

CPD SINGAPORE
EDUCATION SERVICES
PTE LTD

- ▶ Pre-School Level
- ▶ Primary Level
- ▶ Secondary Level
- ▶ A-Level

CATALOGUE 2022

Click on the ▶ to toggle between the different levels and subjects.

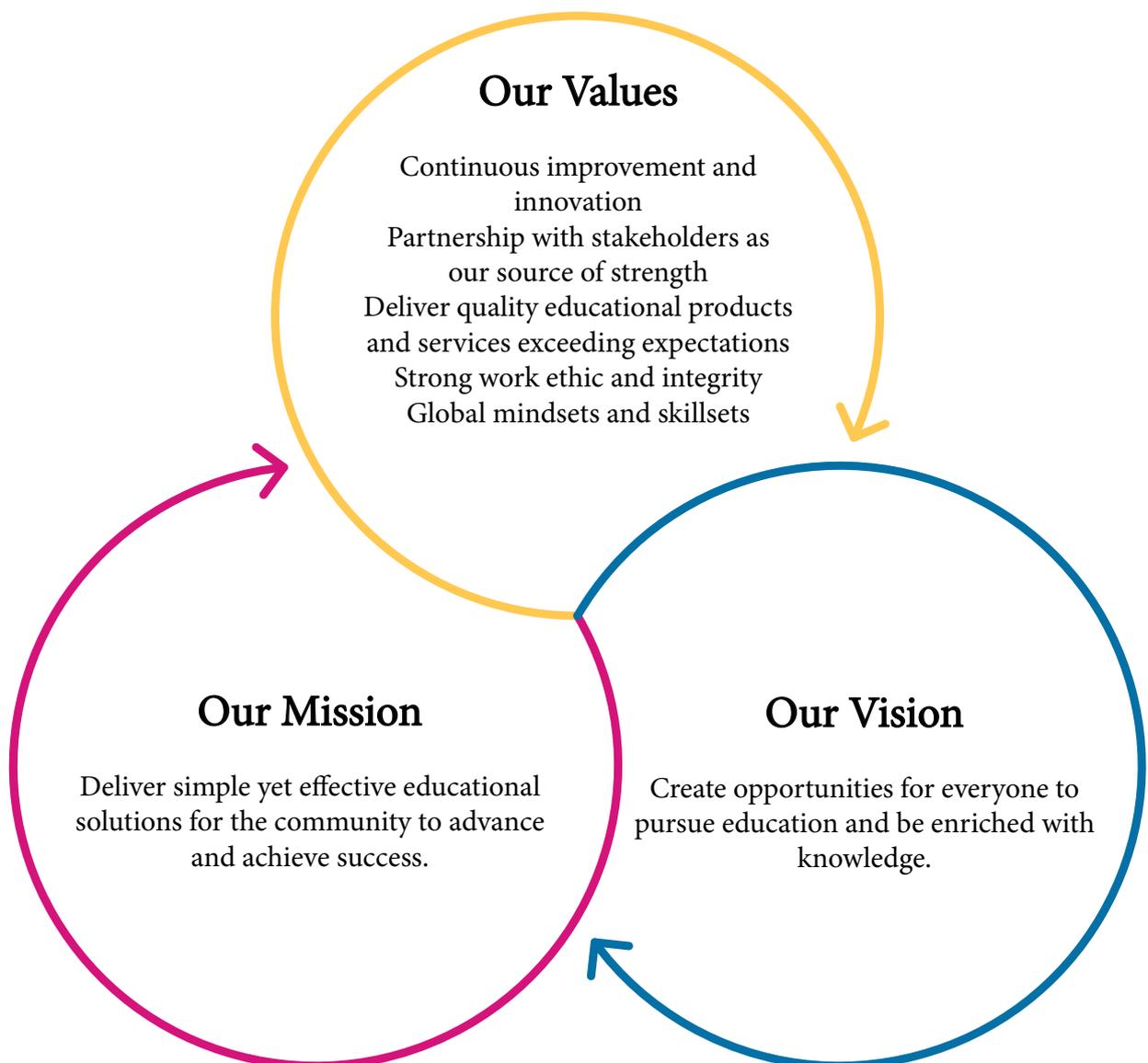
About Us

CPD Singapore Education Services Pte Ltd is an education consultancy firm consisting of a local network of university professors, former National Institute of Education (NIE) lecturers, and ex-Ministry of Education (MOE) curriculum specialists. We embody a global nexus of like-minded organisations and individuals from diverse fields across more than 30 countries, allowing us to adopt a global approach in meeting clients' needs in the education sector.

Having published more than 400 assessment books from pre-school to pre-university levels, to having developed educational resources and comprehensive curriculums, CPD Singapore Education Services Pte Ltd is committed to transforming the field of education in the international community.

Understanding our clients' needs and safeguarding their interests are top priorities of our consultancy as we collaborate with them to achieve their vision. We are also committed to ensuring sustainability in the educational strategies and practices we introduce, as well as viability and relevancy long after the consultancy period.

Our Vision, Mission & Values



Global Presence

Driven by our belief and vision, we have brought education closer to individuals in more than 10 countries globally. As we move forward, we hope to reach out to more people around the world to transform the way of learning.



Australia
Cambodia
Canada
China
Germany
Hong Kong
India
Indonesia
Japan
Korea

Malaysia
Myanmar
Pakistan
Philippines
Saudi Arabia
Singapore
Sri Lanka
Thailand
Vietnam

◀ Pre-School Level

▶ English

▶ Mathematics

▶ Science

▶ Chinese

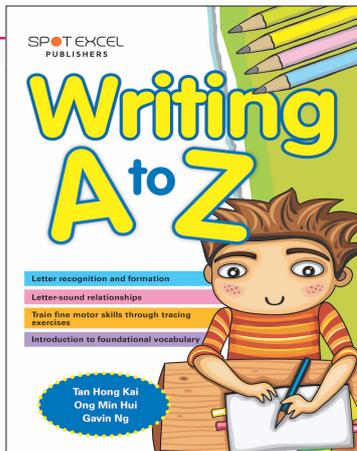
▶ Tamil

▶ Coding

▶ Parents' Guide

Handwriting

Even in this technological, computer-literate age, good handwriting remains fundamental to our children's educational success. Help your child to develop fast, fluent and legible handwriting!

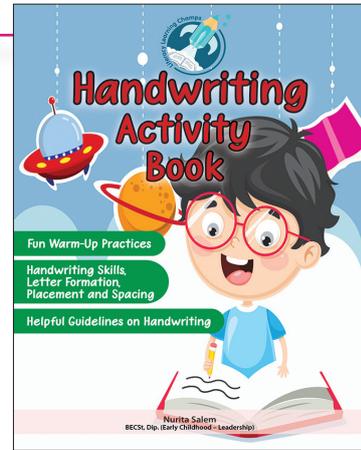


Writing A to Z

ISBN: 9789811176937

This book helps to achieve the following:

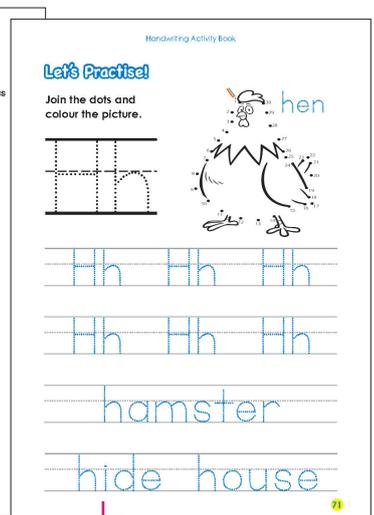
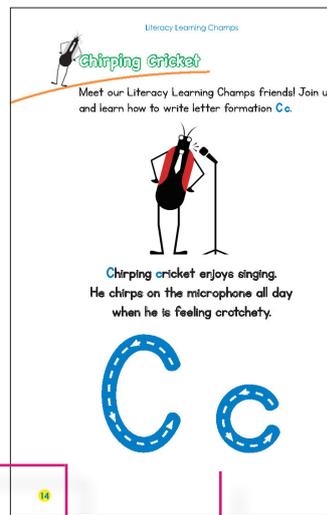
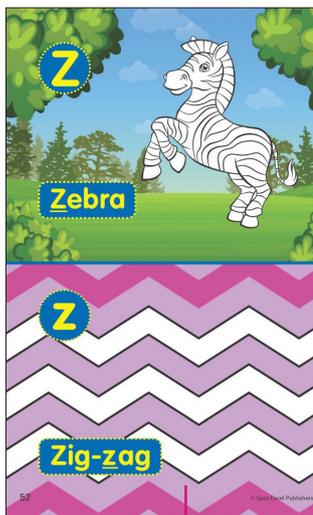
- letter recognition and formation
- letter-sound relationships
- train fine motor skills through tracing exercises
- introduction to foundational vocabulary



Handwriting Activity Book

ISBN: 9789811463594

This book is crafted to help children learn through fun and interesting letter characters. It is the perfect start for any child to learn how to write and read comprehensively.



Relatable Objects & Characters

Vivid and interesting pictures are included along with writing activities to allow children to learn and recognise words effectively.



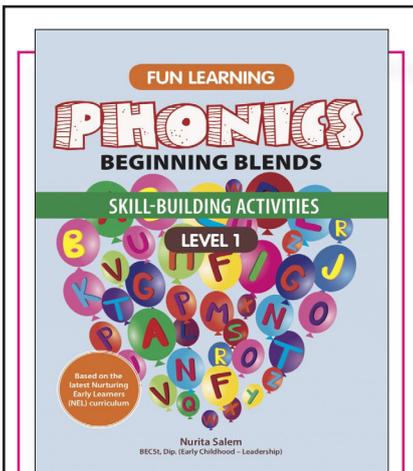
Practices

Number guides and crucial letter formation activities - beginning to join, securing the joins, practicing speed and fluency. Includes new words to grow their vocabulary.

Fun Learning Phonics

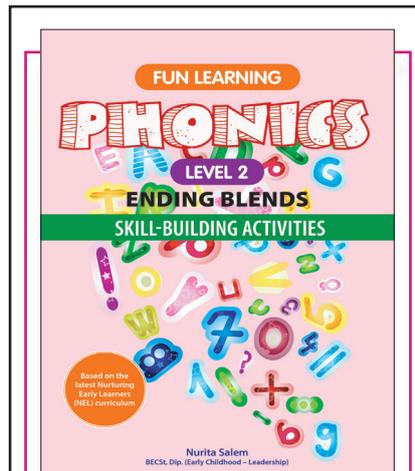
Phonics is one of the basic building blocks of the English language. It is the relationship between the sound (phonemes) and the letters (graphemes) of a word.

This series aims to introduce early learners to phonetic skills and engage them in fun and interactive hands-on activities of various skill levels. Interesting and challenging activities await learners who are looking to achieve success in preparation for their primary school education.



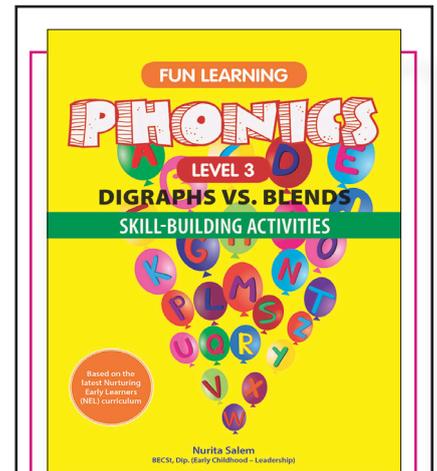
ISBN: 9789811404955

In Level 1, learners will be formally introduced to blends. These beginner activities will prepare learners for the more advanced activities in the following levels.



ISBN: 9789811417528

In Level 2, learners may need some help sounding out some of the complex sounds and understanding how some blending sounds work. This encourages reinforcement and clarification of learners' blending skills to allow learners to gain confidence for the next level.



ISBN: 9789811423024

Before starting this level, learners should already have mastered the first two levels. In Level 3, students should already be able to think of words that begin with specified blends. In this book, they will learn about digraphs. The word and concepts used in this level are more challenging than the previous two levels.

Engaging Activities

Drawing, colouring, matching and sticker activities help children develop early critical-thinking and comprehension skills.

At higher levels, activities like Word Patterns, Search Me Blends, and Crack the Codes gently introduce children to phonics so that they are confident when they hit the classroom.

Beginning Consonant Blends

bl

black blanket
blocks blouse

Choose the correct word.

blood blocks

There is a _____ stain on your shirt.

blanket blow

Draw a blueberry.

Let's _____ the candles.

1

Ending Blend - nd

Colour the pictures that end with the **nd** blend.

plant band
pond stand

Fill in the missing blend.

b l e _ _ _ s a _ _ _

2

Knowing Your Digraphs

sh "sh..sh..sh"

wh wh wh wh

ch choo choo

th

ph

Upper teeth on lower lip and blow air out over the bottom lip.

The tip of the tongue protrudes from the mouth a little to produce sound.

3

Verbal Recognition

Pronunciation guide with visual aids to facilitate learning.

My Favourite Toys

We all have our favourite toys that we love so much! Place the correct sticker button blend in front of each word.

ane
ain
ateboard

4

Digraphs vs. Blends

What is the difference between digraphs and blends?

A consonant blend is when two or more consonants are blended together, but each sound may be heard in the blend. The most common beginning consonant blends include: **bl, br, cl, cr, dr, fr, fl, gl, gr, pl, pr, sl, sm, sp** and **st**.

Digraphs are "voiceless" combinations of two consonants. Following are examples: **sh, ch, th, wh, ph.**

5

Engaging Topics

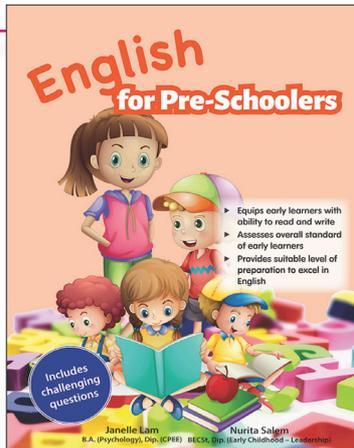
Fun and relatable topics such as "Things Around Me" and "Food and Fruits" introduce children to skills and vocabulary that are essential for developing their language abilities.

Progressive Learning & Explanations

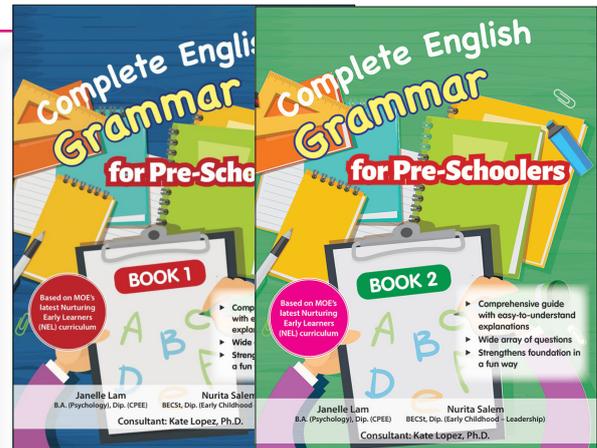
Blends and digraphs are covered progressively and practiced in the series. Clear and simple explanations are also provided to assist in learning.

English for Pre-Schoolers

The aim of this series is to equip children who are moving into Primary 1 with the ability to read and write eloquently. They contain comprehensive assessments which can be used to assess the overall standard of the child and provide the level of preparation necessary to excel in English at the primary school level.



ISBN: 9789811423048



Book 1 ISBN:
9789811404979

Book 2 ISBN:
9789811497704

Clear Learning Objectives

Clear learning objectives and recaps at the start of every chapter helps children understand the concepts and their applications within the English language.

Instructions

This series supports studying by encompassing both the teaching and learning aspect.

Engaging Activities

Activities stimulate children's thinking which helps develop early critical-thinking skills.

Progressive & Graded Learning

Wide array of practice papers help children strengthen their foundation. Each practice paper comes with grading so that children's progress can be tracked.

Chapter 4 **SWIH**

Learning objective:
To learn the SW(s)IH and use them correctly while asking different questions.

Let's start reading!
Who – asking about a person
Example: Who is this beside you?
What – asking about an object
Example: What are you doing after school? / What is the day today?
Where – asking about a place
Example: Where are we going later?
When – asking about a time
Example: When are we going overseas?
Why – asking for a reason for an action
Example: Why is she shouting so angrily?
How – asking about a matter
Example: How are you doing? / How do you feel?

Practice Paper 1

English for Preschoolers

50

myself me her them
he ours itself

Fill in the blanks with the correct word. Use each word only once. (7 marks)

I am Christof. My family consists of my parents, my older brother, my younger sister and myself. We own a dog. The dog is _____. It likes to play by _____. My sister likes to play with _____. My brother likes to sing _____. _____ sings very well. My siblings like to play with _____.

However, I like to play by _____. All in all, I love my family so much and I want to live with _____ for a long time.

UNET Connectors

Activity 1 **Introducing the Connector, and**

Connectors are words that link sentences together.
The word **and** is a connector for addition. This means that it **joins words, phrases and sentences together**.

Example I love apples. I love oranges.
I love apples **and** oranges.

Join the two sentences together by using **and**.
The first one has been done for you.

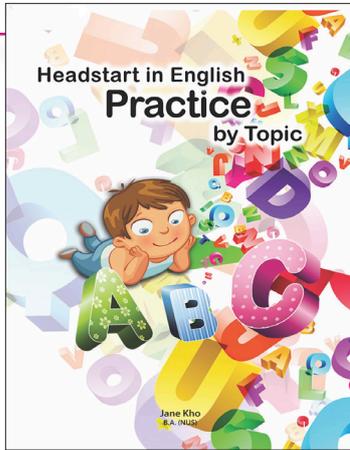
- I love cats. I love dogs.
I love cats **and** dogs.
- He ate an apple. He ate a banana.

- Annie has big eyes. Annie has long hair.

60

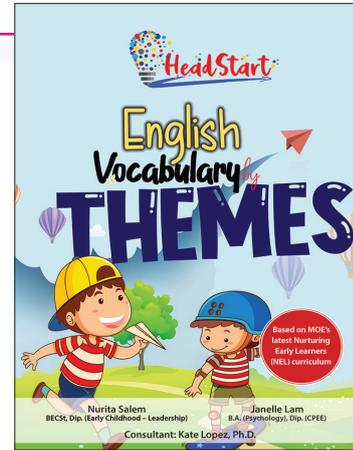
Headstart in English

The Headstart series prepares students for primary school through exercises that encourage them to learn and develop the relevant skills and knowledge to master the English language.



ISBN: 9789811415562

Headstart in English: Practice by Topic is designed to equip students between the ages of 6 and 7 with the necessary skills to tackle English grammar and vocabulary. Students will have an enriching learning experience as they are presented with a wide array of interactive question types to encourage them to put on their thinking caps.



ISBN: 9789811415579

Headstart English: Vocabulary by Themes is designed to equip students between the ages of 6 and 7 with the necessary skills to tackle English vocabulary. Students will be presented with a wide array of fun-filled question types to provide them with an enriching learning experience.

Headstart in English - Practice by Topic

Exercise 5
Write down what the boy is doing.

 B _ _ t h _ _ _ g	 E _ _ t _ _ _ g
 R e _ _ _ n _ _	 z z z

Unit 2 Food

Section D: Draw the shapes
Draw circles around the pictures showing sweet food.
Draw rectangles around the pictures showing salty food.
Draw triangles around the pictures showing spicy food.

Hamburger	Chicken nuggets	Cupcake
Milkshake	Curry	Doughnut
Chillies	Pizza	Lollipop

Headstart in English - Practice by Topic

3. Write down 5 different living things.

4. Write down 5 different types of mammals.

Headstart English: Vocabulary by Themes

Section E: Crossword puzzle

white	orange	yellow
Peas	red	Grapes

Down

1. _____ are purple.

2. Bananas are _____.

4. Tomatoes are _____.

Across

3. Carrots are _____.

5. _____ are green.

6. Cauliflower is _____.



Relatable Topics

Topics such as "Daily activities" and "Living things" introduce children to vocabulary that they will use in their everyday life.

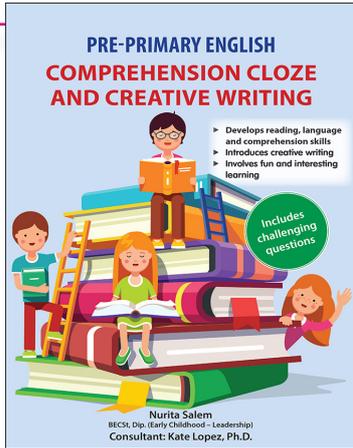


Engaging Activities

Fun-filled exercises encourage students to apply relevant skills and knowledge.

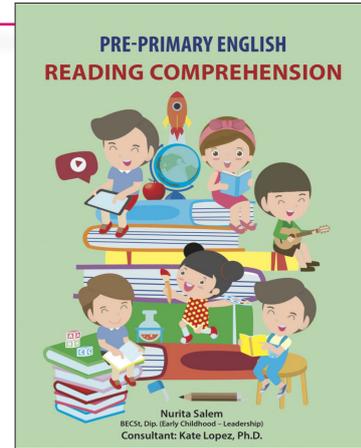
Pre-Primary English

The Pre-Primary English series aims to introduce comprehension cloze and creative writing, develop reading comprehension skills, and improve the grammar of preschoolers through engaging activities. The wide variety of challenging exercises stimulate pre-schoolers' brain development and maximises their learning potential so as to prepare them adequately for Primary 1.



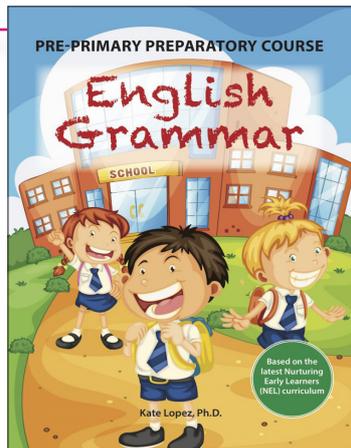
Comprehension Cloze and Creative Writing

ISBN: 9789811197697



Reading Comprehension

ISBN: 9789811415593



English Grammar

ISBN: 9789811404993

Practices

Provides additional practice for children to reinforce learning, and develop creativity.

Visual Text Comprehension practices teach students how pictures convey meaning and help children piece together the storyline. Reading the facial expression and body languages of characters as well as relating personal experiences to the setting of the story enhances comprehension.

Practice Papers

Section C Comprehension MCQ

Read the passage carefully.

Deepavali is celebrated by Hindus. It is also known as the Festival of Lights. Deepavali is in November this year and will be celebrated over five days.

Hindus observe this day by taking a ritual oil bath before daybreak. They do it as an act of self-cleansing. Little India in Serangoon will be decorated with beautiful bright lights throughout the Deepavali celebration.

Both locals and tourists will go to the streets of Little India to visit the bazaars selling sweets, nuts and other traditional delicacies.

The temples will be crowded too where the Hindus will come and pray by offering garlands of flowers and sweetmeat.

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Pre-Primary English Comprehension Class and Creative Writing

Section C Visual Text Comprehension

Read the poster carefully. Answer the questions that follow.

Cookie Sale!

Date: 5th October 2018
Friday
Time: 12 pm to 4 pm
Venue: 1 Main Street Avenue



Fundraising for the Cherry Orphanage Home in conjunction with children's day celebration 2018

Types of Cookies

- Chocolate Chips
- Oatmeal Raisins
- M&M
- Peanut Butter

HURRY!

Price
\$6 per box
\$10 for 2 boxes

For bulk orders, please e-mail us at cookie.sale@gmail.com

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Let's Read

Develops reading and comprehension skills.

22 Food for Fuel

Let's Read

Everything that is alive needs energy. All humans get the energy they need from food. Think of the human body as an amazing machine. It can do all kinds of things for us. Food is the fuel that helps keep the amazing machine running.

Plants use sunlight to make their own food. Animals are not able to do that. Some animals eat plants.

Since plants make their own food using sunlight, the sun's energy is found in plants. When we eat plants, we get more of the sun's energy than when we eat animals. That is why it is good to eat fruits and vegetables.



64

Let's Talk

Develops speaking skills.

Let's Talk



Facilitative Questioning

- What can you see in this picture?
- What do you think the girl is doing?
- What does the sun provide?
- Have you planted anything before? When?
- What do you think happens if there's no sun? Why?

27

Learn & Do

Explanations are followed by exercises for children to apply new concepts. This helps children learn quickly and retain information more readily.

Unit 1 **NOUNS**

Type of nouns	Explanation
Common nouns	General name for a person, place, or thing in a class or group. Unlike proper nouns, a common noun is not capitalised unless it either begins a sentence or appears in a title. <i>Examples</i> boy, teacher, bear, pencil
Gender nouns	It is a form of noun classification that includes feminine and masculine categories. <i>Examples</i> lion and lioness, duke and duchess
Proper nouns	Names of people, places, things, organisations. Begins with a capital letter. <i>Examples</i> Mary, Ministry of Education, Statue of Liberty

Pre-Primary Preparatory Course - English Grammar

Exercise 4
Underline or circle the correct option.

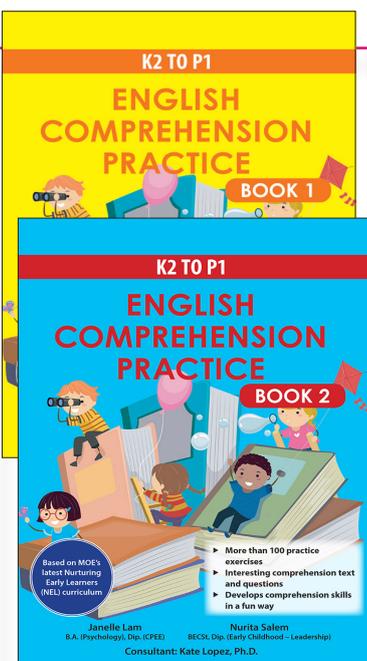
- There is still so (many / much) food left.
- The (army of / herd of) ants were carrying the bread crumb back to their nest.
- Christmas is here! There are so many (present / presents) under the Christmas tree.
- Kelly's favourite festival is (Chinese New Year / chinese new year).
- The calves are following their mother, the (cow / bull) around.
- Eric fell down. He asked for a (plasters / plaster) to cover his wound.



30

K2 to P1 English

This series completes a child's preparation for primary school in comprehension, grammar and vocabulary. It is equipped with comprehensive features including activities and practice questions which aim to stimulate greater interest in learning and improve children's knowledge of language through real-world contexts.

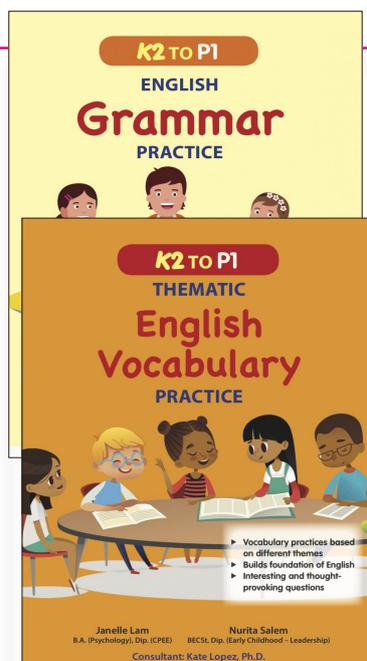


The image shows two book covers for 'English Comprehension Practice'. Book 1 has a yellow background and Book 2 has a blue background. Both covers feature illustrations of children reading and a list of features.

English Comprehension Practice

Book 1 ISBN: 9789811199639

Book 2 ISBN: 9789811401183

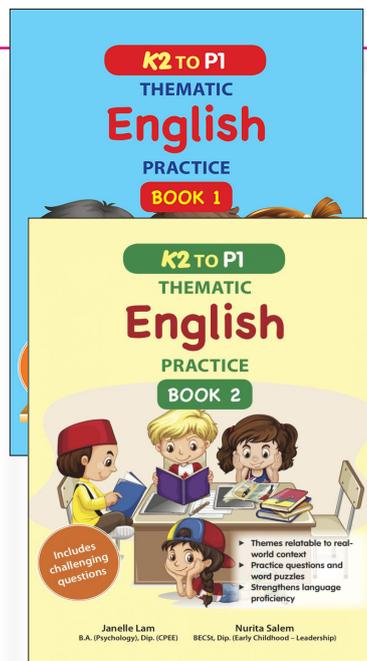


The image shows two book covers for 'Thematic English Practice'. The Grammar book has a yellow background and the Vocabulary book has an orange background. Both covers feature illustrations of children at a table and a list of features.

Thematic English Practice

Grammar ISBN: 9789811415586

Vocabulary ISBN: 9789811409424



The image shows two book covers for 'Thematic English Practice'. Book 1 has a blue background and Book 2 has a yellow background. Both covers feature illustrations of children reading and a list of features.

Thematic English Practice

Book 1 ISBN: 9789811197680

Book 2 ISBN: 9789811419201

Captivating Storylines

Storylines with interesting characters set in familiar contexts help children infer meanings of new words and enhance comprehension independently.

Practice 27 Jane and Her Blocks

Jane likes to play with big blocks. She has a big box of blocks at home. Whenever she is free, she would play with the blocks. Jane makes many things using the blocks. From castles to houses and even trains. Yesterday, Jane made a tall castle.



Underline the correct answer.

- Jane likes to play with (big / small) blocks / toy cars .
- She has a (small / big) box of blocks at home.
- Jane makes castles, houses and (trains / blocks) using the blocks.
- Yesterday, Jane made a tall (tower / castle) .

Practice 41 A Day at Adventure Cove

It is the first day of the school holidays. Fanny and her family decide to go to Adventure Cove. Fanny is excited as it is her first time going to a water park.

Fanny and her family are the first to enter Adventure Cove. They change into their swimming costumes in the changing room. There are many things to do at Adventure Cove. There are water slides, play pools for children and even a wave pool.

Fanny wants to try going down the water slide but is afraid to do so alone. Her father decides to go with her. Fanny sits on her father's lap and they go down the water slide on a big float.

After trying the water slide, Fanny and her family decide to try the other attractions at Adventure Cove.

Choose the correct answer (a, b or c). Write it in the brackets.

- Where did Fanny and her family go?
(a) Adventure Cove
(b) Disneyland
(c) Universal Studios ()

Theme 1 All about me

Section A Introduce yourself

Draw a portrait of yourself in the space and fill in the blanks.

My name is _____
I am _____ years old.
My favourite colour is _____
During my free time, I love to _____

Unit 2 At the beach



Vocabulary list

Word	Meaning
surfing	A sport where an individual rides a wave to the shore using a board or small sail
swimming	An activity that people can do at the beach or a swimming pool

Relatable Topics

Everyday topics such as "All about me" and "At the beach" introduce children to vocabulary that they can easily apply in other contexts.

Recap Components

This series supports learning by encompassing the elements of teaching, reinforcement and practice within each chapter.

Section B Punctuation

Let's Recap!

Full stop (.)	Marks the end of a sentence. Ends any sentence that is not a question or an exclamation.
Question mark (?)	Marks the end of a question.
Exclamation mark (!)	Used at the end of a word or sentence that shows the feelings of the speaker.

Read each sentence. Fill in the blanks with the correct punctuation.

- Wow Look at that colourful rainbow in the sky!
- Auntie Anne bought some red apples from the market
- Did you see my pink pouch anywhere
- Ouch I got bitten by a red ant.
- If you mix red and yellow together, you will get orange

Making Learning Fun

Drawing, colouring and matching activities engage childrens' interest and develop early critical-thinking and comprehension skills. Word search, crossword puzzles, jumbled words, and spelling activities further help to develop their vocabulary.

Theme 11 Pets

Section A: Animals we keep as pets

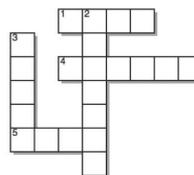
Which animals can we keep as pets? Circle them.



Section H: Crossword puzzle

Solve the puzzle by filling in the boxes using the clues provided.

tooth reading crow family hymn



Clues

- Across**
- Which word has three consonants?
 - Which word has two different vowels?
 - This word has no vowels.
- Down**
- This word has three different vowels.
 - This word contains the same vowel twice.

Section C: Connect the dots

Draw a line to match the words that rhyme. word can only be matched once.

Hide	•	•	Crane
Train	•	•	Groan
Stone	•	•	Lied
Chair	•	•	Hum
Sum	•	•	There

Section D: Sort the words

Write the words given in the box below in the correct circle. Each word can only be used once.

key flower rag face
flag trolley power lean

1. Words that rhyme with me

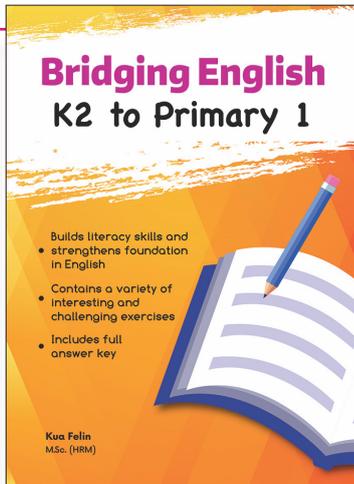
3. Words that rhyme with drag

2. Words that rhyme with shower

4. Which word rhymes with race?

5. Which word rhymes with queen?

Bridging English



ISBN: 9789811490088

Bridging English: K2 to Primary 1 is specially designed for students to learn, practise and improve their English language skills in a simplified way. This book covers grammar, vocabulary, sentence structuring, spelling and reading. Students who are currently in kindergarten will learn new vocabulary words and grammar usage. As such, this can vastly improve their English language aptitude. There are simple illustrated stories and passages for students to practise their pronunciation and reading skills. Answers to all exercises are included as well. Through these exercises, students will have fun, while learning the English language in the most interesting way possible.

Unit 2
To Town
By Joy Cowley

I will go to town on my bulldozer,
my big yellow bulldozer.
Brr-rrr, brr-rrr,
all the way to town.



I will go to town in my fire-engine,
my big red fire-engine.
Oooooo-aaaaaah-oooooo-aaaaaah,
all the way to town.



17

The Hungry Giant

Past continuous tense	Present perfect tense	Simple future tense
He / She / I was stamping. We / They / You were stamping.	He / She has stamped. We / They / You / I have stamped.	He / She / We / They / You will stamp. I shall stamp.
He / She / I was beating. We / They / You were beating.	He / She has beaten. We / They / You / I have beaten.	He / She / We / They / You will beat. I shall beat.
He / She / I was hitting. We / They / You were hitting.	He / She has hit. We / They / You / I have hit.	He / She / We / They / You will hit. I shall hit.
He / She / I was putting. We / They / You were putting.	He / She has put. We / They / You / I have put.	He / She / We / They / You will put. I shall put.
He / She / I was holding. We / They / You were holding.	He / She has held. We / They / You / I have held.	He / She / We / They / You will hold. I shall hold.
He / She / I was kicking. We / They / You were kicking.	He / She has kicked. We / They / You / I have kicked.	He / She / We / They / You will kick. I shall kick.
It was squeaking.	It has squeaked.	It will squeak.

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Easy to Understand

Skills and concepts are taught with simple illustrated passages and table formats for easy reading and understanding.

Challenging Exercises

A variety of exercises will challenge students and push them to develop their skills. Full answer keys to exercises are also provided.

Mrs Wishy-Washy

Let's try the exercises!

Exercise 1
Read the **common nouns** and **proper nouns** and them to the correct bubbles.

Common nouns:

Proper nouns:

Mr Wilson Lee Mrs Sandra Ong En

computer teacher Singapore

10

Ants in a Hurry

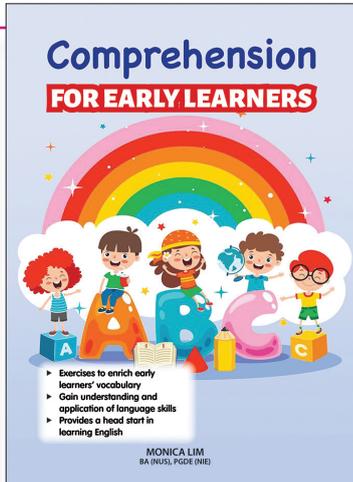
Exercise 9
Fill in the blanks with the words in the box.

market cinema beach bus stop hospital
bakery bookshop laboratory post office salon

- Butchers and fishmongers sell their meat and fish in a _____.
- There are many doctors and nurses in a _____.
- The movie ticket seller gives us our tickets in a _____.
- Scientists work in a _____.
- Hairdressers work in a _____.
- A baker works in a _____.
- Mary is selling books in a _____.
- The bus driver stops at every _____.
- Lifeguards can save people from drowning at the _____.
- The postman collects our letters and parcels from the _____.

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Comprehension for Early Learners



ISBN: 9789811803697

This book is written to give kindergarten students a head start in their journey of learning English. By completing the comprehension exercises, they will not only be able to enrich their vocabulary banks, they will also be able to gain understanding and application skills. The exercises are also tailored to match the standards of kindergarten students who are keen on advancing their English and being ahead of their peers.

Comprehension Exercises

40 comprehension exercises with short and simple passages for students to hone their comprehension skills.

Comprehension for Early Learners

Practice 1
Read the passage carefully.

Josh lives with his grandparents in the countryside. He loves the pumpkins that grow in the large patch behind the house. Every three months, he pleads with his grandparents to allow him to help them harvest the fully-grown pumpkins. Although his grandparents do not want him to do it himself, they always agree to his request.

After harvesting the pumpkins, Josh watches his grandparents make pumpkin paste, pumpkin pies, pumpkin soup and pumpkin porridge. His only job is to taste the food. Josh likes to eat pumpkins, so he does not complain.

Tick the correct answers.

1. Josh lives with his

cousins	<input type="checkbox"/>
grandparents	<input type="checkbox"/>
parents	<input type="checkbox"/>

2. Josh lives in the

jungle	<input type="checkbox"/>
kampong	<input type="checkbox"/>
countryside	<input type="checkbox"/>

3. Josh wants to help

harvest	<input type="checkbox"/>
water	<input type="checkbox"/>
cook	<input type="checkbox"/>

 the pumpkins.

4. One food that his grandparents make is

rice	<input type="checkbox"/>
jelly	<input type="checkbox"/>
paste	<input type="checkbox"/>

 pumpkin.

5. Josh's job is to

mash	<input type="checkbox"/>
taste	<input type="checkbox"/>
store	<input type="checkbox"/>

 the food.

Fill in the Blanks

35 fill in the blanks practices to further build students' understanding and application of vocabulary.

Answer Key

Answers are provided to check accuracy of understanding.

Comprehension for Early Learners

Practice 1
Read the passage carefully and answer the questions.

On a breezy Sunday morning, Cheryl's parents decided to have a family picnic at the beach. They packed sandwiches, canned drinks and fruits into two big baskets before setting off. Arriving at the beach, they chose a cool spot under a coconut tree to lay their picnic mat. Cheryl and Charlie helped to spread the delicious food and started chattering happily. A few hours later, it was time for them to leave. They had enjoyed themselves very much. Seeing their sad faces, their parents brought them to the beach again the following week. Both children cheered in glee.

Section A - Basic Comprehension Exercises

- When did Cheryl and her family go to the beach?

- What did they pack for the picnic?

- Where did they choose to lay their picnic mat?

- Who helped to spread the food out on the cloth?

ANSWER KEY

SECTION A

Practice 1

- Cheryl and her family went to the beach on a breezy Sunday morning.
- They packed sandwiches, canned drinks and some fruits for the picnic.
- They chose a cool, shady spot to lay their picnic mat.
- Cheryl and Charlie helped to spread the food out on the cloth.
- Their parents promised to bring them to the beach again the following week.

Practice 2

- John and Jim are brothers.
- They enjoy playing with toy trains.
- John's toy train broke into two and could not be fixed.
- She heard John crying.
- Jim felt guilty for stepping on John's toy train.

Practice 3

- Hannah likes Furry because she is cute and playful.
- Hannah brings Furry to the nearby park for a walk every day.
- Furry is attracted to butterflies.
- Hannah bathes Furry two times every day.
- Hannah's mother is pleased with her because she takes good care of her pet.

Practice 4

- Nicole likes to eat fruits and vegetables, unlike most children.
- Nicole likes to eat apples the most.
- Nicole's favourite vegetable is broccoli.
- Nicole likes eating broccoli because it is crunchy and can even be eaten raw.
- She knows that chocolates and sweets will cause tooth decay.

Practice 5

- Tim's grandparents, close relatives and friends are invited to his birthday party.
- The house is decorated with balloons and streamers.
- The house becomes lively after people arrive.
- Tim blows out all the candles on his birthday cake after everyone sings him a birthday song.
- Tim feels very grateful for the celebration.

Practice 6

- Katie asks questions whenever she has something that she does not know.
- Katie spends a lot of time with her teachers.
- Katie finishes all her homework before watching the television.
- Katie enjoys reading books because she likes imagining herself as a character in the book.
- Katie goes to sleep at 8 o'clock.

Practice 7

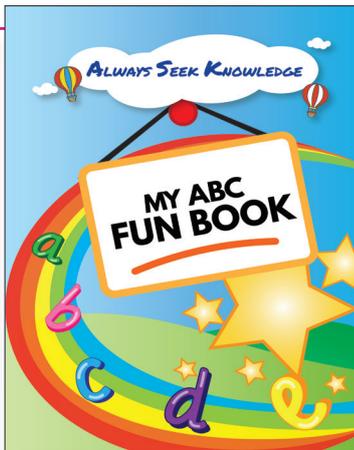
- Lisa wants to dress up as a princess.
- Lisa's dress is pink.
- Lisa is happy about her costume.
- She is very pleased that everyone says she looks extremely pretty.
- Lisa thanks her mother for the wonderful costume that she made her.

Practice 8

- People are chattering happily and taking pictures of everything.
- Sam sees a kangaroo with a pony in her picture.
- He shows in delight and runs off to take a picture with the mother kangaroo.
- Simon shudders in fear and walks away from it.
- The bears look like pandas.

Always Seek Knowledge - Fun Learning

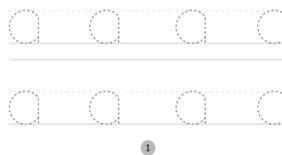
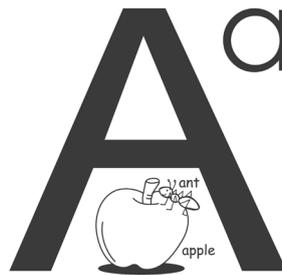
This series of preschool books is specially written to help children learn in a fun and creative way. The books come equipped with flash cards of pictures and words that will help enhance learning. The flash cards and activities in these books are designed to help children recognise, recall and review through visual and sound stimulation. With the guidance of parents, teachers and tutors, it is hoped that children will acquire the necessary skills for each level before proceeding to the next.



My ABC Fun Book

ISBN: 9789811498169

This book is written to help children learn the alphabet in a fun and creative way. Each activity comes equipped with pictures and words that will also help enhance vocabulary. The exercises are designed to help children recognise, recall and review through writing, listening, matching and colouring activities.



Draw an apple.

apple

Colour the picture that begins with 'a'



aeroplane



book

Flash cards - Read, Recognise and Review
Cut and paste on a piece of cardboard.

apple

aeroplane

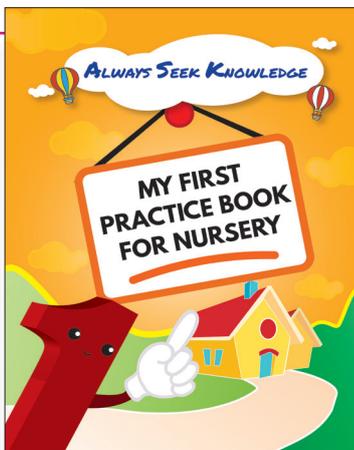
ant



boy

ball

balloon

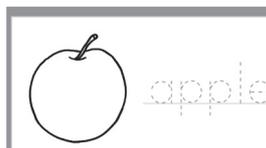


**My First Practice Book
for Nursery**

ISBN: 9789811498152

This book is written to help children learn handwriting skills in a fun and creative way. Each letter of the alphabet comes with tracing activities to guide children on the proper steps to writing complete words. The activities are designed to help children recognise, recall and review through writing, listening, matching and colouring.

Trace and write.



Read, Recognise and Review.
Flash card game: Cut and paste on card-board.



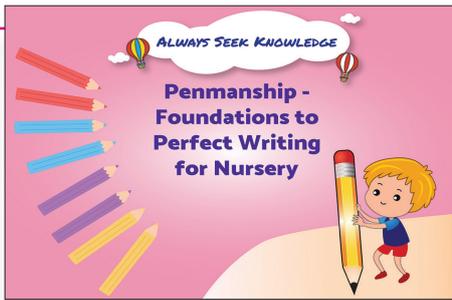
apple

ball

cat

dog

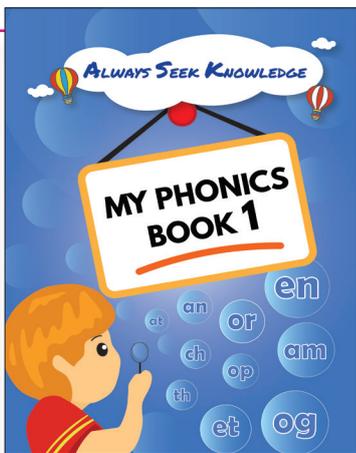
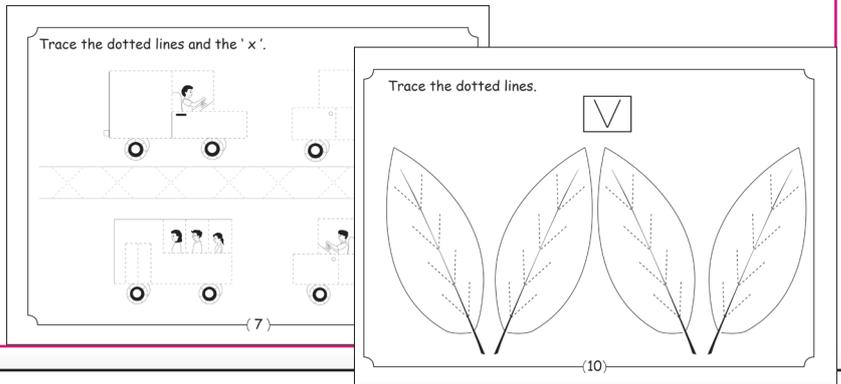
elephant



Penmanship - Foundations to Perfect Writing for Nursery

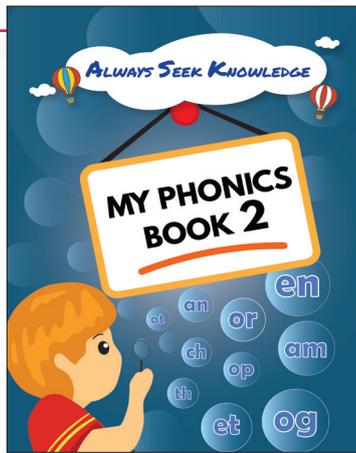
ISBN: 9789811498237

This book introduces children to the basics of writing.



My Phonics Book 1

ISBN: 9789811498176



My Phonics Book 2

ISBN: 9789811455513

These books help children on their reading journey through phonics. The activities in these books teach children how to identify letter sounds, how these sounds are represented alphabetically, and how to sound them. These books are essential for children to become successful readers and spellers in the early years of schooling and beyond.

Day: _____ Date: _____

Read and say the words.

an

4

Day: _____ Date: _____

Cut out the words on page 39. Paste the correct word below each picture.

Day: _____ Date: _____

Colour all the pictures that rhyme with 'can' red. Colour all the pictures that rhyme with 'fat' yellow.

Day: _____ Date: _____

Fill in the blanks and read the sentence aloud.

A _____ on a _____.

A _____ on a _____.

4

Day: _____ Date: _____

Creative Writing
Describe the pictures. Use the words in the box to help you.

fat big long small short

a _____ a _____

a _____ a _____

7

Day: _____ Date: _____

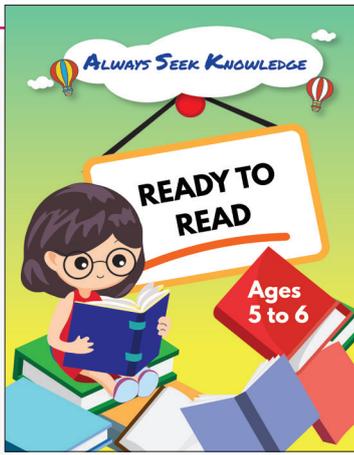
Can you form sentences with the words on the previous page? You can include words not found on the previous page.

- _____
- _____
- _____
- _____

10

Book 1

Book 2
More challenging activities.



Ready to Read

ISBN: 9789811498183

This book introduces children to reading readiness skills. These skills include the ability to distinguish similarities and differences, to recognise letters of the alphabet and the sounds that they stand for. With these basic skills, the children will be ready to progress to more advanced language skills.

Day: _____ Date: _____

Look at the pictures and the words. Place the words in alphabetical order.





bird

elephant

cat





father

ant

dog

1.
2.
3.
4.
5.
6.

6

Day: _____ Date: _____

Word Box of Cc and Dd. List more words in the boxes.

cat
can
cap
cup

dog
doll
draw
drum

Write the word for each picture.

1.  _____
2.  _____
3.  _____
4.  _____

9

Day: _____ Date: _____

Look at the pictures carefully. Say the word and write the first letter of each word. Copy the word below.


 _ c _ o w
 COW


 _ a n
 an

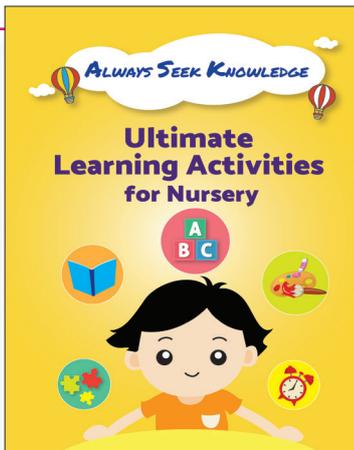

 _ r a s s
 grass


 _ a r
 car


 _ o r s e
 horse


 _ e l l y
 jelly

10



Ultimate Learning Activities for Nursery

ISBN: 9789811498244

This book supplements a child's early learning. The activities in this book help build the framework for self-development, from cognitive skills to emotional and social development. This book emphasises the importance of parent-child interaction through many fun activities which include writing, matching and colouring.

Developmental Focus

Each activity has a pedagogical focus and builds multiple intelligences.

Did You Know?

Fun facts are included for added knowledge.

How old are you?
How old is Jacky? How old is Jenny?




Do you know how old you are?
Mummy has made a big birthday cake for you!
Let's draw in the candles to show how old you are.

I am _____ years old.

Did you know?
We all grow older by one year on every birthday. The number of candles on the birthday cake will tell people how old you are.

3

My handprints and footprints!

1. Place your hand/foot on the paper and draw the outline of your hand/foot.
2. Or you may paint over the palm of your hand/foot before pressing it onto a piece of paper.

Let's try this!
You can make wonderful pictures with handprints. Press two painted handprints on a piece of paper side by side and you can see a butterfly!



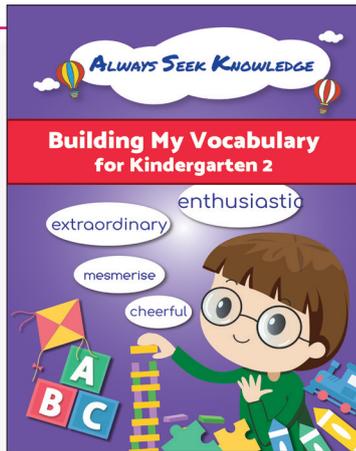
9

Let's Try This!

Additional activities to make learning more fun.

Always Seek Knowledge - Fundamentals of English

This series is meticulously crafted to create a strong foundation of the English language in children through a variety of engaging activities. Each book in this series covers a different aspect of the English language. This series aims to equip students with a strong language foundation which is essential for developing proficiency in the English language.



Building My Vocabulary for K2

ISBN: 9789811498190

This book helps children develop a fundamental repertoire of vocabulary. The exercises are designed to assist children in their language development by introducing new words that will improve their reading and writing skills. The exercises are based on topics relating to what they see, know or experience in everyday life.

My Family (1)
Hi, everybody, I am Tom.
Let me introduce my family to you.

This is my father and my mother.

This is my brother, Pat, and my sister, Pam.

This is my baby sister, Tammy, and I. They are my nuclear family.

1

Day: _____ Date: _____

Fill in the correct word.

- My _____ and my _____ are my parents.
- Pat is my _____.
- My _____, Tammy, is sleeping in the cot.
- My _____, Pam, loves to swim.
- I enjoy playing with my _____ and _____.
- I love my _____ very much.

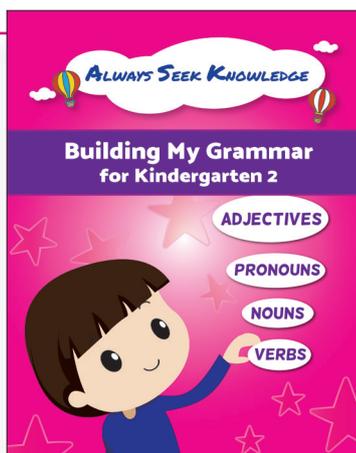
2

Day: _____ Date: _____

Activities A Family Can Enjoy Together
Name the activities in the empty boxes below.

swimming cycling badminton
travelling overseas picnic
visiting the zoo watching television

3



Building My Grammar for K2

ISBN: 9789811498206

This book introduces children to the fundamentals of grammar. They will learn parts of speech, tenses, plural and singular forms of words, gender and other aspects of grammar through a series of exercises. This book aims to equip students with a strong foundation in grammar which is essential for constructing well-structured sentences.

Day: _____ Date: _____

Nouns
Nouns are names of people, animals, places things.
Circle the nouns in the sentences.

- Mr Tang is a policeman.
- Mingli goes to the stadium for a jog.
- The crocodile is in the river.
- Apples are sweet but lemons are sour.
- Aunt May is cooking in the kitchen.
- Lily is sewing a dress.

4

Day: _____ Date: _____

Helping Verbs
is are am

Read the sentences carefully.
Underline the correct word.

- My friend (is / are) on the swing.
- The children (is / are) playing with their pets.
- This skirt (is / are) too short for me.
- I (is / am) going for a jog.
- Henry and Harry (is / are) brothers.

5

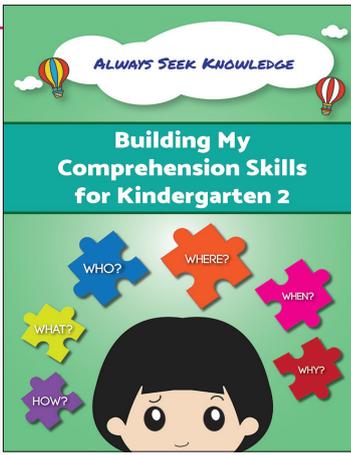
Day: _____ Date: _____

Helping Verbs
is are am

Read the words carefully.
Make as many sentences as you can with the correct verb.

The children	is	playing with a ball.
My sister	are	sweeping the floor.
I	am	eating ice cream.
The girls	am	running a race.
Tom		

6



Building My Comprehension Skills for K2
 ISBN: 9789811498213

This book offers a variety of engaging exercises for children to practise their reading and writing skills. Exercises are crafted to help children think and answer critically, gain exposure to different forms of texts, and expand on their literacy skills. Listening and visual exercises are included to help children develop all elements of comprehension.

Day: _____ Date: _____

An Old Lady
 Look at the picture.
 Read the sentences carefully.
 Write 'True' or 'False' in each box.

- The woman is old.
- The woman has strong legs.
- She uses a walking stick.
- Her grandson is beside her.
- They are walking sadly together.

Day: _____ Date: _____

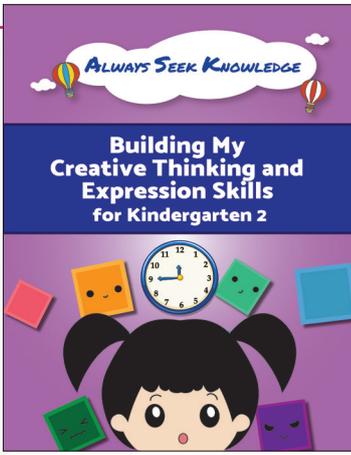
Monkeys
 Look at the picture.
 Read the story and write the correct answers for every sentence.

- There _____ many _____ in the _____
 (is, are) (mice, monkeys) (trees, three)
- Some are _____ (drinking, eating) (bananas, coconuts) and some are not.
- They _____ to swing from tree _____ to _____
 (likes, like) (two, to)
- They are a _____ lot.
 (helpful, mischievous)

Day: _____ Date: _____

Describing A Picture 1
 Look at the pictures and read the sentences carefully.
 Tick (✓) the sentence that describes the picture.
 Copy the correct sentence on the lines provided.

- () Sue is playing on the swing.
 () Sue is playing on the slide.
- () Mr Lim is driving a bus.
 () Mr Lim is driving a car.
- () Pauline and her family are having dinner in a restaurant.
 () Pauline and her family are having dinner at home.
- () Sarah is laughing because she had a bad dream.
 () Sarah is crying because she had a bad dream.



Building My Creative Thinking and Expression Skills for K2
 ISBN: 9789811498220

This book is a fun and engaging exercise book that develops a child's imagination and critical thinking skills. Hands-on activities offer children a chance to look beyond their books to come up with their own creations, broadening their thinking and encouraging creative expression.

Day: _____ Date: _____

Riddles 1
 Read the sentences and guess the answer.
 Write the answer and draw each picture in the box provided.

- I can fly.
 But I have no wings.
 What am I?
 I am _____
- I have four legs.
 But I cannot walk.
 What am I?
 I am a _____
- I am yellow.
 I can be long or short.
 Monkeys love me very much.
 What am I?
 I am a _____

Day: _____ Date: _____

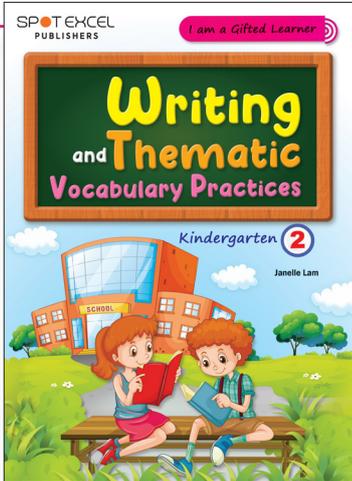
Break The Code 1
 Use the Number Code to find the answer. Write your answer on the line.
 Draw the picture in the space provided.

1	2	3	4	5	6	7
Aa	Bb	Cc	Dd	Ee	Ff	Gg
8	9	10	11	12	13	14
Hh	Ii	Jj	Kk	Ll	Mm	Nn
15	16	17	18	19	20	21
Oo	Pp	Qq	Rr	Ss	Tt	Uu
22	23	24	25	26		
Vv	Ww	Xx	Yy	Zz		

Day: _____ Date: _____

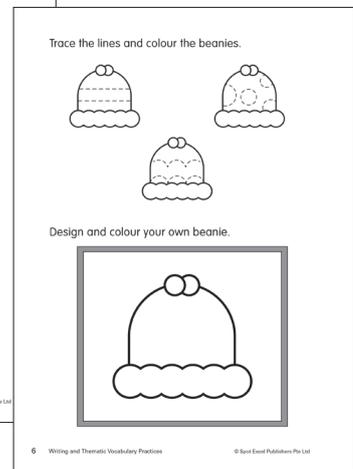
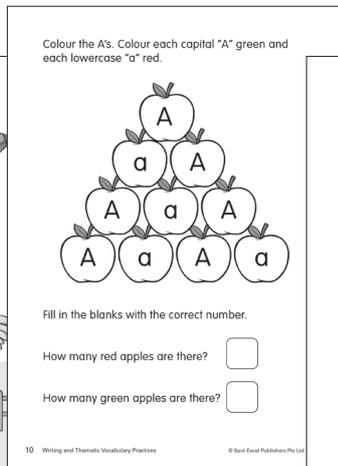
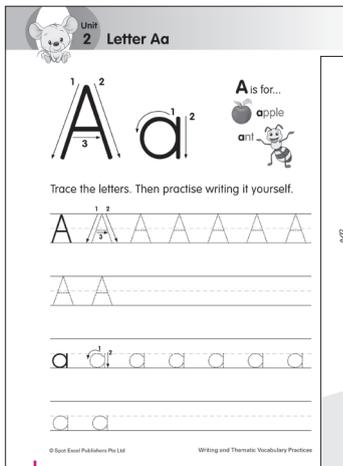
What Can This Be?
 Look at what is drawn below.
 Decide what you want this picture to be and draw it.
 Write two sentences about your drawing.

Writing and Thematic Vocabulary Practices



ISBN: 9780811805707

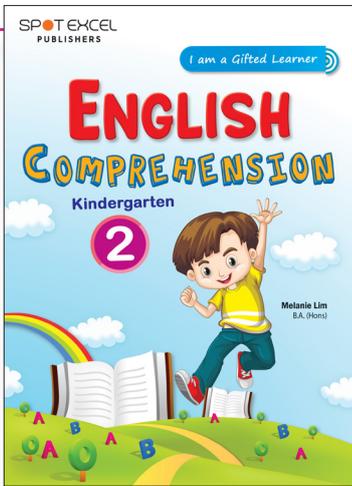
Writing and Thematic Vocabulary Practices provides pre-schoolers with an all-rounded education. Following the Nurturing Early Learners Curriculum Framework, fun-filled activities covering different themes commonly taught in pre-schools await the inquisitive child. Each of these activities helps to build the child's foundation in early literacy skills, establishing basic vocabulary, handwriting and reading.



Fun-filled Activities

A variety of activities help children learn to read and write in a fun manner.

English Comprehension



ISBN: 9789811805066

English Comprehension (Kindergarten 2) is designed to help pre-schoolers hone their comprehension skills before they enter primary school. The series of comprehension passages covers a range of topics so that pre-schoolers are exposed to a variety of content and vocabulary. The exercises aim to give students the confidence to tackle different types of questions.

PRACTICE 01

Read the passage and answer the questions.

It was a bright and sunny Sunday morning. Michael's parents were going to take him to Sentosa. It was Michael's first time there. He was excited to ride the cable car and play on the beach. Michael's father packed some food for them to have a small picnic on the beach. He prepared some sushi, sandwiches and a large bottle of juice. His mother prepared some chicken nuggets and sausages. Michael was very excited because he knew it was going to be a great day ahead.

1. What day was it?
2. Where was Michael going?
3. Who was going with Michael?
4. What was Michael excited to do?
5. What did Michael's father prepare for the picnic?
6. What did Michael's mother prepare for the picnic?
7. How was Michael feeling?

Read the passage and answer the questions.

It was two weeks to Christmas. Xena and Shawn planned to go shopping for Christmas presents together with her brother Shawn. It was their first time going shopping for Christmas presents together. Xena is ten years old this year and Shawn is eight years older than Xena. Shawn often takes his sister out as his parents are often busy working overseas and do not have much time to take care of them. Today, they planned to go to Orchard Road to shop for presents. They planned to buy a total of five presents for their father, mother, grandfather and grandmother and uncle.

1. Who is Shawn?
2. What were the two siblings planning to do?
3. How old is Xena?
4. How old is Shawn?
5. Why does Shawn often take his sister out?
6. Where did the two siblings plan to go?
7. How many presents were they planning to buy?
8. Were they planning to buy any presents for their cousin?

Answers

Practice 1

Passage 1

1. It was a Sunday.
2. He was going to Sentosa.
3. He was going with his mother and father.
4. He was excited to take the cable car and play on the beach.
5. He prepared some sushi, sandwiches and a large bottle of juice for a picnic.
6. She prepared some chicken nuggets and sausages.
7. Michael was very excited.

Passage 2

1. Shawn is her older brother.
2. They planned to go shopping for Christmas presents.
3. Xena is ten years old.
4. Shawn is eighteen years old.

Practice 2

Passage 1

1. Sylvia was at Newmick Shopping Mall.
2. She was out with her mother.
3. They were looking to get a new computer.
4. They were planning to go to the basement.
5. Their budget was \$2000.

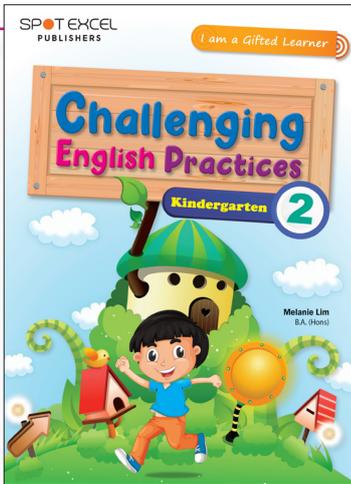
Comprehension Practices

Each practice comes with two passages and questions for students to answer accordingly.

Answers

Answers to all questions are provided.

Challenging English Practices



ISBN: 9789811805059

Challenging English Practices (Kindergarten 2) comprises exercises that aim to develop pre-schoolers' vocabulary, comprehension and reading skills. With a range of challenging and diverse content, this book hopes to strengthen the writing and answering skills of pre-schoolers, ultimately preparing them for their entry into primary school.

Practice 1

Please read the following passage carefully.

Alice is a six-year-old girl. She loves to cycle. Her parents work during the day and her grandparents take care of her. Every day after dinner, Alice will go to the nearby park to ride her bicycle and play at the playground. She will usually spend two hours at the park before going home. Before sleeping, Alice loves to read her storybooks. She loves to read about animals and nature.

Tick the correct answer.

- How old is Alice?
Six years old
Seven years old
Eight years old
- Who takes care of Alice?
Bicycle
Playground
Grandparents
- How much time does Alice spend at the park?
Two hours
One day
Two weeks
- What does Alice do before sleeping?
Play with her toys
Read storybooks
Run around
- What does Alice like to read about?
Animals and nature
Bicycle and park
Playground and work

Practice 2

Read the following and then choose the correct word to fill in the blank spaces.

Johnny loves going for long car rides with his father. He enjoys 1. _____ in the front seat and 2. _____ to the radio. Sometimes his mother joins them. His father drives a white 3. _____. They will usually drive to Changi Airport to look 4. _____ flying. Johnny's ambition is to become a pilot one day.

sitting listening car aeroplanes

Use the following words provided to fill in the blanks.

bus	transport	car
bridge	bicycle	aeroplanes

- I took the school _____ to get home from school.
- I went to the airport to look at _____.
- I had to cross the overhead _____ to get to the other side.
- My father picked me up from school today in his _____ to send me home.
- There are three different types of _____ of which I can use to get to my grandmother's house.
- I will usually ride my _____ to go to the park.

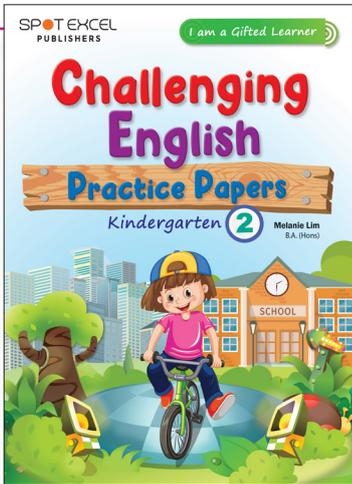
Practice Questions

Different types of practice questions for children to strengthen their English language, with answers provided at the end of the book.

Answers

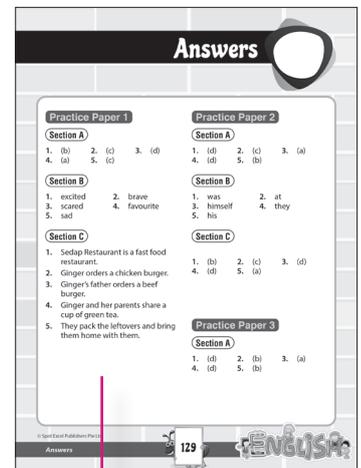
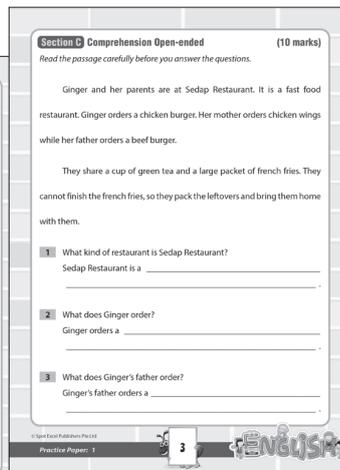
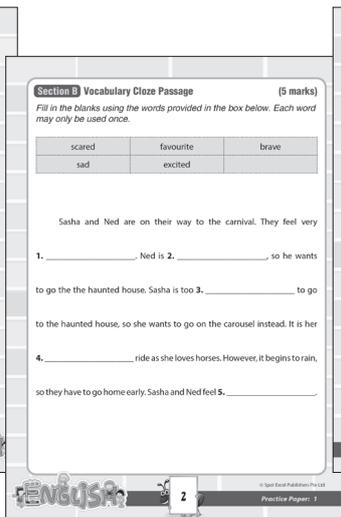
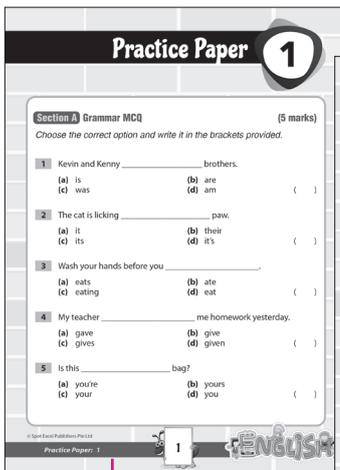
Practice 1	Practice 2
1. Six years old	1. sitting
2. Grandparents	2. listening
3. Two hours	3. car
4. Read storybooks	4. aeroplanes
5. Animals and nature	1. favourite
1. Five years old	2. happy
2. Her family and her two best friends	3. ten
3. Play a game of catch	4. tidy
4. Barbeque food	5. friends
5. To sing her a birthday song	1. bus
1. Kelvin's first day in his new school	2. aeroplanes
2. His father found a new job on the other side of the country	3. bridge
3. Nervous	4. car
4. Friendly	5. transport
5. Pete	6. bicycle

Challenging English Practice Papers



ISBN: 9789811805073

Challenging English Practice Papers (Kindergarten 2) focuses on helping pre-schoolers develop their comprehension, vocabulary and grammar skills, in order to prepare them for Primary 1. This book contains comprehensive exercises with a range of question types, from MCQ to open-ended questions, to help pre-schoolers strengthen their language skills.



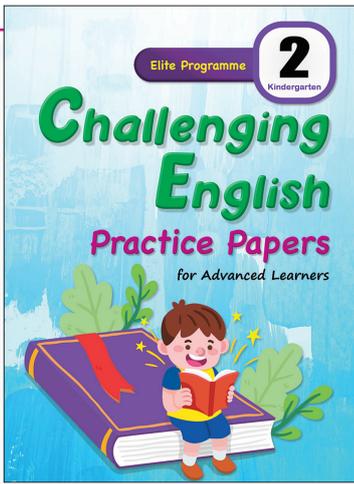
Practice Papers

Consisting of grammar multiple-choice questions, vocabulary cloze passages and open-ended comprehension questions, students will be better prepared for English language lessons in Primary 1.



Answers

Answers to all questions are provided.



Elite Programme **2**
Kindergarten

Challenging English Practice Papers

for Advanced Learners

For Advanced Learners
ISBN: 9789814996341

Elite Programme K2: Challenging English Practice Papers for Advanced Learners comprises 24 practice papers on grammar, vocabulary and comprehension for K2 learners preparing for primary school.

Practice Papers

Consisting of vocabulary, grammar and comprehension questions in multiple-choice, fill in the blanks and open-ended formats.

Practice Paper 1

Name: _____ Marks: 50
Date: _____ Parent's signature: _____

Section A – Vocabulary
(I) Look at each picture carefully and circle the correct word. (10 marks)

-      
-     
-      

Section B

(II) Fill in the blanks with the most suitable word from the box. (5 marks)

careful truthful proud loyal fair

- Jia Ming never lies to his parents. He is always _____.
- Joseph's parents are rich, but he is a very humble boy. Joseph is never _____.
- Audrey is a very careless girl. Her teachers have told her to be more _____.
- Thomas believes that everyone must be treated equally. He is a _____ person.
- Razali has always been good friends with Hock Chai and will never say anything bad about him. He is very _____ to his friend.

Section B – Grammar

(I) Fill in the blanks with the correct answer. (10 marks)

- My best friend _____ (like/likes) animals very much and has many pets.
- Sandra _____ (has/have) a few tickets for the movie tonight.
- My neighbour's dog always _____ (bark/barks) at strangers.
- Aisha _____ (goes/go) to the park every evening.
- I would like to _____ (sleep/sleeps) in the bed now, so please turn off the radio.
- Do you know that my brother-in-law likes to _____ (drink/drinks) his tea from a saucer?
- My mother has just _____ (finish/finished) having her shower.

Section C – Comprehension

Read the passage below and answer the questions that follow. Write the number of the correct answer in the brackets. (5 marks)

Grunt is a pig that loves food more than anything else. One day, he saw some big watermelons at a fruit stall. A sign with the word 'Free' was placed on them. Grunt became very excited. He decided to eat all the watermelons.

Greedy Grunt finished all five huge watermelons. He felt very pleased with himself and went home smiling. The next day, Grunt could not move and had to call for the doctor. He was suffering from a bad stomach upset due to overeating.

(II) Fill in the blanks with the most suitable word. Write the number 1, 2, 3 or 4 in the brackets. (10 marks)

- _____ is your ruler, the long one or the short one?
(1) Which (2) What (3) How (4) Who
- _____ did you start going to school?
(1) What (2) How (3) When (4) Which
- _____ is she crying?
(1) How (2) What (3) Why (4) Which
- _____ did you cut your finger?
(1) Whose (2) What (3) Which (4) How

Section B – Grammar

(I) Last night, Huimin and I _____ (had/have) dinner at a posh restaurant.

9. My daughter is very playful. Sometimes she _____ (pretend/pretends) to sleep during dinnertime.

10. Lionel _____ (enjoy/enjoys) having so many pets in his home.

(II) Fill in the blanks with the most suitable word. Write the number 1, 2, 3 or 4 in the brackets. (10 marks)

- _____ is your ruler, the long one or the short one?
(1) Which (2) What (3) How (4) Who
- _____ did you start going to school?
(1) What (2) How (3) When (4) Which
- _____ is she crying?
(1) How (2) What (3) Why (4) Which
- _____ did you cut your finger?
(1) Whose (2) What (3) Which (4) How

Answers

Practice Paper 1

Section A (I)
1. spoon 2. fork 3. butter spreader 4. knife 5. tin-opener 6. water tap 7. bowl 8. mug 9. plate 10. glass

Section A (II)
1. never 2. always 3. careful 4. proud 5. loyal 6. happy 7. excited 8. surprised 9. interested 10. enjoys

Section B (I)
1. 2 2. 3 3. 4 4. 1 5. 4 6. 1 7. 2 8. 2 9. 4 10. 3

Section C
1. 3 2. 1 3. 4 4. 2

Practice Paper 2

Section A (I)
1. cake 2. curry puff 3. sandwiches 4. rice 5. cookies 6. fish 7. orange 8. mango 9. pineapple 10. apple

Section A (II)
1. juicy 2. sour 3. crispy 4. sweet 5. hard 6. mischievous 7. beautiful 8. funny 9. healthy 10. words

Section A (III)
1. naughty 2. favourite 3. good 4. attention 5. thoughtless 6. shy 7. 1 8. 2 9. 3 10. 2

Section B (I)
1. 3 2. 1 3. They are 4. have 5. see 6. agent 7. reading 8. to sell 9. surprised 10. meet

Section C
1. 3 2. 3 3. 2 4. 1 5. 4

Practice Paper 3

Section A (I)
1. skirt 2. shoes 3. trousers 4. belt 5. slippers 6. towel 7. dress 8. pyjamas 9. shorts 10. T-shirt

Section A (II)
1. 3 2. 1 3. 2 4. 1 5. 4 6. 2 7. 4 8. 1 9. 3 10. 4

Section A (III)
1. skirt 2. pretty 3. attract 4. eyelashes 5. barbed-wire 6. eyelashes 7. 1 8. 2 9. 3 10. 1

Section B (I)
1. 3 2. 1 3. 2 4. 3 5. 4 6. 2 7. 3 8. 3 9. 4 10. 1

Section B (II)
1. should 2. must 3. could 4. shall 5. should 6. used to 7. might 8. can't 9. needn't 10. has

Answers

Section B (III)
1. cry 2. cries 3. cries 4. crying 5. cry

Section C
1. My name is Gary and I am seven years old.
2. I live with my parents.
3. I have up to six socks every morning to go to school.
4. I have many friends at school.
5. He loves dinosaurs and is always fascinated with them.

Section D
1. Everyone likes Adeline because she is kind and helpful.
2. Farah disliked Adeline because Adeline is popular and does well in her school tests.
3. Farah was walking in the rain one day because she had forgotten to bring her umbrella.
4. Adeline ran up to Farah and offered to share her umbrella with her.
5. Farah was moved by her kindness and accepted the offer.

Practice Paper 6

Section A (I)
1. 1 2. 4 3. 2 4. 1 5. 3 6. 3 7. 4 8. 1 9. 3 10. 2

Section A (II)
1. careful 2. park 3. sells 4. rest 5. better 6. litter 7. pencil 8. helpful 9. toys 10. shoes

Section A (III)
1. vegetables 2. fruits 3. watering can 4. pineapple 5. money

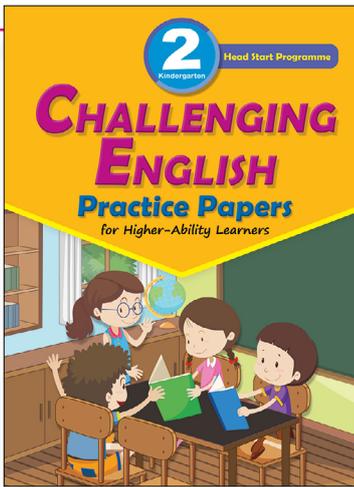
Section B (I)
1. should 2. must 3. could 4. shall 5. should 6. used to 7. might 8. can't 9. needn't 10. has

Section B (II)
1. 2 2. 1 3. 1 4. 4 5. 3 6. 1 7. 4 8. 2 9. 4 10. 2

Section B (III)
1. 2 2. 1 3. 3 4. 4 5. 3 6. 1 7. 4 8. 2 9. 4 10. 2

Answers

An answer key is included for parents to evaluate their child's progress.



For Higher-Ability Learners

ISBN: 9789814996396

This book is specially written for high-ability pre-schoolers preparing for Primary 1. It is suitable for young learners who can ask reflective and probing questions, possess a rich vocabulary and are able to learn quickly, on top of having good memory, the ability to reason at a level usually found in students some years older and a preference for independent work. This book is ideal for parents who are looking to stretch their children to their fullest potential in the English Language.

Test Paper 2

Name: _____ Marks: _____

Date: _____

Time: 1 hour Parent's Signature: _____

Section A (5 questions × 1 mark)
Fill in each blank with the most suitable word from the box.

pen	group	market	book	eraser
soup	florist	ruled	cut	tricycle

- My mother went to the _____ to buy some fish and vegetables.
- I love to have a large bowl of hot chicken _____ cold, rainy day.
- During the school holidays, my classmates and I go out _____ We visit places of interest and have a good time together.
- My sister loves flowers. She wants to be a _____ she grows up.
- Do not touch the blade of the knife! You might get _____

Section B (10 questions × 1 mark)
Choose the most suitable answer and write its number in the brackets.

- The librarian neatly _____ the books on the bookshelves. (1) collects (2) arranges (3) dumps (4) throws ()
- Ahmad keeps guppies in his _____. (1) aquarium (2) warehouse (3) storeroom (4) kitchen ()
- Mrs Leong is my aunt. I am her _____. (1) son (2) father (3) niece (4) cousin ()
- Look into the _____ if you want to know exactly where China is. (1) album (2) dictionary (3) atlas (4) encyclopaedia ()
- I like to go fishing at the _____. (1) fish tank (2) sink (3) river (4) aquarium ()
- The dogs _____ loudly at the stranger. (1) barked (2) hissed (3) moored (4) neighed ()
- Madam Norlitzah is feeding the chickens in the _____. (1) coop (2) stable (3) kennel (4) forest ()
- The young of a goat is called a _____. (1) cub (2) goatlet (3) foal (4) kid ()

Section D (5 questions × 1 mark)
Fill in the blanks with a suitable form of the word given in brackets.

- The prince is one of the _____ men I have ever seen. (tall)
- Bala _____ his cat twice a day. (feed)
- My father _____ me two rabbits as a present. (buy)
- An old man _____ to see Mrs Lim two hours ago. (come)
- He ran _____ in order to catch the bus. (quick)

Section E (2 questions × 2 marks)
Rearrange these words to form sentences. Begin each sentence with a capital letter and end it with a full stop or question mark.

36. during vacation dry season the taking Do enjoy you a _____

37. school the public take every bus I day to _____

Section F (2 questions × 2 marks)
Write a question for each of the answers given.

38. When _____ ?
You can see the doctor at 3.30 pm.

39. What _____ ?
I saw a rainbow across the sky.

Section G (1 question × 2 marks)
Join the sentences to form one sentence without changing its meaning.

40. Mr Harold is very rich. Mr Harold is not happy.

Section H
Comprehension (10 questions × 1 mark)
Read this passage carefully.

One bright Sunday morning, Cheng Lim goes to the beach with his family. They drive there in the family car. It is a sunny day. The sky is clear, and there is a cool breeze blowing all around. The sea is blue and the sand is white and soft. Cheng Lim plays beach ball with his father, while his mother relaxes in the shade, reading a book. At noon, they enjoy a meal of sandwiches and some refreshing lemonade. In the afternoon, Cheng Lim goes swimming with his parents. He also makes sandcastles with a plastic spade and cups. In the evening, Cheng Lim returns home. He enjoyed his day at the beach very much.

Now answer these questions. Write the number of the correct answer in the brackets.

- Cheng Lim went to the beach on _____. (1) Monday (2) Wednesday (3) Sunday (4) Saturday ()
- They took the _____ to the beach. (1) train (2) bus (3) boat (4) family car ()

Section I
Written Expression (5 × 2 marks)
Look at the picture carefully. Write five sentences about what you see.

- _____
- _____
- _____
- _____
- _____

Test Papers

Consisting of more challenging question formats such as rearranging words to form sentences, question-forming and knowledge of written expressions.

Answers

An answer key is included for parents to evaluate their child's progress.

Answers

Test Paper 1

Section A (5)
1. (2) 2. (3) 3. (4) 4. (2)
5. (1) 6. (3) 7. (3) 8. (1)
9. (2) 10. (1)

Section B (10)
11. largest 12. heat 13. pencil
14. bath 15. bookshop

Section C (26)
1. market 2. soup 3. group
4. forest 5. cut

Section D (5)
1. tallest 32. feeds 33. bought
34. came 35. quickly

Section E (2)
36. Do you enjoy taking a vacation during the dry season?
37. Take the public bus to school every day.

Section F (2)
38. When can I see the doctor?
39. What did you see across the sky?

Section G (1)
40. Mr Harold is rich, but not happy OR Although Mr Harold is rich, he is not happy.

Section H (10)
41. (3) 42. (4) 43. (2) 44. (1)
45. (3) 46. (4) 47. (2) 48. (4)
49. (1) 50. (3)

Section I (5)
1. playground 2. car
3. angle 4. kittens
5. knife

Test Paper 2

Section A (5)
1. market 2. soup 3. group
4. forest 5. cut

Section B (10)
1. (2) 2. (1) 3. (3) 4. (3) 5. (4) 10. (3)
11. (1) 12. (1) 13. (4) 14. (3) 15. (2)

Section C (26)
1. market 2. soup 3. group
4. forest 5. cut

Section D (5)
1. tallest 32. feeds 33. bought
34. came 35. quickly

Section E (2)
36. Do you enjoy taking a vacation during the dry season?
37. Take the public bus to school every day.

Section F (2)
38. When can I see the doctor?
39. What did you see across the sky?

Section G (1)
40. Mr Harold is rich, but not happy OR Although Mr Harold is rich, he is not happy.

Section H (10)
41. (3) 42. (4) 43. (2) 44. (1)
45. (3) 46. (4) 47. (2) 48. (4)
49. (1) 50. (3)

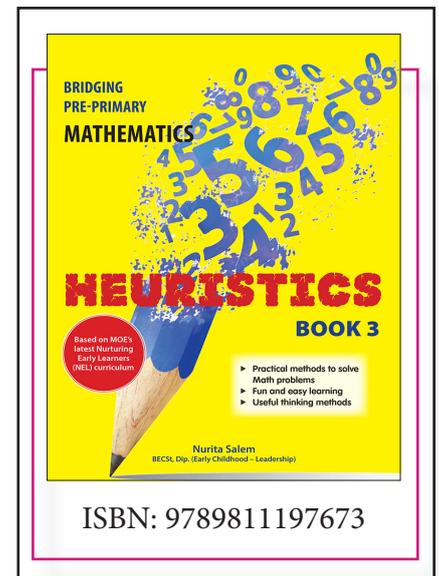
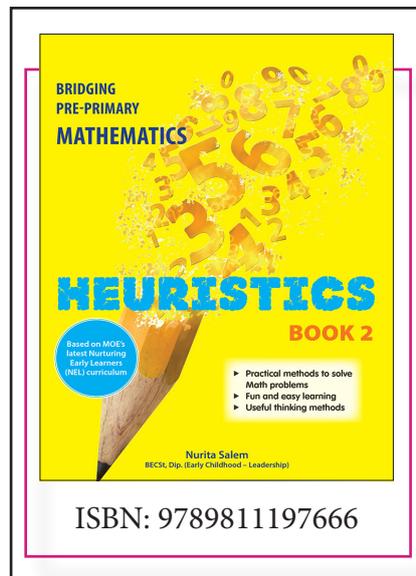
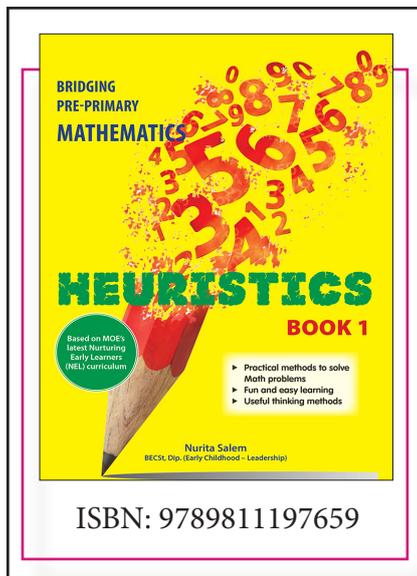
Section I (5)
1. playground 2. car
3. angle 4. kittens
5. knife

Heuristics

Math heuristics are strategies that students can use to solve complex word problems. The Heuristics series provides comprehensive worked examples coupled with step-by-step solutions, fostering a deep understanding of the heuristics covered and the necessary skills to apply them appropriately. The examples are followed by a set of practice questions for students to apply their learning and assess their understanding of the heuristics taught.

The complete series covers all possible heuristics for every topic, stating the conditions for the use of each heuristic technique clearly. Organised by topic, this series gives ample examples and practice to help students master the skill of application, using the appropriate problem-solving strategy to solve a given mathematical problem.

Through the structure above, it is hoped that students will learn progressively and become confident problem-solvers. Educators may also find this series a valuable resource for teaching heuristics in the classroom.



Clear Topics

Topics are stated clearly at the beginning of each unit so that students can be active learners.

Topic Outline

Math vocabulary provides a quick summary for children to reinforce or consolidate learning.

Unit 5 Ordinal Numbers

Ordinal numbers are numbers defining the position of something, such as 'first', 'second', or 'third'.

Knowing your ordinal numbers.

1 st – first	2 nd – second
3 rd – third	4 th – fourth
5 th – fifth	6 th – sixth
7 th – seventh	8 th – eighth
9 th – ninth	10 th – tenth

Unit 5 Ordinal Numbers

Ordinal Numbers (1st to 10th)
Look at the picture and follow the instructions below.

1. Colour the 1st and 8th duck.
2. Circle the fifth and tenth duck.
3. Draw a bow for the sixth duck.
4. Colour the seventh duck brown.
5. Colour the webbed feet of the third and fourth duck orange.

Multiple Practices

Apply new skills and concepts learnt.

Unit 3 Number Bonds

Number Bonds 1 to 10
Complete the number bonds.

1. There are 6 marbles altogether in the two bowls.
There are 4 marbles in Bowl A.
How many marbles are there in Bowl B?

2. There are 8 marbles altogether in the two bowls.
There are 3 marbles in Bowl B.
How many marbles are there in Bowl A?

Unit 1 Addition within 50

Addition without

Method 1
Add by Counting On

Example:
 $25 \rightarrow 26 \rightarrow 27 \rightarrow 28$
 Count on 3 steps from 25
 $25 + 3 = 28$

1. Count on 4 steps from 36.

$36 + 4 = \square$

Progressive Difficulty

Mathematical variation is used, where the concept being taught remains the same but the difficulty of questions varies by increments. By looking at mathematical concepts from various perspectives, the child's understanding of math will deepen.

Methods

We understand that there may be many solutions to the same question. Hence, by showcasing different methods of solving questions, children learn to become more flexible in their problem-solving skills.

Engaging Activities

Fun activities are incorporated to allow students to discover interesting ways to achieve mastery of concepts taught.

Unit 7 Shapes

Find the missing shapes and match them correctly.

Higher Order Thinking Practices

Challenging questions stretch a learner's mind to its fullest.

Unit 3 Adding and Subtracting

Study the figures and fill in the missing numbers.

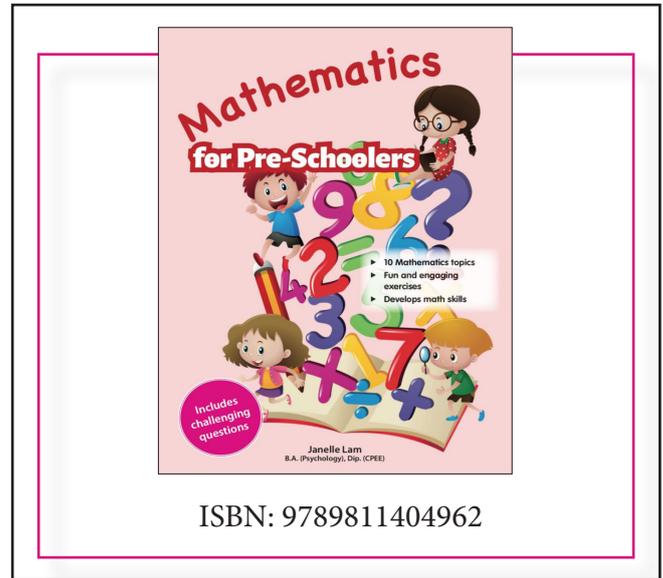
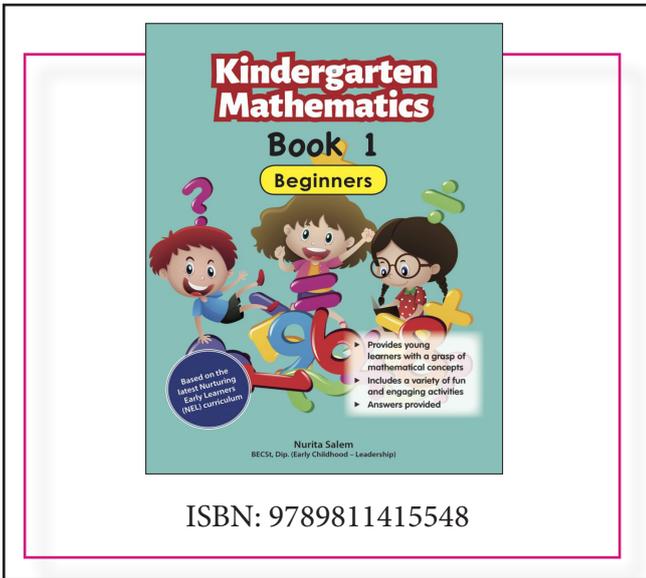
★5. $\square + 3 \rightarrow 37 \rightarrow + 7 \rightarrow \square \rightarrow - 6 \rightarrow \square$

★6. $\square + 3 \rightarrow 31 \rightarrow + 5 \rightarrow \square \rightarrow - 4 \rightarrow \square$

★7. $\square - 2 \rightarrow \square \rightarrow + 9 \rightarrow 21 \rightarrow - 8 \rightarrow \square$

Mathematics for Pre-Schoolers

This series contains fun-filled activities rich in mathematical content to engage children. When children have fun while they learn, they are engaged in learning and grasp mathematical concepts better.



Continuous Challenges

To ensure that students have exposure to questions of all difficulty levels, mathematical variation is used. Each concept taught has questions which gradually increase in difficulty, deepening a child's understanding.

Activity 3 Add and match

Count and add the number of items together. Fill in the blanks and draw a line to match the question on the left to the correct number.

 2 + 2	<input type="text" value="9"/>
 4 + <input type="text"/>	<input type="text" value="8"/>
 6 + <input type="text"/>	<input type="text" value="7"/>
 4 + <input type="text"/>	<input type="text" value="4"/>

Activity 4 Word problems – addition

Complete the word problems.

- Dan has 1 fish. His mother bought him 1 more fish. How many fishes does Dan have altogether?
 $1 + 1 = \square$
 Dan has _____ fishes altogether.
- The dog has 2 balls. Sally gave the dog 4 more balls. How many balls does the dog have altogether?
 $2 + \square = \square$
 The dog has _____ balls altogether.
- Sam has 3 cats. He adopted 2 more cats. How many cats does Sam have altogether?
 $3 + \square = \square$
 Sam has _____ cats altogether.

Activity 6 Favourite fruits

Everyone in the class has a different favourite fruit. The graph below shows the number of children who like each fruit.

Look at the graph and fill in the blanks. 😊 = 1 child.

Apple	😊😊😊😊😊😊😊😊
Mango	😊😊😊😊😊😊😊😊😊😊😊😊😊😊
Watermelon	😊😊😊😊😊😊😊😊
Banana	😊😊😊😊😊😊😊😊

- _____ children like apple.
- _____ children like mango.
- _____ children like watermelon.
- _____ children like banana.
- _____ more children like apple than banana.
- _____ fewer children like watermelon than mango.

- Cross out 5 umbrellas.

 There are _____ umbrellas left.
- Cross out 9 bags.

 There are _____ bags left.
- Cross out 8 trolleys.

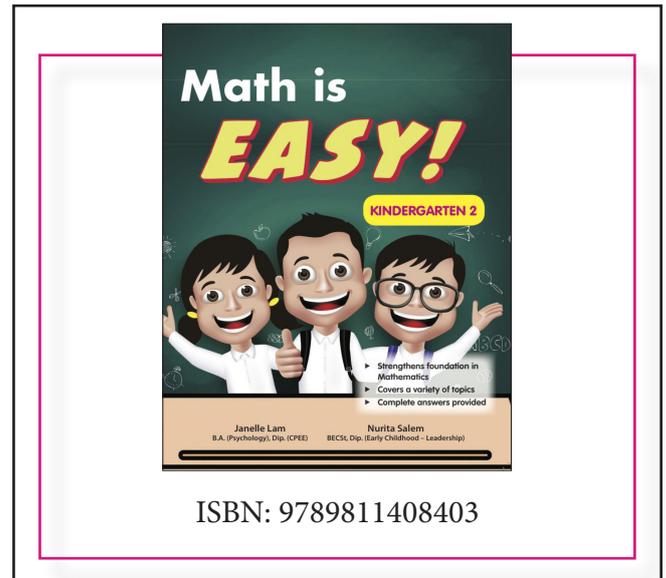
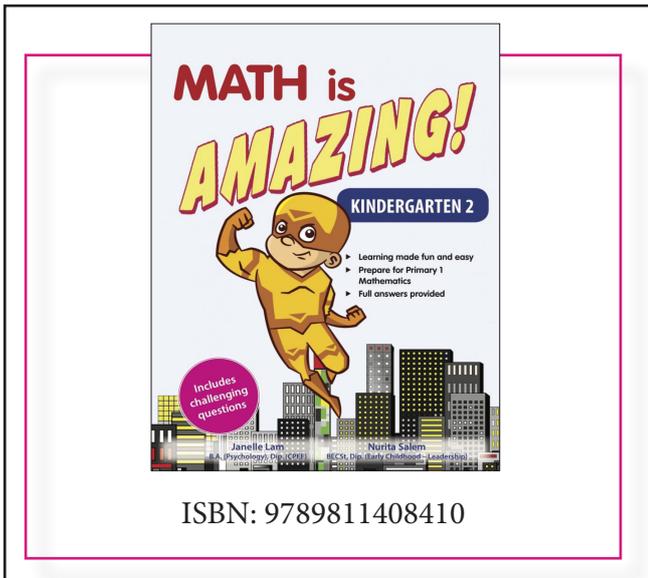
 There are _____ trolleys left.

Real-life Applications

Children can uncover new mathematical ideas and connect numbers with their environment.

What is Math Series

Pre-schoolers are actually no strangers to Math. They naturally sort and organise. They build and design. These mathematical skills are the starting points of their development. With that in mind, we ensure that our titles are developmentally appropriate for pre-schoolers, but at the same time provide comprehensive and fun exercises around counting, adding, subtracting, comparing sizes, lengths, weights and more.



Chapter 6: Measurement

9. What is the length of side A of this rectangle?

The length of side A of this rectangle is _____.

10. What is the perimeter of this rectangle?

The perimeter of this rectangle is _____.

97

Math is Amazing! Kindergarten 2

8. Arrow 2 is _____ arrow 1.

taller than shorter than

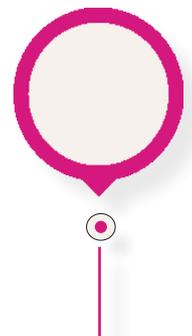
9. Arrow 3 is _____ arrow 2.

taller than shorter than

104

Assorted Practices

Practices are given in different formats to reinforce learning, and develop creativity.



Real-life Applications

Children can uncover new mathematical ideas and connect numbers with their environment.

Unit 3: Patterns and Shapes

Look at the box below and answer Questions 26 to 30.

26. Colour all the rectangles above blue.

27. Colour all the triangles above red.

28. Colour all the circles above yellow.

77

Chapter 3: Multiplication and Division 1: Aided Questions

8. How many **more** chocolates did Chase's friends each get than Chase?

Chase's friends each got _____ more chocolate than Chase.

Read the given information carefully and answer Questions 9 and 10.

Matt organised a farewell party. He bought 30 gifts for his friends. He evenly distributed the gifts among 10 friends. However, two of his friends could not make it to the party.

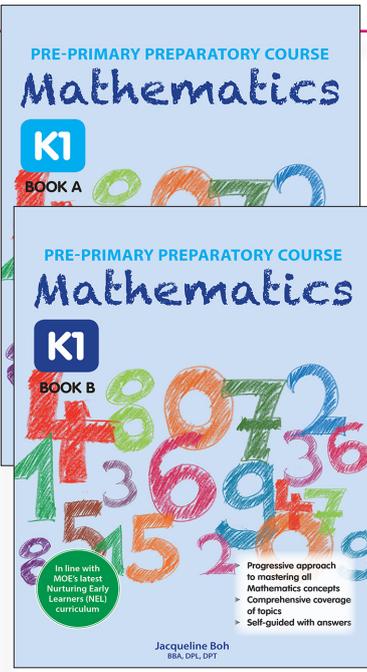
45

Pre-Primary Preparatory Course

This series of 6 titles is designed primarily for children in Kindergarten One and Kindergarten Two. More advanced learners in Nursery Two can start developing their mathematical skills through this preparatory course as well.

To excel in Mathematics in primary school education and beyond, it is important to understand all essential basic mathematical skills well so that children are able to grasp more advanced mathematical concepts in the future. Therefore, this series helps build that foundation in a progressive and systematic manner.

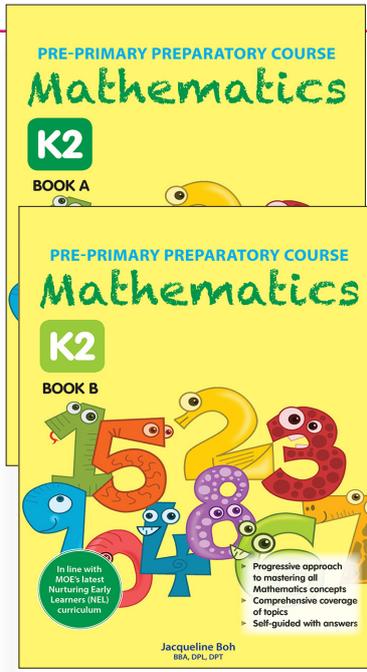
It is comprehensive by providing sufficient practice for each concept in a straightforward and targeted approach. Interesting illustrations and pictures are used to allow children to make connections between the real world and mathematical concepts, and thus help children to develop a stronger grasp of each concept.



The image shows two book covers for the K1 Mathematics series. Book A features a light blue background with the title 'PRE-PRIMARY PREPARATORY COURSE Mathematics' and 'K1 BOOK A' in a blue box. Below the title are colorful numbers. Book B has the same title and 'K1 BOOK B' in a blue box, with a larger collection of colorful numbers. Both covers include a green circular badge stating 'In line with MOE's latest Nurturing Early Learners (NEL) curriculum' and a list of features: 'Progressive approach to mastering all Mathematics concepts', 'Comprehensive coverage of topics', and 'Self-guided with answers'. The author's name, Jacqueline Boh (BBA, DPL, DPT), is at the bottom.

Book A ISBN:
9789811194405

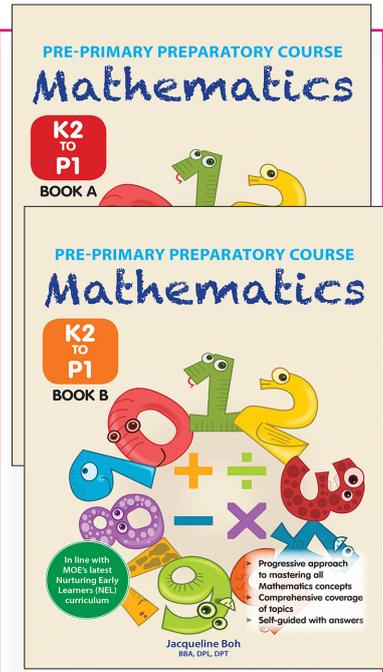
Book B ISBN:
9789811194412



The image shows two book covers for the K2 Mathematics series. Book A has a yellow background with the title 'PRE-PRIMARY PREPARATORY COURSE Mathematics' and 'K2 BOOK A' in a green box. Book B has the same title and 'K2 BOOK B' in a green box, featuring colorful numbers and mathematical symbols like a frog, a duck, and a bird. Both covers include a green circular badge stating 'In line with MOE's latest Nurturing Early Learners (NEL) curriculum' and a list of features: 'Progressive approach to mastering all Mathematics concepts', 'Comprehensive coverage of topics', and 'Self-guided with answers'. The author's name, Jacqueline Boh (BBA, DPL, DPT), is at the bottom.

Book A ISBN:
9789811194382

Book B ISBN:
9789811194399



The image shows two book covers for the K2 to P1 Mathematics series. Book A has a light beige background with the title 'PRE-PRIMARY PREPARATORY COURSE Mathematics' and 'K2 TO P1 BOOK A' in a red box. Book B has the same title and 'K2 TO P1 BOOK B' in a red box, featuring colorful numbers and mathematical symbols like a frog, a duck, and a bird. Both covers include a green circular badge stating 'In line with MOE's latest Nurturing Early Learners (NEL) curriculum' and a list of features: 'Progressive approach to mastering all Mathematics concepts', 'Comprehensive coverage of topics', and 'Self-guided with answers'. The author's name, Jacqueline Boh (BBA, DPL, DPT), is at the bottom.

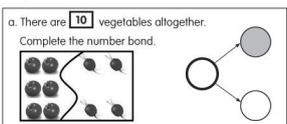
Book A ISBN:
9789811194368

Book B ISBN:
9789811194375

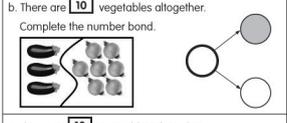
Unit 5 Number Bonds

Practice 5.7 Number Bonds of 10
Complete the number bonds.

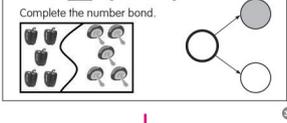
a. There are **10** vegetables altogether.
Complete the number bond.



b. There are **10** vegetables altogether.
Complete the number bond.



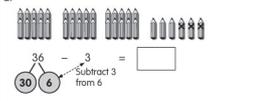
c. There are **10** vegetables altogether.
Complete the number bond.



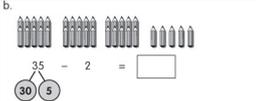
Pre-Primary Preparatory Course Mathematics K2 Book 8

Practice 7.2 Subtract Using Number Bond
Subtract using number bond. Fill in the missing numbers.

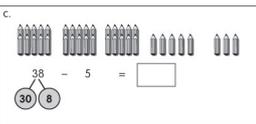
a.



b.



c.



Pre-Primary Preparatory Course Mathematics K1 Book 8

Practice 3.3 Count and Add
Draw circles, count and add. Complete the addition equations.

a.



b.



c.



d.



Unit 1 Counting From 0 to 10

Practice 1.1 Count 0, 1 and 2
Count and write the number in each box.



a. The boy has eyes .

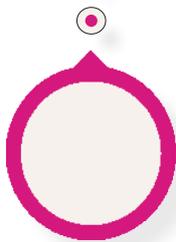
b. He has nose .

c. He has pair of glasses .

d. He has mouth .

e. He has ears .

f. He has cap .



Learn by Doing

Children are encouraged to take a hands-on approach to their learning by actively participating in the exercises.

Unit 2 Comparing Numbers

Practice 2.4 More
Circle the group with **more** things.

a.



b.



c.

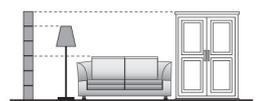


d.



Unit 4 Length

Practice 4.6 Measuring in Units
Fill in the blanks and boxes (is one unit).



a. The floor lamp is units tall.

b. The sofa is units tall.

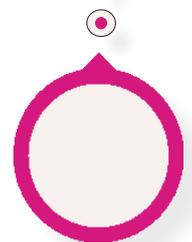
c. The cupboard is units tall.

d. The _____ is the **tallest**.

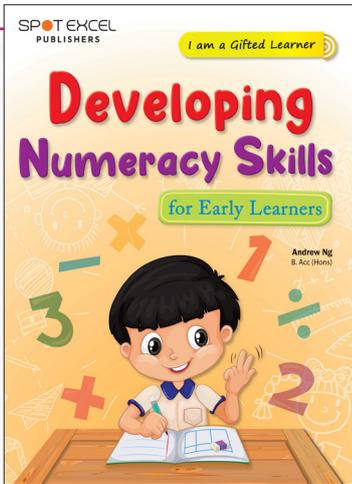
e. The _____ is the **shortest**.

Real-life Applications

Children can uncover new mathematical ideas and connect the concepts with their environment.

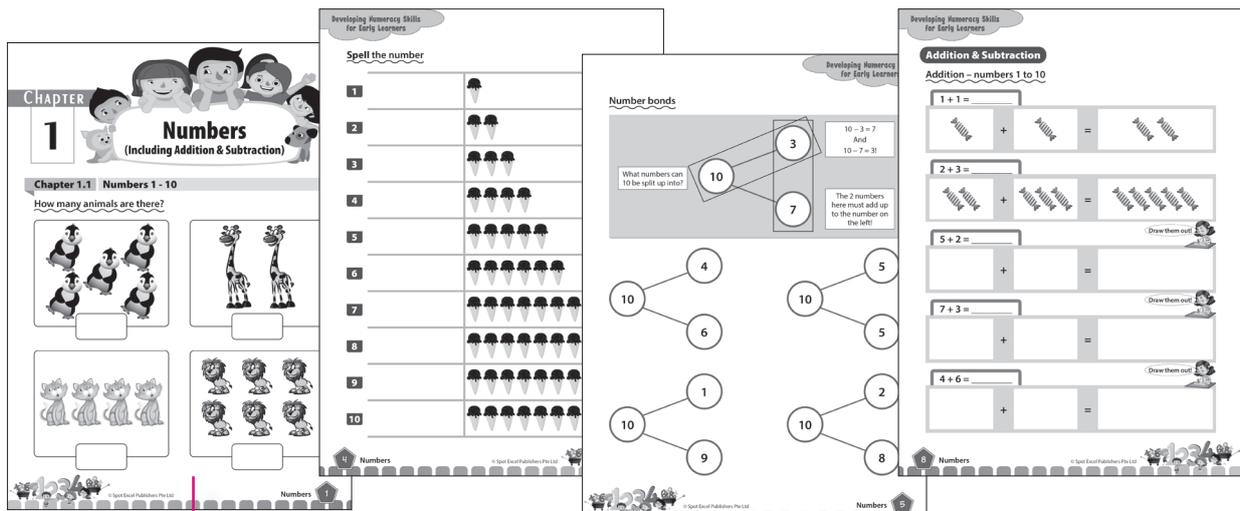


Developing Numeracy Skills



ISBN: 9789811805080

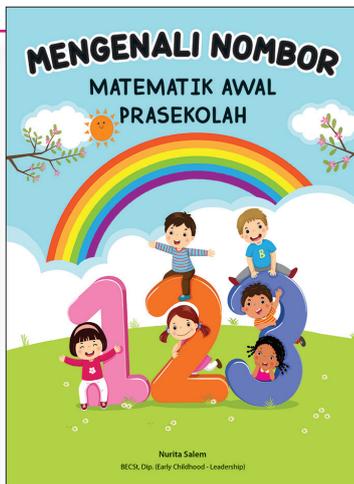
Developing Numeracy Skills for Early Learners focuses on building counting and problem-solving skills in early learners. This book contains engaging visuals and exercises to make learning about numbers exciting for young children, so as to strengthen their foundation in Mathematics and prepare them for more challenging topics in the future.



Engaging Exercises

Various exercises with guiding points and examples for children to learn and explore the wonders of numbers.

Knowing Numbers – Pre-school Mathematics



ISBN: 9789811499210

Knowing Numbers – Preschool Mathematics is written in Malay for children ages four to six. The book aims to introduce basic mathematical foundation and concepts that are interactive. The six different exercises will help stimulate interest in Mathematics among early learners using the Malay language.

Mari Kita Lihat Carta Bentuk!
Teliti dan baca bentuk-bentuk di bawah secara lantang.

Bentuk	Ejaan
	segi empat tepat
	empat segi
	bulat
	segi tiga

Tentukan Urutan
Tampalkan pelekat pada burung yang ketiga dari kiri.

Surihkan Nombor
Warnakan kapal-kapal kertas di bawah mengikut warna kegemaran kamu. Kemudian, surihkan nombor di bawah.

Terdapat kapal kertas.



Interactive Activities

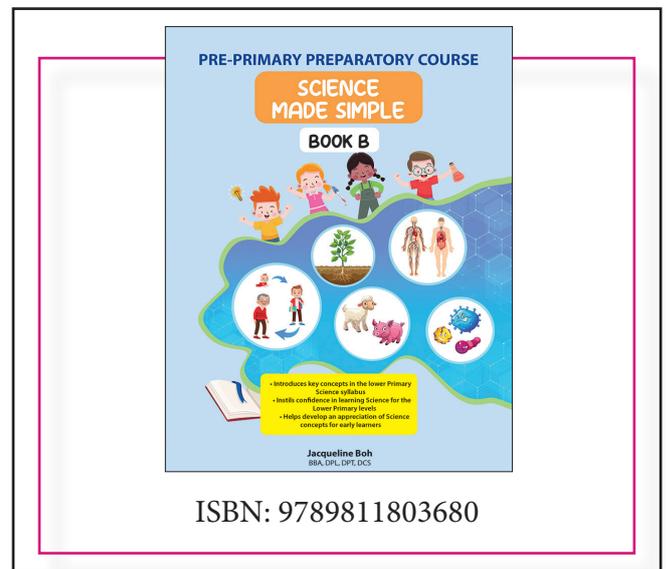
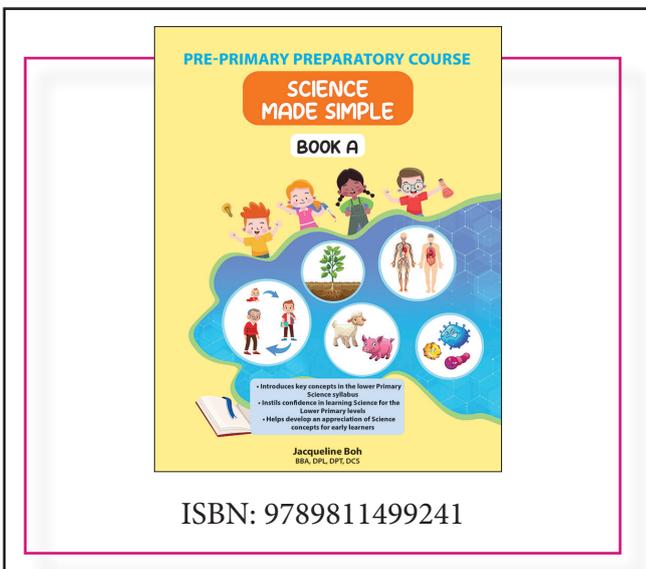
Various interactive activities with fun illustrations aid children in learning Mathematics.



Science Made Simple

Science Made Simple comprises two books (Book A and Book B) and is designed to help children grasp all key Science concepts in the Lower Primary Science syllabus. Advanced learners from Kindergarten Two can start developing an appreciation for Science. Children from Primary One and Primary Two can also use these books to prepare themselves before they progress to Primary Three. Children from Primary Three and Primary Four can use these books for practice and examination preparation.

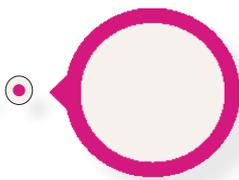
This series aims to achieve the above objectives and instil confidence for deeper Science learning and exploration. All fundamental concepts required for Lower Primary Science are introduced in Book A and B. After completing all practices, the books serve as examination revision notes for Primary Three and Primary Four.



1 Living things and non-living things

Learn Characteristics of living things

- ▶ Need **air**, **food** and **water** to survive.
- ▶ Can **grow**.
- ▶ Can **move** by themselves.
- ▶ Can **respond to changes** around them.
- ▶ Can **reproduce**.



Illustrations

Key learning points are illustrated for easier learning and understanding.

Practices & Answers

Living things and non-living things

Practice 1.5 Living things need air, food and water
Circle **Yes** or **No** and fill in each blank with **air**, **food** or **water**.

- Can the cricket survive? **Yes / No**
Why?
The cricket does not have _____.
- Can the cricket survive? **Yes / No**
Why?
The cricket does not have _____.
- Can the cricket survive? **Yes / No**
Why?
The cricket does not have _____.
- Can the cricket survive? **Yes / No**
Why?
The cricket has _____ and _____.

Living things and non-living things

Practice 1.6 Living or non-living things
Circle **True** or **False** for each sentence.

Group A	Group B
cricket, plant	jam, rock
walrus, lamb	motorcycle, book

- The things in Group A can grow. **True**
- The things in Group A cannot respond to changes. **True**
- The things in Group B can move by themselves. **True**
- The things in Group B cannot grow. **True**

Answers

Practice 1.1
1. Living thing
2. Living thing
3. Non-living thing
4. Living thing
5. Non-living thing
6. Living thing
7. Non-living thing
8. Non-living thing
9. Living thing
10. Living thing

Practice 1.2
1. 1; 2; 3
2. 1; 2; 3
3. Living things can grow.

Practice 1.3
1. reaches
2. moves
3. runs
4. Living things can respond to changes.
5. Living things can move by themselves.

Practice 1.4

Practice 1.5
1. No/air
2. No/food
3. No/water
4. Yes; air; food; water

Practice 1.6
1. True
2. False
3. False
4. True
5. True
6. True
7. True
8. True
9. True
10. Living thing

Practice 1.7

Living things	Non-living things
can grow	can reproduce
can move by themselves	can respond to changes
can reproduce	need air, food and water to survive
can respond to changes	cannot grow
need air, food and water to survive	cannot move by themselves
cannot grow	cannot reproduce
cannot reproduce	cannot respond to changes
cannot respond to changes	can not need air, food and water

Practice 2.1
1. They need air, food and water.
2. They can grow.
3. They can respond to changes.
4. They can move by themselves.
A. They feed on other living things.
B. They can make their own food.

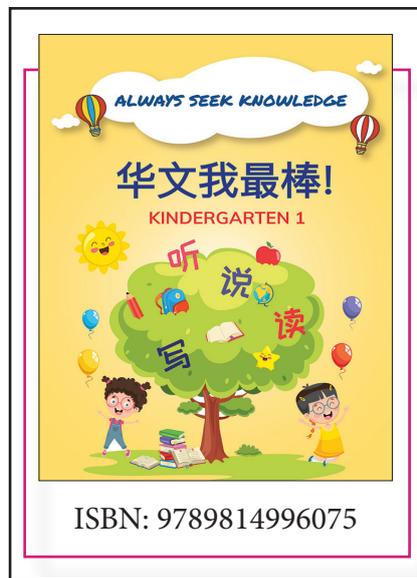
Practice 2.2
1. B
2. A
3. D
4. C

Each unit has several practices of varying difficulty, supported by answers at the end of the books.

Always Seek Knowledge – Chinese

It is only with a solid foundation that the rest of a house can be built. The Always Seek Knowledge 华文我最棒! series is meticulously crafted to create a strong foundation of the Chinese language in children through a variety of engaging activities.

The series builds upon the basics of the Chinese language. Children will learn everyday Chinese vocabulary as well as how to write Chinese characters. Activities in these books will build cognitive abilities in children, ranging from motor skills to problem-solving. Through these books, children will be able to develop a strong foundation in the language.



连连看

连一连:

练习

圈一圈正确的图:

1	□	□	□	□
□	□	□	□	□

圈一圈正确的图:

写一写

读一读, 写一写。

老师早安, 同学好。

早	安	早	安
老	师	老	师

填一填

填写正确的量词。

一个 一只

____ 太阳 ____ 乌龟

____ 蚊子 ____ 皮球

____ 头 ____ 老鼠

____ 猫 ____ 鼻子

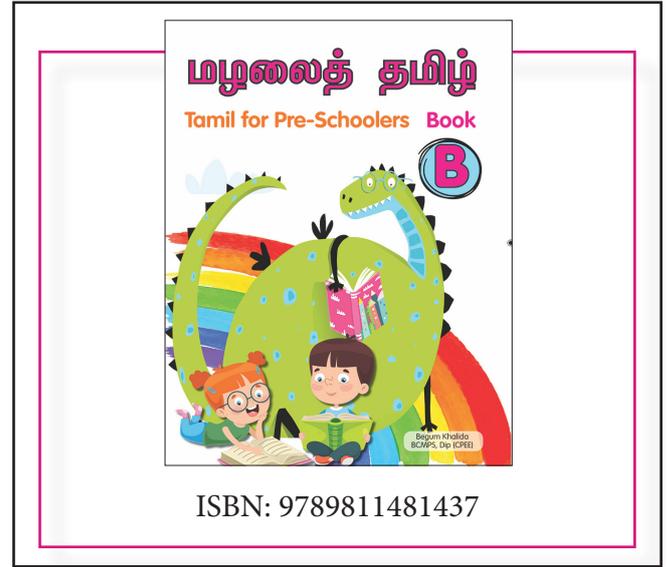
Variety of Activities

Children will be exposed to a variety of activities with increasing difficulty to learn Chinese vocabulary and characters as they progress through the 3 books.



Tamil for Pre-Schoolers

Ideal for introducing the foundations of Tamil language to children. The various thematic practices included in this series aim to engage children with basic Tamil vocabulary and phrases, sentence structuring, simple Mathematics, engrossing word games and stimulating riddles! A must-have for encouraging the love for Tamil in children!

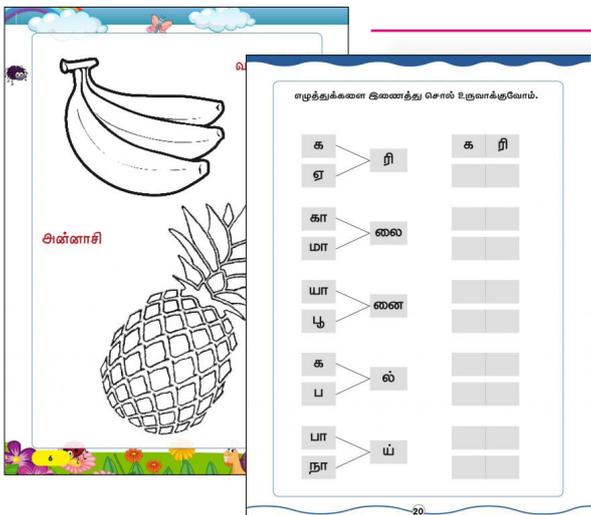


Writing Practices

Comprehensive writing practices that include the writing of letters and common words.

Simple Sentences

Children can put their vocabulary to use by practising sentence construction.

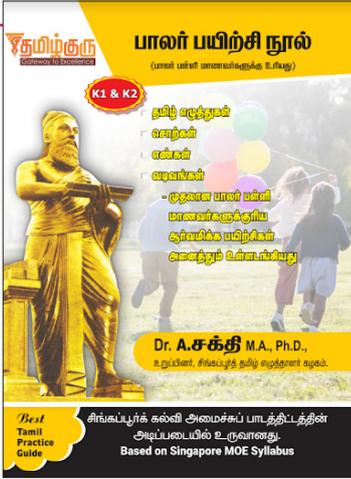


Engaging Activities

Encourage your child's enthusiasm towards the Tamil language through stimulating and comprehensive exercises that equip your child with a wide range of vocabulary.



Practice Guide



ISBN: 9789811498541

Tamil Practice Guide is suitable for Kindergarten 1 and Kindergarten 2 students, based on the latest MOE syllabus.

This book contains Tamil letters, simple vocabulary, numbers, shapes, basic proverbs and many more interesting exercises for kids to indulge in and to increase their exposure to the world of Tamil.

தமிழ் எழுத்துகள்									
உயிர் எழுத்துகள்	- 12								
வெய் எழுத்துகள்	- 18								
உயிர்வெய் எழுத்துகள்	- 216								
ஆய்ந்த எழுத்து	- 1								
வெற்தம்	- 247								
உயிர் எழுத்துகள்									
அ	ஆ	இ	ஈ	உ	ஊ	எ	ஏ		
ஐ	ஒ	ஔ	ஓ	ஔ					
ஆய்ந்த எழுத்து									
ஃ									
வெய் எழுத்துகள்									
க்	ங்	ச்	ஞ்	ட்	ண்	த்	ந்	ப்	ம்
ய்	ர்	ல்	வ்	ழ்	ள்	ற்	ன்		

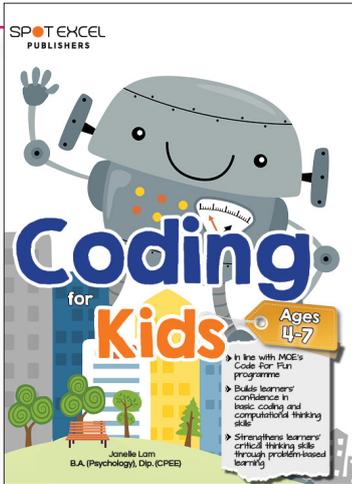
<https://tamilguys.com.sg> 7

Introduction to Tamil Letters

Letters in the Tamil language are grouped into different categories. This book educates young students about the categories while introducing the letters to them.



Coding for Kids



ISBN: 9789811472619

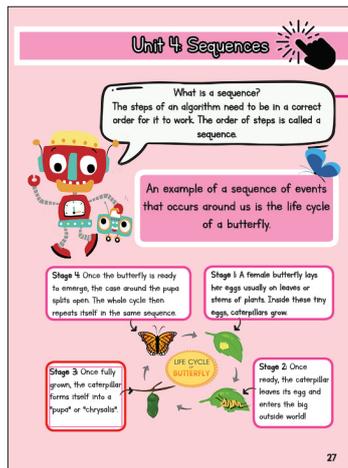
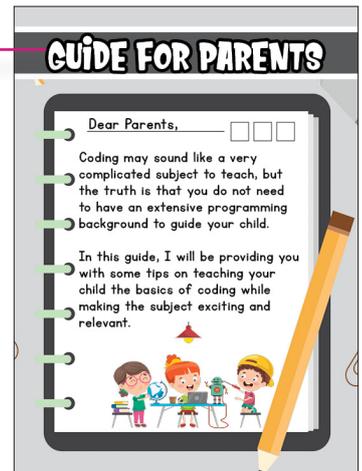
Coding for Kids is an activity guidebook which is primarily designed for children aged 4 to 7 years old. It aims to introduce children to basic coding concepts such as algorithms, sequences, patterns, loops and debugging.

With topics developed to support the Ministry of Education's "Code for Fun" initiative, children will build a foundation in coding through simplified explanations and various fun and hands-on activities.



Guide for Parents

Tips are provided for teaching coding to children so that even parents with no experience in coding can help.



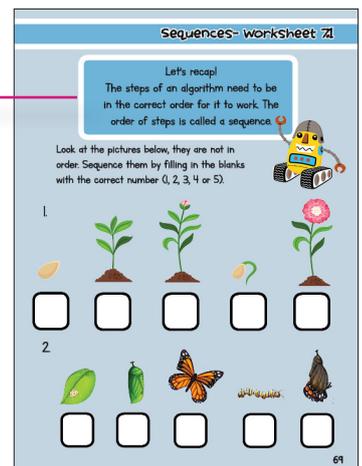
Clear Explanations

Explanations are provided for children and their parents at the beginning of each unit as an introduction to the topic.

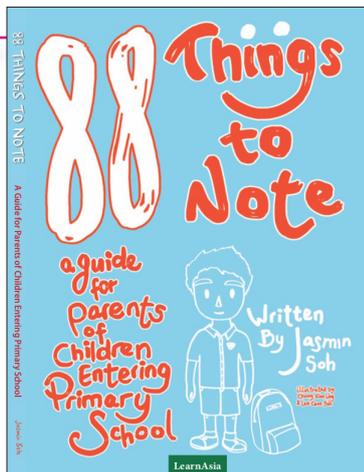


Let's Recap

'Let's Recap!' section at the start of each worksheet to reinforce concepts learnt before attempting practice.



88 Things To Note: A Guide for Parents of Children Entering Primary School



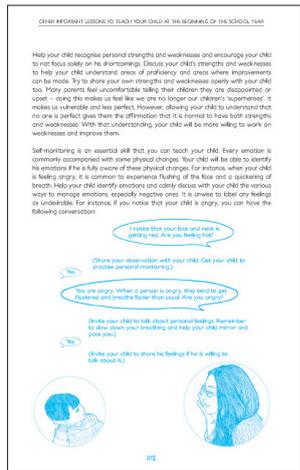
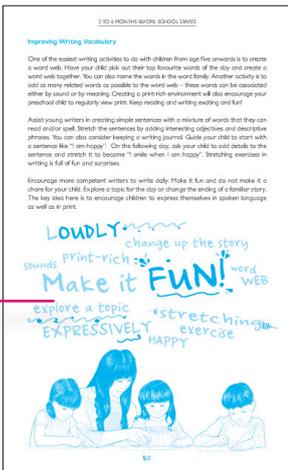
ISBN: 9789811116896

88 Things to Note is written for parents by an experienced lower primary school teacher. This title is meant for parents with children just entering primary school. It provides insight to the selection of a primary school, explains the support parents can provide their children during the transition period, and highlights other factors that would effect a successful transition. Knowing what can be done before school officially starts helps parents to be more confident, and this in turn prepares the child to be mentally ready for the new milestone.

This book compiles more than 80 life hacks for parents and is written to help you prepare to send your child to school, as well as explain the workings of the school to you. This book will serve as a bridge between you and your child's teachers as well as help make the selection of a suitable primary school less frustrating and more enjoyable.

Illustrations

The illustrations help to improve understanding of points made.



Chapter 32 Use a Reward System & Specific Positive Words

... excessive extrinsic rewards are unnecessary and will only undermine the child's effort. This is often an area that parents overlook.

Using a reward system is one of the many classroom management strategies regularly used by classroom teachers. Reward systems promote desirable classroom behaviour. Teachers often use stickers, point systems or special treats like extra play time to motivate students to do activities or work. Using a similar extrinsic reward system for your child at home can help your child understand expected good behaviour, particularly if they are still young.

Young children are often motivated by extrinsic rewards, which are easy to implement and effective. However, this system is focused on reward rather than action. Once the rewards are removed, your child may stop the positive behaviour. In fact, offering excessive rewards can actually lead to a decrease in intrinsic motivation, which originates inside the individual. One reason for the decrease in intrinsic motivation is that activities that initially feel like play or fun can feel like work or obligation when tied to an external reward.

It is therefore important to determine if your child is performing activities out of intrinsic or extrinsic motivation. If your child naturally enjoys working on assessment books, excessive extrinsic rewards are unnecessary and will only undermine the child's effort. This is often an area that parents overlook.

When it comes to praising your child for good behaviour, it also helps to be specific in your praise. For instance, instead of saying "You are such a clever boy", use phrases such as "You are very observant" or "You are solving good maths because of your willingness to solve problems". Remember to praise your child based on effort rather than on outcomes. This will encourage your child to continue to put in effort.

3 TO 4 MONTHS BEFORE SCHOOL STARTS	
PRESCHOOL	PRIMARY SCHOOL (PRIMARY 1 & PRIMARY 2)
<p>Public approach that covers an initial onset of learning experience</p> <ul style="list-style-type: none"> • Academic & creative expression • Emotional expression • Language and literacy • Motor skills development • Numeracy • Self and social awareness 	Similar to that of a preschool
<p>Integrates learning - learning takes place seamlessly in structured and meaningful situations</p> <p>Interactive learning - It is found that when there is extensive and meaningful interaction between children and adults in a nurturing and positive environment, children display more exploratory behaviour and better peer relationships</p>	Similar to that of a preschool in a larger classroom setting
<p>Play as a medium for learning - research has shown that play is the best way for children to learn as it is very motivating for children to explore, discover, take risks, make mistakes, cope with failure and express their feelings</p> <p>Class size is about 15 to 25</p> <p>Average of about two to three preschool teachers</p> <p>Absent of lessons are conducted in the same classroom</p>	<p>A combination of formal frontal teaching and interactive learning</p> <p>Students have many opportunities for small group learning</p> <p>Significantly less time for free play and exploratory activities</p> <p>Class size is about 30</p> <p>Average about six primary school teachers teaching the same class</p> <p>Expect some movements as some lessons are conducted in special rooms or outdoors</p>

Organised Information

Information is organised in such a way that it makes reading easier and makes for an overall more enjoyable experience.



Primary Level

▶ English

▶ Mathematics

▶ Science

▶ Bahasa Melayu

▶ Tamil

Challenging Weekly Practices

This series aims to help students build on their vocabulary and grammar skills to score well in their examinations. Split across 38 weeks of the school year, they can use the books weekly to supplement their school work. The grammar and vocabulary in this series are carefully selected to expose students to words commonly seen at their level.

It also aims to build up students' confidence to facilitate their learning by providing revision for all components of the English paper.

English Language Challenging Weekly Practices Primary **3**

English Language Challenging Weekly Practices Primary **4**

English Language Challenging Weekly Practices Primary **5**

English Language Challenging Weekly Practices Primary **6**

ISBN: 9789811447419 ISBN: 9789811447426 ISBN: 9789811449383 ISBN: 9789811449376

Term 1 Week 1

Topic: Possessive Pronouns

Possessive pronouns are pronouns that can be used to show ownership.
Example This is my cousin. Her name is Alice.

We use the word 'her' to show that the name 'Alice' belongs to the speaker's cousin.

Examples of possessive pronouns			
her	his	our	
their	my	your	

Simple Practice

Draw a line to match the picture to the correct pronoun.

- His
- Their
- Her
- Its

Topics & Practice

English grammar topics are gradually introduced as the student progresses through the book. Each topic is followed by a grammar practice which will allow the student to practise the concepts learnt.



Resource of Practices

Ample questions per worksheet to prepare students for the different sections of an English Language examination paper.

Grammar MCQ

For each question below, choose the most suitable option and write your answer in the brackets provided.

- My sister, Carol, lost _____ grip and fell from the monkey bars. ()
(1) its (2) his (3) her (4) our
- Mrs Ching is very proud of _____ son, who is a primary school principal. ()
(1) its (2) his (3) her (4) our
- My gran _____ my birthday. ()
(1) our (2) his (3) her (4) their
- Jerald _____ his eyes and peered into the darkness that filled his room. "Who is it?"
(1) its (2) his (3) her (4) our
- My pet _____ suddenly. ()
(1) its (2) his (3) her (4) their

Grammar Cloze 2

Read the following passage carefully. Underline the correct word given in the brackets.

Last Saturday, Grandfather brought my siblings and I to the fair in the downtown area. There 13. (are / were) many different stalls there. I was eager to try out some of the games at the stalls.

Looking around, I noticed my younger brother looking at _____

Vocabulary Cloze

Read the following passage carefully. Choose the correct word from the box below and write the letter (A to H) in the blanks provided. USE EACH WORD ONLY ONCE.

(A) turned (B) checked (C) rubbed (D) shocked
(E) curious (F) flipped (G) wriggled (H) quavered

Nicholas sat up on his bed nervously. He (6) _____ his eyes and peered into the darkness that filled his room. "Who is it?" Nicholas mumbled. Suddenly, he felt a tap on his left shoulder. He (7) _____ around and saw a shadowy creature. "Who are you?" screamed Nicholas as he (8) _____ in fear. The creature did not answer and walked away slowly. Feeling very (9) _____, Kevin followed it to the living room. However, the shadow went behind the sofa and disappeared.

Editing

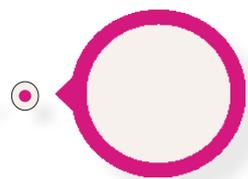
Correct the spelling of each underlined word. Write the correct word in the boxes provided.

Winston was really excited! He had done well in his exameenasins and his parents had promised to bring him to a cooking class. Winston loved helping his mother in the kitchen and spent a lot of time looking up recipes and learning about different ingridiants.

Winston woke up early, eager to begin the day. He looked up the address of the cooking school and enthusiastically gave directions to his father, who was driving.

In class, the head chaf spent some time going through recipes and teaching the students how to prepare the different dishes. He even taught them how to decorate the completed dishes.

Winston finished cooking his dish and proudly presented it to his parents.



100 English Worksheets

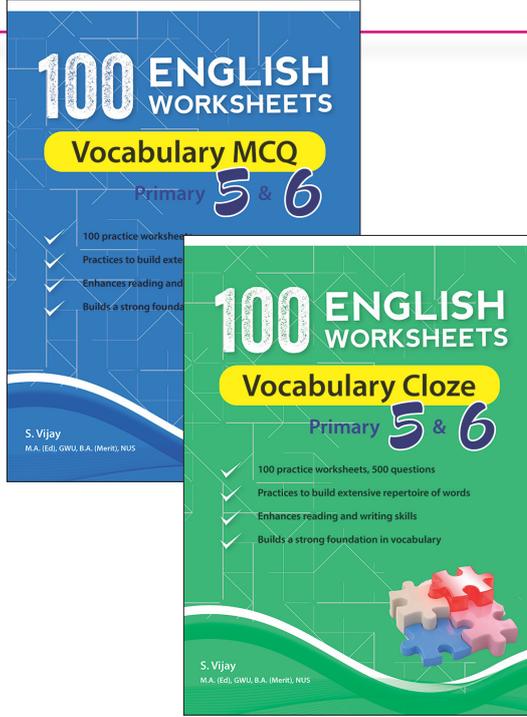
100 English Worksheets Primary 5 & 6 is a series of workbooks based on the latest Primary English syllabus issued by the Ministry of Education, Singapore. With 100 practice worksheets in each book, they aim to help students gain confidence to excel in the English Language examination paper and achieve an outstanding grade in English.



The image shows two book covers for Grammar. The top cover is purple and titled '100 ENGLISH WORKSHEETS Grammar MCQ Primary 5 & 6'. It lists features: 100 practice worksheets, 1,000 questions; Comprehensive coverage of key grammar items; Intensive practice for a wide range of grammar topics; Builds strong foundation in grammar. The bottom cover is green and titled '100 ENGLISH WORKSHEETS Grammar Cloze Primary 5 & 6'. It lists features: 100 practice worksheets; Comprehensive coverage of key grammar items; Widens students' knowledge of collocations; Develop skills in using contextual clues. Both covers feature a puzzle box illustration and the author's name, S. Vijay.

Grammar MCQ
ISBN: 9789811472145

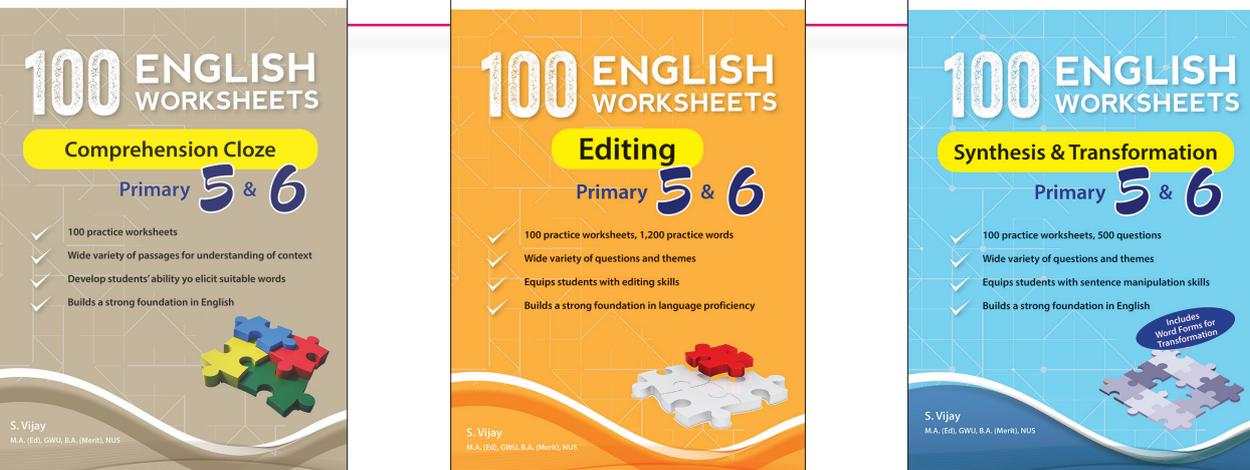
Grammar Cloze
ISBN: 9789811472169



The image shows two book covers for Vocabulary. The top cover is blue and titled '100 ENGLISH WORKSHEETS Vocabulary MCQ Primary 5 & 6'. It lists features: 100 practice worksheets, 1,000 questions; Practices to build extensive repertoire of words; Enhances reading and writing skills; Builds a strong foundation in vocabulary. The bottom cover is green and titled '100 ENGLISH WORKSHEETS Vocabulary Cloze Primary 5 & 6'. It lists features: 100 practice worksheets, 500 questions; Practices to build extensive repertoire of words; Enhances reading and writing skills; Builds a strong foundation in vocabulary. Both covers feature a puzzle illustration and the author's name, S. Vijay.

Vocabulary MCQ
ISBN: 9789811472138

Vocabulary Cloze
ISBN: 9789811472152



The image shows three book covers for other English topics. The left cover is brown and titled '100 ENGLISH WORKSHEETS Comprehension Cloze Primary 5 & 6'. It lists features: 100 practice worksheets; Wide variety of passages for understanding of context; Develop students' ability to elicit suitable words; Builds a strong foundation in English. The middle cover is orange and titled '100 ENGLISH WORKSHEETS Editing Primary 5 & 6'. It lists features: 100 practice worksheets, 1,200 practice words; Wide variety of questions and themes; Equips students with editing skills; Builds a strong foundation in language proficiency. The right cover is light blue and titled '100 ENGLISH WORKSHEETS Synthesis & Transformation Primary 5 & 6'. It lists features: 100 practice worksheets, 500 questions; Wide variety of questions and themes; Equips students with sentence manipulation skills; Builds a strong foundation in English. It also includes 'Word Forms for Transformation'. All covers feature a puzzle illustration and the author's name, S. Vijay.

Comprehension Cloze
ISBN: 9789811479076

Editing
ISBN: 9789811472121

Synthesis & Transformation
ISBN: 9789811472114

Mastering Vocabulary

The Mastering Vocabulary series is specially designed for students to prepare for Paper 2 of the English examination. It is based on the latest Primary English syllabus issued by the Ministry of Education, Singapore. Besides the Vocabulary MCQ and Vocabulary Cloze in Paper 2, having a rich vocabulary also enables the student to answer questions in other sections of the examination paper more effectively. Through the practices in this book, students will be able to familiarise themselves with the commonly tested vocabulary questions and will be better equipped to attempt their tests and examinations. This series also serves as a good supplement for students to build a strong foundation in vocabulary, heighten their interest in English and help them achieve excellent results.

ISBN: 9789814996365 ISBN: 9789814996303 ISBN: 9789811165245
 ISBN: 9789814996235 ISBN: 9789811165238 ISBN: 9789811165252

PRACTICE 1

Choose the most suitable answer and write the corresponding alphabet in the bracket.

- Always remember that there are _____ to your actions. Please think before you act.
 (A) consequences
 (B) results
 (C) punishments
 (D) rewards ()
- Please do not _____ this machine to the sun as the ultra-violet rays will spoil its mechanism.
 (A) open
 (B) put
 (C) expose
 (D) reveal ()
- The old lady who _____ a terrible fall was rushed to the hospital immediately.
 (A) surmised
 (B) created
 (C) suffered
 (D) slipped ()
- James fell asleep the moment he _____ on his bed.
 (A) lay out
 (B) lay down
 (C) lay up
 (D) lay in ()
- You will never know if you can make it unless you _____.
 (A) throw in the towel
 (B) ride the waves
 (C) give the game away
 (D) give it a shot ()

PRIMARY - ENGLISH VOCABULARY PRACTICE

PRACTICE 39

Fill in the blanks with the correct words from the box. Use each word only once.

stunning decay adverse indelible deserves
 foraged compromise tepid water harmony

- Always remember that blood is thicker than _____. Your family will always be there for you.
- Eating fast food everyday has an _____ impact on our health.
- Mary weaved everyone when she walked into the hall with a _____ dress.
- The _____ memories of war will forever live on in the hearts of the people.
- No one _____ to be treated in such a humiliating manner.
- After many rounds of discussion, Peter and Sam finally reached a _____.
- The cattle _____ in the fields for food.
- The _____ response of the audience was a big disappointment for the cast of the play.
- In Singapore, people of all races and religion live in _____.
- I had to visit the dentist as my tooth _____ was causing me a lot of pain.

PRIMARY - ENGLISH VOCABULARY PRACTICE

PRACTICE 45

Fill in the blanks with the correct words from the box.

rejected raided astronauts chauffeur crept abandoned
 position reputation retired

- The ship captain ordered everyone to _____ the ship as it was sinking.
- The panel of judges _____ Tommy's idea as they did not like it.
- Anthony _____ out of the kitchen after stealing a chocolate chip cookie.
- The _____ strapped in and prepared for the spaceship to take off.
- The band of robbers _____ the convenience store at midnight.
- The rich man has a _____ that drives him around.
- This school has an extremely good _____. Many students are fighting to get into the school.
- Charmaine _____ from work as she wanted to have more time to take care of her sick mother.
- The chairman holds the highest _____ in the company.
- My grandfather _____ at the age of sixty.

PRIMARY - ENGLISH VOCABULARY PRACTICE

PRACTICE 70

Fill in the blanks with the correct words from the box. Use each word only once.

fight vital superlative ability
 greatly prepare talent repair

Sleep plays a very important role in our lives. Although some people may feel that sleep is redundant, research has shown that sleep plays a _____ role in our health and well-being.

(1) _____ While we are sleeping, our brains and bodies get a chance to rest and _____ for the next day. Studies have shown that a good night's sleep improves our learning. _____ Sleep improves our attention span and helps us become more creative.

Sleeping also helps to improve our physical health. During our rest time, our bodies are able to _____ and heal body parts such as our hearts and blood vessels. Sleeping enough also _____ reduce our risk of obesity. Sleeping too little can result in less ideal growth and development. Being sleep deficient also reduces our immune system's ability to _____ off common infections and illnesses. _____

PRIMARY - ENGLISH VOCABULARY PRACTICE



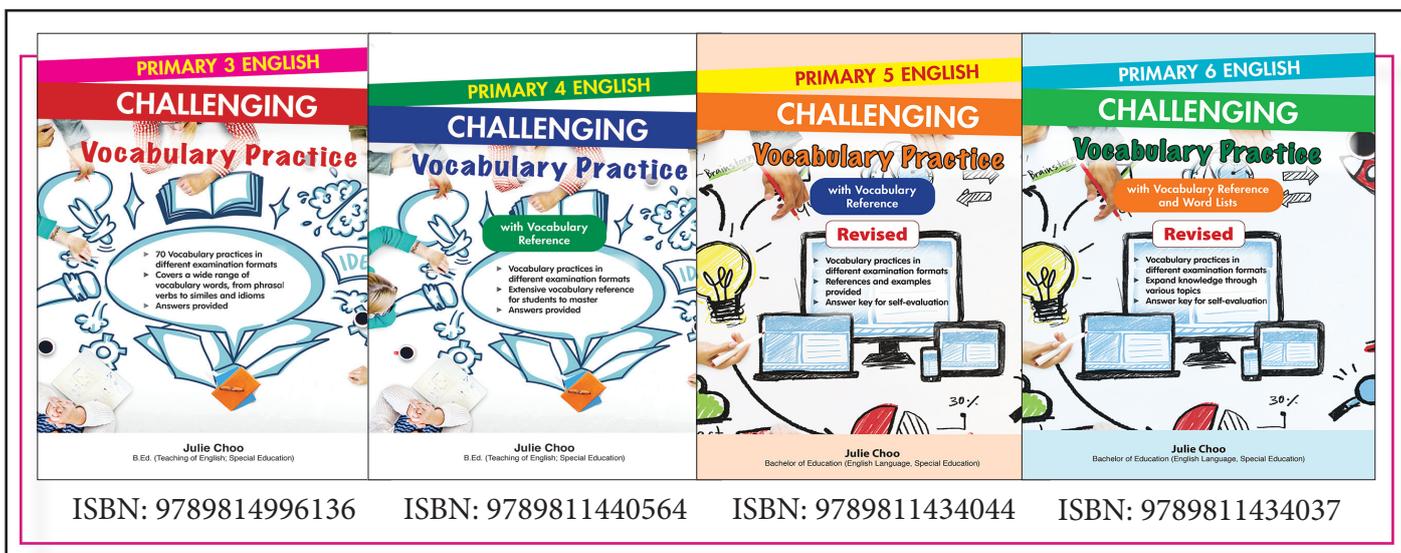
Progressive Difficulty

As they build their vocabulary through the practices, they will encounter increasingly difficult questions to stretch their abilities.

Challenging Vocabulary Practice

The main objective of the Challenging Vocabulary Practice series is to immerse the student in the joys of learning the wide range of English words. Vocabulary is indeed the 'colour' and 'music' of language and the wider one's range is, the better the mastery of the language.

It comprises questions on vocabulary, grouped according to distinct themes. The wide variety of visual and textual information is accompanied by a set of thought-provoking questions to set the student into the notion of in-depth thinking.



Vocabulary References		Vocabulary References - Occupations	
<p>Synonyms for overused words Note: Usage depends on context</p> <p>big</p> <ul style="list-style-type: none"> astronomical colossal enormous gargantuan gigantic great huge immense large mammoth massive spacious substantial vast voluminous <p>small</p> <ul style="list-style-type: none"> dainty delicate diminutive little miniature minuscule minute petite snuggly tiny undersized 	<p>good</p> <ul style="list-style-type: none"> acceptable admirable adventurous angelic appetising benevolent capable causing charitable commendable conscientious considerate decent delightful dependable efficient enjoyable ethical excellent exemplary expert fabulous fantastic favourable fine friendly gracious gratifying hard-working helpful honest honourable humane incredible just 	<p>Occupations</p> <ul style="list-style-type: none"> accountant acrobat actor/actress actuary admiral advertiser / marketer agriculturist ambassador anaesthetist anatomist announcer anthropologist antiquarian apergence archaeologist architect artist athlete assassin astrologer astronaut athlete auctioneer author baker banker bartender barthol biographer biologist blacksmith bodyguard bookkeeper botanist 	<p>one who manages a record of debts and credits</p> <p>one who performs daring stunts</p> <p>one who plays an actor in a drama</p> <p>one who makes the calculations connected with insurance</p> <p>one who commands a fleet of warships</p> <p>one who organises a sale or event</p> <p>one who is skilled in growing crops</p> <p>one who looks after the comfort of passengers in an aircraft</p> <p>an official usually used for diplomatic engagements</p> <p>one who gives anaesthetic to patients before operations so they will not feel pain</p> <p>one who is skilled in the science of the body structures of organisms</p> <p>one who reads the news and other information over radio or television</p> <p>one who studies human origins and evolution of human customs and beliefs</p> <p>one who studies, collects or sells relics of the past</p> <p>one who is attached to someone to learn or trade</p> <p>one who looks after historic records, documents, etc.</p> <p>one who is skilled in building and oversees their construction</p> <p>one who looks after historic records, documents, etc.</p> <p>one who is skilled in handicraft</p> <p>one who is skilled in painting and drawings</p> <p>one who brings disease or acts professionally</p> <p>one who commits murder for reward or political reasons</p> <p>one who forecasts events by studying the stars</p> <p>one who is engaged in space travel in a space vehicle</p> <p>one who is a competitor in bodily exercises such as running and jumping</p> <p>one who sells goods in public to the person who offers the most money for it</p> <p>one who writes literary works</p> <p>one who produces bread</p> <p>one who engages in the business of banking</p> <p>one who mixes and serves drinks at a bar or hotel</p> <p>one who works in a hotel, carrying the luggage of guests to their rooms</p> <p>one who writes an account of a person's life</p> <p>one who is an expert in the science of living things</p> <p>one who makes things out of iron</p> <p>one who guards and protects an important person</p> <p>one who keeps accounts systematically</p> <p>one who is an expert in the scientific study of plants</p>

Vocabulary References

Vocabulary References are provided for students to expand their vocabulary and learn the meaning of each word.

Challenging Practice 19 - Vocabulary Cloze

Fill in the blanks in the passage below:

There are more than 3,000 types of (1) _____ that are grown around the world. They come in various (2) _____ and sizes.

About 5,000 years ago, Egyptians (3) _____ mushrooms as 'magic food'. They believed that they could (4) _____ immortality by eating them. Only the pharaohs had the privilege of eating mushrooms. Common people were not (5) _____ to enjoy this food like their kings.

In other ancient civilisations, people believed that mushrooms had a special ingredient that could produce superhuman strength. Over the years, the (6) _____ for mushrooms gradually (7) _____. This led to the establishment of mushroom farms which cultivated and grew these fungi in a special (8) _____.

By the 1940s, most of the mushrooms came from the Far East, mainly China and Japan. (9) _____ the second World War, American soldiers (10) _____ many delicious mushrooms and learnt about mushroom (11) _____. They brought this (12) _____ back to the United States after the war. Since then, the country has become one of the world's major mushroom producers.

Not all mushrooms are (13) _____. Some are poisonous. Mushrooms that are found in grocery stores are safe to eat. These mushrooms are (14) _____ recommended by (15) _____ because they are cholesterol-free and low in calories.

Challenging Practice 66 - Confusing Words

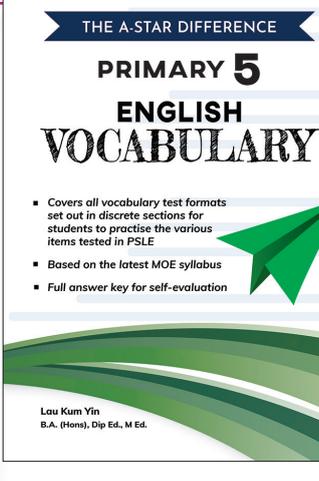
Fill in the blanks with the correct word.

1. moral, morale
The _____ of the story is meaningful and this story gave us a good boost to our _____.
2. excess, access
No one can _____ the information unless they are the director. There is an _____ of food in the refrigerator.
3. adopt, adapt
We must always try to _____ ourselves to the environment we are in.
I would like to _____ a puppy as I need a companion.
4. desert, dessert
The largest _____ is the Sahara.
I love eating _____ after dinner.
5. principal, principle
The _____ of this science lesson is that 'Light travels in straight line'.
My _____ was proud that I had won the contest.
6. loose, lose
There is a _____ piece of rope hanging from the ceiling.
I think I might _____ the competition to James.
7. personal, personnel
The government _____ will be asking you for the documents.
This is my _____ computer.

Challenging Practices

Exposes students to a wide range of vocabulary in different contexts.

The A-star Difference Vocabulary

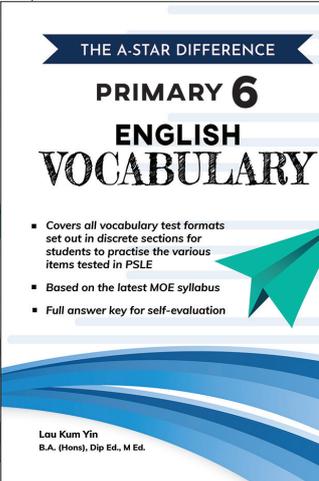


THE A-STAR DIFFERENCE
PRIMARY 5
ENGLISH
VOCABULARY

- Covers all vocabulary test formats set out in discrete sections for students to practise the various items tested in PSLE
- Based on the latest MOE syllabus
- Full answer key for self-evaluation

Lau Kum Yin
B.A. (Hons), Dip Ed., M Ed.

ISBN: 9789814996259



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ISBN: 9789811494338

The A-star Difference English Vocabulary books aim to provide students with over a thousand vocabulary items used widely in tests. Some questions are deliberately set out to be self-learning.

Each book is divided into three sections that enhance students' awareness of key words and their meanings. In this way, their command of vocabulary will put them in the A-star category for English.

CHAPTER 1
NOUNS

For each question from 1 to 10, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4) and write your answer in the brackets.

- Helen did not get the job because her _____ were too low; she left school at thirteen.
1. associations 2. accents 3. qualifications 4. relations ()
- That childcare centre runs its program with _____ always using the latest concepts and following the recommendations of expert childcare professionals.
1. vigour 2. rigour 3. vigily 4. composure ()
- The audience was impressed by the choir's wide _____ of songs.
1. collection 2. repository 3. reservoir 4. repertoire ()
- "Who broke the bowl?" Mrs Tan demanded when she saw the _____ of glass on the floor.
1. shards 2. sheads 3. fragments 4. remnants ()
- Li Ping bought a bright purple blouse on _____ but regretted it when she tried to wear it with her orange skirt.
1. impression 2. instruct 3. impulse 4. intuition ()
- Some parents substitute _____ such as television for their children's mistakes. They think that their children are not entitled to enjoy themselves if they do not behave well.
1. rights 2. privileges 3. advantages 4. enjoyment ()
- Jack bore the _____ of his father's temper and often had bad bruises after his father went drinking.
1. beast 2. attack 3. sage 4. penalty ()
- In traditional China, many topics were _____ and girls especially could not speak about love and romance.
1. ban 2. ban 3. taboo 4. repression ()
- The plucky little girl was so full of _____ that she ran the race even though she had only one leg.
1. nerve 2. grit 3. pain 4. guilt ()
- The notion that the Earth is flat is a common _____ and children do not know that it is a wrong idea.
1. misrepresentation 2. misjudgment 3. mistake 4. misconception ()

The A-Star Difference | 1

Section A - Multiple-choice questions

The questions emphasise the importance of contextual clues which help students to learn and remember word collocations and specific nuances in meaning. Students will learn new words as well as understand why one word is preferred over others in a given context.

CHAPTER 7
CONFUSING WORDS

Exercise 1
Match the correct words from the box to the phrases/sentences that follow. Write 1, 2, 3, or 4 in the brackets.
Use each word only once.

1 adjust	2 fluent	3 proficient	4 accomplished
----------	----------	--------------	----------------

- Susan is an _____ pianist. She plays the piano with the orchestra. ()
- The linguist is _____ in many different languages. ()
- Wendy is _____ in tennis and is on the school team. ()
- Tom is _____ at fixing motor bikes and mechanical things. ()

Exercise 2
Match the correct words from the box to the phrases/sentences that follow. Write 1, 2, 3, 4 or 5 in the brackets.
Use each word only once.

1 ample	2 adequate	3 substantial	4 sufficient	5 considerable
---------	------------	---------------	--------------	----------------

- The amount in the bank is _____ more than enough to pay the supplies. ()
- There is _____ rice to cook one meal. ()
- We have _____ supplies that will last us for longer than the six months we intend to stay here. ()
- This cloth is _____ with nothing left for any errors. ()
- The land is _____ no one else has such a big plot. ()

Exercise 3
Match the correct words from the box to the phrases/sentences that follow. Write 1, 2 or 3 in the brackets.
Use each word only once.

1 replicated	2 complicated	3 implicated
--------------	---------------	--------------

- This is a _____ design; it's exactly the same as the first one. ()
- His brother is _____ because he was found near the scene of the murder. ()
- The plan is so _____ that no one can understand it. ()

The A-Star Difference | 61

Section B - Commonly confused words

This self-explanatory section helps students remember when and how to use the word. The exercises do not set out to mislead but to guide. Each option can be used only once and if one mistake is made, it means that another sentence has the wrong answer as well.

CHAPTER 8
VOCABULARY IN CONTEXT

For each question 1-5, choose the correct word(s) closest in meaning to the underlined word(s). Write (1, 2, 3 or 4) in the brackets.

Exercise 1

We set off in high spirits. At long last, both of us managed to wrangle some trees off (1) at the same time. It was pitch dark but our teeth (2) shone in the darkness when we grinned at each other. In the distance, the mountains (3) glimmered (4) making three layers of blackness, darker near the ground and lighter towards the heavens. We made for the first opening that was the mouth of the famed Goa Tunnels. It was (5) well-lit (6) and the hard to get ourselves on our stomachs through the (7) twisted passage that was exactly like the inner ear. The earthy smell of the cave enveloped us as we penetrated deeper into the mountain.

1) 1 exactly	2 instantly	3 simultaneously	4 diagonally
2) 1 glittered	2 gleamed	3 glimmered	4 glistened
3) 1 gleamed	2 glimmered	3 shimmered	4 glowered
4) 1 justly	2 acceptably	3 feebly	4 aptly
5) 1 consulted	2 despatched	3 confronting	4 impassable

Exercise 2

How do people get into such a pitiful state? Many homeless people lose their jobs to begin with and then they reside with drugs and alcohol. (1) In a word, they cannot afford rent. Some have mental illness and their families abandoned them. For others, the streets are (2) jobless compared to what they left behind. How do we (3) solve this problem? While governments can build low cost homes, private organizations should also do their part. They can help provide in-service (4) housing for the needy and job training for the street people to (5) obtain the skills they need to get long term jobs.

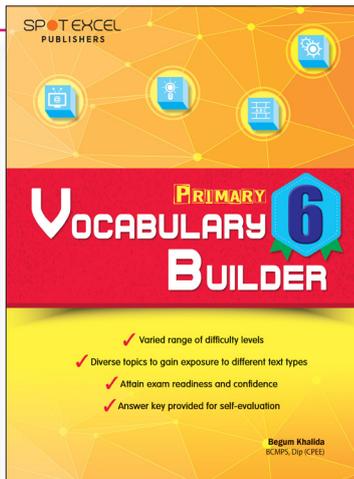
1) 1 Consequently	2 Subsequently	3 Alternatively	4 Moreover
2) 1 hotels	2 inquests	3 havers	4 hospices
3) 1 tackle	2 manage	3 coordinate	4 organize
4) 1 villas	2 accommodations	3 hostels	4 burglarious
5) 1 maintain	2 sustain	3 require	4 accrue

The A-Star Difference | 71

Section C - Text-based exercises

Many of the connecting devices in language are tested in this section. Many of the adverbial forms that make up the "ly" words are in this section too.

P6 Vocabulary Builder

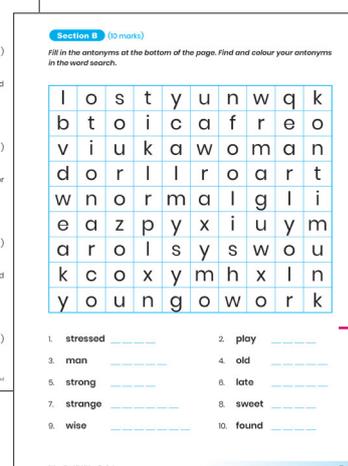
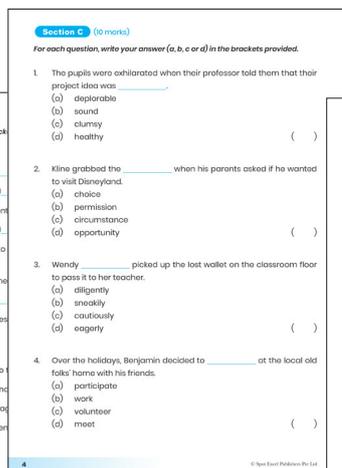
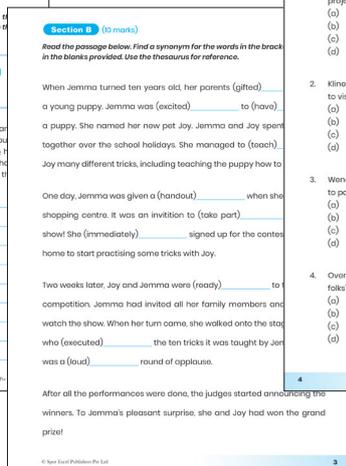
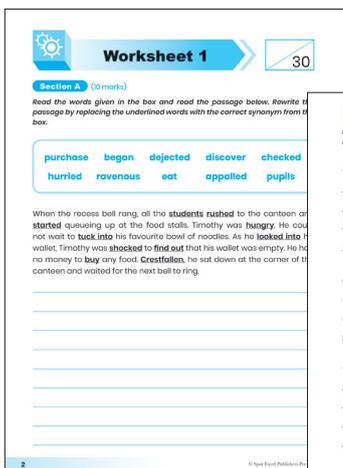
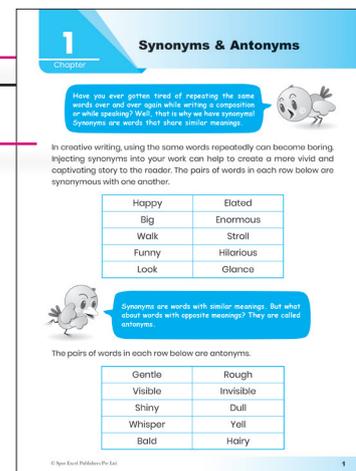


ISBN: 9789811806377

Primary 6 Vocabulary Builder focuses on building up the vocabulary skills of students preparing for their PSLE. This book is structured to help students develop skills and confidence in creative writing, vocabulary cloze practices and vocabulary MCQ. It contains passages with diverse topics to give students exposure to different text types and to equip them with the necessary skills to answer a wide range of questions.

Introductions

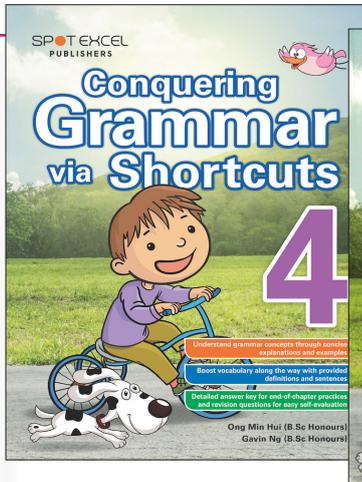
Each chapter introduces the topic with explanations and examples for better understanding of the application of the different text types.



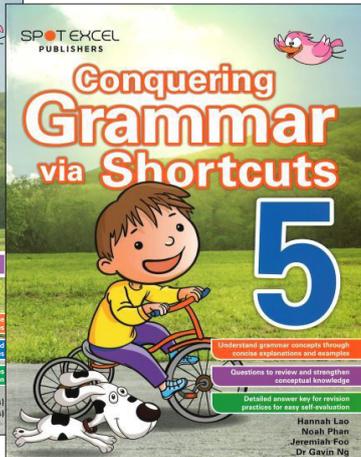
Worksheets

The worksheets of various question types come with scores for students to easily gauge their performance for the topic. Non-examination format type of questions are also included to make learning more interesting.

Conquering Grammar via Shortcuts



ISBN: 9789811164347



ISBN: 9789811176913

These books offer guidance in strengthening students' foundation in English in terms of grammar. They offer clear and concise explanations of grammar concepts based on everyday usage of spoken and written English. In addition, tips and explanations are also included to build their vocabulary as they work their way through these books.

1 Nouns - Introduction

What is a noun?
A noun can be a person, an animal, a place, or even an idea that you have in your head.

Let us look at some examples of nouns. Look at the example given to you, and try to come up with three other examples on your own.

Person	Examples
teacher, fireman, mother	
Animal	dog, cat, cow
Place	park, school, hospital
Thing/object	plate, spoon, bag
Idea	rules, love, happiness

***What is an idea?**
An idea can refer to a real idea you have for something, but it can also be a fantasy, or even a concept. Unlike other objects like animals or things which you can physically touch, ideas and concepts cannot be touched. We will go through this again in a later section under abstract nouns.

Let us now try to identify nouns in sentences.

Example:
Lionel brought some cards to play in school.

What is Lionel? Lionel is a person.

What are cards? Cards are an object that students go to everyday to study.

Recall: Is a person a noun? Yes!
Recall: Are objects are nouns? Yes!
Hence cards are a noun.

What is a school? A school is place that students go to everyday to study.

Recall: Are places are nouns? Yes!
Hence school is a noun.

1 NOUN PHRASES

A noun is a word that names a person, place, thing or idea.

A noun phrase is a noun with a modifier which distinguishes it.

A noun phrase can come before or after the noun.

Modifiers that come before a noun might include articles, possessive nouns, possessive pronouns, adjectives, and/or participles.

There are only three articles: a, an and the. Some examples of noun phrases with an article as the modifier:

a goldfish the car an umbrella

Possessive nouns are nouns with an apostrophe and an 's' to the noun. If the noun already ends with an 's', an apostrophe is added after the 's'.

Some examples of noun phrases with a possessive noun as the modifier:

Sarah's dress the children's toys Charles' daughter

Possessive pronouns are pronouns indicating possession of the noun. Some examples of possessive pronouns are mine, yours, his, hers, its, ours, yours, and theirs.

Some examples of noun phrases with a possessive pronoun as the modifier:

our sister her computer their school bags

Explanations with Examples

Explanations are accompanied by examples when introducing topics so that concepts are easier for students to visualise.

Revision Practices

Revision practices are provided for students at the end of each topic to revise and cement concepts learnt.

NOUNS

Person	Examples
teacher, fireman, mother	
Animal	dog, cat, cow
Place	park, school, hospital
Thing/object	plate, spoon, bag
Idea	rules, love, happiness

1. I bought a new sweater for my mother at the mall last night.
2. My grandmothers went to the market to buy some fresh seafood.
3. Please keep the books and stationery neatly in your desk.
4. Sarah wanted to bring her sister to the zoo to pet the little rabbits.
5. You should be driving your car more cautiously especially in the heavy rain.

ANSWER KEY

1. My grandmothers went to the market to buy some fresh seafood.
2. Sarah wanted to bring her sister to the zoo to pet the little rabbits.
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REVISION PRACTICES

1. I bought a new sweater for my mother at the mall last night.
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5. You should be driving your car more cautiously especially in the heavy rain.

NOUNS

Fill in the boxes the category that each noun should belong to.

1. My grandmothers went to the market to buy some fresh seafood.
2. Remember to return the money to your brother before he leaves the house.
3. Please keep the books and stationery neatly in your desk.
4. Sarah wanted to bring her sister to the zoo to pet the little rabbits.
5. I bought a new sweater for my mother at the mall last night.
6. You should be driving your car more cautiously especially in the heavy rain.

NOUN PHRASES

Write a noun phrase with each noun given below.

1. cat
2. house
3. shoe
4. chair
5. library

Add modifier words to each noun given below to create a noun phrase.

Example: My _____ coach gave me an award.
Answer: My basketball coach gave me an award.

1. The _____ child was disruptive at the library.
2. The _____ horse galloped around the field.
3. I took the chocolates away from the _____ child.
4. We walked to the _____ farm during the holidays.
5. The _____ park was open until seven in the evening.

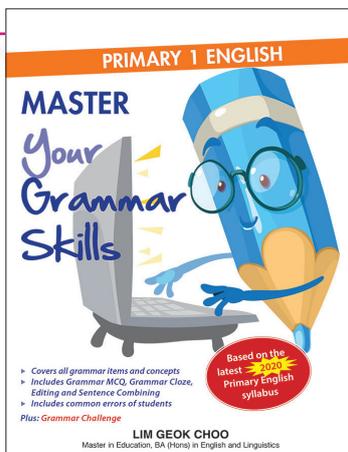
Answer Key

Answers are provided for students to do self-marking or for parents to check.

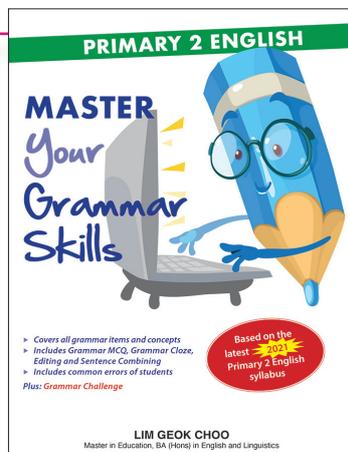
Mastering Grammar Skills

Each book in this series contains the following features:

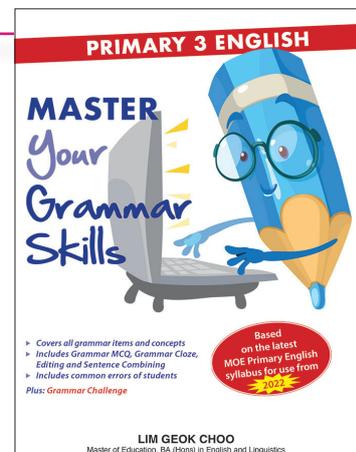
- Covers all grammar items and concepts required by the Primary English syllabus issued by the Ministry of Education, Singapore
- Comprehensive grammar exercises and tests on Grammar MCQ, Structural Cloze, Editing, and Synthesis and Transformation
- Exercises based on the latest CA/SA format clearly identified
- Includes definitions, explanations and examples of grammar concepts
- Includes common errors students make in grammar exercises



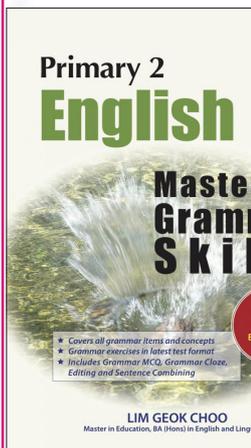
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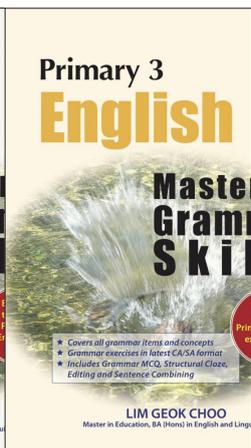
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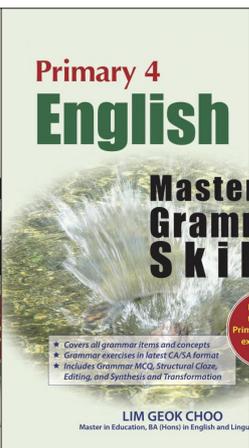
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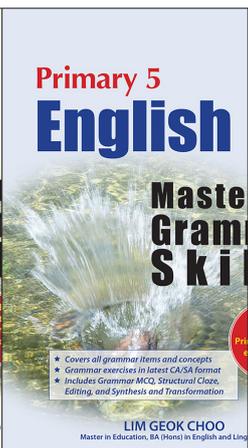
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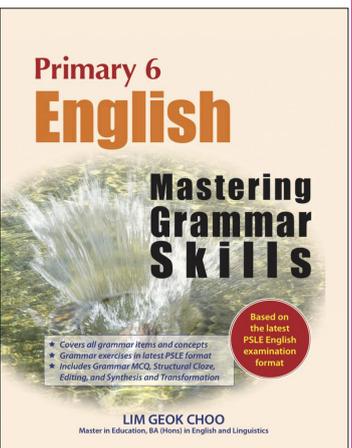
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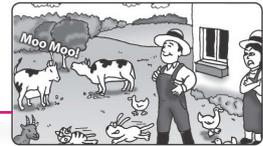
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Introduction

An attractive visual stimulus introduces the grammar item or concept. This is followed by relevant definitions and explanations with examples to make the abstract grammar concepts more concrete and easier for learning.

Unit 1 Nouns

Introduction



Mr **Ang** is a **farmer**. This is his **farm**.
There are two **cows** on his **farm**. They are playing in the **mud**.
Mrs **Ang** is angry with them.

The highlighted words are called **nouns**.
Definition ► **Nouns** are words we use for animals, people, places and things.
Some of them are common nouns and some are proper nouns.
Definition ► **Common nouns** are words we use for animals, people, places and things. In the story, the words **farmer**, **farm**, **cows** and **mud** are common nouns.

Mastering Grammar Skills Primary 3

Exercise 11

Fill in each blank with **into** or **onto**. The first one has been done for you.

1. My wallet fell out of my pocket **onto** the floor.
2. The children jumped _____ the pool to swim.
3. The baby spilled some milk _____ its clothes.
4. When you walk _____ the room, you will see the table and chairs.
5. Put everything _____ your bag before you leave the room.

Common Errors to Avoid

Be careful when using the words **passed** and **past**. **Passed** is a word in the past tense. It is not a preposition like **past**.

It is wrong to say We walk **passed** the shop. It is correct to say We walk **past** the shop.

Exercise 12

Fill in each blank with **passed** or **past**. The first one has been done for you.

1. My coins from my wallet rolled **past** the door.
2. The children ran _____ the bus stop.
3. I was so busy that I did not see a bee fly _____ me.
4. Phil _____ the flag to a member of his team.
5. The children _____ their books to their friends.

Common Errors

Tips are given to warn students about common errors that they should avoid when they attempt exercises on grammar.

Exercises

Short grammar exercises on a specific item or concept are included to provide students with immediate practice. Exercises in the Continuous Assessment (CA) and Semestral Assessment (SA) formats are given so that students can apply what they have just learnt about specific grammar items in the individual units.

Linking verbs

Exercise 1

Look for 5 linking verbs in the sentences below and circle them. The first one has been done for you.

1. **am** in the kitchen with Grandma.
2. There are many things on the table.
3. Grandma is going to cook.
4. Do you like dumplings?
5. I have some dumplings for you.

Exercise 2

Read the rules to fill in the blanks with **is**, **are** and **am** correctly. The first one has been done for you.

Rule 1 When the subject is **singular** (only one), use **is**.
Rule 2 When the subject is **I**, use **am**.
Rule 3 When the subject is **you** or **plural** (more than one), use **are**.

1. You **are** a great cook.
2. I _____ excited.
3. She _____ making dumplings.
4. Grandma _____ teaching me to cook.
5. The dumplings _____ ready!



Connectors for Contrast

We use **but**, **though** and **although** to connect sentences with different or opposite meanings.

Example 1 I love experiments. I dislike tests.
One sentence is about liking something and another sentence is opposite, about disliking something.
I love experiment **but** I dislike tests.

Example 2 I wanted to give a magnet to Jerry. He did not accept it.
The second sentence gives an unexpected outcome.
Although I wanted to give a magnet to Jerry, he did not accept it.
I wanted to give a magnet to Jerry **but** he did not accept it.
Though I wanted to give a magnet to Jerry, he did not accept it.

Exercise 4 – Synthesis

Use **but** to combine each pair of sentences. The first one has been done for you.

1. The north pole of my magnet attracts the south pole of your magnet. It repels the north pole of your magnet.
The north pole of my magnet attracts the south pole of your magnet but repels its north pole.
2. The magnet attracted the metal clips. It did not attract the plastic clips.
3. I like experiments very much. I do not like tests at all.

Tests

At the end of the guide, students can attempt mock tests that assess grammar items and concepts across several units, just like in their school CA and SA papers.

Section E: Sentence Completion and Combining (6 marks)

Match and join the two parts to form a question. (1 mark each)

Column A	Column B
20. Who •	- happened to my pencil?
21. What •	- does school start every day?
22. When •	- is he talking to?

Join the sentences using the words in bold. The meaning of your sentence must be the same as the meaning of the given sentences. (1 mark each)

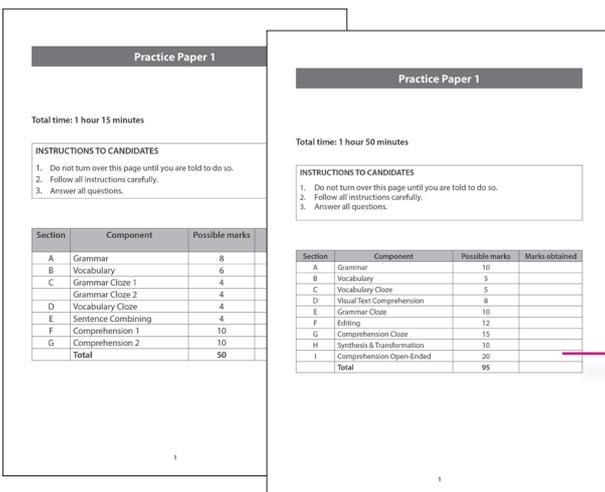
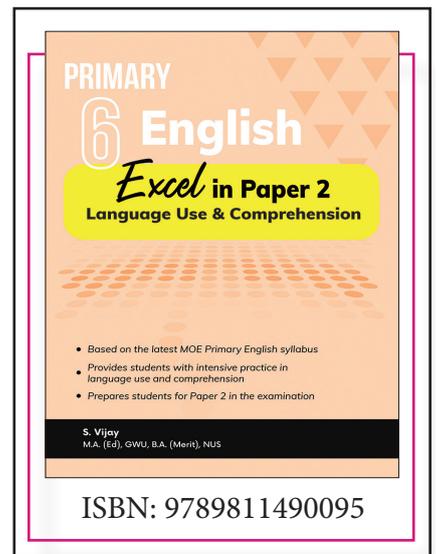
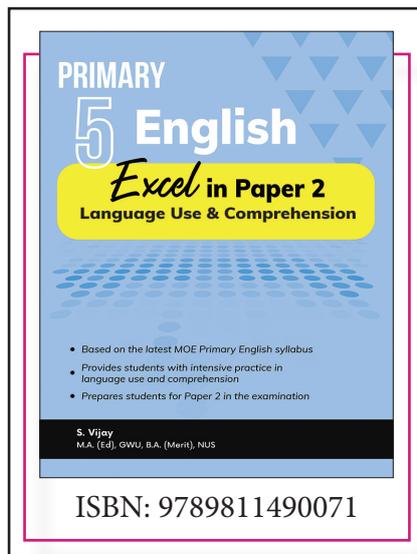
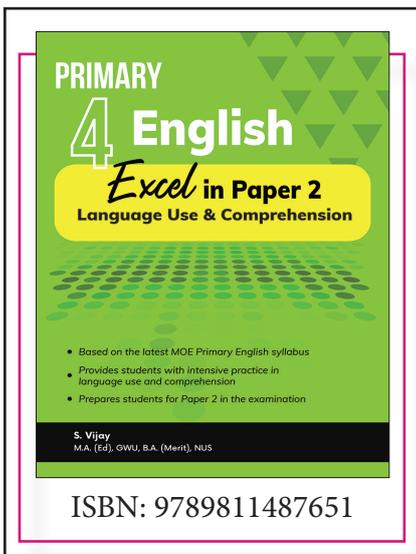
Example Andy played soccer. Andy also played basketball.
Andy played soccer **and** basketball.

23. Cinderella was sad. Cinderella did not cry or complain.
_____ **but** _____
24. Look left, right and left again. Then, you cross the road.
_____ **before** _____
25. Move the glasses and bottles. Be careful.
_____ **with** _____

Excel in Paper 2

Language Use & Comprehension

This series is written based on the latest Primary English syllabus issued by the Ministry of Education, Singapore. There are eight practice papers in each book, designed for students who are looking for rigorous practice before the examinations, or those who want to consolidate their learning and gauge their level of English language proficiency. Students will not only get accustomed to completing their work under examination conditions, but also reinforce what they have learnt, expand their knowledge and be amply prepared for their examinations.

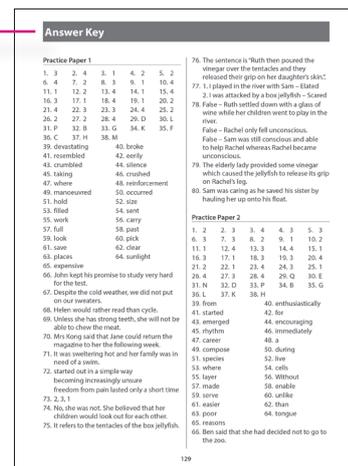


Variety of Questions

Modelled after the latest assessment formats, students will encounter questions that check their understanding of what is taught in schools as well as challenging questions that will extend their learning beyond the classroom.

Answer Key

Answers are provided for students' self-evaluation.



76. The sentence is "Ruth then patted the vinegar over the testicles and they released their grip on her daughter's skirt."
77. I played in the river with Sam - Elated
78. I was attacked by a box jellyfish - Scared
79. Father - Ruth noticed down with a glass of wine while her children went to play in the river.
Father - Sam was still unconscious and able to help Rachel whereas Rachel became unconscious.

79. The elderly lady provided some vinegar which caused the jellyfish to release its grip on Rachel's hip.
80. Sam was caring as he saved his sister by holding her up onto his foot.

Practice Paper 2
1. 2 2. 3 3. 4 4. 3 5. 3
6. 3 7. 3 8. 2 9. 1 10. 2
11. 1 12. 4 13. 3 14. 4 15. 1
16. 3 17. 1 18. 3 19. 3 20. 4
21. 2 22. 1 23. 4 24. 3 25. 1
26. 4 27. 3 28. 4 29. Q 30. E
31. N 32. D 33. P 34. B 35. G
36. L 37. K 38. H
39. from 40. enthusiastically
41. started 42. for
43. emerged 44. encouraging
45. rhythm 46. immediately
47. career 48. a
49. composer 50. diving
51. opinion 52. live
53. where 54. cells
55. layer 56. without
57. made 58. enable
59. serve 60. unlike
61. easier 62. than
63. poor 64. tongue
65. reasons
66. Ben said that he had decided not to go to the zoo.

English Comprehension Practice

The central purpose of this series is to provide students with the vital skills to comprehend English texts and take on comprehension questions with confidence. It builds a strong foundation through the use of interactive questions and stimulating passages to immerse them in active learning. The interdisciplinary element of this series engages students with its passages on various topics of interest, both fiction and non-fiction.

Primary 1 ISBN: 9789811487668
 Primary 2 ISBN: 9789811487675
 Primary 3 ISBN: 9789811499180
 Primary 4 ISBN: 9789811499197
 Primary 5 ISBN: 9789814996143
 Primary 6 ISBN: 9789814996129

Comprehension Practice 1

Read the passage below and answer the questions that follow.

One day, while Lily was playing in the park, she saw a short tree with a bird's nest resting on its branches. Lily tiptoed and investigated the nest and saw three pretty blue eggs.

As Lily curiously looked on, the eggs started quivering and cracking. Lily was thrilled! She saw tiny birds hatch out of the eggs slowly. Once they were out, they started chirping noisily. At once, the mother bird flew back to her nest and fed her chicks with some worms. As it was getting late, Lily returned home.

Every day, Lily stopped over at the park to check on the chicks. They grew stronger and bigger every day. One day, Lily went to visit the nest and found it empty. Where were the chicks?

Lily told her mother about the empty nest. Her mother explained that chicks learn to fly and would eventually leave their mother's nest to build a nest of their own. Lily was glad that the chicks had learnt to fly but was also glum that she could not see them anymore.

Word Bank
quiver
check on
glum

Comprehension Practice 1

Read the passage below and answer the questions that follow.

Dugg the slug lived in the garden. He loved to munch on the leaves in the bushes and visit his snail friend.

But he was unhappy that he did not have his own shell to live in. He lived under a boring, black rock. Dugg wanted to have his own shell.

So, he went to his friend, Abigail. Abigail was a snail that had a big, beautiful shell. Dugg cried to Abigail that he wanted a shell too.

After listening to Dugg, Abigail brought him to the back of the garden. There were lots of shiny, brown shells in a pile. Dugg was extremely happy!

Questions

1. What does Dugg like to do in the garden?

Word Bank
munch
boring
pile

Word Banks

New vocabulary is highlighted for each comprehension passage.

Creative Exercises

There are 60 comprehension practices in each book, with creative exercises designed to enrich students' comprehension skills and vocabulary.

Primary 2 English Comprehension Practice

Questions

1. Where was the nest located? Tick your answer.

On the roots of a short tree at the park
 On the branches of a short tree at the market
 On the branches of a short tree at the park
 At the bicycle station under the block

2. Why was Lily thrilled when the eggs started to quiver?

The eggs were dancing.
 The eggs were starting to hatch.
 The mother bird was waiting to feed the chicks.
 She could not wait to see the chicks after the eggs had hatched.

3. How do you think Lily felt when she found the bird's nest empty?

4. Why was the nest empty? Fill in the blanks.

The _____ was empty because the chicks had learnt to _____. They have left their _____ nest and have flown away to _____ a nest of their own.

Primary 1 English Comprehension Practice

3. How do they build the sandcastle? Match the action correctly to the person.

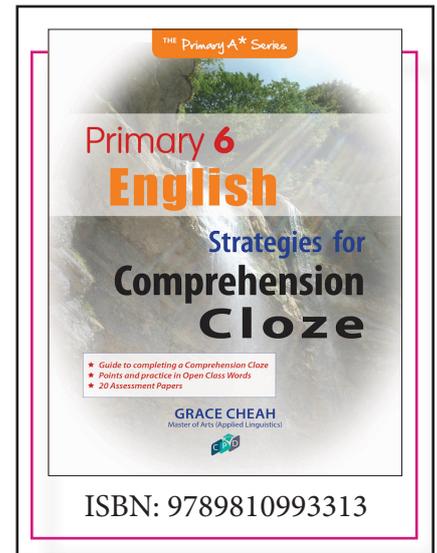
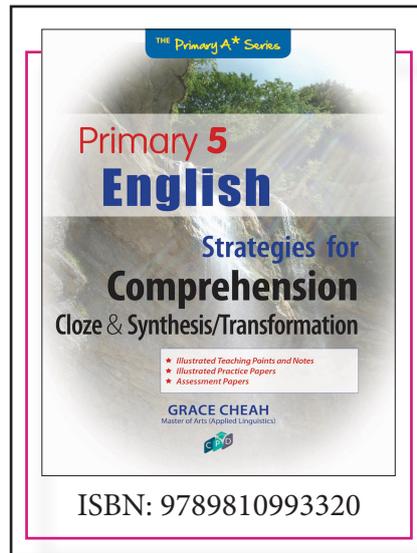
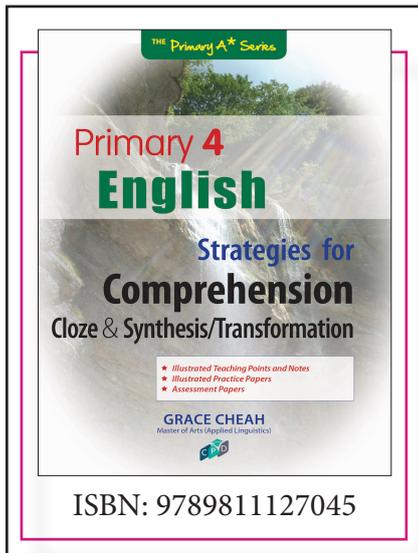
Sandy • Fill the pail with sand
 Sam • Turn the pail over and lift it
 Collect shells to decorate the sandcastle

4. What happens in the afternoon?

5. Draw a picture of Sam and Sandy at the beach.

Strategies for Comprehension Cloze

This series is designed to prepare students for the comprehension cloze in their semestral assessments. Students who are successful at comprehension cloze are those who are able to use their existing knowledge of both language and subject matter.



Primary 4 English Strategies for Comprehension - Cloze & Synthesis/Transformation

Exercise 8 - Adverbs, Verbs and Nouns

Comprehension Cloze 8

Teaching Points



1. Read the text.

Coney Island Park is located on the offshore Coney Island. The park is accessible via two bridges, one linked to Punggol and the other to Pasir Ris. The entire route is only 2.4 kilometres so visitors can easily complete the trail on foot. If they cycle, they can explore Coney Island at a faster pace.

An innovative approach to recycling waste materials is the playground at Casuarina Exploration. Constructed from the trunks of uprooted Casuarina trees, recycled sand and other natural materials, the playground features four different stations appropriately named Caterpillars, Earthworm and Millipede. Visitors of all ages will enjoy keeping their balance as they cross from one station to another.

There is an abundance of butterflies, lizards and mudskippers. Wildlife consists of a resident cow and wild boars which may hide from people. Access to five different beach pockets is free. Bird watchers will be thrilled to camp at the bird watching hideout and observe bird activities closely. More than 80 species of birds including migratory birds have been photographed at Coney Island Park.

2. Fill in each blank with a **noun**, a **verb** or an **adverb**.

Example:

Word	Open class words
park	noun
explore	verb
across	adverb

(a) _____ is accessible from Punggol and Pasir Ris.
 (b) Cyclists can cover the 2.4 kilometre _____ to Coney Island _____ than those who walk.
 (c) You can cycle or walk _____ the bridge at Punggol that _____ Coney Island to the mainland.
 (d) Recyclable materials were used to _____ the playground at Casuarina Exploration.
 (e) The stations at Casuarina Exploration are named after _____.
 (f) Visitors who _____ at the bird-watching hideout can watch birds.
 (g) An attraction to the island is an _____ of birds, insects and fish.

Open Word Classes

The guide begins with a recapitulation of Open Word Classes learnt in the classroom: nouns, verbs, adjectives and adverbs. This is followed by examples of contextual clues and connectors that students can make use of when completing a cloze passage.

Examples

Examples are provided with explanations so that students can get a better understanding of concepts taught.

Primary 4 English Strategies for Comprehension - Cloze & Synthesis/Transformation

Exercise 18 - Choice

Teaching points

We use **either** and **neither** to refer to two people, things or their qualities.

Examples: You are at the bookshop selecting a book for your brother's birthday. The salesperson shows you two books and says:
Both books are cheap.
Neither book is expensive.

Neither ... nor is the opposite of 'both'.

Example: **Neither** Roy **nor** his brother **likes** singing.
 (Meaning: Both Roy and his brother **do not** like singing.)

Either ... or is used when referring to a choice between two things or possibilities.

Examples: I don't like **either** tea or coffee. (two things)
 The class can **either** read now or after recess. (2 possibilities)

Neither ... nor is used when two or more things are not true.

Example: **Neither** Sue **nor** her sister plays the piano.

Which verb do we use: Singular or Plural Verb?

If both subjects are singular, then the verb is singular.

Examples: **Either** your father **or** mother **has** to sign your report book.
Neither Mr Tan **nor** his wife **is** attending the concert.

If one of the subjects is singular and the other, plural, the verb must agree with the subject closest to it.

Examples: **Either** the twins **or** Joe **prepares** tea every Saturday.
Either Joe **or** the twins **prepare** tea every Saturday.
Neither the students **nor** their teacher **was** in the classroom this morning.
Neither the teacher **nor** the students **were** in the classroom this morning.

Either ... or with a negative verb can replace **neither ... nor** with a positive verb.

Example: I don't like **either** tea or coffee.
 I like **neither** tea **nor** coffee.

Primary 4 English Strategies for Comprehension - Cloze & Synthesis/Transformation

Comprehension Cloze - Teaching Points and Practice

Exercise 6 - Adverbs

Comprehension Cloze 6
Teaching Points



1. Read the text.

Birds are created to fly and to be with others of their kind in a natural environment. They make their homes in trees in the forest or city. If separated from their flock, they call wildly to their flock mates. Other than flying, birds preen each other, feed, mate, build nests and take care of their brood. They are never alone. Many species of birds mate for life.

No bird was born to live in a cage. Yet people keep birds as a hobby. A bird owner feeds his bird and cleans the cage regularly. He also takes his bird outdoors to stretch its wings. However, new bird owners soon find out that birds need more attention than they think. If they are kept in a cage for too long, they become bored and behave abnormally.

Birds often display their frustrations by screaming, biting or being difficult. Others become aggressive and self-destructive. They pull out their feathers, pace back and forth, peck at cage bars, and shake or even collapse from anxiety.

On the other hand, some bird owners succeed in interacting with their pets. Bonding makes birds well-adjusted and well-behaved. Nevertheless, the bird will still escape if it has the chance. It is sad that caged birds pass away years before they would have in the wild.

2. Fill in each blank with an **adverb**.

(a) Birds live in flocks in the wild. They are _____ alone.
 (b) Birds must be fed and their cages, cleaned _____
 (c) If birds are left alone for too long, they begin to behave _____
 (d) Birds are well-behaved when their owners _____ interact with them.

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(e) When taken _____ by their owners, some birds may try to escape.
 (f) Even when well-treated, caged birds will _____ long for freedom.
 (g) Birds in the wild have a life span of about a hundred years while caged birds die years _____ their time.

Practice Paper 6 (15 marks)
Pre-activity



- Do you keep fish? If not, do you have a pet? _____
 - How do you take care of your pet? _____
 - Look at the aquarium above. How did the owner decorate it? _____
 - How would you decorate an aquarium if you own one? _____
- 25

Exercises

Each exercise has two components: Teaching Points and Practice Paper. Students are advised to answer the questions in the 'Pre-activity' section which is a 'warming up' activity before they complete a cloze passage.

Assessment Papers

10 assessment papers are included for students to apply the skills they have acquired.

Primary 4 English Strategies for Comprehension Cloze

Assessment 6
(15 marks)

Pre-activity



- Do you waste food at home and at hawker centres? _____
- Why is it wrong to waste food? _____
- "Food waste impacts the environment." Can you explain the statement? _____
- How can we try to cut down food waste? _____

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Assessment Papers

Assessment
Fill in each blank with a suitable word.

Every day food waste is generated in Singapore by wet markets, supermarkets, hawker centres, restaurants and homes. Food is wasted when there is improper (1) _____ or handling, resulting in food spoilage. Leftovers from cooking are disposed of rather than kept (2) _____ for the next meal. Food that has passed the (3) _____ date by a day or two is not consumed. At wholesalers, vegetables are trimmed to (4) _____ them for sale at the wet markets and supermarkets. Fruits are discarded if they show the slightest damage.

(5) _____ food after buffets or celebrations end up as food waste. The full shelf (6) _____ of cakes, bread and pastries at most bakeries increase the likelihood of purchase. However, (7) _____ ones are thrown away at the end of the day. All waste goes into the (8) _____ plants which emit greenhouse gases into the environment.

For this (9) _____, we should encourage people to reduce food loss. Families can buy food supplies in bulk to save (10) _____. However, they should plan a shopping list so that they do not (11) _____. Leftover food can be recycled or (12) _____ with neighbours. Restaurants should not overstock food that may (13) _____ have to be thrown away. Surplus food can be (14) _____ by volunteers and redistributed to the poor.

Cleaners and stallholders at hawker centres will be (15) _____ to operate food waste recycling machines which can recycle food waste to either water or compost. It is part of the Government's efforts to aim for zero waste and help save the environment.

Before you begin, check the tense of the text.

1. _____	6. _____	11. _____
2. _____	7. _____	12. _____
3. _____	8. _____	13. _____
4. _____	9. _____	14. _____
5. _____	10. _____	15. _____

Score: _____ / 15

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Synthesis/Transformation

This section in the Primary 4 and 5 books covers the use of connectors to join sentences, word formation which requires learners to convert one word class to another or add prefixes or suffixes, and changing of direct speech to reported speech and vice versa.

Primary 4 English Strategies for Comprehension - Cloze & Synthesis/Transformation

Synthesis/Transformation 7

Rewrite the sentence(s) given, using the word(s) provided. Your answer must be in one sentence. The meaning of your sentence must be the same as that of the sentence(s) given.

- The twins showed their love for their mother. They baked her a birthday cake.
The twins showed _____
- Jack's father will allow him to play soccer. He must come home on time for dinner.
As long as _____
- The boy's dog was killed in an accident. The boy was heart-broken.
The boy _____
- He has failed many times. He still hopes to succeed.
In spite of _____
- Maria has not seen Peter for some time. She wonders how he is keeping.
Not having _____
- They spoke quietly. They did not want to wake the children up.
_____ so as _____
- The dismissal bell rang. We went home immediately.
As soon as _____
- Jenny refused to follow Mr Ali's instructions. Mr Ali was frustrated.
Jenny's _____

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Synthesis/Transformation 8

Rewrite the sentence(s) given, using the word(s) provided. Your answer must be in one sentence. The meaning of your sentence must be the same as that of the sentence(s) given.

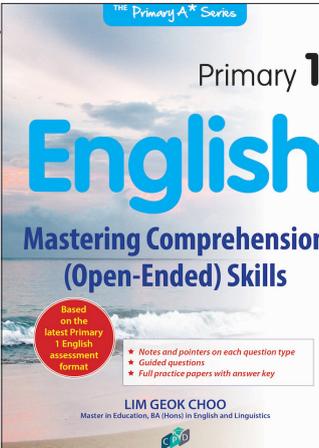
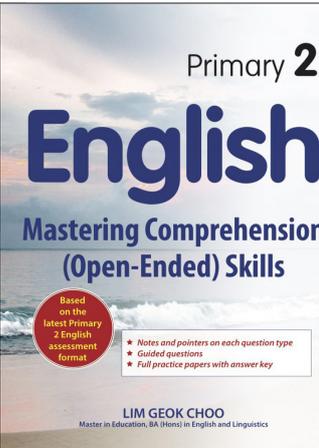
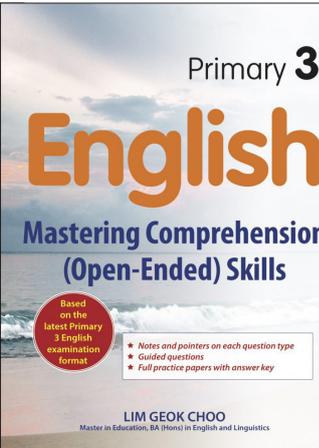
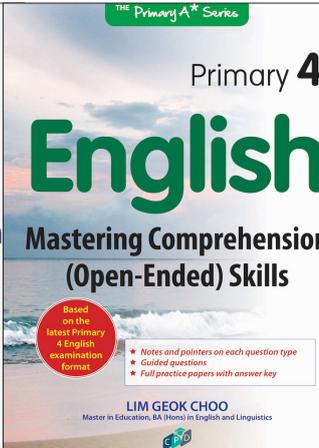
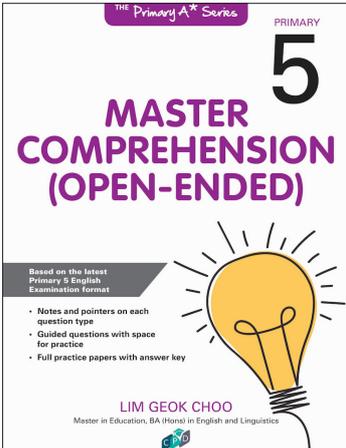
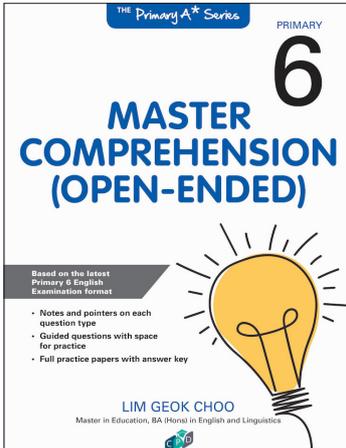
- Neither Adam nor Joy is convinced that they made a mistake.
Both _____
- Mr Lee's children show no interest in horror movies.
Neither of _____
- We will not give you the goodies bag if you do not request for it politely.
Unless _____
- The lady lost her handbag. She broke into tears.
_____ whose _____
- My teachers were patient. I passed my examination.
Because of _____
- Pat is captivated by the flowers. They are beautiful and fragrant.
Pat is captivated _____
- "Ahmad, I'm sorry. I was rude to you at the meeting," Alice said.
Alice apologised to _____
- Mrs Lim reminded her pupils not to forget to bring their report books the following week.
_____ Mrs Lim reminded her pupils.

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Mastering Comprehension (Open-Ended)

This series is written for students to use in the classroom with teacher supervision and/or at home for independent learning.

With the teaching notes, short practice exercises, tips on common mistakes to avoid and full practice papers, students will be more confident and better prepared to handle the demands of this new format of open-ended comprehension in the English Language examination.

 <p>ISBN: 9789810990114</p>	 <p>ISBN: 9789810990121</p>	 <p>ISBN: 9789810990138</p>	 <p>ISBN: 9789810971823</p>
 <p>ISBN: 9789811138034</p>	 <p>ISBN: 9789811138041</p>		

Teaching and Explanation Notes

Notes and examples are given to explain the demands and expectations of open-ended comprehension.

Primary 1 English – Mastering Comprehension (Open-Ended) Skills

Quoting the Text

Steps to use
 In each step, there is a guiding question to help you.
 Step 1 What is required? (A word? A phrase? A sentence?)
 Step 2 What is the given meaning?
 Step 3 Which word, phrase or sentence in the passage has this meaning?

Example
 Mani and Lukman were good friends. They were travelling through a forest together. Suddenly a bear appeared. Mani did not know what to do. Lukman sprinted off, leaving his friend behind.
 Mani tried to run but he fell instead. The bear came over and sniffed Mani, who had passed out. As Mani seemed lifeless, the bear walked away. It continued in search of Lukman.

Quote the 2-word phrase in the passage that means 'fainted':

Step 1 What is required?
 A 2-word phrase

Step 2 What is the given meaning?
 'Fainted' means 'blacked out or became unconscious'.

Step 3 Which phrase in the passage has this meaning?
 'Passed out' has the meaning 'fainted'.

Answer

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Primary 2 English – Mastering Comprehension (Open-Ended) Skills

Example

On his way home, Bei saw many dragonflies. They came flying in circles around his head. Irritated by the buzzing, he caught one and the rest flew away.
 Then he met a woman and her son. The little boy exclaimed, "Mummy, dragonfly!"
 Bei gave the dragonfly to the little boy. He received three oranges from the grateful woman.

Who gave Bei some food?

Step 1 The question word is 'who'.
 Step 2 I must identify the person who gave Bei some food. In the story, Bei met a woman and her son. Bei gave a dragonfly to the little boy. Bei received three oranges from a woman.
 Step 3 The person was the boy's mother.

Answer The boy's mother gave Bei some food.

Primary 1 English – Mastering Comprehension (Open-Ended) Skills

Content Errors to Avoid

Be Careful!
 Do not read only parts of the story to decide if a sentence is true or false. Read everything.

Example
 Some women looked at the apples. They were going to buy them if the price was right.
 Put a tick (✓) in the box if it is true and a cross (X) if it is false.
 The women bought the apples.

Read the whole story to get the full picture. Then decide if the sentence is true or false.

Some women looked at the apples. They were going to buy them if the price was not high.
 The stall-holder said the apples cost one dollar each. The women shook their heads.

In this example, the women were going to buy the apples if they were not expensive. At one dollar each, the apples were expensive. The women shook their heads because they did not want to buy the apples.
 The truth is they **did not buy** any apples because the price was high.

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Common Errors

Pointers are provided to warn students about common pitfalls when they answer questions.

Guided Exercises

Guided exercises are included to provide students with immediate practice and guidance.

Full Practice Papers

Full practice papers are provided for students to test their ability to apply what they have learnt. To benefit from this book, students should complete the teaching section first. Then they can proceed to the full practice papers with greater confidence.

Full Practice Paper 8

Dear Diary,
 Today our teacher told us about the reading competition. There was a buzz in the room after that. My classmates and I hoped our class could win.
 "Joyce, you are the class leader. Any ideas?" Mrs Lim asked. Before I could reply, my best friend suggested that we could go to the library during recess. I was surprised. All my classmates agreed. I thought everyone wanted to play during recess.
 "We can eat quickly. That way, we can still borrow books from the library," Jenny said.
 Today, our class loaned a total of forty books. We plan to read them by tonight, so tomorrow we can get more books. I am confident that our class stands a good chance. We will be reading more books than other classes. Jenny's idea was a clever one.

Answer all the questions.

1. What did the pupils hope they could win? [1m]
 They hoped they could win.

2. Why did Mrs Lim ask the writer for ideas? [1m]
 Mrs Lim asked her for ideas because _____.

3. Who was the writer's best friend? [1m]
 The writer's best friend was _____.

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Primary 1 English – Mastering Comprehension (Open-Ended) Skills

Full Practice Paper 9

King John loved his son very much. There was nothing he would not do to see him smile.
 One day, the little prince fell ill. He would not eat his favourite food, fried rice. He would not take his medicine. He did not want to play with his favourite ball.
 "What shall we do?" King John asked his queen.
 "A pet!" said the advisor. "A cute little pet will cheer the prince up!" he added.
 King John chose a puppy. The queen chose a kitten. When the prince saw the animals, he smiled. He cuddled and stroked them. He took his medicine and got well, thanks to the new pets!

Answer all the questions.

Put a tick (✓) in the correct box.

1. King John wanted _____ to be happy. [1m]
 the prince the puppy the queen

2. The advisor told the king to give his son _____. [1m]
 a kitten a puppy a pet

Put (✓) in the box if it is true and (X) if it is false. [4m]

3. The prince was not well.

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Answer Key

An answer key is provided for students' use when assessing their own answers so that they can learn from their mistakes. Practice makes perfect.

Master Comprehension (Open-Ended) – Primary 2

Exercise 6D
 (a) connected
 (b) smothering
 (c) conspicuous

Exercise 6E
 (a) waddles
 (b) disappreciated
 (c) warring

Exercise 6F
 It tells us that the players performed badly during the games and always lost to their opponents.

Unit 7

Exercise 7A
 1. The names of the characters properly fill out their character after Neo had fallen to his knees and led him to the chair.
 2. They made sure that Neo was always ahead of them by not overtaking him.

Exercise 7B
 Step 1 The question word is 'why'.
 Step 2 When his father found a large gold coin in the cake, he did not keep it for himself. Zui's father told Zui to return it to Ahmad.
 Step 3 Zui should be thankful to his father for being honest and not taking home a job. Ahmad chose a worker for his factory to bring food to him and if the person is honest enough to return the gold coin he had put inside the cake.

Exercise 7C
 Step 1 The question word is 'how'.
 Step 2 Ahmad gave a feast to some children. He put a gold coin in each piece of cake of the person eating it.
 Step 3 When the person returned the coin, Ahmad would know that he was honest. If the person did not return the coin, Ahmad would not offer him a job.
 Answer Ahmad chose a worker for his factory to bring food to him and if the person is honest enough to return the gold coin he had put inside the cake.

Exercise 7D
 Step 1 The question words are 'what' and 'why'.
 Step 2 His father cut the cake and found a large gold coin in it. He was honest and he told his father. Ahmad told Zui to return it to his factory the next morning so Zui should be thankful to his father for being honest and telling him to return food inside the cake. Zui should be thankful to Ahmad for giving him a job.
 Answer
 1. Zui should be thankful to his honest father for telling him to return the gold coin.
 2. He should also be thankful to Ahmad for giving him a job in his factory.

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Master Comprehension (Open-Ended) – Primary 3

Practice Paper 10

1. Ahmad.
 2. Spending a long day shopping with friends for presents made him drowsy.
 3. It was a short cut and he was impatient to reach home.
 4. They were the crushing of sand and gravel under his boots and light footings behind him.
 5. He was not alone in the park. There was someone else in the park besides him.

True/False	Reason
True	People walked those around them would watch.
False	They wanted a side for them to hide in.
True	The writer walked fast.
False	He confronted the author directly.
True	so that he could shake off or frighten the reader.

7. The writer recalled something that happened 8 months ago.
 True/False Reason
 True The writer thought that the stranger was evil but he was kind / The stranger was a kind man who helped the writer.
 False The writer spoke politely to the stranger.
 False The reader happened to be the afternoon.
 True It was night / There was moonlight.

8. 2, 1, 3
 9. yes
 10. I would feel embarrassed because my trousers were torn and I had scolded someone who was trying to help me.
 OR I would feel thankful because the kind and elderly man prevented other people from seeing my torn trousers.
 OR Any other reasonable response

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Mastering Comprehension Visual Text & Cloze

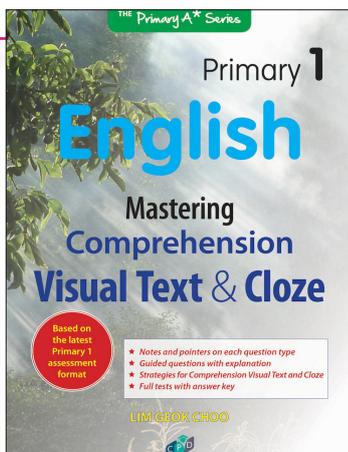
There are 2 main sections in each book:

Section 1: Visual Text Comprehension

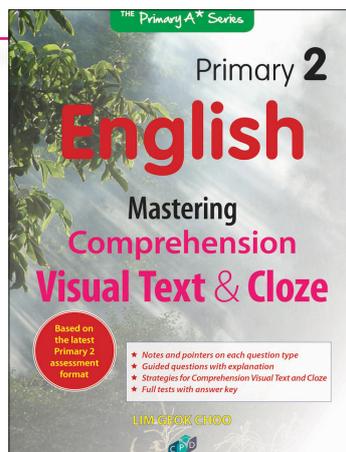
Visual text comprehension is different from open-ended comprehension. A visual text has images and words to convey meaning. These help to make the meaning of the information clearer for readers. Examples of visual texts are: web pages, flyers, posters, advertisements, brochures and newsletters. The following common types of questions in visual text comprehension are explained in this section: (a) True statement, (b) Vocabulary in context, (c) Important details, (d) Reasons, (e) Evidence, (f) Facts vs. non-facts, (g) Main aim and (h) Punctuation. 10 tests in visual text comprehension are included in this section.

Section 2: Comprehension Cloze

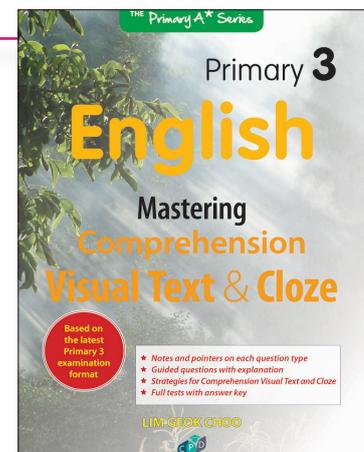
Comprehension cloze is a test of students' ability to comprehend a text. There are 15 deletions in each text from different word classes. The following are some useful strategies on comprehension cloze covered in this book: (a) Collocations, (b) Contextual clues, (c) Connectors, (d) Synonyms/Antonyms, (e) Summary, (f) Grouping, (g) Referring back and forward, (h) Cumulative and global comprehension. 10 tests in comprehension cloze are included in this section.



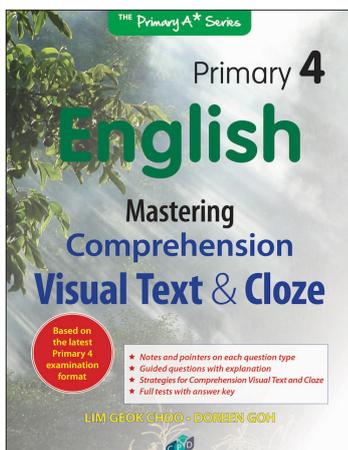
ISBN: 9789811111723



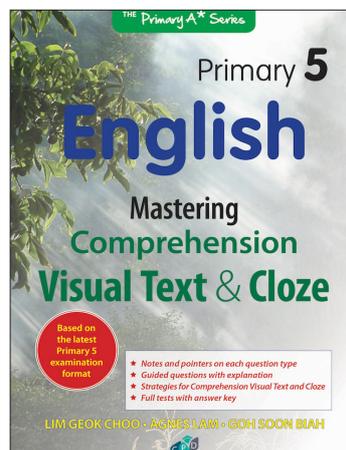
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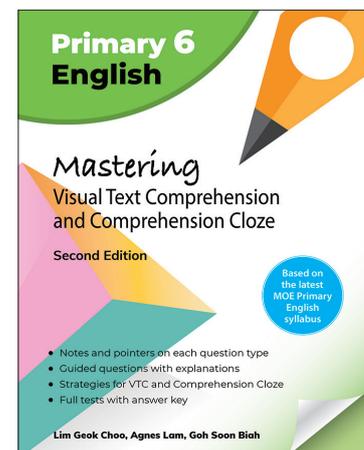
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ISBN: 9789811111693



ISBN: 9789811111686



ISBN: 9789811499203

Unit 12
Synonyms / Antonyms

Writers use synonyms (words with similar meanings) so that they do not have to use the same words in a paragraph. At times, they also use antonyms (words of opposite meanings) to express their ideas to avoid repetition.

Hence, an important strategy to remember when you need to find the correct word to fill in a blank is to think of a possible synonym or antonym that can fit into it.

Steps to use

1. Read words before and after the blank.
2. Study the clues to find out if the writer is using a synonym or an antonym.
3. Use a suitable synonym or antonym for the blank.

Example 12
Jack feels unhappy when he sees his best friend _____ about her lost pet.

Steps to use

Step 1 Read the words before and after the blank.
The words before the blank state that something is making Jack unhappy. The words after the blank tell me that Jack's unhappiness has to do with how his best friend is feeling when she loses her pet.

Step 2 Study the clues to find out if the writer is using a synonym or an antonym.
The clues tell us that the writer is stating that Jack's feeling of unhappiness is linked directly to how his best friend is feeling over the loss of her pet. So both their feelings have to do with the loss of the pet, the writer is using a synonym for the word 'unhappy'.

Step 3 Use a suitable synonym or antonym for the blank.
The word for the blank must be able to replace the word 'unhappy'. Therefore, the answer is 'upset'.

Answer: Jack feels unhappy when he sees his best friend upset about her lost pet.

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Primary 6 English Reading/Short Text Comprehension and Language Use

Practice 16

"I'm having a headache again," said Joe. "This story-writing competition is giving me endless trouble!" he thought to himself.

That afternoon, Joe went to the library in search of inspiration. He took some books down from the shelves and started reading some stories. Suddenly, he had an idea. He could just use one of them as his entry for the competition! He quickly set to work.

The next day, Miss Tan came to class early and read a story to the pupils. It was the prize-winning story last year. It was the story that Joe had copied and submitted as his entry.

For the next few days, Joe could not sleep or eat well. He was afraid he would be found out. Joe _____ stealing someone's work. He wished he had not done what he did. If only he could get his entry back. He decided by his heart to write an original story even if it was going to give him a headache again.

Steps to use

Step 1 Read each paragraph to get its main idea.

Paragraph 1 Joe was having problems trying to _____

Paragraph 2 Joe copied _____

Paragraph 3 Miss Tan read _____

Paragraph 4 Joe could not sleep or eat well for fear that _____

Step 2 Connect the main ideas of the individual paragraphs.
Joe was desperate for story so he _____ as his entry for _____

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Steps to Use

Each unit contains a 'Steps to Use' section which provides students with a step-by-step guide on how to tackle different questions.



Common Mistakes

Showcases common mistakes made during comprehension so that students can avoid the same pitfalls.

Unit 7 Vocabulary in Context

Option (4): preserve

Step 1 Read each option to understand its meaning.
Option (4) means keep in its original state.

Step 2 Find the relevant part of the visual text to decide if the option is correct.

The natural resources on our planet earth are limited so we must make the most to conserve, recycle and reuse whenever possible.

This tells me that the resources must be kept in their original state.

The information helps me decide that Option (4) is not correct.

Answer: Option (1)

Common Mistakes to Avoid

Some options may be quite plausible and close to the correct answer. Do not be misled by such options but consider the context more closely. Be aware that some options offer only dictionary meanings and may not be suitable in the given context.

Practice 2

Joyce Lim – a student

I enjoyed myself very much. Besides some shrubs, we also planted nine Tembusu trees around the neighbourhood. I learnt that there is a tree of this type right in the heart of the Botanic Gardens. It has a unique low-hanging branch and is an icon of the Gardens. It is over 150 years old. The wood from the Tembusu is very hard, and resistant to termites and weevils, which makes it popular for building. It only flowers twice a year, with an unmistakable fragrance.



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Primary 3 English Reading/Comprehension/Short Text & Use

Visual Text Test 9

Look at the poster. Answer Questions 1 to 4.

Sweet Smile Dental Clinic

38 Orchard Road, #08-11
Flax Building
Singapore 27883311

A clinic specially for children

Our dentists are trained to help children overcome their fear of getting dental treatment.

Come and have a pleasant experience at our clinic when you need dental treatment. Read, rest or do some art activities while you wait for your dentist.

Context 2

Helping words
librarian pupils sign chair shelf counter

This is a 1. _____

2. _____ 3. _____ 4. _____

5. _____ 6. _____

7. _____ 8. _____ 9. _____ 10. _____

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Primary 6 English Reading/Short Text Comprehension and Language Use

Exercise 11

Fill in each blank with a suitable word.

1. We went to a fast-food restaurant _____ we did not have a lot of money with us.
2. _____ soft drinks are tasty, water is healthier for you.
3. We had not eaten since we went on the hike. _____ we felt very hungry and could not walk very fast.
4. I hope they will come to my house _____ I want to learn more about their overseas trip.
5. It started to rain heavily. _____ we could not leave the house.
6. _____ to the drought, the government is going to start water rationing.
7. It is important to exercise regularly. You must also have a balanced diet. Most _____ you must have enough sleep.
8. He did not win a prize. _____ the judge praised him for his commendable efforts.
9. People used bricks _____ were sturdier than other building materials to build their houses.
10. They cite examples of sailors. _____ in the past, had to sail on the oceans for months without proper nutrition.
11. We should feel satisfied _____ not stuffed at the end of each meal.
12. They cannot sleep. _____ they hug their favourite teddy bears.
13. Kite flying was introduced to India by travellers. _____ then, different types of kites have been flown by Indians.
14. You did not tell us you wanted to come _____ our group outing.
15. I think it is a good idea to buy your most _____ you should buy her to _____

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Unit 4 True Statement

Step 1 Read each statement to understand its meaning.

Option (1): You can have noodles with ice cream.
Option (1) means that when you order noodles, you also get ice cream.
It is not correct because the order is noodles and orange juice together.

Option (2): You can have burgers with ice cream.
Option (2) means that when you order burgers, you also get ice cream.
It is not correct because the order is burgers, fries and orange juice together.

Option (3): You can have pizza with ice cream.
Option (3) means that when you order pizza, you also get ice cream.
It is correct because the order is pizza and ice cream together.

Step 2 Find the correct part of the visual text to decide which statement is true.



The text states that there is an order for pizza and ice cream together.

Answer: Option (3)

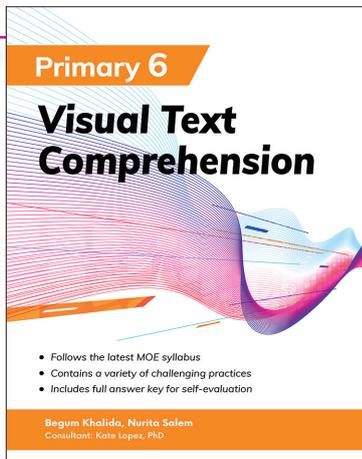
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Practices with Answers

Students can test skills and concepts learnt, after which they can easily do self-evaluation with the help of the provided answers.



P6 Visual Text Comprehension



ISBN: 9789811494345

The objective of this Primary 6 Visual Text Comprehension is to equip Primary 6 students with the vital skills to face visual text comprehension questions in preparation for PSLE. The challenging visuals are presented in a myriad of ways to expose students to the varieties of visual texts that they could encounter in their examinations.

This book will strengthen the students' comprehension skills through the use of stimulating visuals that encourage sustained and mindful interaction between the reader and the visual texts.

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Extensive Practices

The book contains 50 visual texts for comprehensive practice.

Challenging Visuals

A variety of visual texts with questions following the latest MOE syllabus.

Primary 6 Visual Text Comprehension

VISUAL TEXT 1

Study the following bulletin and answer questions 1 to 6.

Organised by Birchwood Primary School

SCIENCE AND BEYOND

Calling our P5 & P6 students to join Birchwood's annual science fair!

3rd May & 4th May 2019

10 a.m. to 5 p.m.

Present this coupon to get 10% discount at the science fair food stalls.

Registration forms for participants are available at the general office. Alternatively, you can register online at www.birchwoods.com

Spectators are welcome to come down for a great day of fun and learning at our school's science fair! There will be 50 science booths to look out for! Food stalls set up by students will also be available.

Grand prize: 2-year subscription to Science magazine (value \$100)

Winners will be announced on the second day of the fair at 4:30 p.m.

Judging begins at 3 p.m. each day.

Participants are to bring their project summary and present it in a file at the audition on 25th April. Selected Names of selected participants will be announced on 29th April.

2. Where can the registration form for the science fair be obtained?
 (A) From the science teachers.
 (B) From www.birchwoods.com.
 (C) From the science fair judges.
 (D) From the general office.

3. Why is the date "25th April" written in bold?
 (A) To make the date look pretty.
 (B) To draw people's attention to the audition process.
 (C) To make the date stand out.
 (D) To highlight when the selected participants will be announced.

4. Who is the organiser of "Science and Beyond"?
 (A) Birchwood Primary School
 (B) Science and Beyond Magazine company
 (C) Birchwood Secondary School
 (D) Birchwood Science Club

5. The 10% coupon is to be presented at the _____.
 (A) general office
 (B) science fair food stalls
 (C) audition for the judges
 (D) science fair booths

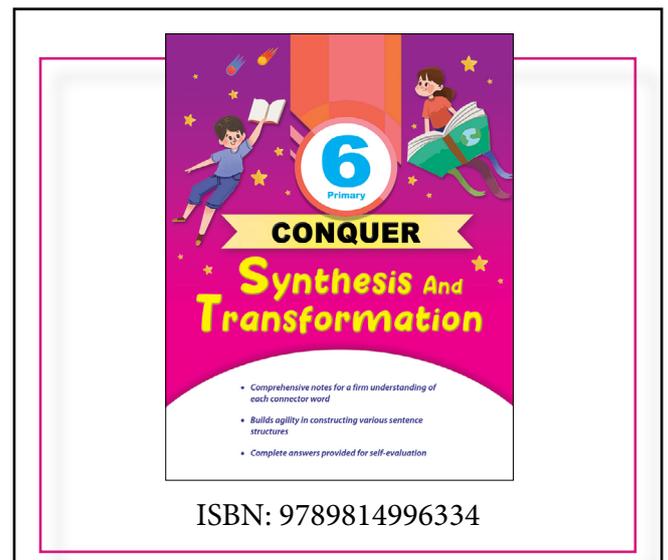
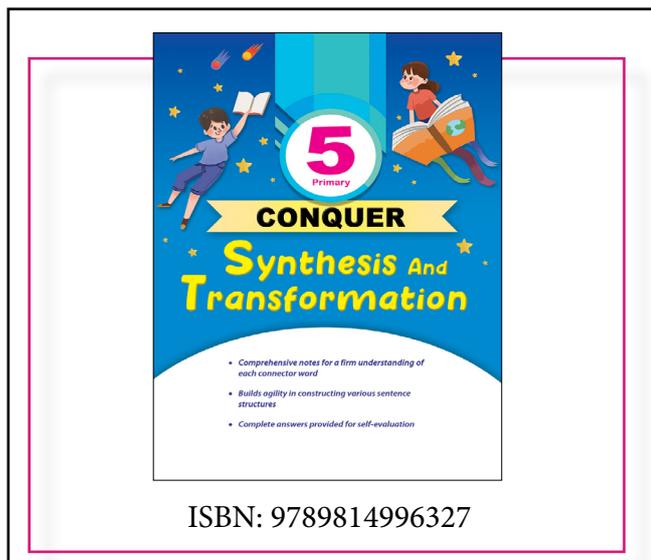
6. Gerald is interested in participating in the fair. What does he need to prepare for the audition?
 (A) Project summary PowerPoint slides
 (B) Speech for the science fair
 (C) Project display
 (D) Project summary in a file

Conquer Synthesis and Transformation

Both the Primary 5 and Primary 6 Conquer Synthesis and Transformation books provide practice in constructing meaningful sentences, with the added aim of helping students learn to show how their ideas connect and emphasise the important ideas in their sentences. Students will develop a firm foundation in understanding the structure of English sentences as well as the confidence to use the acquired skills in their compositions.

The sentences in the practice exercises follow the sentence structures students should master at the end of Primary 6, as spelt out in the latest Ministry of Education syllabus for primary schools. Between the two books, the various strategies are comprehensively covered.

These books will help teachers, parents and pupils to identify and correct language errors. The highlighted skills are organised following a systematic approach. Following such an approach also means that pupils are exposed to a variety of ways in which each skill can be explored, building agility in writing and thinking.



Using conjunctions to join two or more words or statements

and **both ... and** **not only ... but also**
as well as

These conjunctions allow us to express two ideas which move along the same line of thought.

Eg: Wee Nam was late. Raju was late too.

It is possible to combine the two sentences in the following manner.

A1 **Both** Wee Nam **and** Raju were late.

Note the verb change in A1 from 'was' to 'were' because **both** is used.

Eg: The boys were quite tired. They were also quite hungry.

A2 **The boys were both quite tired and quite hungry.**

A3 **The boys were not only quite tired but also quite hungry.**

(a) Since **not only ... but also** and **both ... and** are correlative conjunctions, the pair should be followed immediately by the same grammatical words, two similar phrases, or two similar clauses.

Wrong: The boys not only were quite tired but also quite hungry.

Exercise 1

For each of the items, rewrite the given sentence(s) using the words in bold in one sentence. The meaning of your sentence must be the same as the original.

- My brother is furious with me. My sister is furious with me too.
 Both _____
- Kaaren spent her childhood in India. She spent it in China too.
 Kaaren _____ not only _____ but _____

Answers

Exercise 1

- Both my brother and my sister are furious with me.
- Kaaren spent her childhood not only in India but also in China.
- Jacky smelt and enjoyed the food.
- Not only does Jacky like to watch movies but he also likes to watch plays.
- Shakespeare was both an actor and a playwright.
- Both the front and the back of the building need painting.
- Mr Goh was pleased and impressed with John's work.
- Gerie not only drilled the pre-ropes but she had the second safest.
- Wee Seng has a great sense of humour and likes to play jokes on his friends.
- Diabetes not only pushed the moral in the league but also handicapped the wooden statue.

Exercise 2

- Although the theatre was freezing cold, Polly did not put on a coat.
- She tried solving the mathematical problem but gave up after two hours.
- I enjoy watching soccer whereas my father prefers watching basketball.
- Although I had planned my journey carefully, the closure of the mountain pass upset it.
- We had trained hard but lost the match.
- When Mr Lim wanted to visit the Am Museum, Mrs Lim wanted to shop.
- I did not get an interview although I had all the necessary qualifications.
- Neither had he to the rock but he was not.
- Lila loves to eat whereas Mia Mei finds it a chore.
- When I got to the airport, I realised I had not packed my suitcase.

Exercise 3

- Helen refused to take out the trash on the empty bottles.
- You can choose either a sweater or a hat and shoes.
- Suling has not visited her aunt or auntie in her.
- Enrica has neither an estate nor a table.
- When you get there, ask for either Ethan or Anishah.
- I have never neither the forest nor the forest.
- Tell me the truth, Lila, or I will not trust you again.
- You can either walk along the Singapore River or enjoy the city view from Mt Faber.
- Neither Patrick nor his hand wants to eat the food.
- Either he is Korean or he is Japanese.
- Ling Li brought a dress along, for she knew the theatre was freezing cold.

Exercise 4

- Her classmates like her because she is kind and cheerful.
- As tomorrow is Chinese New Year, every shop will be closed.
- As we have not seen each other for a long time, they have been busy.
- The bus is not late now, for the policeman has been come.
- The student often has to study hard.
- Mr Tan made great progress in her work for she worked hard.
- We were charged with the policeman for the evidence pointed to him.
- As James was nervous, he decorated his room.
- Suzuki walked away because she was afraid of the performance was being.
- Ling Li brought a dress along, for she knew the theatre was freezing cold.

Coverage in Each Unit

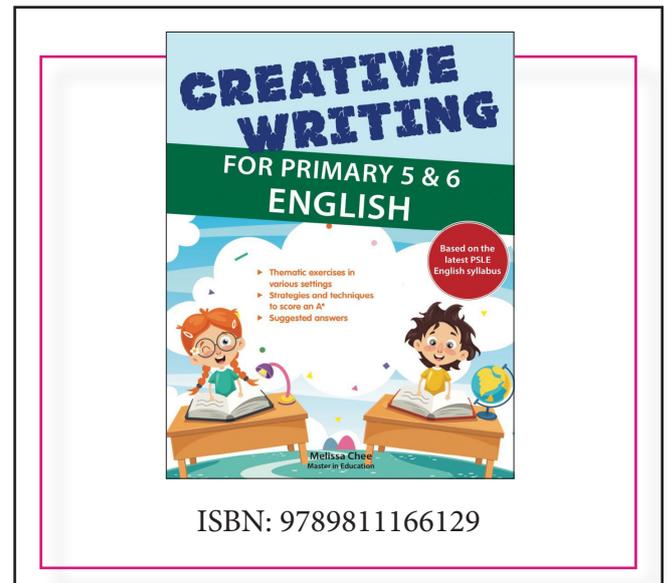
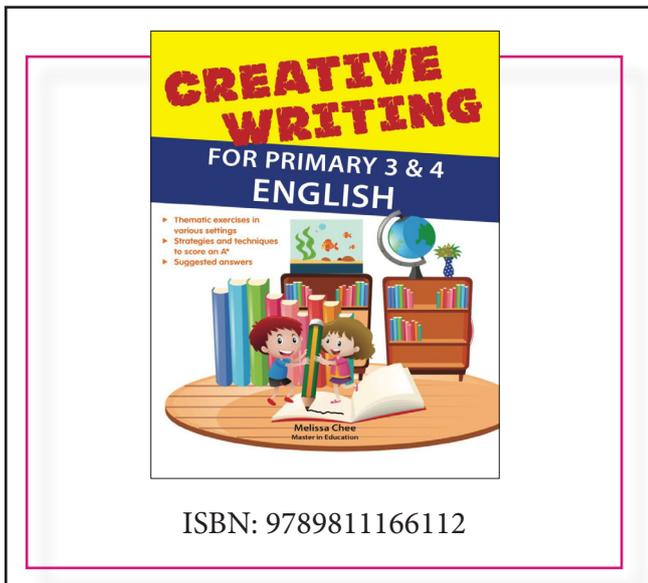
A box at the beginning of most units highlights the different words to be covered for that particular strategy. Those in bold are discussed in the book, while those which are not are introduced in the other.

Enhanced Learning

Since learning is enhanced through insight, explanatory notes and answers to the exercises accompany each unit.

Creative Writing

Writing a good essay requires a good command of the English language and clarity in expression. This series contains thematic exercises in various settings found in examinations. With many examples of good descriptive phrases from different themes, you will definitely improve your writing and build up your word bank. Suggested answers to practice questions are provided to facilitate learning and for students to eventually make use of the techniques in the answers to score an A* in Paper 1.



Unit 1 Introduction

Devices that you can use to enhance your writing

There are various devices that you can use in your essays to make them better. Some of these devices are given below.

Metaphor A figure of speech where a word or a phrase is regarded as symbolical of an object or an action.
Example Pauline is feeling blue.
The statement is not literally stating that Pauline is feeling like the colour blue, but that she is feeling sad as the colour blue is often symbolical of sadness.

Simile A figure of speech used to compare two different things to emphasize on the description. Similes usually come in the form of: "as _____ as _____", "like _____".
Example The winner of the 100m race paraded around the track like a peacock.
A peacock is usually representative of pride and hence, stating that the winner of the race paraded around like a peacock, just means that he was proud.

Idiom A figurative phrase that should not be taken literally as idioms often have meaning that cannot be derived from the words in the phrase itself.
Example Once in a blue moon
If someone says that something occurs once in a blue moon, it means that it happens rarely.

Unit 1 Introduction

Devices that you can use to enhance your writing

There are various devices that you can use in your essays to make them better. Below are some which you can consider:

Personification
 The assigning of human qualities and characteristics to something non-human, such as the weather.
Example The stars danced in the night sky.
Dancing is a human action and the stars did not literally dance in the night sky. It is used in this sentence metaphorically to mean that the night sky is filled with twinkling stars.

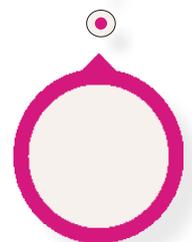
Onomatopoeia
 The formation of a word from a sound.
Example The rain pitter-pattered on the window pane.
Pitter-patter is the sound made by the rain when it falls on a surface. It can be used to further illustrate and describe the scene of the rain falling.

Oxymoron
 A contradiction of terms – often to add dramatic effect or meaning to a certain context.
Example The silence in the room was deafening.
'Silence' and 'deafening' are contradictory words. Deafening is usually associated with loud noises. In this case, 'deafening' emphasises on how extreme the silence was.

Foreshadowing
 A slight hint at what is coming, usually used to build up tension.
Example John beamed in pride. Little did he know that his joy would be short-lived.
Little did he know hints at the tragic events that could follow after, creating an atmosphere of suspense.

Progressive Difficulty

Creative Writing for Primary 3 & 4 helps students build a foundation in creative writing. Creative Writing for Primary 5 & 6 builds competence in students to write confidently.



Practices with Examples

Reinforces learning through using different expressions that can be used in essays. Students will have a better understanding of phrases though exposure to their usage in different contexts based on themes. It provides a structured way to improve creative writing.

Unit 4 Scenery

Good weather

Examples

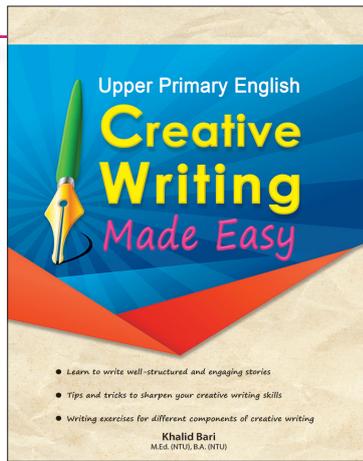
- The flowers blooming in the field...
- The sturdy trees bowed their heads...
- From pastel flowers to tropical cacti housing some of nature's finest cre...
- I was mesmerized by the flowers in before me and a sweet aroma waft...
- A butterfly flitted through the bea collect sweet nectar.
- The snow-capped mountains stood soft sunlight.
- The rainbow shimmered beautifull causing pedestrians to stop and ga...

Practice 10

- The air _____ as thunder and lightning waged war in the sky, producing low rumbling sounds that crescendoed into a cymbal crash.
- _____ of incessant rain pummelled down on the roof of our car.
- The air turned _____ and _____, heavy with the _____ of rain. Sprinkles of water fell from the sky, and soon enough, a wall of rain was drumming on our window.
- A streak of lightning _____ through the chilly night, briefly illuminating the sky.
- By the time I got home, my white shoes were caked with _____ and _____.



Creative Writing Made Easy



ISBN: 9789811490118

Some might think that a good composition is one that has flawless grammar, punctuation and spelling. However, correct writing is not the same as good writing. Those are only the basic expectations an English teacher has of any student's composition. Creative Writing Made Easy helps students share their imagination and present their stories creatively, the hallmarks of good writing.

Chapter 2
What Makes a Story Great?

A good story boils down to two main features: an interesting character and an interesting storyline.

Good Story Feature: Interesting Character
When we are creating a character, that character must be reliable to our readers and more importantly to ourselves, the writer.

For instance, imagine that you are a Primary 5 student writing a composition for your English language teacher. Your main character in your story should be of someone who can be a student like yourself whose situation is similar to yours (for instance, having an argument with a friend, passing a difficult test, visiting a foreign country for the first time).

Creative Writing Tip
Create a main character whom you and your reader could relate to.

While you can create an interesting character who shares no similarity with you (like a 30-year-old woman who was recently re-rentended or an ex-offender who was just released from prison), you might not be able to convey the character effectively because you are unable to relate to the character's experiences.

The easiest way to create the main character in your story is with someone whom you know. It could be a friend you know, a relative you have or a neighbour whom you know very well. Better yet, you can create a character based on yourself.

Creative Writing Tip
Try to introduce your character's personality at the start of the story.

Exercises

Writing exercises for different components of creative writing.



Creative Writing Tips

Help sharpen students' writing skills.



Upper Primary English Creative Writing Made Easy

EXERCISE
Create three characters that have both good and bad qualities.

Character	What does he/she do?	What is his/her positive quality?	What is his/her negative quality?
Example: Mr Lim	An old man who lives alone.	He takes care of stray cats.	He is a grumpy old man who dislikes children.

As you are writing and presenting your characters in your story, you must give them a **personality**. Each character must have a distinct personality to separate the characters apart.

Creative Writing Tip
Limit your number of characters in your story. If there are too many characters, the reader might be confused.

Build Better Vocabulary

Multiple sample phrases to describe scenarios are provided.



Chapter 9 - Building Better Vocabulary

Phrases to describe evening or night

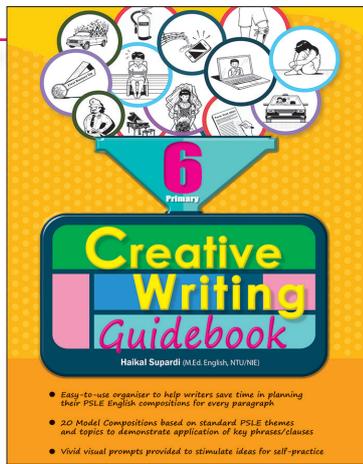
- The evening sun beckoned me home after a brain-storming session in school.
- The splendid sunset had us spellbound as we watched the sinking of the huge ball of fire amidst the splashes of warm hues of red, orange and yellow. Such was the splendour and grandeur of the sunset.
- The moon was high in the sky, shrouded by misty grey.
- Beneath the silvery moon, the distant owl hoisted had silhouettes of the branches resembled ghostly limbs.
- The ominous moon seemed to be in cahoots with the
- The moon lost its place in the night sky as the blanket descended on the quiet neighbourhood.

Upper Primary English Creative Writing Made Easy

Phrases to describe a person's voice

- A screeching voice
- A tremulous voice
- A voice so cruel, cold and ugly
- A voice that brought my heart to my mouth
- A cry that penetrated the silence of the night
- A cry that rang through the night
- Blatant out
- Cried out in a trembling voice
- Deep authoritative voice
- Dry and caustic
- Deafening roar
- High-pitched voice
- His or her voice faltered
- High-pitched laugh
- Hysterical and shrill laughter
- Grunted breathlessly
- Long hyena-like laugh
- Loud and dictatorial voice
- Momentary silence
- Muffled laughter
- Picked up the ears
- Quivering voice
- Raising his or her voice in an odd sing-song manner
- Sounded calm and composed
- Silence tinged in the air
- Snapped scornfully
- Soothing voice

P6 Creative Writing Guidebook



ISBN: 9789811803673

This book serves to guide students in planning and writing creative compositions for the Continuous Writing component of the PSLE English Language Paper 1. Each chapter has been produced in consideration of previous PSLE questions over the years.

Each Writing Task in this book demonstrates a guided planning structure for every section of the composition known as F.A.S.T. (Feelings, Actions, Speech, Thoughts).

In this guidebook, students will have the opportunity to generate ideas for commonly tested topics such as crime, unfortunate events, school issues and values in action. Students may refer to the model compositions and identify phrases (written in bold) that can be applied in the 'Self- Practice' sections.

Planning: Character & Story Development (F.A.S.T) - Sample

	Feelings	Actions	Speech	Thoughts
Intro / Conflict	- Anxious - Disappointed - Heralded	Baxter suspected he was a victim of an online scam. He could not contact online support after promised delivery of the game.	"Where on earth is that deliveryman? It's been 2 hours!" he barked.	Decided to contact the seller via that messenger on the website.
Backstory / Body	- Disappointed	The account had been blocked from contacting the seller and the deposit was gone.	"The number you just dialed is not in use," said the operator.	
Backstory / Body	- Frustrated - Impatient	Baxter used an online shopping website to make a game console for a long time. He engaged a seller by the name "Charles" who asked for a deposit of \$100 to receive the product reservation.		who did request a refund.
Climax	- Depressed - Disappointed	He decided to confirm his suspicions by checking the reviews.		finally returned the console such as a scammer.
Resolution / Conclusion	- Embarrassed - Guilty	The seller's page was flooded with hundreds of complaints and warnings.		
Resolution / Conclusion	- Not realising in regret and self-pity for too long	Baxter readily reported the scam to the website helpline as well as the police. He was informed that the culprit had been apprehended.	"Oh, God answered my prayer! Justice was served!" Baxter barked.	would be the same gullible was. Justice

Self-Practice 1

	Feelings	Actions	Speech	Thoughts
Intro / Conflict				
Backstory / Body				

Planning Structure

Each Writing Task comes with a sample F.A.S.T planning structure and provides an opportunity for the students to practise and have their own version.

Model Compositions

Each Writing Task also comes with a model composition with key clauses/phrases highlighted to further guide the students in their essay writing.

Model Composition

An Online Scam

"Where on earth is that deliveryman? It's been two hours!" Baxter barked. His disappointment over the late arrival of his game console quickly morphed into anxiety. Patience was not his strongest suit, especially when it concerned his games. Soon after, his patience reached its limit. He dialled the online seller's number hoping to get a reasonable explanation. Alas, within seconds of dialling, the next thing he heard was the start of an agonising nightmare.

"The number you just dialled is not in use."

The operator's dry voice sent shockwaves throughout Baxter's body, naturally reeling red as anger started brewing in him. Baxter refused to believe what he had just heard. Just two hours ago, he was bawling with excitement upon a deposit of \$100 to purchase his Nintendo Switch. An online seller by the name "Charles" was selling the game console for half its retail price and promised it to be delivered in an hour's time. So why did he become suspiciously uncontactable all of a sudden?

Desperate for answers, Baxter quickly tried to send a chat message to the operator. "What! I've been blocked!" exclaimed Baxter. By this time, Baxter's palms had become excessively sweaty. He was panicking—did he unknowingly give away his personal information to a scammer? The terrified boy quickly contacted the website helpline to report the scam. He was informed that the culprit had been apprehended.

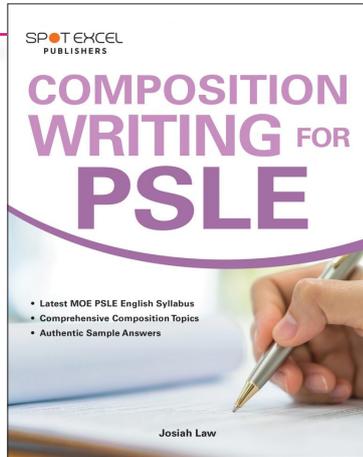
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Key Clauses / Phrases

- Introduction**
- disappointment over the late arrival of his game console quickly morphed into anxiety
 - Patience was not his strongest suit
 - the next thing he heard was the start of an agonising nightmare
- Body**
- the operator's dry voice sent shockwaves throughout his body
 - cheeks naturally swelled red as anger started brewing in him
 - was bawling with excitement when he paid a deposit
 - became suspiciously uncontactable all of a sudden
 - palms had become excessively sweaty
 - decided to confirm his suspicions by checking the reviews
 - game console escaped his lips
 - page was flooded with hundreds of complaints and warnings
 - finally acknowledged that he was a victim of such a simple yet deceptive scam
 - not one to wallow in regret and self-pity for too long
 - readily reported the scam to the website helpline as well as the police
 - informed that the culprit had been apprehended
- Conclusion**
- unsettled heart was rid of all despair
 - Justice was served
 - If only he had... would not have made such a blunder
 - did not forget, however, how he landed in the predicament in the first place
 - would not remain the same naive and gullible boy he once was

Composition Writing for PSLE



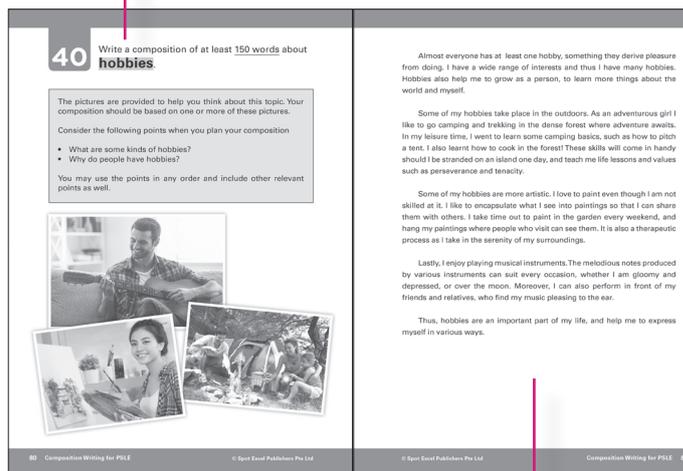
ISBN: 9789811170973

Composition Writing for PSLE is a guide book that helps students generate relevant ideas and express themselves in a coherent and cohesive manner.

With a variety of topics and exemplars, students are encouraged to use a variety of vocabulary creatively in order to suit the respective purpose, audience and context given in the examination questions. By modelling the sample essays, students can develop their own unique style of writing in a confident and enjoyable learning approach.

Comprehensive Topics

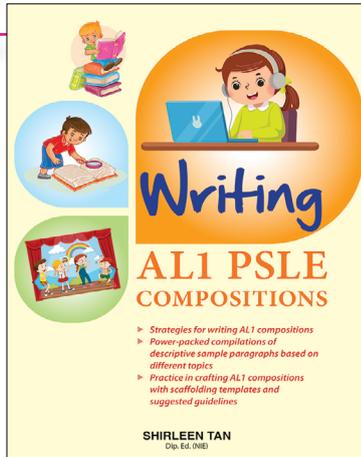
Chapters cover a wide range of topics to increase students' general knowledge.



Practices with Sample Answers

Supports learning with a sample composition passage for each practice.

Writing AL1 PSLE Compositions



ISBN: 9789814996471

Writing AL1 PSLE Compositions is a great tool to help students improve their writing skills. This book is crafted to teach students how to write more expressively, using the D.A.R.T method.

Writing AL1 PSLE Compositions is divided into three parts:

- Section 1: Strategies for writing AL1 compositions
- Section 2: Partial Composition Crafting Chronicles
- Section 3: Crafting AL1 Compositions

Writing AL1 PSLE Compositions

HOW TO D.A.R.T. YOUR COMPOSITION WRITING

Many students lack the patience to plan thoroughly before fleshing out their stories. A good storyteller takes time to plan, plot and present his story that will garner praises from his audience. You, the student, are the "storyteller", and the "audience" is your teacher/ marker/grader. To get a reader "hooked" on your story, a well-executed plot is crucial. We have since developed a simple yet effective D.A.R.T. strategy to help our students strengthen their story plots and beef up their descriptive phrases. D.A.R.T. strategies aim to help students make an impactful presentation to the audience.

This is what D.A.R.T. stands for:

- D** Descriptive Phrases
- A** Adopt/Adapt Ideas
- R** Realistic Story Plots
- T** Twist in Ending

Writing Strategies

In Section 1, a detailed description of the D.A.R.T strategy aims to direct students into strengthening their story plots and beefing up their use of descriptive phrases. There are some exercises in this section for students to practise on, which help them to further improve the flow of their composition writing.

Writing AL1 PSLE Compositions

Sample Composition and Guide

Paragraphs	Planning process
"Click to win! Send my details within five minutes, and I can win a trip to the Trick Eye Museum! Interesting..." Kian Seng murmured to himself. He was using the family laptop to complete his school project, when a pop-up advertisement caught his attention. Kian Seng had always wanted to tour the much-raved-about museum, but his parents were always too busy with their work. "If I could just win the deal, I will go on my own!" Kian Seng decided there and then, and (a) after glancing to some details featured on the keyboard and he clicked the "Enter" tab, Kian Seng was soon absorbed back into his school project, even forgetting what had transpired seconds ago.	(a) Exposition: Introduction of character (b) Change: Start of problem
"Seng! Time for lunch! Switch off the laptop and come right here at the table now!" (c) a shrill voice burst through Kian Seng's train of thought as he was fully immersed in his school project. With a sigh, Kian Seng obediently saved his project in the laptop and walked towards the dining table. (d) It was a Saturday afternoon, and although the sun was beating mercilessly on the earth, Kian Seng's house was sheltered by a lush array of trees which provided the much-needed relief and respite from the sun. The smell of his mother's home-made chicken pie and bubble trays was strong enough to permeate the whole house. Kian Seng realised he was famished, no, ravenous! He joined his family members and was about to tuck into the warm and comforting food...	(c) Introduction: Kian Seng's mother (d) Description: the weather, his home, food
(e) "Hey, why was I charged \$1,000 on my credit card an hour ago?" Kian Seng's father, choked on a piece of chicken meat as he scrolled through his handphone message. Everyone looked at him in bewilderment. Kian Seng's older sister shook her head nonchalantly while his younger brother continued eating, not fully aware of the conversation. "It is from a 'Click To Win' advertisement."	(e) Rising action: Kian Seng's father was shocked to see the charge. Kian Seng was guilty.

Practices with Sample Answers

In Section 3, students are shown how to flesh out their writing chops with the scaffolding templates and suggested guidelines given. This section is divided into three parts:

- Part 1: Plot crafting
- Part 2: Sample composition guides with process planning
- Part 3: Proof that showing is better than telling

Section 3 Partial Composition Crafting Chronicles

Topic 3 Describing School

Compo Crafting 1:
Describe your first day of school.

I stepped eagerly into the school compound, wide awake and excited, as dawn broke. The morning sun filtered through the leaves and the air was warm and inviting. It sure was a good start! My shoes were squeaky clean and new, and my uniform was crisp and bright. I bade goodbyes to my mother and walked with a spring in my step into the hall, led by one of the schoolteachers. My friends and I were ushered into our classrooms, where we put our belongings on our chairs. We were then told to follow the school prefect to the hall for our first formal assembly...

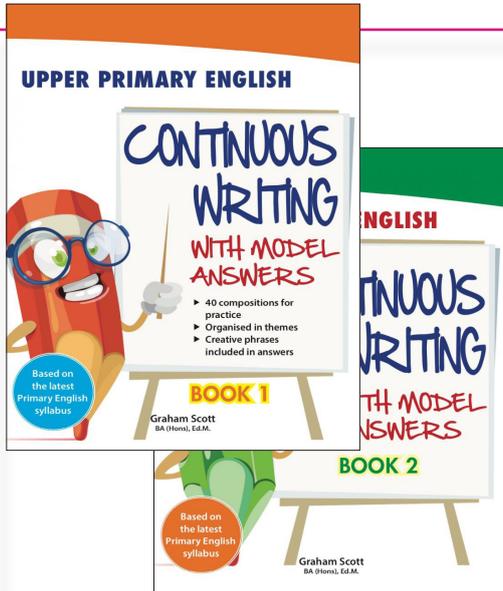
Compo Crafting 2:
Describe whether you like to be in school.

School is fun! I get to learn new things every day! I get to ask a myriad of questions and get them answered patiently by my teachers. I get to be away from my parents, who want to instil discipline and independence to build my character. I get to make new friends and learn from my peers. I get to eat healthy food during recess too! Although the school hours are longer compared to kindergarten and I tend to get sleepy, I still enjoy going to school. Although some teachers are fierce and scary, I still love my school!

Power-Packed Descriptive Paragraphs

Section 2 comprises a wide variety of power-packed compilations of descriptive sample paragraphs based on different topics. This resource is helpful for students when they need quick help in describing a particular scenario or a specific theme and have no idea how to start.

Upper Primary Continuous Writing



Upper Primary English – Continuous Writing with Model Answers Books 1 and 2 provide a practical guide for students who will be sitting for the PSLE English examinations. Each book comprises 40 model compositions which are organised according to different themes.

There are many ways to write a great composition, and these ways typically involve writing elements such as organising the information in a logical sequence, generating interest to capture the reader’s attention and giving the story proper closure. This series will help students learn about and prepare for their examinations in a more efficient and systematic way.

Book 1 ISBN: 9789811401206

Book 2 ISBN: 9789811401473

Question 1

Part 2: Continuous Writing (40 marks)

Write a composition of at least 150 words about going into hiding.

The pictures are provided to help you think about this topic.

Your composition should be based on one or more of these pictures.

Consider the following points when you plan your composition:

- Who went into hiding?
- Why did they go into hiding?

You may use the points in any order and include other relevant points as well.

Question 36

Part 2: Continuous Writing (40 marks)

Write a composition of at least 150 words about the apprentice.

The pictures are provided to help you think about this topic.

Your composition should be based on one or more of these pictures.

Consider the following points when you plan your composition:

- Why the apprenticeship came about?
- What kind of apprentice was the person?

You may use the points in any order and include other relevant points as well.

Suggested answer

Grey dust clung on to the construction site's atmosphere like a shroud as the morning overclouded in and started dispersing to their respective stations. The wrecking-ball operator, Max, sat in his small cabin and peered down at the line of migrants filing in, one truckload after another. They would take up their shovels and wheel barrels to remove the rubble. At least Max **had the ease of the machine to be grateful for**. As the dust struck night, **he twisted the keys to the ignition and the machine rumbled to life**. The constant high-pitched beeps of the machine, as it reversed and turned on the unlevelled ground, rang in Max's ears. But he has grown used to it over the past six years. It is routine now.

"All clear?"

His supervisor's voice cracked through the dust-filled speakers of Max's walkie-talkie. The last building in this area is now ready for demolition. Max flicked the switch for the wrecking ball. **He clenched his jaw and waited for the ball to swing over and strike the concrete**. His cabin **shook from the tremor** as the ball smashed through the wall. **Concrete dust plummeted out, like thick fog, from the fresh rubble**. As Max backed his destruction machine to aim for another bit, the familiar voice boomed from his walkie-talkie.

"All clear?"

STOP! Someone has been hit!

Max struck his foot on the emergency brake. His heart was hammering in his chest and his mind was **immediately surging with thoughts about killing someone and returning to his village, stripped of his livelihood. Has his luck finally run out?**

Knowing that his voice would barely register above the roar of the engine, Max deserted his walkie-talkie and made his way to the accident area. Upon reaching, he saw a migrant worker sitting down and clutching his head and **blood oozed out like the Nile**.

"He had been hit by one of the small concrete pieces as it fell on him from the crumbling building. We have called for the ambulance. You do not have to worry. It is not that serious."

Max's supervisor's voice **sounded like a sweet lullaby in his ears**. Despite feeling sorry for the victim, he heard a sign of relief upon realising that he will not be sent home after all.

Suggested answer

From behind the ragged cotton curtain, Adina watched as four men in brown uniforms ambled towards the house, after downing sandwiches from the push-cart across the street. Her glazed eyes were fixed on their red swastika armbands that **seemed hard to miss under the blinding sunlight**. Adina **held her breath as the armbands awoke memories** of what men in those uniforms did to her Jewish family.

Aunt Mary had hurriedly sent Adina to the basement when **she heard their clomping military boots in the distance**. She had no idea why they were approaching her house but **all she knew was to ensure that Adina stays well out of their sight**. The young girl was the only surviving member of the neighbour's family after the rise of the Nazis in Germany.

Aunt Mary was determined not to let the Nazi regime lay their hands on Adina, as well.

Aunt Mary had just pushed the bookshelf to hide the basement entrance when **the main door rattled violently as one the men banged on it relentlessly with his fist**. Before the door could break open, Aunt Mary opened it.

"Good afternoon, Madam. Sorry to disturb you but **a little bird has told us that there may be someone of importance to us living under this roof**. We would just like to have a look around and soon be on our way."

His malicious eyes staring at Aunt Mary betrayed the smile that was dancing on his lips. She led the soldiers in to snoop around her house, in their vigorous jinking of the tablecloths and shuffling of furniture, **the suspicious men turned the house upside down**. Aunt Mary stood rooted to a spot, **silently praying** that they do not move the bookshelf, when the men stopped all activities and dragged themselves towards the exit.

"We will let you go, now. Do let us know if you know anyone who you would like to report to us." The men left her door while grumbling under their breaths.

"Over my dead body," Aunt Mary whispered and shut the door behind her.



Practices with Answers

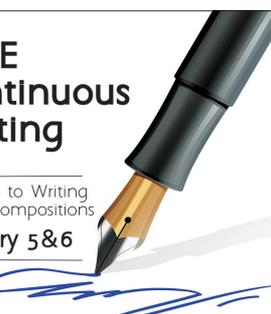
Model essays provided have useful phrases highlighted for easy identification and efficient studying.

PSLE Continuous Writing

PSLE Continuous Writing

A Guide to Writing Better Compositions
Primary 5 & 6

- ▶ 30 writing practices with interpretations
- ▶ Tips on writing using a theme-based approach
- ▶ Helpful guidelines to unpack task requirements



Joshua Meyyappan
BA (Hons) Education, Master of Mass Communication
Gifted Education Programme Trained

ISBN: 9789811499227

In this book, the author shows students how to plan good compositions in a unique and entertaining way. This approach is novel because it focuses not on the plot, but on the theme. Using this approach, students will learn how to craft better compositions.

PSLE Continuous Writing - A Guide to Writing Better Compositions Primary 5 & 6

The Task

Write a composition of at least 150 words about **A Lie**.

③ The pictures are provided to help you think about this topic.
Your composition should be based on one or more of these pictures.

④ Consider the following points when you plan your composition:

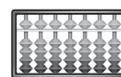
- ▶ What was the lie?
- ▶ What was the consequence of the lie?

You may use the points in any order and include other relevant points as well.

- KEY
- ① Word Count
 - ② Theme
 - ③ Pictures
 - ④ Guiding Questions
 - ⑤ Other relevant points



1. Word Count (or Why count words when you can make word count!)



You may wonder why the task mentions a specific number of 150 words. You may have guessed or found out that just writing 150 words may result in a dismal score. This does not mean, it is impossible. To understand the word count requirement, we must understand what the task is.

The task requires you to bring out the theme in a story using one or more of three pictures. To bring out the theme, a story must have a suitable introduction, events, problem, climax, resolution and conclusion. Is this all possible in 150 words? Maybe. It is easy to demonstrate well-developed content using advanced vocabulary in 150 words? Probably not.

Bear in mind the meaning of the words 'at least'. This is **not a word limit**. A word limit would begin with the phrase 'at most'. This means that **without 150 words, a passing score is unlikely**. At the same time, even if a student writes 300 words (unlikely within the time limit), she or he will not pass if the writing is not based on the theme.

So, what is a good guide and do we actually count the words? Typically, a high scoring piece (above 30) would be about 3 sides of foolscap paper. This is not to say this is always the case. **What is important is whether the content is sufficient for the theme to come out clearly.**

Understanding the Task

Helpful guidelines to unpack task requirements.



Section B

5 Keys to Unlocking the Treasure Chest

The 5 Keys
- Using the example theme, 'Courage'

- DEFINITION: What does 'courage' mean?
- REASONS: Why be courageous?
- CONSEQUENCES: What happens when we are not courageous?
- EXAMPLES: What are examples of courage?
- FEELINGS: What are some feelings that are experienced when we try to be courageous?



PSLE Continuous Writing - A Guide to Writing Better Compositions Primary 5 & 6

Introduction to the 5-Keys Approach

The 5 Keys Approach is a way to plan your compositions. **Though there are 5 keys, you do not always have to use all 5 keys to unlock a theme.** You have the option of using as many of the 5 as you want. This approach does not focus on the plot like different versions of the 'Story Mountain'. Instead, it focuses on the theme. The theme is the content and it has to come through a plot. Content marks are given for theme and plot and will try to convince you that even without a plot you can get very good scores if you demonstrate deep understanding of the theme.

Why theme is all important

There have been students who have gone off the beaten track and tried something other than the usual narrative style of story writing to obtain scores in the elusive regions of above 35. Let me give you an example. For the theme of forgiveness, someone wrote a letter from a grown-up daughter to her mother. In this letter, the daughter writes emotionally about how her mother was absent when she was growing up and how that had hurt her deeply. Now that the author (the daughter) was older, she realised her mother's difficulties in raising her and so she tells her mother that she forgives her for all the hurt. It was a very touching and heartfelt letter and the theme of forgiveness came through strongly. **There were no events, problems, climax and resolution and yet the student scored her writing task.** This suggests that the theme (more than the plot) is crucial.

With that out of the way, let us understand exactly how to go about what might seem (only initially) like a time-consuming exercise to uncover the theme.

Key #1: First Thing - Working Definition of Courage

The first thing to do when you receive your writing task is to take note of the theme. Then, you come up quickly with a working definition. **This is the first key and must be used first. All other keys can be used in any sequence.** As mentioned earlier, definitions are anything but definite (fixed and unchanging). Words take on different meanings depending on where they are found. This frees us from worrying too much about getting the definition 'right'. In other words, you do not have to come up with something that appears like an entry in a dictionary.

Let us try by considering the theme, 'Courage'. How would you define courage? To define 'Courage', we have to come up with a few words or a sentence that shows the meaning of the word. Easier said than done.

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Writing Practices

30 writing practices with sample interpretations.



Theme-based Approach

In-depth tips on writing using a theme-based approach.

PSLE Continuous Writing - A Guide to Writing Better Compositions Primary 5 & 6

Practice 1 - Forgiveness

What is forgiveness?

To forgive someone is to no longer be upset, angry or hold in your heart any other unpleasant feeling towards him because of something you feel he should not have done.

We have heard of the phrase, 'Forgive and forget'. Forgiving someone does not necessarily mean we forget what has happened. What it does mean is that we no longer feel the sting of what he did.

We may or may not want to continue the relationship with the one we decide to forgive. It means we no longer demand some kind of payment from the person we forgive.

When do we forgive?

We assume that forgiveness can only be granted after someone has apologised. This need not be the case, especially if we no longer, for some reason, want to continue being friends. Forgiveness is a choice we make because we see how harmful holding a grudge is, to our emotional, mental and even physical well-being.

If a person apologises, it may be because he hopes to continue a relationship with the one he has done wrong against. It could also be because he feels a burden in his heart and he is angry with himself. He may not be expecting forgiveness. However, receiving forgiveness might help him feel lighter and believe he can be a better person.

Another assumption we make is that forgiveness is given by one person to others. Sometimes, we need to forgive ourselves. This means we stop blaming ourselves and try our best to not repeat our mistakes.

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Section D 5 Keys Approach - Practising with Themes (Possible Interpretations)

Practice 1 (5 Keys)

Reasons

- ▶ To stop feeling unpleasant emotions.
- ▶ To continue a relationship.
- ▶ To become a better person (if you are forgiving yourself).
- ▶ You understand that everyone including yourself does wrong against others at some point even if you did not mean to.

Feelings

- ▶ Anger
- ▶ Disappointment
- ▶ Judgmental
- ▶ Sanness
- ▶ Bitterness
- ▶ Relief (at being forgiven)
- ▶ Guilt-free (for a second chance)
- ▶ Peace (putting the past behind you)

Examples

- ▶ To let go of ill feelings towards a parent who has been absent.
- ▶ To let go of ill feelings towards a sibling who has taken all of your parents' attention.
- ▶ To let go of ill feelings towards a friend who hurt you deeply with his words and actions.
- ▶ To let go of ill feelings towards someone who has committed a crime against you because this person has been imprisoned.

Consequences

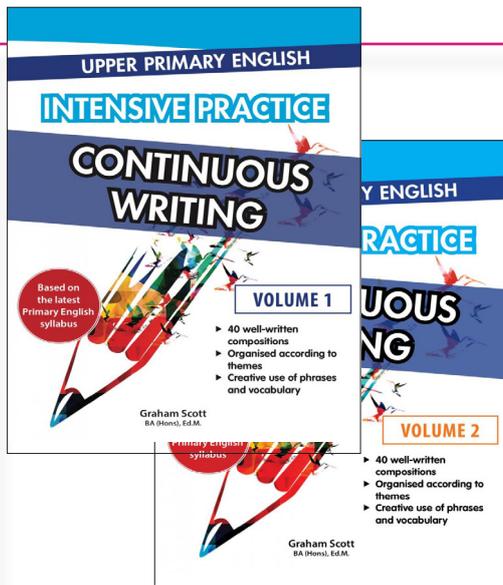
- ▶ Not forgiving someone could result in mental and emotional distress.
- ▶ Not forgiving someone could affect every other relationship we have in the future.
- ▶ Not forgiving someone would mean we are reliving a negative experience over and over again.

Definition

To let go of ill feelings towards yourself, someone or some others for something you feel should not have been done.

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Intensive Practice Series



Continuous Writing

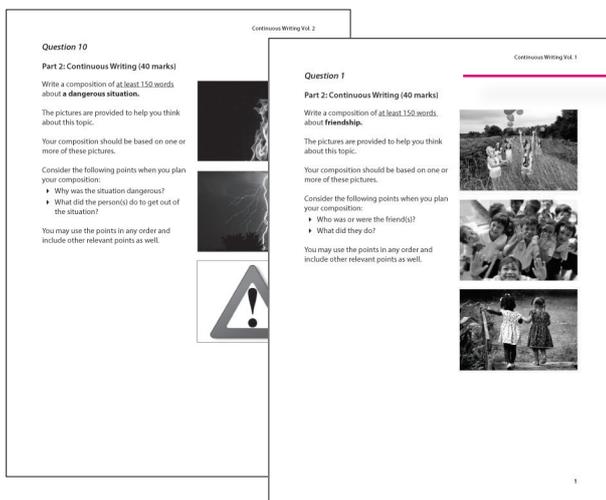
Volume 1 ISBN: 9789811401190

Volume 2 ISBN: 9789811401213

Intensive Practice – Continuous Writing is written to provide a practical guide for students who will be sitting for the PSLE English examinations. This book comprises 40 model compositions which are organised according to different themes.

There are many ways to write a great composition and it involves writing elements such as organising the information in a logical sequence, generating interest to capture the reader's attention and giving the story proper closure.

This series will definitely help students improve their writing and prepare for their examinations in a more efficient and systematic way.



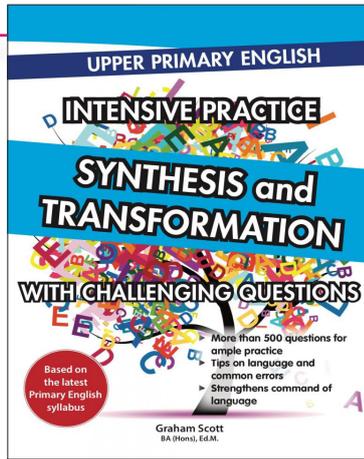
Comprehensive Topics

Topics covered are extensive to prepare students for any type of question they may receive in PSLE.

Suggested Answers

Allows students to learn useful vocabulary and phrases from model essays to apply in their own writing.



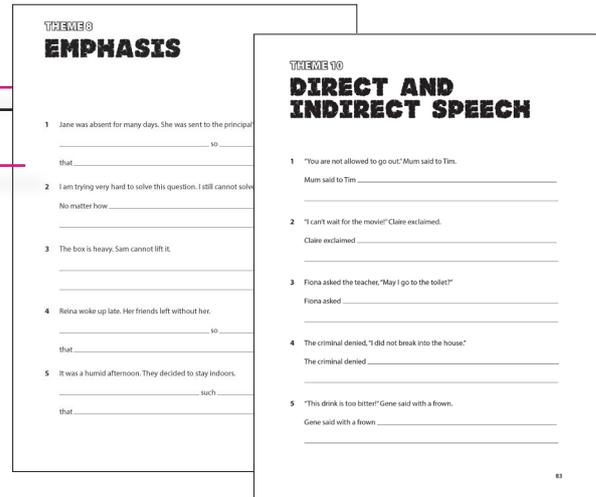


Synthesis and Transformation

ISBN: 9789811199646

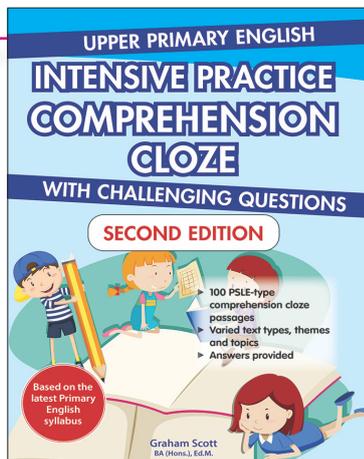
With more than 500 questions to practise combining and transforming sentences, this series prepares students for the Synthesis and Transformation section of the English Language examination paper.

Chapters are arranged thematically to expose students to the use of connectors in a variety of synthesis and transformation processes. Complete answers are provided for effective self-assessment.



Comprehensive Topics

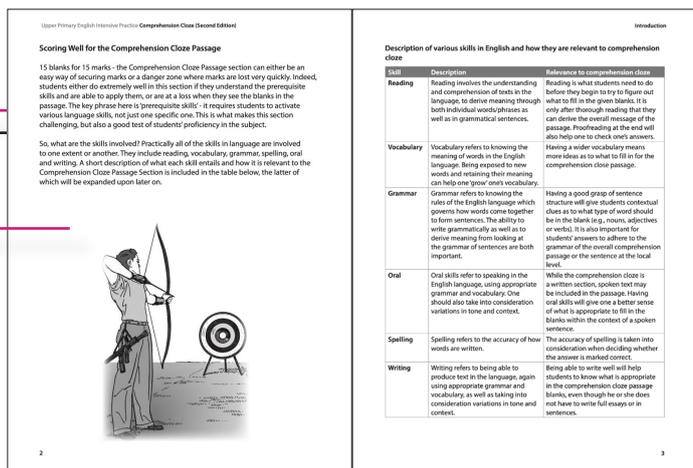
Topics cover an extensive range of connectors used in the synthesis and transformation process as well as aspects of grammar so that students are well-equipped to answer all variations of Synthesis and Transformation questions.



Comprehension Cloze

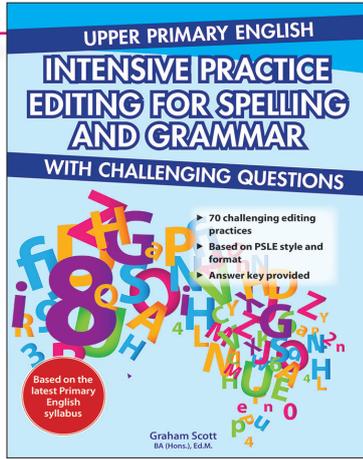
ISBN: 9789811487620

Mastering cloze passages requires practice. The Upper Primary English Intensive Practice Comprehension Cloze assessment book has 100 PSLE-type comprehension cloze passages for students to prepare for the PSLE examinations. In this assessment book, there are various text types on interesting themes and topics to encourage reading and pique curiosity in diverse subject matters, which makes learning enjoyable.



Tips

Tips are provided to guide students to score for comprehension clozes.



Editing for Spelling and Grammar

ISBN: 9789811487682

Upper Primary English Intensive Practice – Editing for Spelling and Grammar is a collection of editing exercises designed to provide students with sufficient practice to tackle the editing section. Students will be presented with a wide array of questions to equip them with the necessary skills to master spelling and grammar and tackle the editing section at the upper primary level.

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Practice 1 – The Only Child

Each of the underlined words contains either a spelling or a grammatical error. Write the correct word in each of the boxes. (12 marks)

I was an only child. It did get lonly sometimes.

I never allowed it to dampen my love for life. Life is like a rollercoaster ride, having both its ups and downs. A who do not love rollercoaster rides? Having spent a decade as the solby child in my family, I had amassed various tricks to alleviate my feelings of loneliness. Allow me to my secreat. My life mostly revolved around self-enterta

Practices

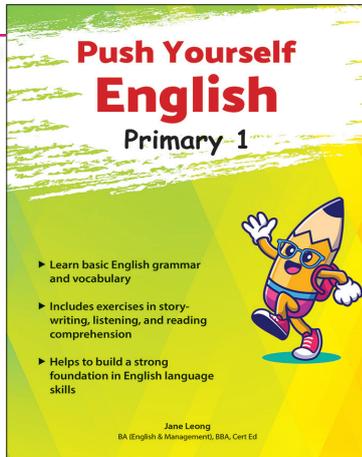
70 challenging editing practices based on PSLE style and format.

Upper Primary English Intensive Practice – Editing for Spelling and Grammar

It all changed one day. My construction of a seemingly tranquil, perfect world was shattered. My parents announce that they were respecting another child; a sibling for me. By default, I was no longer the only child. How that was going to work out, I have no idea.



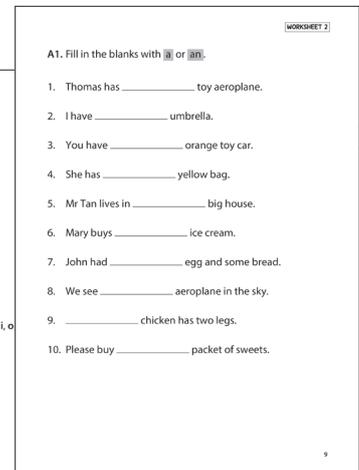
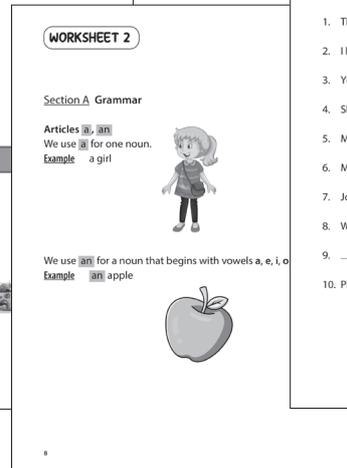
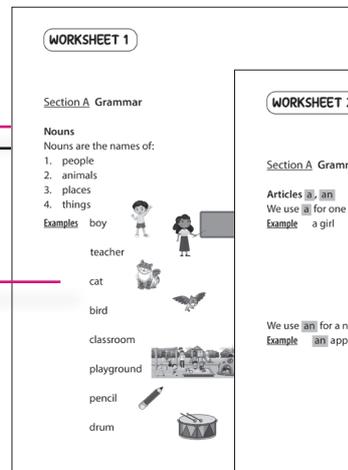
Push Yourself English



ISBN: 9789814996105

Push Yourself Primary 1 English is designed to help pupils to learn basic English grammar and vocabulary. Additional exercises in story-writing, listening, and reading comprehension are included.

It is recommended for parents or teachers to go through these exercises together with the students.

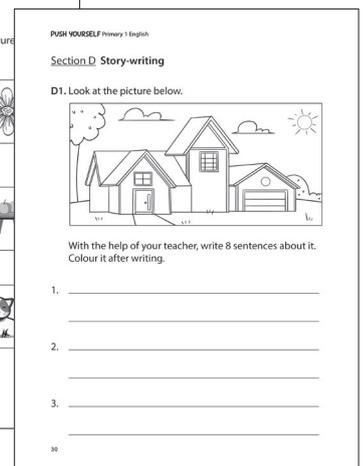
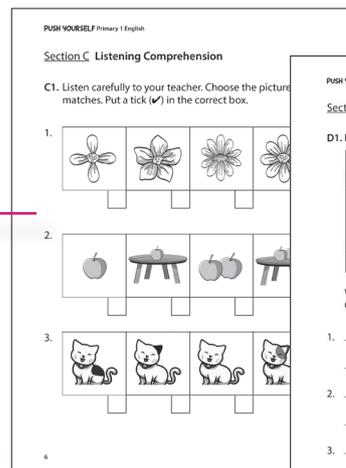
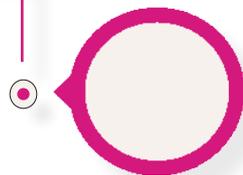
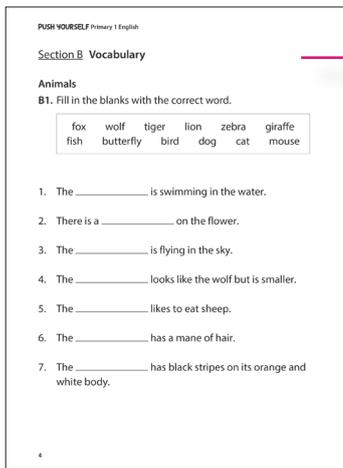


Section A

Each worksheet is structured with an introduction to a new concept in the English language. These are followed by exercises for students to practise the new concepts that they have learnt.

Section B

Students are introduced to new words and their usage in sentences to expand on their vocabulary knowledge for school.

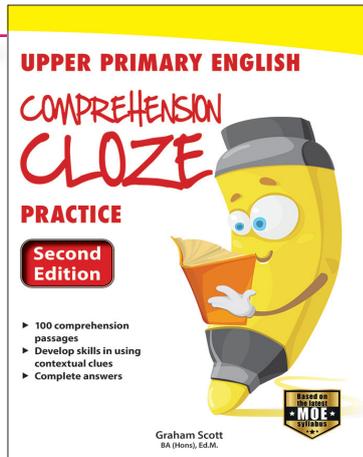


Sections C & D

These sections are designed to help students build on their listening and reading comprehension skills.



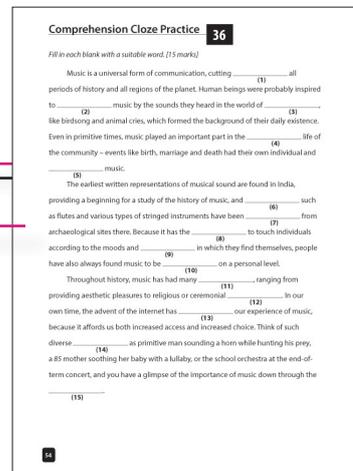
Upper Primary English



Comprehension Cloze
ISBN: 9789811801464

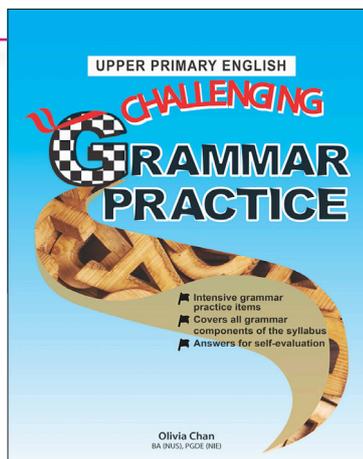
This practice book contains 100 passages for students to have adequate practice for the comprehension cloze passage component of the English paper.

With more practice, students will be able to develop the skills needed to successfully identify the contextual clues and use them to find the right word needed.



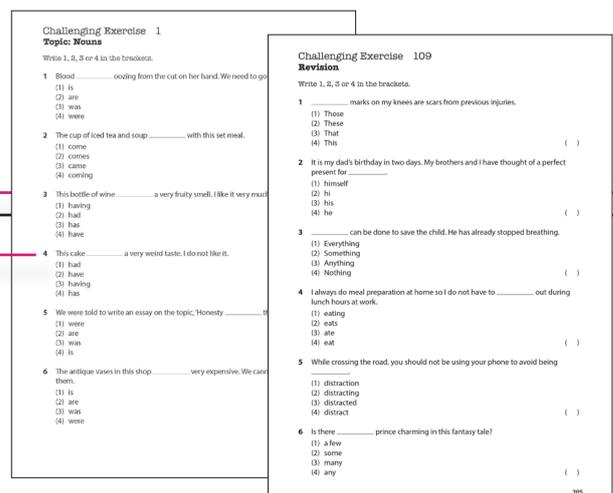
Practices with Answers

The practices come with answers to allow students to perform a self-evaluation of their answers and learn from their mistakes.



Challenging Grammar Practice
ISBN: 9789811420276

This book is written to help students recognise and correct common errors in grammatical and structural language through practice. It provides students with ample practice to learn and understand the rules of grammar in order to achieve accuracy in using English. It also helps students to build a strong foundation in English grammar and do well in their examinations.

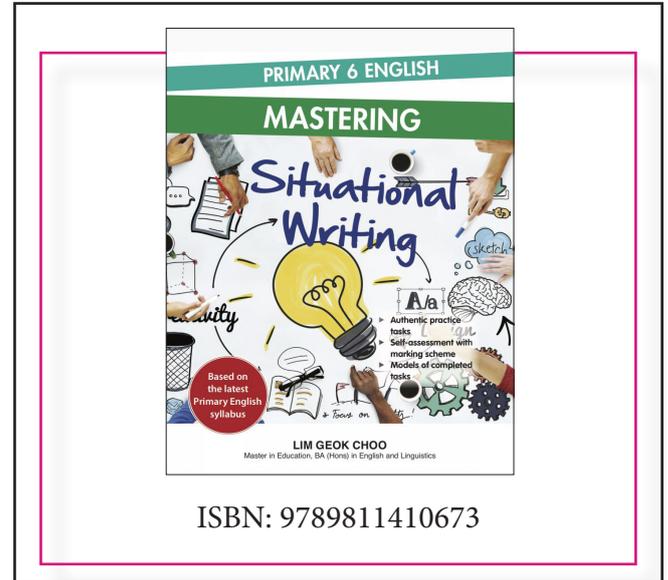
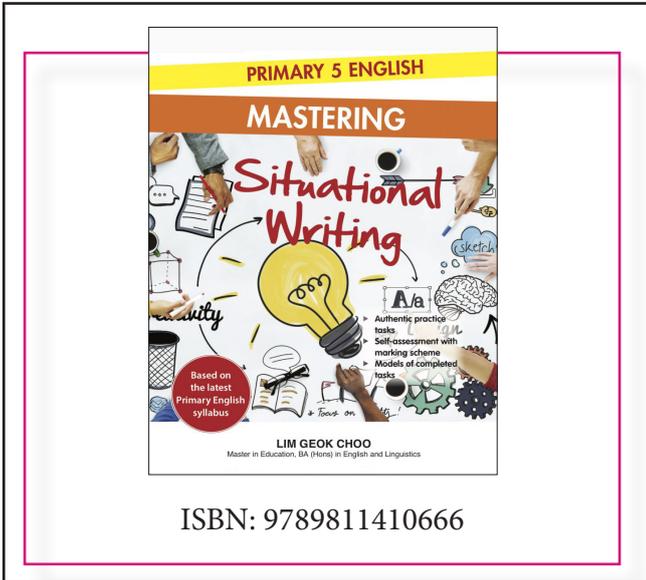


Topical Exercises & Revisions

Exercises are arranged by topic and include revision exercises which contain questions on all topics.

Mastering Situational Writing

Situational writing is the writing of a short functional piece such as a letter, email, report, etc., that suits the purpose, audience and context (PAC) of a given situation.



Primary 5 English - Mastering Situational Writing

Sample Stimulus

The pictures below show Mary and Andy talking about the good deeds of their classmate Alex. Study the given pictures and information carefully.

Sample Task

Your task

Imagine you are Andy Lee.

Write a letter to your principal, Mrs Quek, to nominate Alex Wan for the Youth Care and Compassion Award.

You are to refer to the given pictures and information for your letter.

In your letter, include the following information:

- what Alex does to help his classmate
- why his classmate needs help
- when Alex helps this classmate
- which class Alex is from
- another good deed Alex is doing
- when Alex is doing this good deed

You may reorder the points. Write in complete sentences.

Sample Stimulus and Task

Authentic tasks commonly found in interpersonal, social and cultural situations develop students' language ability based on context, purpose and audience.

Practices with Marking Schemes and Answers

Supports learning with answer keys that highlight examples of both good and inadequate understanding of the PAC. Answers are shown in a table format with bullet points to allow easy reading for better understanding.

Primary 5 English - Mastering Situational Writing

Situational Writing Practice 7

Task Fulfilment (4 marks)

PAC	Good understanding and awareness	Inadequate understanding and awareness
Purpose	<ul style="list-style-type: none"> to nominate someone for the Caring Neighbour Award 	<ul style="list-style-type: none"> would like to tell you about Ben Loon
Audience	<ul style="list-style-type: none"> Dear Sir, Dear Madam, Dear Manager, 	<ul style="list-style-type: none"> Hi, Manager!
Context	<ul style="list-style-type: none"> formal based on a 12-year-old communicating with a respected adult 	<ul style="list-style-type: none"> informal many contractions
Signing off	<ul style="list-style-type: none"> Yours faithfully, Full name, e.g. Arfan Bin Muhammad Ali, Lee Tock Ming, Jerry Tan, Kumar v/s Raju 	<ul style="list-style-type: none"> Signing off Cheers, Love, Bye-bye! First name/other names From/Written by
Relevant pointers	<ul style="list-style-type: none"> Acceptable key information 	<ul style="list-style-type: none"> Unacceptable responses
when you saw Ben Loon do to help a neighbour	<ul style="list-style-type: none"> he pushed the neighbour on a wheelchair to the nearby bus stop 	<ul style="list-style-type: none"> he pushed the old lady
when you saw it happen	<ul style="list-style-type: none"> 26 September 2021 	<ul style="list-style-type: none"> 26 Sept 2021 26/9/2021
good deeds Ben Loon does on other occasions	<ul style="list-style-type: none"> helps younger students cross the road safely (after school) 	<ul style="list-style-type: none"> helps younger student
where these deeds take place	<ul style="list-style-type: none"> at the busy road junction in front of the New City Community Club 	<ul style="list-style-type: none"> at the community club
what Ben Loon shows through these deeds	<ul style="list-style-type: none"> care and concern for others 	<ul style="list-style-type: none"> care and concern

Marking Scheme and Responses

Language and organisation (9 marks)

- Accuracy of language: grammar, expression, spelling and punctuation
- Clarity of presentation: linking and sequencing of ideas and facts

Refer to band descriptors in sample answer key on page 5.

A suggested response

Dear Sir,

I am Irene, a resident of New City housing estate and I would like to ask you to consider someone for the Caring Neighbour Award. He is Tan Ben Loon.

On 26 September 2021, I saw Ben Loon help an old lady in a wheelchair get in front of my school. She pushed her to the wheelchair to the nearby bus stop. Besides that, Ben Loon performs good deeds at other times. He helps younger students cross the road safely after school. The children want to cross the busy road junction in front of the New City Community Club. Ben Loon goes out of his way on countless occasions to guide them safely across. Through these actions, Ben Loon shows care and concern for others.

Ben Loon is a resident our community can be proud of. I hope you will consider him for the award. Thank you.

Yours faithfully,
Irene Koh

70

Mastering Assessment/Examination Skills

This series is a compilation of the latest practice questions in accordance with the latest syllabus issued by the Ministry of Education. With contributions from teacher consultants who have decades of experience, the examination practices in this series aim to be a one-stop and comprehensive guide for English learning. The questions are challenging and specifically hand-picked for their value in teaching students important concepts and examination techniques. Each book consists of 9 practice papers with full answers for Paper 2. These examination papers aim to teach students important concepts and help students discover weaknesses in their answering techniques which they may not be aware of.

ISBN: 9789814996440 ISBN: 9789814996242 ISBN: 9789811134005
 ISBN: 9789814996167 ISBN: 9789811476266 ISBN: 9789810997151

Practice and Exam Papers

Full practice papers for both Papers 1 and 2.

Section A – Grammar MCQ (5 marks)
 Choose the correct answer and write its number in the box.

1 Lillian and her family _____ to the zoo last week.
 (1) go
 (2) went
 (3) gone

2 Joshua and his sister _____ to the park yesterday.
 (1) is
 (2) are
 (3) were

3 Sue says the dog _____ her mother had _____.
 (1) a
 (2) an
 (3) the

4 Ali saw _____ some puppies yelping away.
 (1) its
 (2) his
 (3) her

5 Irene wants to _____.
 (1) draw
 (2) drives
 (3) drawing

Section C: Grammar Cloze (8 x 1 mark)
 Passage 1
 Read the passage carefully. Choose the correct word from the words given in the box and write its letter (A to F) in each blank.
 USE EACH WORD ONCE ONLY.
 (A) it (B) he (C) him
 (D) them (E) they (F) you

This river is a busy place. Like a market, (17) _____ is crowded and noisy. Boatmen sell fruit and vegetables. (18) _____ row their boats and sometimes ask (19) _____ to help them. (20) _____ have (21) _____ firmly so that soup does not spill.

Section E – Word Order (4 marks)
 Rearrange the words to form complete sentences with a capital letter. End it with a full stop.
 Example my friend badminton
 Answer: I play badminton.

23 The boys down chasing _____.

24 year winter coldest is _____ the _____.

25 Lillian pen new lost _____ and _____ was _____.

26 We hills distance can _____.

Section F: Comprehension 1 (10 marks)
 Read the passage carefully and answer the questions that follow.

The taxi stopped outside But Mother, Jo and I got out of the taxi. "Alright children, remember holidays and the mall is very crowded. recalling the time I got lost at a shopping mall." "I'll get the drinks and the paper." "Tickets, please?" asked the conductor. Mother rummaged through her bag. Father joined us with drinks. "Do you have the tickets, dearest?" Dad looked at Mother curiously. "Mother told you to put them into your pocket!" A look of horror flashed across Mother's face. She had dropped them in the toilet just as we were about to get on. Instantly, Mother rushed off to the toilet. She returned with tickets in her hand. "Thank you, Mother. I'm sorry. I was so nervous." "Poor little fellow, I'll take care of you." Her mother was pleased. Back in their house, Mother named it Sandy. Sandy was injured leg. Under her tender loving care, Sandy's injured leg _____ (64) _____ fortunate to have such a caring and responsible mother. _____ (65) _____ Sandy and Bee Kim grew attached to each other over the years. They went forward to going home every day after school to play with her.

Guided Writing (25 marks)
 Write a composition of at least 100 words about helping someone.
 The pictures are provided to help you think about this topic.
 Your composition should be based on one, two or all of these pictures.
 Consider the following points when you plan your composition:
 • What were the children doing?
 • Why did the woman fall down?
 • How did the children help the woman?
 You may use the points in any order and include other relevant points as well.

Helping words:
 enjoying themselves
 slipped accidentally
 grocery bag
 rushed to help
 carried
 accompanied her home

Examination 5
 ENGLISH LANGUAGE PAPER 1 (WRITING)
 Total time: 1 hour 15 minutes

Examination 2
 ENGLISH LANGUAGE PAPER 2
 Total time: 1 hour 15 minutes

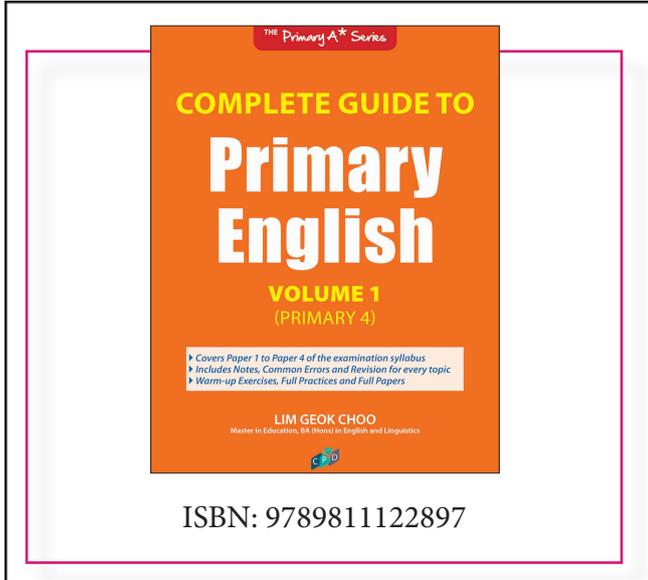
RELEVANT INSTRUCTIONS TO CANDIDATES
 1. Do not turn over this page until you are told to do so.
 2. Follow all instructions carefully.
 3. Answer all questions.
 4. Write all your answers in the brackets () or spaces provided.

Comprehensive Questions

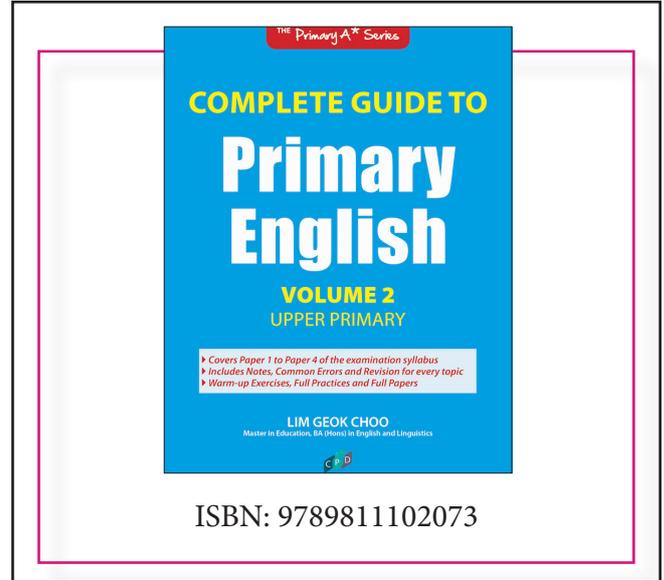
In line with MOE syllabus.

Complete Guide to Primary English

Comprehensive revision guide and practice books that cover all components of Upper Primary education leading up to the PSLE. They cover Paper 1 to Paper 4 of the examination, and are suitable for use in class and self-revision at home.



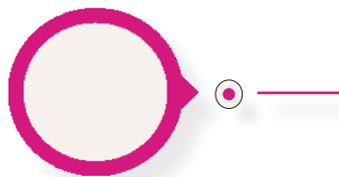
ISBN: 9789811122897



ISBN: 9789811102073

Definitions

Definitions to help students understand what each exam component assesses and the skills required to do well in that component.



Detailed Examples

Examples to show students exactly what each exam component looks like.

Sequencing
Unit 11 Non-Basic Comprehension (Open-Ended)

What is it?
It tests if you can follow the plot of events in a story. You are given 3 statements of events that have taken place and you are required to order them according to the flow of the story.

Example
My eyes gazed at parts of the room, admiring the party decorations. Balloons and streamers hung on the walls. A table was overflowing with gifts of different sizes and colourful wrappers. The huge spread of food made my stomach rumble instantly. There was a feast waiting for the party guests.
Frank's mother smiled and told me to help myself to the food. I gobbled up jelly, marshmallows and cookies.
Frank's father announced that we were going to watch a magic show. All the children sat down quietly to wait for it.
In a flash of light and smoke, Adrian the magician appeared out of nowhere. He whizzed past my shoulders and stopped. Poof! Out flew a white dove. Everyone including me clapped loudly.

Write 1, 2 and 3 on the blanks to indicate the order in which the events occurred in the story.
The writer watched a magician perform a trick.
The writer ate a lot of food.
The writer saw many gifts.

Take Note!
In the example, the writer went into a room. She saw many presents or gifts. Frank's mother told her to help herself to the food, so she ate jelly, marshmallows and cookies. Frank's father said a magic show was about to start and the writer watched a magician perform a trick.

Key Notes

Notes of key skills and knowledge.



Warm Ups

Short, skills-based practices as a warm up to the longer practices.

Warm up!
Unit 3 Section A - Grammar MCQ

Use the words in the brackets as gerunds to fill in the blanks.
Gerund as subject of sentences
1. _____ is my favourite sport. (swim)
2. _____ in a choir is fun. (sing)

Gerund as object of verbs
3. Yin Mee suggested _____ for a swim. (go)
4. Can you imagine _____ on water? (walk)

Gerund used with expressions like 'it's no use' / 'have difficulty' / 'a waste of time' or 'money' / 'not worth' / 'fancy' / 'suggest' / 'imagine'
5. It's no use _____ over spilled milk. (cry)
6. We had no difficulty _____ our way home. (find)
7. It's a waste of time _____ the pictures on the worksheets. (colour)
8. It's not worth _____ money on low quality products. (spend)
9. Do you fancy _____ in Bukit Timah? (bike)
10. I suggested _____ in the park but no one liked my suggestion. (jog)
11. Mother left her phone _____ and forgot to take it along with her to the market. (charge)
12. The children miss _____ with their old toys very much. (play)

Watch Out!
We can also use the infinitive interchangeably with the gerund sometimes (see page 39).
✓ It's a waste of time _____ the pages.
✓ It's a waste of time _____ the pages.
It is wrong to use the gerund and the infinitive interchangeably all the time.
✓ Do you like to swim? Do you like _____?
✓ Do they prefer _____ to swimming?

Common Mistakes

'Watch Out!' components to show where students often lose marks because of common errors, including advice and examples to show how students can avoid these pitfalls.



0001/2 PSLE
Full Mock Examination

ENGLISH LANGUAGE
PAPER 2
(BOOKLET A AND BOOKLET B)

Total time for Booklets A and B: 1 hour 50 minutes

RELEVANT INSTRUCTIONS TO CANDIDATES

- Do not turn over this page until you are told to do so.
- Follow all instructions carefully.
- Answer all questions.
- For Booklet A, write all your answers in the brackets () provided.*
- For Booklet B, write all your answers in the spaces provided.

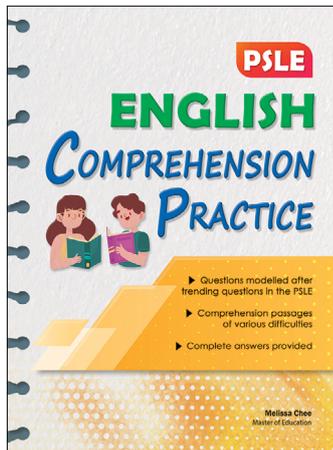
* In the actual PSLE, you will write your answers to Booklet A on the Optical Answer Sheet (OAS) provided.

Mock Exam

A full mock examination with answers to all the 4 Papers for a final test before the real examination.



PSLE English



Comprehension Practice
ISBN: 9789814996419

The PSLE English Comprehension Practice book is written based on the latest MOE syllabus for the open-ended comprehension passages for the PSLE. This book thus caters to students who are sitting for the most recent PSLE.

The questions in this assessment book are specially modelled after frequently-asked questions in the PSLE. In following the strict guides of the PSLE format, this would allow students to be more familiar with the examination, and thus have more confidence to tackle the open-ended comprehension passages.

This book aims to help students achieve success and score well in their PSLE.

PRACTICE 1

Read the passage and answer Questions 1-10.

"Didn't I tell you about the dizziness of the situation already? You never listen to what I say!" At the urgency and sheer volume of my mother's voice, I shot out of bed immediately, desperate to find out what was happening that had caused my mother to flare her temper. As I tumbled outside my bedroom blindfolded, I was greeted by the sight of my mother holding on to my sister Jasmine's phone whilst she was trying to hold back her tears.

"The PSLE is only one month away and you still want to play games? I keep hearing the shouting sounds coming from your phone! At this rate, how can I expect stellar results from you? I want you to work harder for your upcoming PSLE and get into an elite school, do you understand me?" As the berating went on, Jasmine's face scrunched up even more and with every passing second, the tears threatened to spill.

"Ma, don't scold Sis anymore. I'll help her and teach her all she needs to know for it. Don't discourage her more." Coming from the corridor, I decided to take action for Jasmine. "If she doesn't do well for the upcoming examinations, then you can put the blame on me instead of being incapable as a tutor. I don't have much to do now since it's already the end of my O-Level's anyway." After much persuasion from me, my mother finally gave into my pleading, letting me take charge of my younger sister's education. Jasmine and I set off to work immediately after that, and she looked considerably happier. Together, we tackled English, Maths, Science and Chinese before retiring for lunch. Despite being four years older, the new format of the PSLE did shock me quite a bit, and made me secretly thankful that I had sat for the old syllabus instead of its current one. Whilst gobbling down on the macaroni and chicken soup which our mother made for us, Jasmine recounted her gaming experiences, showing me how to play her games and the screenshot in which she was placed first in the global leaderboard. Day by day, we set out for this routine for the month in the run-up to her exams, increasing her knowledge and ability to handle any question that various assessment books had, while also taking the time to bond with each other.

Finally, the day of the PSLE arrived. I wished her the best of luck before she set off to take the public transport to school, ensuring that she had

PRACTICE 3

4. Based on the passage, state whether each statement in the table below is true or false. Then give one reason why you think so. [3m]

Situation	True/False	Reason
The writer was excited about going to Japan.		
The writer had a different experience from what he expected.		

Write the numbers below to indicate the order in which the events took place. [1m]

Who was involved
Futons laid out by the staff
Writer and his parents having dinner

Answers Provided

Complete answers to all questions are provided.

ANSWERS

Practice 1

- She was sitting for her PSLE.
- It shows how the mother's scolding was harsh and demeaning.
- She wanted Jasmine to study hard so that she could enter an elite school.
- He could not bear to see his mother putting his sister down.
- It refers to the PSLE.

Sights/Sounds	Who was involved
Yelling	Jasmine's mother
Shouting sounds	Jasmine playing a mobile game
Chicken macaroni soup	Jasmine and the writer
Sounds of a conversation	Jasmine showing the writer her game

- My mother was shouting at Jasmine.
 - I woke up to my mother shouting at Jasmine.
 - Jasmine and I bonded.
 - Yes he did. He viewed the tutoring and bonding as something that was irreplaceable.
 - Yes. She had listened to her brother and did her work diligently.
- | Situation | True/False | Reason |
|--|------------|---|
| Jasmine wasn't studying. | True | She did not feel the urgency to study for her PSLE, and was playing games on her phone instead. |
| Jasmine and the writer did not have a good relationship. | False | The writer had volunteered to help Jasmine, thus showing that they were close. |
| The writer was a bad brother. | False | The writer had helped Jasmine thoroughly. |

Practice 2

- The sentence is "Yet, all these reasons were not enough to quell her anger towards Jade."
- The rainforest was like a labyrinth, so she had to do it in order not to lose her sense of direction.
- Elise got wounded.
 - Elise left her campsite.
 - Elise was being stalked by a creature.
- She surprised her predator by charging towards it and screaming, and it retreated afterwards.
- | Sights/Sounds | Who was involved |
|-----------------------------------|---|
| Crunching leaves / identical tree | Elise continuing through the rainforest trunk |
| Chirping | Birds in the rainforest |
| Shall scream | Elise charging towards the predator |
| Blood | Elise's bleeding back |

Comprehension Passages

This book has comprehension passages with various difficulties, in order to expose students to various types of comprehension questions.

Master Your Paper 3 & Paper 4

PRIMARY 5 ENGLISH

MASTER
Your
Paper 3 &
Paper 4

(Listening Comprehension and Oral Communication)

- ▶ Comprehensive guide to listening comprehension and oral skills
- ▶ Complete listening scripts and answers, including suggested oral responses
- ▶ Five full mock exams for Paper 3 and Paper 4

LIM GEOK CHOO
Master of Education, BA (Hons) in English and Linguistics

ISBN: 9789814996150

PRIMARY 6 ENGLISH

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LIM GEOK CHOO
Master of Education, BA (Hons) in English and Linguistics

ISBN: 9789814996648

This is a comprehensive guide to listening comprehension and oral communication tested in Paper 3 and Paper 4 of the English examination.

It is closely aligned with the latest assessment objectives for primary level issued by the Ministry of Education, Singapore and includes online audio files of all texts of the listening scripts.

Unit 2
Multiple-Choice Questions

What is it?
It is a test of your ability to listen to a longer stretch of spoken text. There are 13 questions.

Take Note!
The options are not pictorial but in words. Instead of studying pictures, you have to read and understand the options. Then you can eliminate two of them to get the correct answer.

Spoken texts include:

- ▶ Interviews/speeches
- ▶ Extracts from news reports
- ▶ Narratives/look tables
- ▶ Documentaries

Watch Out!
For example, the speaker could name a place like Best Primary School but one of the options could be Best Minds Primary School. This option is wrong because the name of the school is slightly different from what the speaker said. Accuracy is key!

Primary 5 English - Master Your Paper 3 & Paper 4 (Listening Comprehension and Oral Communication)

Try This!

Text for Multiple-Choice Questions

A man and his son were on their way to a market one morning. They walked alongside their donkey for a while. When they passed by a temple, they heard some people laughing at them. "What fools they are, walking alongside their donkey when they could be riding on it!"

The man thought they were right, so he put his obedient son on the donkey and continued their journey. As they passed by a village, an elderly man shouted at the boy. "Get down, boy! How can you ride on the donkey when your old father has to trudge along?"

1. Where were the man and his son going?
(1) to a temple ()
(2) to a village ()
(3) to a market ()
2. What did the elderly man think of the boy riding on the donkey?
(1) The boy was foolish. ()
(2) The boy was obedient. ()
(3) The boy was inconsiderate. ()

Answers
1. (3)
2. (1)

Take Note!

Notes on important skills and knowledge.

Watch Out!

Common mistakes in reading and answering questions.

Try This!

Warm-up exercises for immediate application of skills learnt.

Mock Exam Papers

There are five full Mock Paper 3 and Paper 4 exam papers with complete listening scripts and answers, including suggested oral responses.

MOCK EXAM 4

Paper 3 (20 marks)

Text 1 (Track 4.1)

1. Which picture shows the correct items on the noticeboard for this term?

MOCK EXAM 1

Paper 3 (20 marks)

Text 1 (Track 1.1)

1. Which picture shows the correct items the student leader should collect?

Listening Texts and Answers

From then on, Jack always looked for Tommy during recess. Sometimes he brought snacks for Tommy. Other times, he would look about to him the strange things that Tommy did not stand up or walk up and down when Jack was reading. He sat down uselessly enjoying the book. Every afternoon, after dismissal, Tommy and Jack left together and once before, Jack answered.

Text 2
I would hear an announcement during assembly.

Good morning, students. Today is an important day. The media team will be here soon. You are reminded to be on your best behaviour. Do not gather in large numbers, talk loudly or swarm the media team when it arrives. The area will be taking video of your during lessons and at recess too. Try to be natural and please do not cover your face when the cameramen are nearby.

Because our education system is considered effective and impressive, the video will be shared with schools in countries such as Japan and Brazil. School principals in those countries are keen to see how we teach our English lessons as they hope that teachers will be able to improve the standard of English of their own students. They strongly use our books as well, so they will need to observe how our teachers teach in their own schools.

Remember to look in your mirror and look presentable. Make a good impression and do not forget our school reputation.

Answers to Paper 3

Paper 3 – Answers to pronunciation, word stress, intonation and expressions for listening A1 and suggested responses for prompts

Reading A1(a)

Pronunciation

1. work, back, mark, look – say the ending k sound
2. that, right, hat, next, best, went, feet, about – say the ending t sound
3. did, moaned, dragged, did – say the d sound

4. that, they – say the th sound
5. which – say the connected form of wh and in

Word stress

1. overuse – put the stress on the third syllable over-USE
2. completion – put the stress on the second syllable com-PLETION
3. unavailability – put the stress on the second syllable un-avail-ABILITY

Intonation and expression

1. Oh, no! – use a falling tone to express disappointment
2. Mary! Look which hair! – use a rising tone to express surprise

Comprehension

10) Yes, I have these tablets because I need them for personal grooming and cleaning. I need the toothbrush and toothpaste for cleaning my teeth every morning after I wake up. If I don't brush my teeth, my friends will say I have bad breath and avoid me like the plague. I also use the comb to make my hair neat and tidy. If not, it will look very messy in the morning when I just wake up after sleeping the night before.

OR

Yes, I have these tablets because they are used for cleaning and chewing. I need my toothbrush & hair – in the morning after I wake up and at night before I go to bed. This helps to prevent tooth decay. Also combs my hair with the hairbrush so my hair gets entangled easily. Without the hairbrush, it is difficult to be my hair into a neat ponytail.

11) It is important to be neat and tidy when going to meet other people. We should not look the house looking messy and untidy because we meet other people. We should know the house looking messy and untidy as we did not bother to clean neatly or comb our hair. People may not like us if we are dressed untidily since normal people look neat and tidy. People may think we are abnormal if we look dirty or messy. They will probably avoid meeting with us, thinking that we are unhygienic.

89

Ace Your Show-and-Tell

Ace Your Show-and-Tell

DEVELOPING ORAL COMPETENCE FOR EXTRAORDINARY PRESENTATIONS

PRIMARY 1 & 2

- Promotes metacognition and critical thinking skills
- Enriches students' vocabulary to help them express themselves clearly
- Builds confidence for effective communication

Karen Tan
BA, (NUS)

ISBN: 9789811493119

Most primary schools in Singapore that do not conduct examinations for Primary 1 students have instead implemented show-and-tell presentations or written expressions as formative assessments. This is in line with MOE's Primary Education Review and Implementation (PERI) recommendations to support learning through holistic assessment.

Show-and-tell is a form of public speaking. There are several benefits to performing show-and-tell, such as developing effective communication skills, honing emotional skills and nurturing listening skills. Children would also have to make eye contact and articulate with poise while talking to the class. This builds their self-confidence and self-esteem.

Tips for Parents

How to help your child prepare for show and tell?

Preparing for show and tell is a wonderful activity for parents and children to bond over. It is a good chance to have conversations that you would not usually have. As a parent, you can not only help provide ideas for content, but also provide support as your child builds up his or her confidence in public speaking. You can also provide constructive feedback that will help them improve on their vocal skills.

Here are some tips to take note of:

- 1. Be encouraging.** If your child is shy, he or she may be scared and lacking in self-confidence. Help them build their confidence by praising areas in which he or she is good at. Also, be enthusiastic about the activity and remind them that it is a good opportunity to share something meaningful to their classmates and teacher.
- 2. Get handy.** Usually, presenting something during show and tell sessions will be required. If it is a family photograph or a photograph of the object or event, help your child to engage the photograph and perhaps even laminate it so that he or she will be proud to hold on to it during his or her presentation.
- 3. Ask questions.** As parents who want to help their children, it may be tempting to provide them with the answer. However, remember that the learning process is just as important to their learning as the presentation itself. There is no right or wrong in show and tell. Your child will be proud and confident if he or she is sharing something they truly want to convey. If your child asks you a question, try saying "let's find out the answer together!" rather than immediately handing him or her the answer. For example, look up a book or search the internet. Let your child discover the topic independently!
- 4. Try drawing mindmaps.** This is helpful for children who are visual learners. Start off with a few points, then encourage them to further elaborate on points that he or she is more interested in, or whichever that fits the topic better.
- 5. Be his or her first audience.** If your child can practice in front of an audience whom they are comfortable with, it will be extremely helpful in boosting their confidence. Ask your child some questions so that they will be better prepared to answer the questions their classmates may ask them. You may also wish to record his or her performance and show it to them after! This will improve their presentation skills.
- 6. Demonstrate.** Provide ideas on how to use appropriate hand gestures to further enhance their performance.
- 7. Focus on the process.** Remember that it is not so much the outcome that you and your child should focus on. Remind your child how they have improved with each show and tell practice session, so that they will be motivated to continue improving with each try!

Introduction

Checklist

- Did you ensure that the main ideas and points are easy for the audience to understand?
- Did you speak clearly, confidently and expressively?
- Did you speak at an appropriate pace?
- Did you maintain eye contact with the audience?
- Did you use suitable and natural hand gestures to emphasise your points?
- Did you engage your audience during the presentation?

Rubrics

	Beginners	Intermediate	Advanced
Content	Points are not well developed and elaborated. No examples are used, or examples used are not relevant.	Some points are developed and elaborated. Some examples are used but not all of them are relevant.	Points are all well-developed and well-elaborated. Examples are used and all of them are relevant.
	Points do not address the given topic at all. Student shows no knowledge of the topic.	Points address topic adequately but not fully. Student shows sufficient knowledge of the topic.	Points address the topic fully. Student shows in-depth knowledge of the topic.
	Points and examples are not particularly innovative or interesting.	Points and examples are fresh and insightful.	

Tips

Tips and rubrics are included to help parents better prepare their child for show-and-tell.

Variety of Topics

More than 100 interesting topics that develop analytical and critical thinking skills.

CONTENTS

Introduction

Section A: Family and Friends

- Why I love my mum and dad
- Funny things my parents say
- My imaginary friend
- What my sibling thinks of me
- About my family
- My family's traditions
- A family vacation
- My grandparents
- My best friend
- What do you do on weekends?

Section B: Miscellaneous

- Something you made yourself
- Tell a joke
- Something small
- My dream vacation
- My invention
- Why I am on Santa Claus' nice list
- My birthday wish
- An event that made me sad
- If I had three wishes, they would be ...
- If I were the author of a book, I would write about ...
- The best thing about me is ...
- What I want to be when I grow up
- What to do when there is no television
- Situations that scare me
- A person I want to meet
- A birthday party I attended
- Who do I look so like most?
- Convince your classmates to recycle plastic
- Convince your classmates to conserve water
- Convince your classmates to lead a healthy lifestyle

Ace Your Show-and-Tell

C3 At the hawker centre

Hawker food is something all Singaporeans love to dine on. Describe what you see, smell, feel, taste when you visit hawker centres!

What you see	Example: many people at the hawker centre Example: plates of food on every table
What you smell	Example: smoke coming from the hawker Example: aroma of fried noodles
How you feel	Example: hungry while waiting for the food Example: satisfied after eating
What you taste	Example: sweet desserts Example: savoury carrot cake

- Which hawker centre do you often visit?
- Is there a favourite hawker stall that you always visit?
- What is your favourite hawker food?

Places

Fill in the blanks provided to talk about your hawker centre experience.

Good morning/afternoon/evening _____
(name of teacher) and fellow classmates. My name is _____

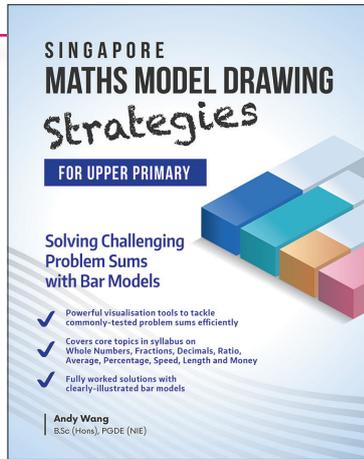
Today, I am going to share about my hawker centre experience. I often visit _____ as it is _____ and _____.

_____ The hawker centre has a large variety of food, but my favourite dishes are _____ and _____.

These dishes are prepared so well that I just cannot resist their _____ and _____.

I hope everyone here has a chance to visit my favourite hawker centre, because it is an experience that you will never forget. This is the end of my presentation. Thank you for your attention!

Maths Model Drawing Strategies



ISBN: 9789811490125

The questions in this book are designed to enable progressive learning. Step-by-step solutions are provided to ensure students master the skill of model drawing in various core topics of the primary school mathematics syllabus such as whole numbers, fractions, decimals, ratio, average, percentage, speed, length, money, mass and volume.

Contents	
BASIC COMPARISON MODEL CONCEPT	1
BASIC UNITS MODEL CONCEPT	10
BASIC EQUALISATION MODEL CONCEPT	16
BASIC TRANSFER MODEL CONCEPT	21
REMAINDER MODEL CONCEPT	42
CONSTANT TOTAL MODEL CONCEPT	56
CONSTANT DIFFERENCE MODEL CONCEPT	67
CONSTANT QUANTITY MODEL CONCEPT	77
ANSWER KEY	84

Various Model Drawing Concepts

Students will acquire basic to advanced model drawing concepts upon completion of this book.



Clear Examples

Each concept is explained with straightforward step-by-step examples.



BASIC COMPARISON MODEL CONCEPT

The basic comparison model concept helps to illustrate the difference between two more parties. Keywords such as "less than" or "more than" will usually require the use of the comparison model concept.

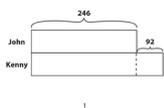
Example 1

John has 246 chocolates while Kenny has 92 more chocolates than John. How many chocolates does Kenny have?

Step 1: Since we know the number of chocolates that John has, we can draw a bar and label it first.

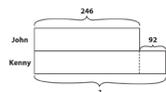


Step 2: To complete a model, we need to draw another bar to represent the number of chocolates that Kenny has.



Singapore Maths Model Drawing Strategies for Upper Primary

Step 3: We can therefore calculate the number of chocolates that Kenny has.



Number of chocolates that Kenny has $\rightarrow 246 + 92 = 338$
Kenny has 338 chocolates.

Example 2

Crystal and Stephanie have a total of 65 sweets. Given that Stephanie has 15 more sweets than Crystal, how many sweets does Stephanie have?

Step 1: We know the total number of sweets that the two girls have. We also know that Stephanie has more sweets. So, we draw two bars and label it.



Step 2: Next, since we know that Stephanie has 15 more sweets than Crystal, we label that in our model as well.



Exercises with Answers

Answers with models and full working steps are provided for each exercise question.



Singapore Maths Model Drawing Strategies for Upper Primary

Exercise 1

(a) Peter scored 891 points in a game. Matthew scored 247 points less than Peter. How many points did Matthew score?

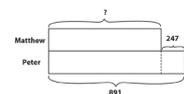
(b) Beatrice received \$40 from her parents. Her brother received \$2 did while her sister received $\frac{1}{3}$ of what her brother received. How much money did her sister receive?

ANSWER KEY

BASIC COMPARISON MODEL CONCEPT

Exercise 1

(a)



Number of points that Matthew scored $\rightarrow 891 - 247 = 644$
Matthew scored 644 points.

Master Math Models

The Master Math Models series was written based on methods developed and refined from two decades of teaching thousands of students with successful results. These results can be replicated by learning the techniques in this series.

The objective of the series is to empower: (a) parents and teachers with an easy-to-use tool for teaching, and (b) students to become independent learners.

This series is the first of its kind that is written in a style with clear step-by-step diagrams, instructions and explanations that allow independent learning. Parents and tutors will find this series self-explanatory and useful in guiding students. Much effort has been made to provide examples for easy reference, as they only need to point out the clear and concise explanations on each page.

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Benjamin Low
B.A. (HONS), PGDE (MIE, NTU)

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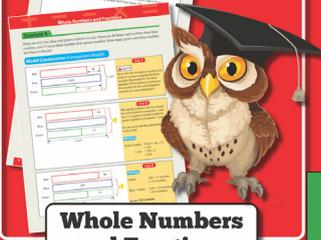
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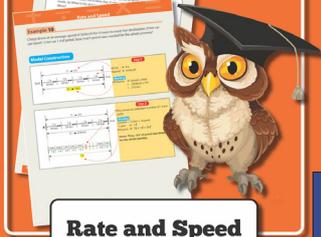
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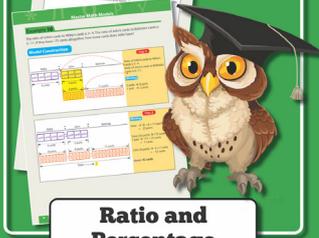
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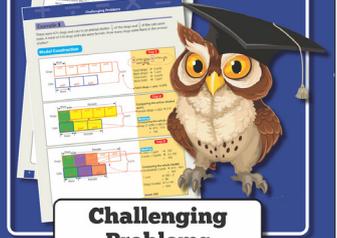
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Book 4



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Master Math Models

Primary 5 & 6



The Solutions Book

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ISBN: 9789811446214

Book 1 Whole Numbers and Fractions

Example 1

There are 627 red, blue and green marbles in a jar. There are 46 fewer red marbles than blue marbles, and 77 more blue marbles than green marbles. How many green and blue marbles are there in the jar?

Model Construction (Comparison Model)

Step 1

Red: $\overline{\hspace{1cm}}$ 46
Blue: $\overline{\hspace{1cm}}$ 1 unit
Green: $\overline{\hspace{1cm}}$ 77

NOTE Since the red and green marbles are used to compare against the blue marbles, the model for the blue marbles will be placed in between the models for the red and green marbles for easy comparison.

Step 2

Red: $\overline{\hspace{1cm}}$ 46
Blue: $\overline{\hspace{1cm}}$ 1 unit
Green: $\overline{\hspace{1cm}}$ 77

We add 46 marbles into the model for red marbles to complete 1 unit, and 77 marbles into the model for green marbles to complete 1 unit. So, we must add the same amount to the total.

Worked

Total 13 units $\Rightarrow 627 + 46 + 77$
 $\Rightarrow 750$
1 unit $\Rightarrow 750 \div 13$
 $\Rightarrow 58$

Step 3

Red: $\overline{\hspace{1cm}}$ 140
Blue: $\overline{\hspace{1cm}}$ 250
Green: $\overline{\hspace{1cm}}$ 77

Worked

Green: $250 - 77$ marbles
 $= 173$ marbles
Blue + Green: $250 + 173$ marbles
 $= 423$ marbles

Answer: 423 marbles

Book 1 Whole Numbers and Fractions

Example 2

Tristan has \$78 more than Stephen. James has \$40 more than Tristan and Stephen's total sum of money. James has \$350 more than Tristan. How much do they have altogether?

Model Construction (Rearrangement Model I)

Step 1

Stephen: $\overline{\hspace{1cm}}$ 1 unit
Tristan: $\overline{\hspace{1cm}}$ 1 unit
James: $\overline{\hspace{1cm}}$ 1 unit

Tristan has \$78 more than Stephen.
James has \$40 more than Tristan and Stephen's total sum...

Step 2

Stephen: $\overline{\hspace{1cm}}$ 1 unit
Tristan: $\overline{\hspace{1cm}}$ 1 unit
James: $\overline{\hspace{1cm}}$ 1 unit

James has \$350 more than Tristan.
We rearranged James' model for ease of comparison.

Worked

1 unit $\Rightarrow \$350 - \40
 $= \$310$

Step 3

Stephen: $\overline{\hspace{1cm}}$ \$310
Tristan: $\overline{\hspace{1cm}}$ \$310
James: $\overline{\hspace{1cm}}$ \$310

Tristan $\Rightarrow \$310 + \$78 = \$388$
James $\Rightarrow \$310 + \$388 = \$718$
Total $\Rightarrow \$310 + \$388 + \$718$
 $= \$1416$

Answer: \$1416

Guided Examples

Colourful step-by-step examples are provided so that students can clearly understand the fundamentals behind each working or step.

Mastering Mathematics

Mastering Mathematics was conceptualised and developed to provide students in primary schools with an organised approach to revising Primary Mathematics through comprehensive practices ranging in difficulty from basic to challenging. All topics in the Primary Mathematics syllabus issued by the Ministry of Education, Singapore, are covered. Examples are given in the form of worked questions in the exercises to give students a clear reference on how each type of question should be answered. An answer key is also given at the end of the book for students to assess their own answers so that they can learn from their mistakes. Parents and teachers can make use of this as well.

To maximise the book's benefits, students should first complete the exercises in Section A to strengthen their basic skills, concepts and processes before attempting the questions in Section B.

This book has been written for students to use in the classroom with teacher supervision; and/or at home, for independent learning or with parental guidance.

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Unit 1
Numbers to 100

Learning objectives

At the end of this topic, pupils should be able to do the following:

- Count and tell the number of objects in a given set.
- Read and write numbers in numerals and in words.
- Compare the numbers of objects in 2 or more sets.
- Compare and order numbers up to 100.
- Recognise ordinal numbers.
- Recognise number patterns.
- Recognise number bonds for numbers up to 10.

Section A

Exercise 1a

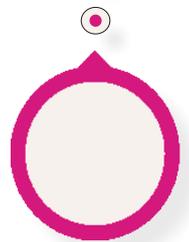
Write each of the following statements in numbers. The first question has been done for you.

1. Eight Answer: 8

2. Eleven Answer: _____

Learning Objectives

Learning objectives are clearly spelt out at the beginning of each topic, so students know what is expected of each topic in the curriculum.



Exercises

Comprehensive exercises for each learning objective of each topic.

Exercise 2a

Unit 3 Multiplication and Division

Divide the following numbers. The first question has been done for you.

1. $35 \div 5 = 7$
 $7 \times 5 = 35$
Answer: 7

2. $36 \div 6$
Answer: _____

3. $40 \div 8$
Answer: _____

4. $42 \div 7$
Answer: _____

5. $45 \div 9$
Answer: _____

6. $48 \div 6$
Answer: _____

7. $50 \div 10$
Answer: _____

8. $54 \div 9$
Answer: _____

9. $56 \div 8$
Answer: _____

10. $60 \div 6$
Answer: _____

11. $63 \div 7$
Answer: _____

12. $72 \div 8$
Answer: _____

Unit 3 Area of Triangle

11. Alex wants to tile the triangular floor shown. How much does he have to pay if 1 m² of tiling costs \$51.50?

Answer: \$ _____

12. In the figure, ABCD is a square of side 15 cm. The length of AB is three times the length of BE. Find the area of the shaded triangle.

Answer: _____ cm²

13. The base of a triangle is 21 cm and its height is $\frac{2}{3}$ of its base. Find the area of the triangle.

Answer: _____ cm²

Unit 5 Length

3. Cain is 1 m 38 cm tall. Don is 4 cm taller than Cain. What is the total height of the two men?

Answer: _____ m

4. Gao Ming has a piece of wire that is 90 cm long. He uses the wire to make a square as shown below.

(a) What is the length of wire used to make the square?
(b) What is the length of wire left after making the square?

Answer: (a) _____ m
(b) _____ m

5. Hazel stacked some paper weights on a box as shown. What is the height of the box?

Answer: _____ m

Mastering Mathematics Primary 2

Exercise 2

Write your answers to each of the following questions in the space provided. For each question, write the number statements and show your working clearly in the space below it. The first question has been done for you.

1. A tailor has a piece of cloth 95 cm long. He cuts it into 3 pieces. The first piece is 25 cm long. The second piece is 15 cm longer than the first piece.

(a) What is the length of the second piece?
(b) What is the length of the last piece?

(a) Length of second piece — $25 \text{ cm} + 15 \text{ cm} = 40 \text{ cm}$
(b) Length of last piece — $95 \text{ cm} - 25 \text{ cm} - 40 \text{ cm} = 30 \text{ cm}$

2. Estelle has 3 strings. The total length of Strings A and B is 98 cm. The total length of Strings B and C is 72 cm. String C is 39 cm long. What is the length of String A?

The length of String A is _____

3. Fabian walks from his house to his school every morning. He has to walk past the park and the community centre. How far does he walk from his house to his school every morning?

He has to walk _____ m every morning.

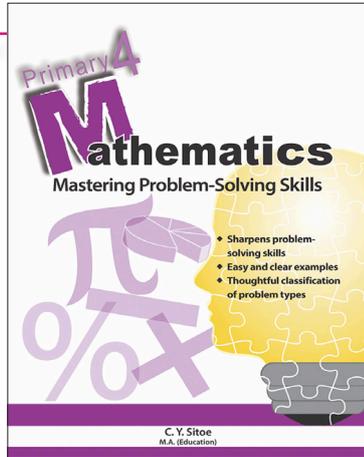
Hints

Hints for selected questions are provided to scaffold the students' mathematical thought processes.

Progressive Difficulty

Questions arranged in an organised progression, from simple to difficult. Challenging questions stretch students' ability in problem-solving.

Mastering Problem-Solving Skills



ISBN: 9789811419218

This book aims to stimulate young minds and sharpen problem-solving skills using different approaches.

Thoughtful classifications to help your child recognise commonalities among some seemingly different problem sums.

Chapter 1
As Many As, More Than, Less Than

Example

At a funfair, three students shared a total of 355 tokens. Benny used three as many tokens as Ahmad while Kane used 40 more tokens than Ahmad. How many tokens did Kane use?

Working

B					} 355
A					
K				+40	

Su + 40 → 355
 Su → 355 - 40 = 315
 Tu → 315 ÷ 5 = 63
 Kane → 63 + 40 = 103

Ans: Kane used 103 tokens

Examples

Easy and clear guides that walk your child through the process to solve the different types of heuristic problem sums that they will face.

Practice and Revision

Comprehensive coverage for all topics.

Primary 4 Mathematics: Mastering Problem-Solving Skills

Practice

- Andy, Billy and Calvin shared 120 stickers among themselves. Andy received 12 more stickers than Billy. Calvin received 4 times as many stickers as Billy.
 - How many stickers did Calvin receive?
 - How many more stickers did Calvin receive than Billy?

Revision 2

- At a bookshop, exercise books are sold in sets of 9. Each set costs \$3. Alicia has \$16.40. What is the maximum number of exercise books she can buy?
- This year, Mrs Lim's age is between 40 and 50 years old. Her age is a multiple of 8. Next year, her age will be a multiple of 7. How old is she now?

Answer Key

Chapter 1

- | | | | | | |
|--------|--|--|--|----|-------|
| Calvin | | | | | } 120 |
| Billy | | | | | |
| Andy | | | | 12 | |

120 - 12 = 108
 6 units → 108
 1 unit → 108 ÷ 6 = 18
 4 units → 18 × 4 = 72

(a) Calvin received 72 stickers
 3 units → 18 × 3 = 54

(b) Calvin received 54 more stickers than Billy.
- | | | | | | |
|-------|--|--|--|----|-------|
| Billy | | | | 25 | } 115 |
| Anita | | | | | |
| Sally | | | | | |

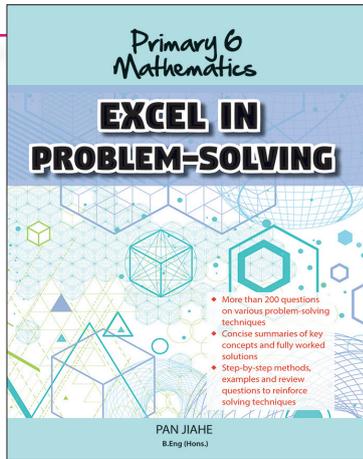
115 + 25 = 140
 7 units → 140
 1 unit → 140 ÷ 7 = 20
 3 units → 20 × 3 = 60
 60 - 25 = 35

Billy has 35 stamps.

Answer Key

Detailed answers are provided for students to do self-marking and ensure their workings contain the right steps.

Excel in Problem-Solving



ISBN: 9789811440571

This book is a culmination of a decade of experience in teaching hundreds of students, and is written with one goal in mind - to teach and impart the key problem-solving techniques in tackling common to challenging problem sums to students, so that they can excel in their PSLE Mathematics examination, and find joy in the process of learning mathematics.

This book aims to achieve this by teaching students the key problem-solving techniques tested in PSLE Math in a structured and concise manner.

Chapter 2: Number \times Value = Total

Introduction
This method is the most effective in solving questions where the number of the variables, the value of each variable and the total value are known. Hence, this technique is known as **Number \times Value = Total**.

Main Concepts
This technique involves constructing a simple table to allow us to solve easily.
Example: The fruit seller sold apples and oranges in the ratio of 2 : 3. Each apple costs 40 cents, while each orange costs 50 cents.

Step 1 Construct a simple table as follows:

	Number	\times	Value (cents)	Total (cents)
Apples		\times		
Oranges		\times		

Step 2 Fill in the "Number" and "Value" columns.

	Number	\times	Value (cents)	Total (cents)
Apples	2 units	\times	40	
Oranges	3 units	\times	50	

Step 3 Multiply the "Number" and "Value" to get the "Total" (Number \times Value = Total).

	Number	\times	Value (cents)	Total (cents)
Apples	2 units	\times	40	80 units
Oranges	3 units	\times	50	150 units

Step 4 Use the table to solve the questions.

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Introduction

Main concepts are introduced at the beginning of every chapter.



Guide

Step-by-step examples to coach students, which also serve as a revision guide.

Primary 6 Mathematics: Excel in Problem Solving

Number \times Value

Example 1
Lynn started to save her pocket money in her piggy bank. After one year, the number of 10-cent, 20-cent and 50-cent coins in her piggy bank was in ratio of 2 : 5 : 3. If she had saved 563 altogether, what was the total number of 20-cent coins in the piggy bank?

Steps
1. Fill in the table (Ensure all are in the same units - cents).
2. Number \times Value = Total
3. Solve.

	Number	\times	Value (cents)	Total (cents)
10 cents	2 units	\times	10	20 units
20 cents	5 units	\times	20	100 units
50	3 units	\times	150	300 units

Total value \rightarrow 20 units + 100 units + 300 units = 420 units
563 = 63 \times 100 = 6300 cents
420 units = 6300
1 unit = 6300 \div 420 = 15
No. of 20-cent coins \rightarrow 5 units = 5 \times 15 = 75
There were 75 20-cent coins in the piggy bank.

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Exercises

Review and revision exercises for students to further reinforce their understanding.



Final Revision

Solve the following questions.

- In the figure below, the area of the shaded part of the circle is 35% of the area of the circle. The area of the shaded part of the triangle is $\frac{1}{3}$ the area of the triangle. What fraction of the figure is shaded?

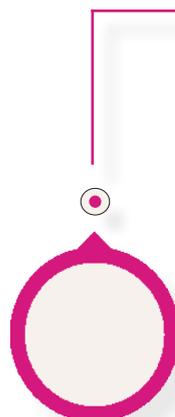


- A computer shop had 104 laptops and printers. After he sold $\frac{3}{8}$ of the laptops, and $\frac{1}{4}$ of the printers, he had the same number of laptops and printers left. If the selling price of each laptop and each printer were \$850 and \$215 respectively, how much did he collect from the sale of the laptops and printers?

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Solutions

Detailed worked solutions for students to learn at their own pace.



Worked Solutions

Chapter 1

- Money \rightarrow Uncle Ng \rightarrow Grandchild \rightarrow Left

Uncle Ng \rightarrow $\frac{1}{2}$
Grandchildren \rightarrow $\frac{1}{3}$
Left \rightarrow $\frac{1}{6}$
2 units = \$560 \times 3 = \$1680
1 unit = \$1680 \div 2 = \$840
5 units = \$840 \times 5 = \$4200
- Cupcakes \rightarrow Neighbours \rightarrow Colleagues \rightarrow Left

Neighbours \rightarrow $\frac{1}{5}$
Colleagues \rightarrow $\frac{1}{4}$
Left \rightarrow $\frac{1}{20}$
7 units = 21
1 unit = 21 \div 7 = 3
40 units = 3 \times 40 = 120 cupcakes
- Class \rightarrow Glasses \rightarrow Boys \rightarrow Girls

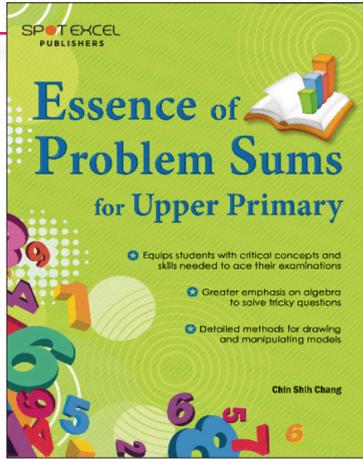
Glasses (girls) \rightarrow $\frac{1}{2}$
Glasses (boys) \rightarrow $\frac{1}{3}$
No glasses (boys) \rightarrow $\frac{1}{6}$
No glasses (girls) \rightarrow $\frac{1}{6}$

4 units + 9 units = 13 units
13 units = 26
1 unit = 26 \div 2 = 13
8 units = 16 boys
- Hour \rightarrow Mon \rightarrow Tue

Mon \rightarrow $\frac{1}{2}$
Tue \rightarrow $\frac{1}{3}$
Left \rightarrow $\frac{1}{6}$
63 units - 40 units = 23 units
23 units = 165
1 unit = 165 \div 7 = 23.57
63 units = 7 \times 63 = 441 g

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Essence of Problem Sums



ISBN: 9789811485879

- Equips students with critical concepts and skills needed to ace their exams
- Greater emphasis on algebra as a method to solve tricky questions
- Detailed methods for drawing and manipulating models

Essence of Problem Sums for Upper Primary focuses on strategies for solving problem sums. This book consists of 10 chapters and each chapter includes the most common types of questions seen in school preliminary exams and the PSLE.

At the start of each chapter, students are taught the methods to solve the problem sums. Questions are then set to test the students' understanding. These questions are set in such a way that they are similar to PSLE and top schools' prelims.

This book is a good guide for students who are struggling with problem sums.

Detailed Examples

Step-by-step solutions with detailed model drawing and explanation are provided for example questions.

Example 2

If Ali gives Tom \$20, Tom will have $\frac{5}{8}$ as much money as Ali. If Tom gives Ali \$25, Tom will have $\frac{2}{3}$ as much money as Ali. If Tom gives Ali \$20, Tom will have $\frac{2}{3}$ as much money as Ali. If Tom gives Ali \$25, Tom will have $\frac{2}{3}$ as much money as Ali.

a) How much money do they have altogether?
b) How much does Ali have more than Tom?

Ali gives Tom \$20
 Ali: \$20u
 Tom: \$32u
 Total: \$52u

Tom gives Ali \$25
 Ali: \$45u
 Tom: \$27u
 Total: \$72u

Students should by now have no problem with the first 2 steps. However, question, finding the value of $1u$ is not so straightforward.

From the 1st model, Tom is 20u after receiving \$20 from Ali. So, looking at the 1st model, Tom at first will be $(20u - 20)$.

From the 2nd model, Tom is 5u after giving \$25 to Ali. So, looking at the 2nd model, Tom at first will be $(5u + 25)$.

Therefore,

$$20u - 20 = 5u + 25$$

$$20u - 5u = 25 + 20$$

$$15u = 45$$

$$11u = 55$$

$$1u = 5$$

$$52u = 5 \times 52 = 260$$

a) They have **\$260.00** altogether. b) Ali has **\$100.00** more than Tom.

Example 3

If Ali gives Tom \$30 Ali will have $\frac{3}{4}$ as much money as Tom. If Ali gives \$80 to Tom, Ali will have $\frac{1}{2}$ as much money as Tom.

a) How much money do they have altogether?
b) How much does Ali have less than Tom?

Ali gives Tom \$30
 Ali: \$30u
 Tom: \$40u
 Total: \$70u

Tom gives Ali \$80
 Ali: \$110u
 Tom: \$20u
 Total: \$130u

From 1st model, Ali at first $\rightarrow 30u + 30$
 From 2nd Model, Ali at first $\rightarrow 14u + 80$

$$30u + 30 = 14u + 80$$

$$30u - 14u = 80 - 30$$

$$39u - 14u = 50$$

$$25u = 50$$

$$1u = 50 \div 25 = 2$$

$$125u = 125 \times 2 = 250$$

a) They have **\$252.00** altogether.

$$30u + 30 = 36 + 30 = 108 \text{ (Ali's money at first)}$$

$$250 - 108 = 144 \text{ (Tom's money at first)}$$

$$144 - 108 = 36$$

b) Ali has **\$36.00** less than Tom.

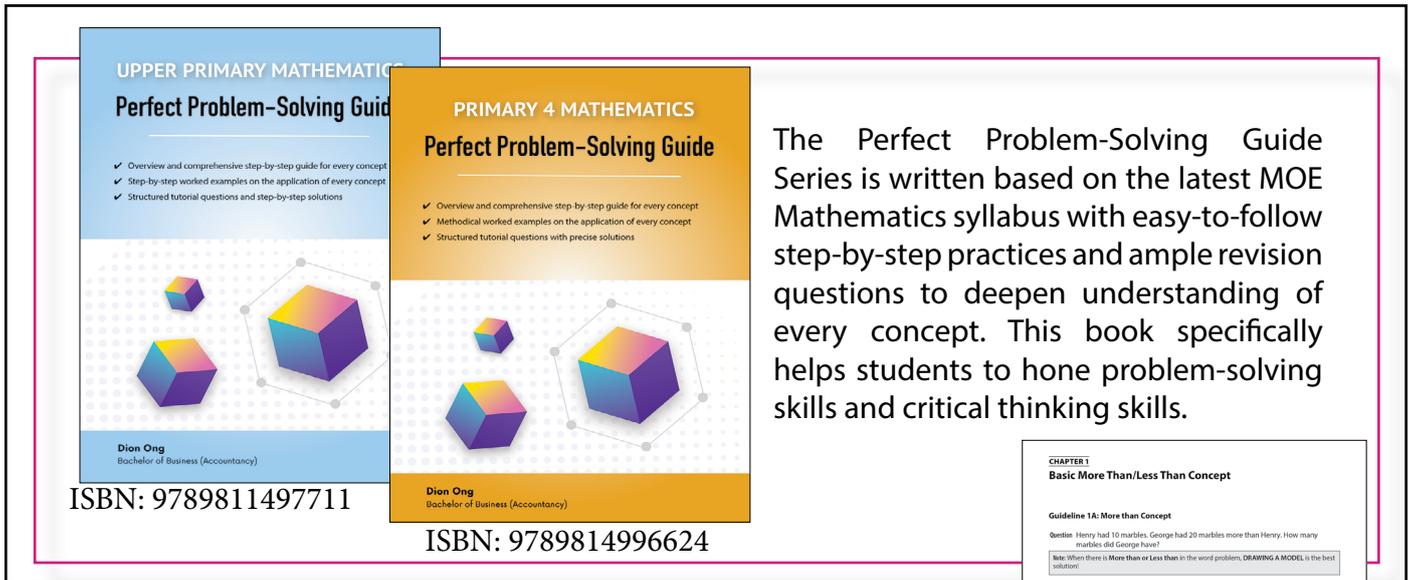
Practice Questions 2

1. All and Tom have some money in the ratio of 1 : 7. Tom then give to Ali. Tom now has $1\frac{1}{2}$ more money than Ali. How much money have at first?
2. Fatty weighs $\frac{2}{3}$ as much as Obese. Fatty then gives 56.25 kg to Obese. Fatty now weighs $\frac{11}{12}$ less than Obese. How much weigh after losing weight?
3. Tank A has $\frac{7}{8}$ as much water as Tank B. All then pours 32.5 ml from Tank A into Tank B. Tank A now has $\frac{2}{3}$ as much water as Tank B. How much water did Tank A have in the end?
4. Pears are sold at \$3 each. For every 4 pears bought, the customer is allowed to buy the 5th pear at 40% discount. Ali has \$90 and he buys as many pears as possible. How much money does Ali have left?
5. For every 3 pots that a customer buys, he/she will be given 1 free. Each pot costs \$2.55. Tom wishes to buy 207 pots. What is the minimum sum of money he must pay?
6. All delivers letters for Tom's company. For every letter delivered on time, he is paid \$3.20. For every late delivery, he has to pay Tom's company \$1.40. One day, the number of letters delivered late by Ali is $\frac{1}{3}$ of the number of letters delivered on time. Ali is then paid \$92.40. How much more will Ali earn if he delivers all the letters on time?
7. Tom owns a farm. There are $\frac{2}{3}$ as many chickens as ducks. There are $\frac{1}{4}$ as many ducks as pigs. All the pigs and chickens have 416 more legs than all the ducks. How many ducks does Tom have?

Practice Questions

Multiple practice questions of examination standard to test the students' problem sums solving skills.

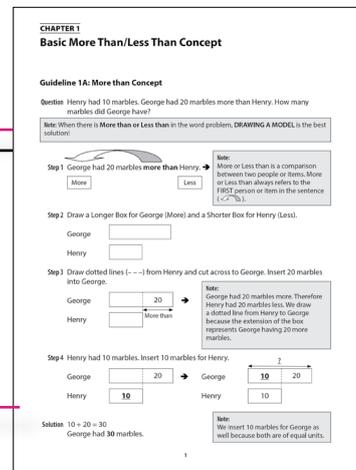
Perfect Problem-Solving Guide



The Perfect Problem-Solving Guide Series is written based on the latest MOE Mathematics syllabus with easy-to-follow step-by-step practices and ample revision questions to deepen understanding of every concept. This book specifically helps students to hone problem-solving skills and critical thinking skills.

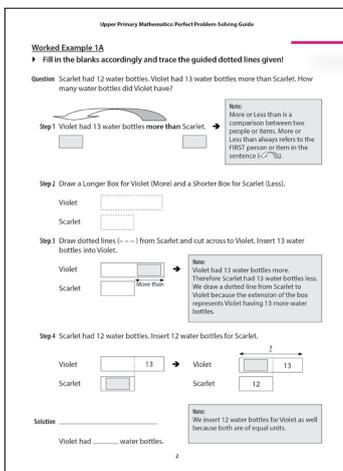
Guidelines

Each chapter contains guidelines of the concepts with clear explanations.



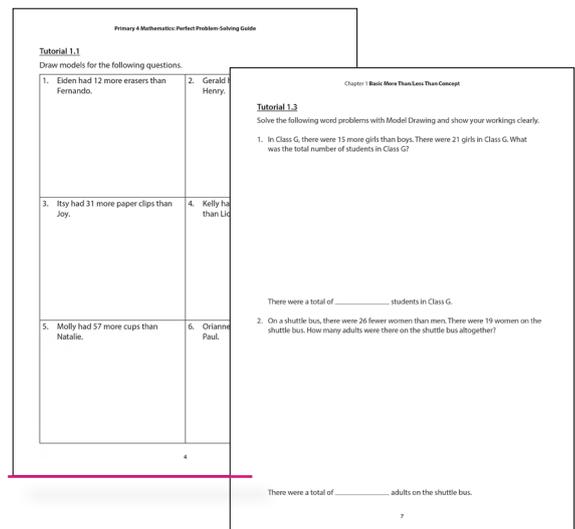
Worked Examples

Each concept is illustrated by a step-by-step worked example.



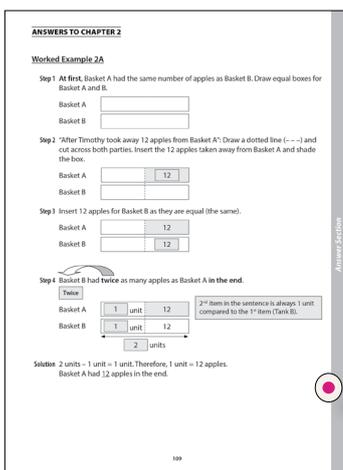
Tutorial Questions

There are structured tutorial questions for basic application of each concept, and further tutorial questions adapted from exams with varying levels of difficulty.

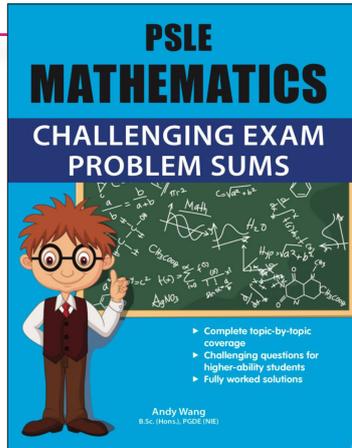


Answers

Step-by-step solutions are provided for all questions to optimise the learning of every student.



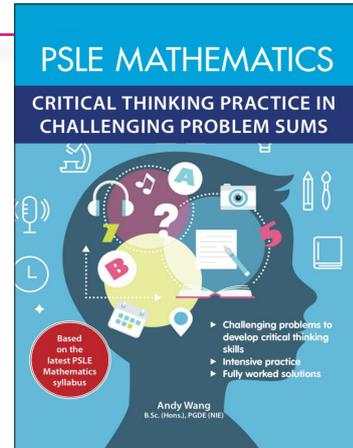
PSLE Mathematics



Challenging Exam Problem Sums

ISBN: 9789811404924

This book is a compilation of challenging mathematics questions for students. As most students usually avoid practising challenging questions, they do not have enough exposure to questions with such levels of difficulty. It is important for students to have adequate practice so that they can ace their examinations.



Critical Thinking Practice in Challenging Problem Sums

ISBN: 9789811404931

Students are often stumped by challenging problem sums. This book aims to help students develop critical thinking skills needed to solve such problems. The intensive practice aids in the mastery of mathematical concepts and builds confidence in students to answer challenging problem sums in their examinations. Full worked solutions are provided to facilitate learning.

Unit 3
RATIO

1 In a school hall, the ratio of the number of boys to the number of girls was $4:3$. $\frac{1}{2}$ of the boys left the hall and 60 students remained.

(a) Find the ratio of the number of the end.

(b) How many students were there?

Unit 4
DISTANCE, TIME AND SPEED

1 A concert lasted for $1\frac{1}{2}$ hours. It ended at 10.25 p.m. What time did the concert start?

(b) How many students were there?

2 Mr and Mrs Wang left their house in their car for Ion Orchard. Mr Wang drove at a speed of 60 km/h. Realising he left his mobile phone at home, he let Mrs Wang alight at a bus stop and drove back to his house. Mrs Wang walked from the bus stop at a speed of 4 km/h to Ion Orchard and it took her 45 minutes to reach.

23 The figure below is not drawn to scale. Given that PQRS is a rhombus, find:

(a) $\angle TPR$

(b) $\angle TRS$

PSLE Mathematics - Challenging Exam Problem Sums

5 The figure below shows an empty container made up of three cuboids. 28.9 L of water is poured into one of the top cuboids into the cuboid below. Find the height of the water level from the base of the container.

6 The total surface area of a cube is 96 cm². What is its volume?

Answers:

Ans: _____

Ans: _____

Topics

Complete topic-by-topic coverage of all PSLE topics with challenging questions.

Solutions

Fully worked solutions are provided for self-evaluation and learning.

ANSWERS

Unit 1

1. $\frac{1}{2} - \frac{1}{3} = \frac{3}{6} - \frac{2}{6} = \frac{1}{6}$
 $\frac{1}{6} \times 12 = 2$
 $\frac{1}{6} \times 18 = 3$
 $\frac{1}{6} \times 24 = 4$

2. $1 - \frac{1}{2} = \frac{1}{2}$
 $\frac{1}{2} \times 10 = 5$
 $\frac{1}{2} \times 15 = 7.5$
 $\frac{1}{2} \times 20 = 10$

3. $\frac{1}{2} \times 10 = 5$
 $\frac{1}{3} \times 15 = 5$
 $\frac{1}{4} \times 20 = 5$

4. 542

5. 17

6. Apples: Others
 15:35
 Oranges: Peas
 3:2
 21:14
 21 units = 14 units = 7 units
 7 units = 105
 30 units = 105 \times 3 = 315
 21 units = 105 \times 2 = 210 (oranges)
 15 units = 105 \times 1 = 105
 $210 + 105 + 315 = 630$

7. 20 pages

8. $1 - \frac{1}{2} = \frac{1}{2}$
 $\frac{1}{2} \times 10 = 5$
 $\frac{1}{2} \times 15 = 7.5$
 $\frac{1}{2} \times 20 = 10$

9. $\frac{1}{2} \times 10 = 5$
 $\frac{1}{3} \times 15 = 5$
 $\frac{1}{4} \times 20 = 5$

10. \$100

11. (a) $5128 - 2$ units = \$64 \rightarrow cost of oven
 (b) $564 \div 6 = 94$
 516×7 units = \$112 \rightarrow cost of air fryer
 $512 \times 64 = 5176 \rightarrow$ total cost of air fryer and oven

12. (a) $\frac{1}{2} \times 12 = 6$
 $12 - 6 = 6$
 $6 \times 21 = 126$
 $24 \times 15 = 360$
 $24 \times 15 = 360$
 $97 = 640$
 $11 = 5720 - \text{Tim}$

(b) Balls = $5120 \times 2 = 10240$

13. 3 units = 18 \times 25
 2 units = 10
 1 unit = 5.50
 3 units = 4.50
 4.50 = 3 \times 1.50
 1.50 = 21
 10 = 6
 40 = 34
 $6 + 21 = 27$
 $27 \times 3 = 81$
 $81 \times 5 = 405$
 $405 + 24 = 69$ children

14. 5118

15. $\frac{1}{2} \times 100$ pages
 $\frac{1}{3} \times 180$ pages

16. $1 - \frac{1}{2} = \frac{1}{2}$
 $\frac{1}{2} \times 10 = 5$
 $\frac{1}{2} \times 15 = 7.5$
 $\frac{1}{2} \times 20 = 10$

17. $\frac{1}{2} \times 10 = 5$
 $\frac{1}{3} \times 15 = 5$
 $\frac{1}{4} \times 20 = 5$

18. $\frac{1}{2} \times 10 = 5$
 $\frac{1}{3} \times 15 = 5$
 $\frac{1}{4} \times 20 = 5$

19. $1 - \frac{1}{2} = \frac{1}{2}$
 $\frac{1}{2} \times 10 = 5$
 $\frac{1}{2} \times 15 = 7.5$
 $\frac{1}{2} \times 20 = 10$

20. \$190

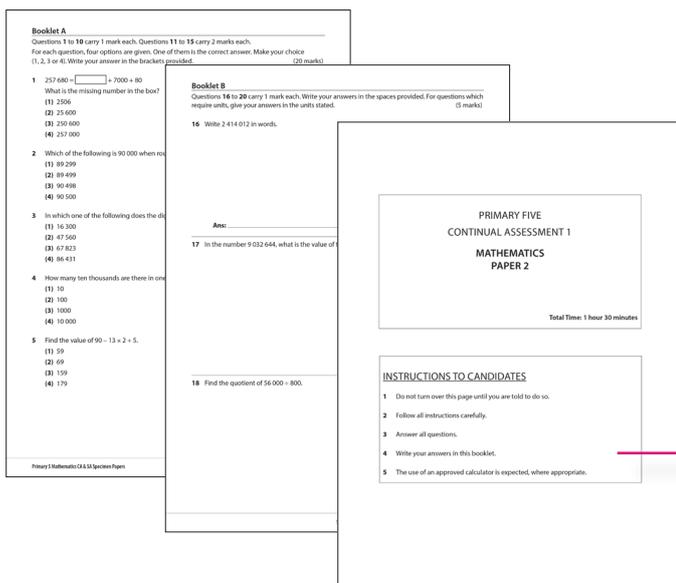
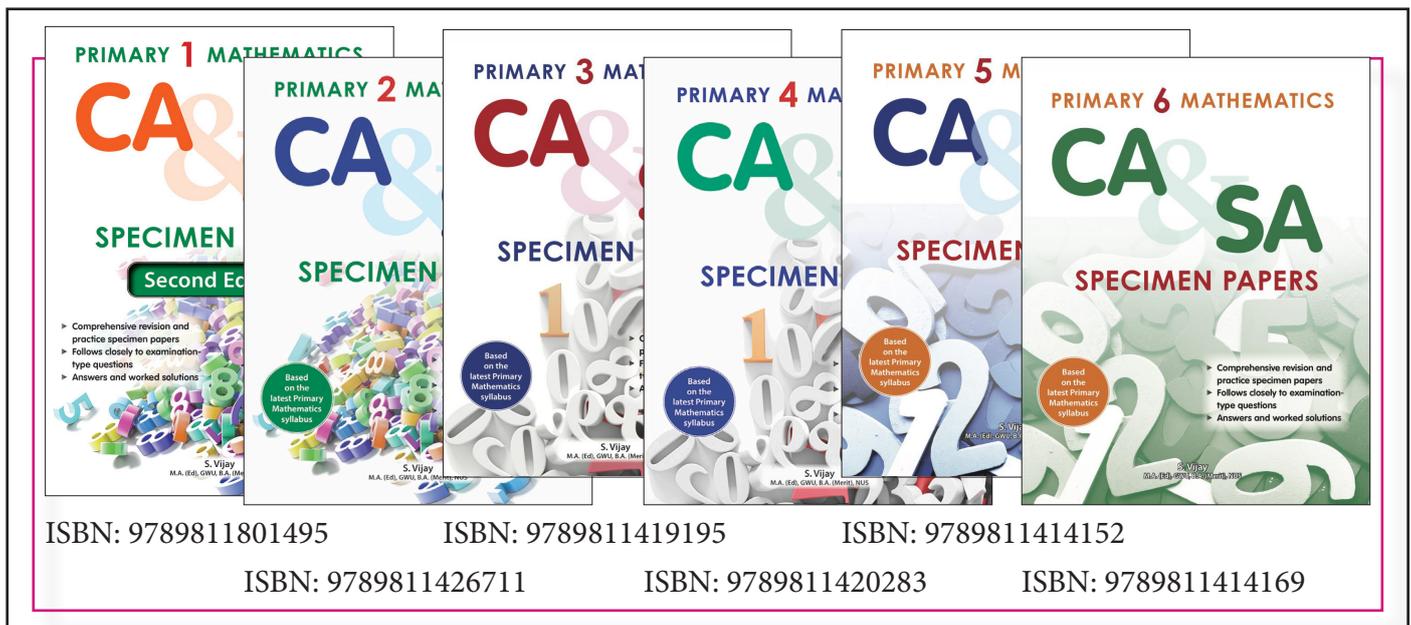
21. (a) $5128 - 2$ units = \$64 \rightarrow cost of oven
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 516×7 units = \$112 \rightarrow cost of air fryer
 $512 \times 64 = 5176 \rightarrow$ total cost of air fryer and oven

CA & SA Specimen Papers

Written based on the latest MOE Mathematics syllabus, this series provides students with comprehensive revision and practice for the actual continual and semestral assessments held in schools.

Each book in the series contains 8 specimen papers:

- 2 sets of Continual Assessment 1 (Specimen Papers 1 & 2)
- 2 sets of Semestral Assessment 1 (Specimen Papers 3 & 4)
- 2 sets of Continual Assessment 2 (Specimen Papers 5 & 6)
- 2 sets of Semestral Assessment 2 (Specimen Papers 7 & 8)



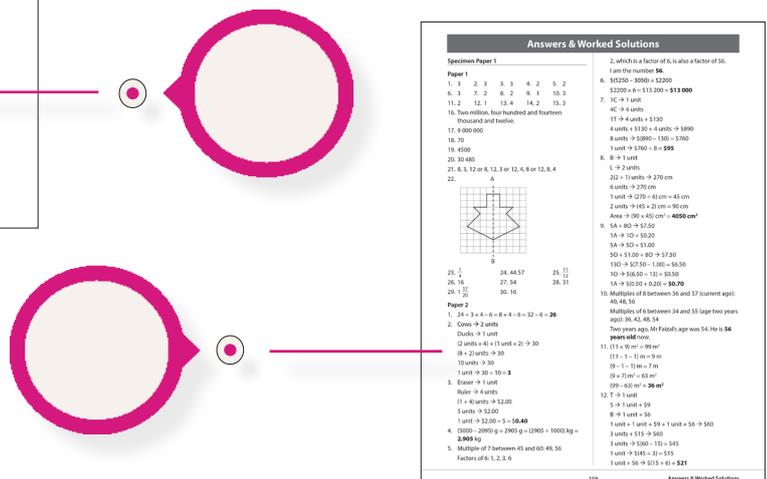
Aligned with PSLE Format

Each specimen paper follows the latest examinations format:

- Paper 1 Booklet A – 15 multiple-choice questions,
- Paper 1 Booklet B – 15 short-answer questions, and
- Paper 2 – 5 short-answer and 12 long-answer questions.

Comprehensive Answer Keys

All answers are provided. Worked solutions for the questions in Paper 2 are also provided to help students who have difficulties solving these sums.



Mastering Assessment/Examination Skills

This series is a compilation of the latest practice questions in accordance with the latest PSLE Mathematics syllabus issued by the Ministry of Education. With contributions from teacher consultants with decades of experience, the examination practices in this book aim to be a one-stop and comprehensive guide for Mathematics learning.

The questions are challenging and specifically hand-picked for their value in teaching students important concepts and examination techniques. Each book consists of 9 practice papers with full answers and worked solutions for the problem sums.

These examination papers aim to teach students important concepts and help students discover weaknesses in their answering techniques which they may not be aware of.

PRIMARY **1** MATHEMATICS PRACTICE PAPER Mastering Assessment Skills through Practice

PRIMARY **2** MATHEMATICS PRACTICE PAPER Mastering Assessment Skills through Practice

PRIMARY **3** MATHEMATICS PRACTICE PAPER Mastering Examination Skills through Practice

PRIMARY **4** MATHEMATICS PRACTICE PAPERS Mastering Examination Skills through Practice

PRIMARY **5** MATHEMATICS PRACTICE PAPER Mastering Examination Skills through Practice

PRIMARY **6** MATHEMATICS PRACTICE PAPERS Mastering Examination Skills through Practice

ISBN: 9789814996051 ISBN: 9789811188756 ISBN: 9789811147982
 ISBN: 9789811197710 ISBN: 9789811147999 ISBN: 9789811180378

5 3 pencils cost \$2.10. How much do 5 pencils cost?
 (1) \$2.80
 (2) \$3.50
 (3) \$0.70
 (4) \$10.50

6 Which of the following decimals is closest to 3.57?
 (1) 3.49
 (2) 3.498
 (3) 3.506
 (4) 3.51

7 Simplify $9 - 3h + 2 - 4h$.
 (1) $4h$
 (2) $7 - 7h$
 (3) $11 - 7h$
 (4) $11 - h$

8 The figure below shows the net of a cube. Which 2 are folded into a cube?

A
B
C
D

(1) A and B
 (2) A and D
 (3) C and E
 (4) F and E

9 A water tank has a length of 20 cm, a breadth of 10 filled with water. How much water is needed to fill it?
 (1) 400 cm³
 (2) 1000 cm³
 (3) 10,000 cm³
 (4) 4000 cm³

15 The ratio of number of marbles in Box A to the number of marbles in Box B is 3 : 16. After 200 marbles were removed from Box B and placed into Box A, the ratio of the number of marbles in Box A to Box B became 1 : 1.
 (a) How many marbles were there in Box B at first? [3m]
 (b) How many marbles were there in Box A in the end? [1m]

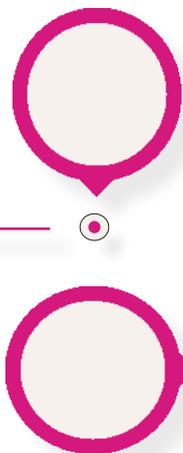
Ans: (a) _____
 (b) _____

16 The table below shows number of stamps collected by 5 students.

Student	Number of marbles
Albert	204
Beatrice	177
Cindy	?
Daniel	?
Eileen	430

(a) If the average number of stamps collected by Beatrice, Cindy and Daniel is 222, what is the average number of stamps collected by all 5 of them? [3m]
 (b) Cindy has twice as many stamps as Daniel. How many stamps does she have? [2m]

Ans: (a) _____
 (b) _____



Challenging Problems

Challenging problems are included in this book as a way to test the students' understanding of the topics and to expose them to a wider variety of questions.

Answer Key

Answers are provided with worked solutions for students to review their answers.

Primary Mathematics Practice Papers

Answers

Examination 1

1. 2, 2, 1, 3, 4, 4, 2
 5, 1, 6, 1, 7, 3, 8, 3
 9, 1, 10, 1, 11, 3, 12, 1
 13, 1, 14, 2, 15, 4, 16, 3
 17, 2, 18, 2, 19, 2, 20, 1
 21. 80.047 22. 32
 23. 10.409 24. $1\frac{1}{2}$
 25. $\frac{2}{5}$ 26. 9 burgers
 27. 57 28. Thursday
 29. 56 30. 13
 31. 36 32. \$3.60
 33. 12 cm 34. 44 cm
 35. 2, 1 36. 137
 37. 26 workers 38. 0.18 kg
 39. 9 lines of symmetry 40. 340

41. Number of boys = $\frac{2}{3} \times 270 = 180$ boys
 Number of girls = $270 - 180 = 90$ girls
 Total money donated = $180 \times \$4 + 90 \times \$5 = \$1242$
 \$1242 is donated in total.

42. (a) Difference in number of stickers given = $10 - 5 = 5$ stickers
 Difference in total number of stickers required = $45 - 30 = 15$ stickers
 Number of stickers in Mrs Tan's class = $75 \div 5 = 15$ students
 There were 15 students in Mrs Tan's class.

(b) Number of stickers Mrs Tan had = $15 \times 10 = 150$ stickers
 Mrs Tan had 120 stickers altogether.

43. Wendy $\frac{1}{2}$ = 54 cookies
 John $\frac{1}{3}$ = 54 cookies
 Number of cookies John had at first = $54 \times 1.5 = 81$ cookies
 Number of cookies Wendy had at first = $54 \times 2 = 108$ cookies
 After Wendy ate 6 cookies, number of cookies she had = $108 - 6 = 102$ cookies.
 Number of cookies John had after eating some = $81 - 5 = 76$

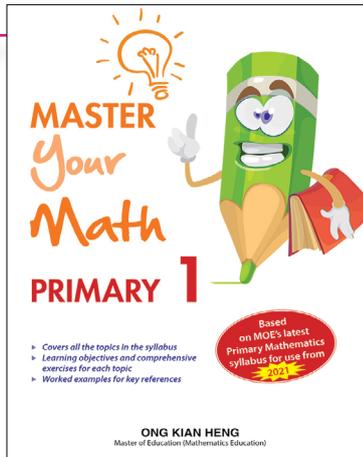
Examination 2

1. 4, 2, 1, 3, 4, 4, 4
 5, 2, 6, 3, 7, 4, 8, 2
 9, 2, 10, 1, 11, 2, 12, 1
 13, 3, 14, 1, 15, 4, 16, 2
 17, 3, 18, 4, 19, 2, 20, 2
 21. 16.68 22. 288 24. 26
 25. 3500 26. $\frac{1}{2}$, 0.625, $\frac{1}{2}$

27. June 28. 2322
 29. 4 games 30. \$2.08
 31. 26 cups 32. \$8.45
 33. 5 34. 5aw
 35. 5, 1 36. 541

120

Master Your Math



ISBN: 9789814996266

Master Your Math Primary 1 was conceptualised and developed to provide students in primary schools with an organised approach to revising Primary Mathematics through comprehensive practices ranging from the basic to the challenging. All topics in the latest Primary Mathematics syllabus issued by the Ministry of Education, Singapore, are covered.

Topic 1 Numbers to 10

LEARNING OBJECTIVES

At the end of this topic, students should be able to do the following:

- Count to 10.
- Read and write numbers in numerals and in words.
- Compare the number of objects in two or more sets.
- Compare and order numbers up to 10.

Section A

Exercise 1a

Write the numbers. The first question has been done for you.

- Eight 8
- Three _____
- Ten _____
- Seven _____
- Five _____
- Nine _____

1

Learning Objectives

Brief learning outcomes of each topic are clearly spelt out so students know what is expected of each topic in the curriculum.

Worked Examples

Examples are given in the form of worked questions in the exercises to give students a clear reference on how each type of question should be answered.

Master Your Math Primary 1

Exercise 4

Count and compare the two sets. Fill in each blank with the correct answer. The first question has been done for you.

1. Set A  Set B 

Set A has 3 oranges.
Set B has 5 oranges.
5 is greater than 3.
3 is smaller than 5.

2. Set A  Set B 

Set A has _____ muffins.
Set B has _____ muffins.
_____ is greater than _____.
_____ is smaller than _____.

Answers

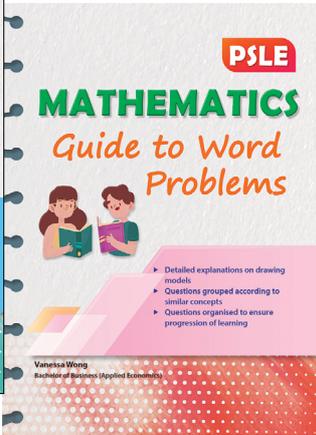
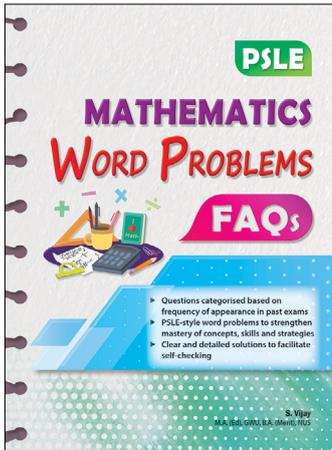
TOPIC 1		Section B	
Section A		Exercise 1	
Exercise 1a		1. 11 3. eight	
2. 3	3. 10	2. 10 4. 7	4. 9
4. 7	5. 9	6. 7	5. 9
8. 9	7. 2	8. Six	6. 1, 2, 5, 7, 9
9. 6		9. Circle 7 and 8	
Exercise 1b		10. Colour the sun with the number 6.	
2. ten	3. nine	11. 3	
4. eight	5. four	12. Accept any possible answer.	
6. two	7. seven	<i>Exercise 2a</i>	
8. one		TOPIC 2	
Exercise 2		Section A	
2. 6, 8	3. 7, 8	Exercise 1a	
4. 5, 2	5. 10, 9, 6	2. 11 3. 16	
Exercise 3		4. 20 5. 18	
2. Tick Set C		6. 14	
3. Tick Set F		Exercise 1b	
4. Tick Set H		2. twelve 3. seventeen	
5. Tick Set I		4. fifteen 5. fourteen	
6. Tick Set L		6. sixteen	
Exercise 4		Exercise 2	
2. 7, 4, 7, 4, 4, 7	3. 2, 8, 8, 2, 2, 8	2. 10, 20 3. 14, 12	
4. 6, 10, 10, 6, 6, 10		4. 10, 18 5. 18, 20	
Exercise 5a		Exercise 3	
2. smaller than	3. the same as	2. 14, 2, 10 3. 9, 16, 18	
4. greater than	5. greater than	4. 13, 16, 19	
6. smaller than	7. smaller than	3. 7, A, B	
8. greater than	9. smaller than	2. 2; 2; 4; D	
10. greater than		4. 10, 16, 15	
Exercise 5b		9. S, Q, P	
2. 3		Exercise 4	
4. 2		2. 16 3. 13	
7. 6		4. 18 5. 2	
10. 8		6. 17 7. 14	
13. 3		8. 17 9. 10	
10. 3		10. 10	
Exercise 6a		Exercise 5a	
2. 1, 2, 3, 5		2. 6, 10, 15, 18	
4. 1, 5, 7, 8		4. 13, 16, 19	
Exercise 6b		Exercise 5b	
2. 9, 8, 3, 2		2. 18, 12, 10	
4. 7, 2, 2, 1		3. 20, 16, 15, 4	
		3. 10, 14, 12, 11	

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Answers

An answer key is also given at the end of the book for students to assess their own answers so that they can learn from their mistakes.

PSLE Mathematics



Word Problems FAQs

ISBN: 9789814996457

Guide to Word Problems

ISBN: 9789814996655

The FAQs title is written based on the latest Primary Mathematics syllabus by the Ministry of Education. The word problems in this book are crafted to model closely after past-year actual PSLE questions, allowing students to be familiar with the types of word problems they can expect to see in the PSLE Mathematics paper.

The Guide to Word Problems includes detailed explanations on how the steps on drawing models come about and pointers that give students the opportunity to ponder on the questions. The questions in this book are grouped the questions according to similar concepts and the level of difficulty to ensure a progression of learning.

Worked Examples

Each worksheet in the FAQs book begins with a worked example followed by seven related word problems for students to apply the concepts and strategies learnt.

FAQ #1
Intervals

Choice tip
When objects are arranged in a line with intervals between them, the total number of intervals is 1 less than the total number of objects.

In the example below, the number of intervals between the 1st shrub and the 30th shrub is $30 - 1 = 29$.

Example
30 shrubs are planted along a road. The shrubs are planted equally apart at 8 metres.
Distance between one shrub and the next = 8 m
Number of intervals between the first and the last shrub
= $30 - 1$
= 29
Distance of the road from the first to the last shrub
= 29×8
= 232 m

UNIT 1.1 BASICS OF FRACTIONS AND PERCENTAGES

1. Kristian had $\frac{1}{2}$ kg of sugar. She used $\frac{1}{4}$ kg of sugar to bake some cookies and $\frac{1}{8}$ kg of sugar to bake some muffins. How many kilograms of sugar had she left? Leave your answer in its simplest form.

Think and Ask
What do you observe to be the same in all these fractions? They all came with a unit of measurement. We know exactly how many kilograms of sugar Kristian had and the kilograms of sugar that she used to bake some cookies and muffins. We do not have to draw models for any of the fractions as we already know how much sugar there was.

Step 1 Find the total amount of sugar used by adding the amount of sugar she used for baking cookies and muffins together. Change to the equivalent fractions by making both the denominators to be the same. The lowest common multiple of 4 and 8 is 8.

**It is not compulsory for students to indicate the unit of measurement, eg, in their workings. But for better understanding, we will include the 'kg' in our presentations.*

Step 2 Find the amount of sugar left by subtracting the amount of sugar used from the total amount of sugar Kristian had at first.

8. Sunarti spent $\frac{1}{4}$ of her money on a dress. She then spent $\frac{1}{5}$ less than $\frac{1}{4}$ of the remaining money on a blouse. She spent the last \$93 on a pair of shoes.

How much did Sunarti have at first?

Think and Ask
How is this question different from the ones we see from question 1 to 7? The question has extra absolute values of 12 and 53. Hence, it is not possible to cut the models into equal parts.

Step 1 Draw 2 blocks to represent Sunarti's money at first. She spent $\frac{1}{4}$ less than $\frac{1}{4}$ of her money on a dress, hence $\frac{1}{5}$ means she spent $\frac{1}{5}$ MORE than $\frac{1}{4}$ of her money. Label all the information in the model.

Step 2 Align the portion representing the remaining money, we will draw another model of 2 blocks below it.

Step 3 She spent $\frac{1}{5}$ less than $\frac{1}{4}$ of her remaining money on a blouse, hence $\frac{1}{5}$ means that she spent $\frac{1}{5}$ MORE than $\frac{1}{4}$ of her remaining money on the pair of shoes.

Step 4 Work backwards to find the amount of money at first. Equate \$3 to more than $\frac{1}{5}$ of her remaining money to \$93 to find the remaining amount of money.

Step 5 Equate \$2 more than $\frac{1}{4}$ of her money to \$180 to find Sunarti's amount of money at first.

Total amount of money at first
Dress: $\frac{1}{4}$
Blouse: $\frac{1}{5}$
Shoes: 93

$\frac{1}{4}$ of the remaining money = \$3 = \$93
 $\frac{1}{5}$ of the remaining money = \$93 - \$3 = \$90
Remaining money = $2 \times \$90 = \180
 $\frac{1}{4}$ of the total amount of money = \$2 = \$180
 $\frac{1}{5}$ of the total amount of money = \$180 - \$2 = \$178
Total amount of money = $2 \times \$178 = \356
Sunarti had \$356 at first.

Practice Questions

The worksheets in the FAQs title are categorised according to the types of questions that have frequently appeared in past year papers. The questions are arranged with increasing levels of difficulty. Questions 1 to 3 of each worksheet are relatively easy to solve, Questions 4 to 5 are of average difficulty while Questions 6 to 7 are reasonably challenging.

PSLE Mathematics Word Problems **120**

Practice

1. 50 trees were planted along one side of a straight road. The trees were planted equally apart at 15 metres. What is the distance between the first and the last tree?

Answer: _____

2. Mr. Tan planted 11 seedlings in a row. The seedlings were planted at the same distance apart. The distance between the 1st and the 6th seedling was 20 cm. What was the distance between the 1st and the 11th seedling?

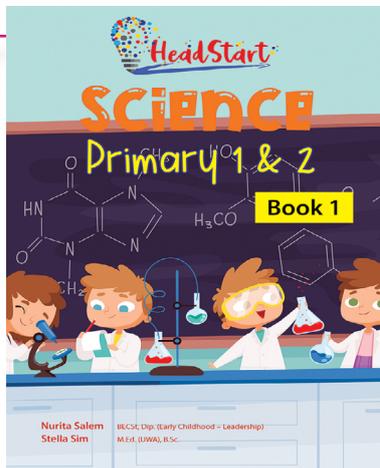
Answer: _____

Think and Ask

Detailed explanations and helpful hints are provided in Guide to Word Problems to help students work through different questions.

Headstart in Science

The Headstart series prepares students for primary school through exercises that encourage them to learn and develop the relevant skills and knowledge in Science topics.



ISBN: 9789814996488

The Headstart Science Primary 1 & 2 series is specially designed to prepare Primary 1 and 2 children for Primary 3 and 4 Science by exposing them to a variety of exercises and topics that are covered in the primary school syllabus.

The exercises feature eye-catching pictures that stimulate visual learning. Interactive learning methods are used to encourage children to take ownership of their learning. This combination will help children develop an interest in Science.

Unit 1 Living Things and Non-Living Things

There are many kinds of things around us. Some are living things and the others are non-living things.

Let us find out the differences between living things and non-living things by looking at their characteristics.

	Characteristics of Living Things	Characteristics of Non-Living Things
1.	They need air, food and water to live.	They do not need air, food and water.
2.	They grow over time.	They do not grow.
3.	They respond to changes around them.	They do not respond or their own.
4.	They reproduce. Some give birth to their young and some lay eggs.	They do not reproduce.
5.	They can move on their own.	They cannot move on their own.

Unit 2 - Animals

Insects

- Have a hard outer body covering called an exoskeleton
- Have six legs
- Have three body parts

Fish

- Have scales as their outer body covering
- Breathe through gills
- Have fins for movement

Reptiles

- Have dry scales as their outer body covering

Amphibians

- Have moist, smooth skin
- Live on land and in water

Activity Time
Explore and Discover the Animals Around Us

Take a walk round your neighbourhood or make a visit to the zoo. Then try putting the animals that you have spotted into their correct animal groups.

Clue: You can use the **Main Characteristics of Some Different Groups of Animals** to help you in this activity.

Science Topics

Important Science topics are introduced with clear descriptions and examples.

Unit 1 - Living Things and Non-Living Things

Exercise 1: Match Up
Match each characteristic of living things to its meaning.

1. Move	•	•	Produce offspring
2. Die	•	•	Go to another place or position
3. Grow	•	•	Increase in size and change physically
4. Reproduce	•	•	React to something that has happened
5. Respond	•	•	Stop being alive

Headstart Science Primary 1 & 2 Book 1

Exercise 2: Identify the Living Things
All living things need air. They take in oxygen and give out carbon dioxide. Look at the following pictures. Circle the pictures that show living things.

Baby

Packet drink

Zebra

Cupcake

Cloud

Tree

Engaging Activities

Fun-filled exercises encourage students to apply relevant skills and knowledge.

Science Olympiad Guide and Practice Books



ISBN: 9789811437229

ISBN: 9789811437212

It is important that science is taught in a captivating and enjoyable way so that students gain a passion for the subject.

This series aims to instil that passion in the hopes of nurturing future scientists. In line with the syllabus issued by the Ministry of Education, Singapore, questions involve critical thinking and picking out hidden hints. To make things more challenging, students might be required to read between the lines and pick out exactly what the question is asking for.

There are inference-based questions where students need to infer trends from diagrams, graphs or tables, or predict what would happen if factors are changed.

Application-based questions teach students how the science concepts they learn can be employed in their everyday lives. They also expose students to new inventions.

Interesting science facts and questions beyond the syllabus are also included for additional knowledge.

WORKED-OUT EXAMPLES

Answer: C

Explanation: **Option A is incorrect.** Diffusion occurs in both the liquid and gaseous state.
Option B is incorrect. Diffusion does not occur in the solid state as particles cannot move in the solid state.
Option C is correct. During diffusion, particles spread from where there are more particles to where there are less particles.
Option D is incorrect. During diffusion, particles spread from where there are more particles to where there are less particles.

Worked-out example 3 (Primary 4)

Melting point is the temperature where a substance changes from the solid state to the liquid state. Boiling point is the temperature where a substance changes from the liquid state to the gaseous state. When impurities are present, the melting point becomes lower while the boiling point becomes higher.
For example, water has a melting point of 0°C and a boiling point of 100°C. When salt is added to water, the salt is an impurity and the melting point will be about -2°C to -3°C and the boiling point will be about 101°C to 103°C. The melting point of potassium chloride is about 770°C.

What is the most likely boiling point of a sample of water that contains a small quantity of potassium chloride?

- A 773°C
- B 456°C
- C 90°C
- D 104°C

Answer: D

Explanation: **Option A is incorrect.** Potassium chloride is the impurity added. The boiling point should be related to that of water not potassium chloride. The boiling point of water should then increase and be slightly above 100°C.

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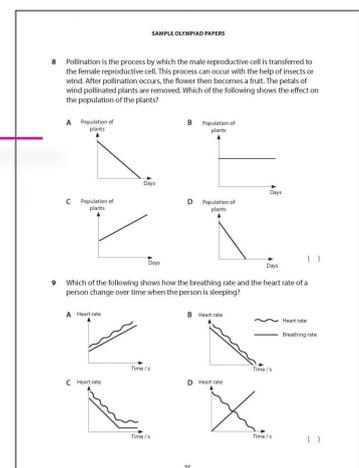
Examples

Worked solutions are provided with examples so that students can learn the thought process and apply it to practice questions.



Sample Papers

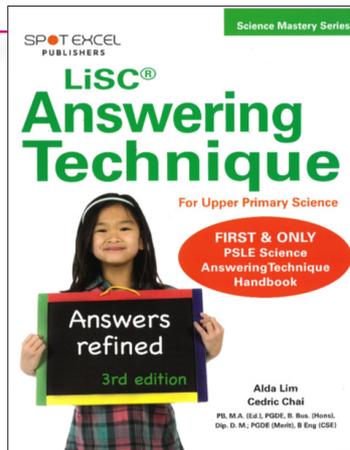
Sample Olympiad papers are provided for students to practise concepts learnt.



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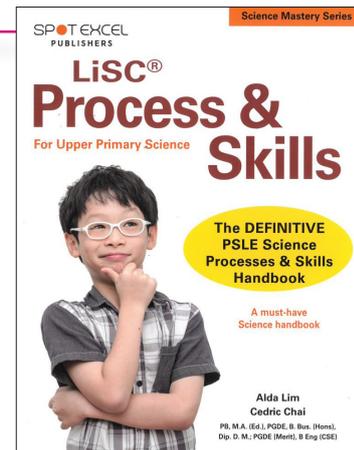
LiSC® Science Mastery Series

This series of books is the culmination of our years of research and experience in marking, teaching and guiding teachers and students in the differentiation of sound answers and questions. It provides a complete and comprehensive guide from the understanding of concepts to the mastery of processes and skills, to answering perfection, each targeting a different aspect to help students achieve excellence in Science examinations.



Answering Technique
ISBN: 9789811415258

This book aims specifically to help those who already have a good grasp of concepts and are seeking a breakthrough in their answering. Through this book, students will understand the meaning of active application of concepts to unfamiliar situations, bridge the gap they encountered in articulating their thoughts and thus attain improvement in their results from the minimisation of marks loss due to inaccurate, non-precise and incomplete answers.



Process & Skills
ISBN: 9789811415241

This book aims specifically to help students in the identification of key requirements in each process and skill, hereby equipping students with a set of practical and easy to apply consolidated processes and skills to successfully tackle examination questions which involve experimental set-ups and/or are investigative in nature. The 11 process skills stipulated in the current school syllabus are integrated into commonly tested examination items in this book, complete with detailed explanations and illustrations in easy-to-follow steps and visualisations.

Chapter 2: Unpacking the Question: Diagram Key

EXAMPLES

1. LIFE SCIENCE

The diagrams below show two types of fish. Study them carefully and answer the question that follows.

Explain two ways in which Fish B is better adapted for survival than Fish A.

ANSWER

- Fish B has stripes on its body to camouflage and hence hide. Fish A does not.
- Fish B has a more streamlined body and hence can swim faster.

LiSC® Approach – DIAGRAM KEY:
Identification of **FEATURES** that differentiate the diagrams provided.

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Chapter 2: Unpacking the Question: Diagram Key

EXPLANATION

Analyse the diagrams carefully. Identify features that only Fish B possesses.

Explanation for Answer to Part (i):

Applying the LiSC® approach	Formulation of Answer	Detailed Explanation
Identify the key (Diagram)	Fish B: Stripes	The presence of stripes is a prominent feature of Fish B that Fish A does not have.
Identify the concept used	Adaptation	As provided in the question, the concept or topic listed is on Adaptations (PE – Interactions).
Linking the Key to Concept used	Camouflage	Stripes are linked to the concept of camouflaging in the topic of Adaptation.
Final Answer	Hide better	Camouflaging refers to the same concept of hiding well.

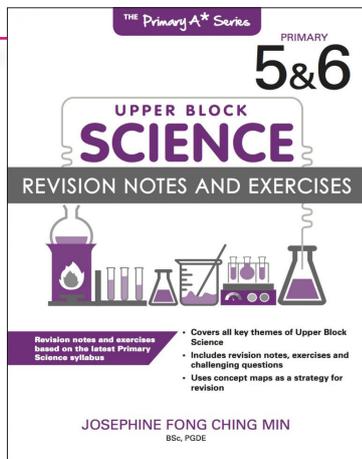
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Comprehensive Examples

Answers are provided for examples with key words underlined so that students can identify them easily and learn the structure to answering questions.



Science Revision Notes and Exercises



ISBN: 9789811148026

This is a revision guide in Upper Block Science for students in Primary 5 and Primary 6. It covers all the 4 themes in the Upper Block syllabus and features comprehensive revision notes and illustrations, exercises after each theme, and challenging questions at the end of the book. Key features of the book include:

1. Using concept maps as a strategy for revision
2. Linking themes to one another
3. Applications of science to everyday life in the Science in Our Life section
4. Inquiry and deep-thinking questions to extend the student's scope of the topic in the Thinking Out Loud section
5. Tagging of exercises with question-type so students know what skills they are tested on when they attempt a question. Suggested answers are also included for self-check.

Thematic Assessment 1

2. The table describes the features of flowers X and Y.

Feature	Flower X	Flower Y
Petal characteristics	Small, dull green	Large, bright red
Scent	No scent	Sweet scent
Location of the anther / stigma	Hangs outside the flower	Sits firmly inside the flower
Pollen characteristics	Light and smooth; present in large quantities	Spiky and sticky; present in moderate quantities

Which of the following statements is valid? (Application)

(1) Both flowers are pollinated by insects.
 (2) Both flowers are pollinated by wind.
 (3) Flower X is pollinated by insects and flower Y is pollinated by wind. ()
 (4) Flower X is pollinated by wind and flower Y is pollinated by insects. ()

3. Which of the following is the most probable reason why spores are microscopic? (Application)

(1) The size of the parent plants is also microscopic.
 (2) They are dispersed by wind.
 (3) They do not contain hereditary information.
 (4) They do not undergo sexual reproduction. ()

4. Which of the following statements is true about the sperm cell and the egg cell? (Knowledge)

(1) Fertilisation happens only in the body of a human female.
 (2) Millions of sperm cells are produced every day while only one egg cell is produced once a month.
 (3) Only one sperm cell can fertilise an egg cell. ()
 (4) The sperm cell is much larger than the egg cell. ()

Thematic Assessments

Practice questions after each unit to test the students' understanding of the topic.

Learning Outcomes

Learning outcomes stated at the start of every unit so that students can learn more effectively.

Systems
Unit 5
The Cell – A Unit of Life

LEARNING OUTCOMES

You are expected to be able to do the following:

- Show an understanding that the cell is a basic unit of life
- Identify the different parts of a typical plant cell and animal cell
- Relate the parts of a cell (plant and animal) to its functions
- Compare a typical plant and animal cell

Cells

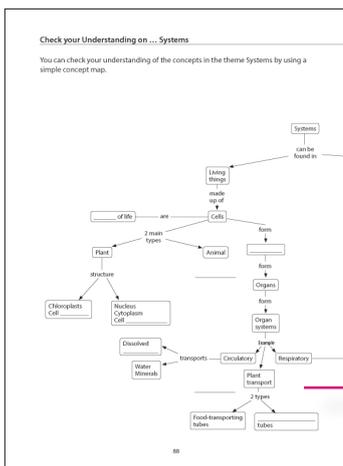
1. All living things are made up of cells – the smallest unit of life.
2. Some living things are made of only one cell, while others are made up of more.

Single-cell living things

1. A single-cell living thing can perform all the functions of a typical living thing.
2. Examples: yeast, bacteria, amoeba

Multi-cell living things

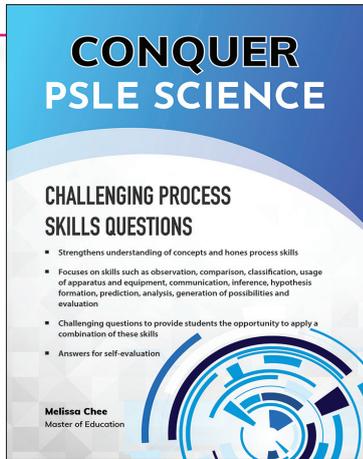
1. We can classify the cells of a multi-cell living things into two major types: plant cells and animal cells



Concept Maps

Concept maps are used at the end of each unit to check the students' understanding of the topics.

Conquer PSLE Science



ISBN: 9789811447396

Conquer PSLE Science features questions that require the use of process skills in the science syllabus. Each of the 11 process skills has a chapter with both multiple-choice questions (MCQ) and open-ended questions to familiarise students with the various types of questions. These questions are taken from as many topics as possible to allow for breadth and exposure to content. There is also a short introduction on each process skill and knowledge required for that skill so students can be informed before starting on the questions. Answers are provided for self-evaluation.

Unit 3 Process Skill: CLASSIFYING

Classifying is a skill that requires you to group objects or events based on common characteristics and patterns. These common characteristics include the physical and behavioural characteristics of living organisms.

Classification allows us to group similar things together so that it is easier for researching. It also allows us to better understand the organism for further research by comparing it to other organisms which are observed to have similar characteristics as them.

Questions are often in the form of interpreting a classification chart or filling up parts of a classification chart. To begin, we must first know the aim of the classification. The question may directly state the aim, for instance: flowering plants vs non-flowering plants. Only then can we begin to classify.

After that, take note of common traits present in the objects to be classified. For instance, do they reproduce by spores?

The classification table can then be filled up, with one side being the flowering plants section and the other being the non-flowering plants section. In some cases, the headings will have to be filled in.

The following are examples of questions:

Example 1 Classify these plants into the respective groups: lotus, sunflower, ferns, moss.

Flowering plants	Non-flowering plants

Example 2 Label the headings of the 2 columns according to their common characteristics.

lotus	Ferns
Sunflower	Moss

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Quick Notes & Examples

Notes and examples are provided in each unit to strengthen students' understanding of concepts.

Clear Diagrams

Aid understanding of questions and concepts.

Conquer PSLE Science

26.

What could have taken place at X?

A There was a sudden increase in ferns in the area.
 B There was an increase in the amount of grass.
 C The cows started reproducing more quickly.
 D Snakes were wiped out. ()

27. Jane made the following set-ups.

What observation was Jane trying to make?

A She was trying to conclude the effect of temperature on fish.
 B She was trying to conclude the effect of the presence of food on fish.
 C She was trying to conclude the effect of air on fish.
 D She was trying to conclude the effect of light on fish. ()

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Conquer PSLE Science

Exercises on Classifying

- Which parts of the digestive system produce digestive juices?
 - A Mouth, stomach, small intestine
 - B Mouth, gullet, stomach
 - C Mouth, stomach, large intestine
 - D Mouth, small intestine ()
- Which of the organisms mentioned below is not a mammal?
 - A Spiny anteater
 - B Guppy
 - C Cheekah
 - D Human ()
- Joyce concluded that a seed was not a living thing as the seed did not move by itself when she placed it on a table. Is Joyce's statement correct?
 - A Yes, it is not a living thing as it does not respond to change.
 - B Yes, the seed does not grow.
 - C No, the seed does not reproduce.
 - D No, the seed is able to grow when provided with warmth, oxygen and water. ()
- Which option shows the correct classification of animals based on their outer covering?

	Hair	Shell	Scales	Feathers
A	Bat	Tortoise	Goldfish	Sparrow
B	Human	Snail	Whale	Rhinoceros
C	Ostrich	Tortoise	Goldfish	Bat
D	Giraffe	Crocodile	Guppy	Chicken

 ()

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Exercises on Specific Process Skills

Allow students to apply process skills learnt.

Detailed Answers

Detailed answers are provided for easy self-evaluation.

Answers

Unit 1

1. D 2. D 3. C 4. A 5. B
6. C 7. D
8. Wooded (due to the presence of a large amount of trees) and grassy (due to the presence of a large amount of grass) areas.
9. It has a hollow that allows it to breathe in air from the atmosphere.
10. The hot air will have a larger expanded surface area with the surrounding air. By convection, the hot air will rise and move away from the stove, and the cold air will move in to replace it.
11. Snake(s)
12. B, C, A
13. The seeds are dispersed by wind as it has wing-like structures that allow it to be carried away from its parent plant by the wind.
14. It obtains food from the storage root.
15. (Accept any other answer)

16. Switching it on will allow it to magnetise a magnetic object temporarily.

17. Cell wall (chloroplast)

Spores are located on the underside of the leaves in ferns.

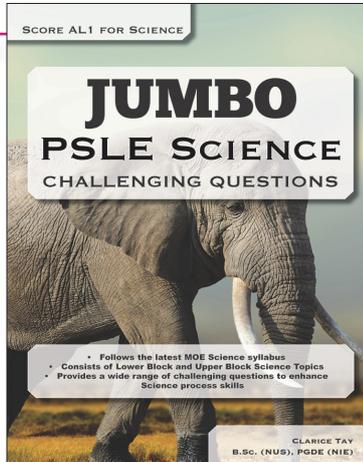
56. Asexual reproduction

Unit 2

1. C 2. C 3. A 4. D 5. D
6. C 7. B 8. B 9. A 10. C
11. B 12. C
13. Diffusion (Oxygen)
14. Photosynthesis requires the presence of light energy (the green part of the plant does not).
15. Photosynthesis releases oxygen and takes in carbon dioxide, while respiration releases carbon dioxide and takes in oxygen.
16. Photosynthesis only occurs when light is present while respiration occurs all the time.
17. They all live in water (part of the pond community).
18. Gills to absorb dissolved oxygen in water.
19. Both have shells that allow them to hide from predators.
20. White footed mice give off greenish gases when sunlight produce energy, leading to...

123

Jumbo PSLE Science Challenging Questions



ISBN: 9789811487699

This book is specially written to cover all 5 themes in the latest MOE Science syllabus – Cycles, Systems, Diversity, Interactions and Energy. It contains multiple-choice questions and open-ended questions that will help to develop critical thinking and build examination confidence in students. The questions are set at a higher standard to encourage students to think about a problem at a deeper level in order to solve them. Complete solutions are provided at the end of the book for self-evaluation.

Full Range of Topics

Consists of both lower and upper primary Science topics.

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CHAPTER 1 Living and Non-living Things

Section A

- Which of the following statements about living things is incorrect?
 - Living things require air, water and food to be able to survive.
 - Living things do not grow over time.
 - Living things can reproduce.
 - Living things can respond to changes around them.
- Pauline received a rabbit as a birthday gift. She placed the rabbit in a container as shown in the diagram below.



What is lacking in Pauline's set-up?

- Pauline's set-up is not sealed.
 - Pauline's set-up does not have water for the rabbit.
 - Pauline's set-up does not have enough food for the rabbit.
 - Pauline's set-up lacks toys for the rabbit to play with.
- Which of the following characteristics is NOT sufficient to prove that John is a living thing?
 - John cries when a ball hits his face while playing soccer.
 - John can no longer fit into his clothes that he used to wear when he was younger.
 - John needs air, food and water to survive.
 - John can talk.
 - Which group of objects are objects that were made from things that were once living?
 - Rubber gloves, wooden chair, leather bag
 - Leather wallet, plastic cup, wooden cabinet
 - Woolen sweater, metal clip, plastic bottle
 - Leather wallet, wooden chair, glass jar

Score AL1 for Science Jumbo PSLE Science Challenging Questions

- Benjamin visited the zoo and saw that the tiger there just gave birth to its young.
 - Which characteristic of living things does that show?
 - Why is it necessary for living things to do so?

- Below is a picture of a robotic vacuum cleaner that can move on its own.



Mary claims that it is a living thing because it can move while Nancy says that it is not.

- Who is correct?
- Explain your answer for part (i).

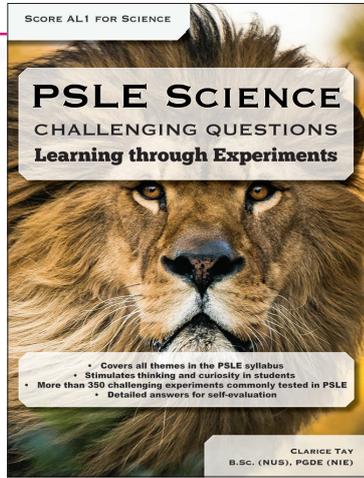
- An elephant is observed to be fanning its ears when the weather is hot. What characteristic of living things does this show?

Challenging Questions

Provides a wide range of challenging questions to enhance Science process skills.

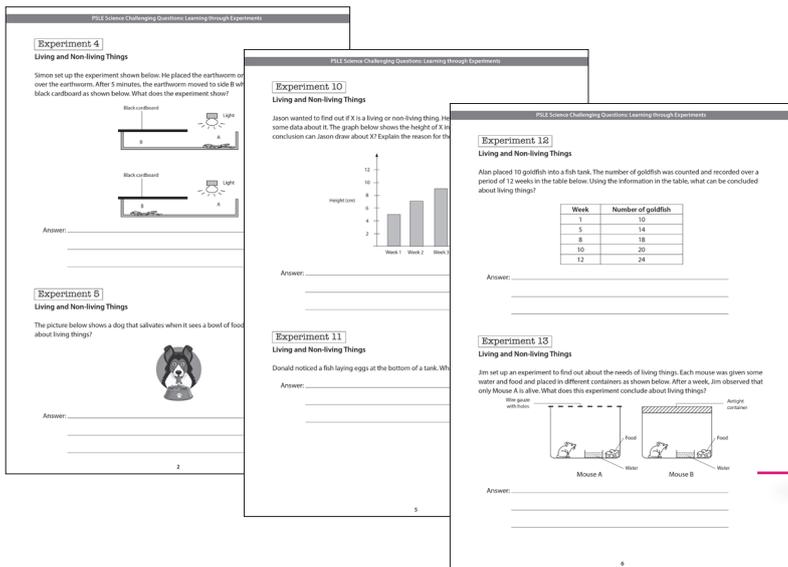
PSLE Science

Learning through Experiments



ISBN: 9789811490057

This PSLE book is based on the latest Ministry of Education syllabus. Themes covered in this series are Diversity, Cycles, Interactions, Systems and Energy. These activities allow students to go beyond the textbook and further explore the real-world context of Science. These experiments stimulate students' thinking and provoke curiosity in a fun and exciting manner. Students will be able to pick up skills such as observation, comparing, communicating, inferring, classifying, predicting, analysing and evaluating while carrying out the various experiments in this book. Complete answers are given for self-evaluation.

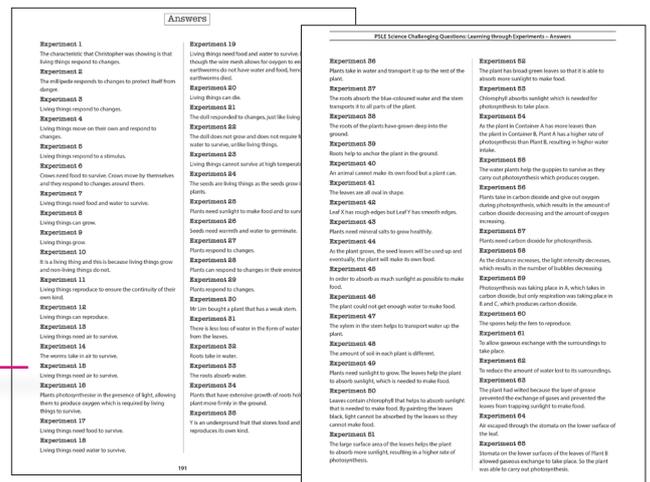


Challenging Questions

More than 350 challenging experiments commonly tested in PSLE.

Answers

Detailed answers for self-evaluation.



Malay Intensive Practice



ISBN: 9789811415609

Lestari Bahasa Kita Edition is written to help newly transited students from the pre-school to primary level. The book consists of intensive practice papers based on the latest syllabus. The content will help expand student's language ability and foundation in Malay language. The practice papers are relatable and suitable for students to expand their knowledge in their vocabulary, language usage and phrasing.

Practices

Various forms of practice questions to improve the child's Malay language proficiency and linguistic skills.

2 Kosu Kata: Kata Berkawan Berpasang (Antonim)

Latihan 3

- Liana nampak **cantik** dan kemas.
(1) busuk (2) wangi ()
(3) buruk (4) tinggi ()
- Cikgu berasa bangga apabila ramai muridnya **lulus** dengan cemerlang.
(1) menang (2) gagal ()
(3) kalah (4) pandai ()
- Adik sedih kerana tidak dapat menonton televisyen yang sudah **rosak**.
(1) baik (2) elok ()
(3) baru (4) antik ()
- Pakcik Ahmad kelihatan **kurus**.
(1) gemuk (2) pendek ()
(3) tinggi (4) panjang ()
- Kita harus rajin memberus gigi agar selalu **bersih**.
(1) hitam (2) putih ()
(3) bau (4) kotor ()
- Lelaki itu sentiasa nampak **lapan** dan bergaya.
(1) bersih (2) tinggi ()
(3) segar (4) hadoh ()

3 Penjajah Bilangan

Latihan 2

keping	biji	pasang	helai
buah	batang	ekor	orang

- Di kandang itu ada lima _____ harimau.
- Saya berasa kenyang selepas makan dua _____ epal.
- Atuk se _____ yang tegas dan berwibawa.
- Kereta itu terbalik setelah melanggar se _____ kayu di tengah jalan.
- Ibu gemar memakan dua _____ roti bakar dan secawan teh panas.
- Beberapa _____ kain yang bermururan darah dijumpai di tempat kejadian.
- Polis telah berjaya menangkap se _____ penyekut saku di pasar tadi.

Lestari Bahasa Kita - Latihan Intensif Darjah 1

Latihan 1 - Kefahaman Objektif

Baca pelikan karangan di bawah ini dengan teliti.

Salman gemar berbasikal bersama teman-temannya di sebuah taman berdekatan. Mereka akan berbasikal di sana pada jam lima petang setiap hari. Pada suatu petang, Salman mencuba nasib dengan melakukan aksi yang berbahaya dengan menaikkan layar basikalnya di atas papan gelangkor. Nasib Salman kurang baik. Dia terjatuh dari basikalnya dan lengan kirinya patah akibat dihempas oleh basikalnya.

Seorang penduduk kawasan itu yang sedang bertari-tari anak terlihat kejadian itu. Dengan segera, dia datang menolong Salman. Dia menelefon ambulans dan ibu Salman.

Jawab soalan-soalan berikut dengan jawapan yang sesuai di tanda kurung () yang disediakan.

- Salman suka berbasikal bersama _____.
(1) adik-beradiknya
(2) jirannya
(3) seorang diri
(4) teman-temannya ()

Relatable Topics

Topics such as daily activities introduce children to vocabulary that they can easily relate to.

Buku Latihan Peperiksaan Cekap

Buku Latihan Peperiksaan Cekap (Primary 1 – Primary 6) Series is written especially to prepare and attune students to the latest exam format in accordance with MOE guidelines. The test exercises and questions are comprehensive for students of all levels. Aligned with the current Cekap textbook and activity book, the students will be keen and confident in tackling all types of questions.

ISBN: 9789814996709

ISBN: 9789814996716

ISBN: 9789814996723

3. Omar gemar berenang di _____.

- kolam renang
- taman permainan

4. Adik bekerja sebagai _____.

- doktor
- mekanik

5. Mai suka memelihara _____.

- arnab
- kura-kura

6. Mereka berasa seronok mer _____.

- kek
- lukisan

7. Amir ingin membeli _____.

- kabinet
- rak-rak

BAHAGIAN 1: IMBUHAN (10 markah)

Arahan: Pilih perkataan yang paling sesuai bagi setiap tempat kosong dalam petikan karangan di bawah ini. Kemudian, tulis **angka jawapan** pilihan kamu di dalam kurungan () yang disediakan.

Razak dan Amir sedang bermain basikal di kolong blok. Razak (1) _____ sangat gembira pada hari itu.

Tiba-tiba, Razak hilang (2) _____ dan dia terjatuh. Razak mengering kesakitan.

Amir (3) _____ dan dia mati akal. Amir ingin (4) _____ Razak ke klinik, namun, dia tidak mempunyai cukup wang.

Mujurhah, ada seorang warga emas yang sedang (5) _____ tubuhnya di situ. Dia terpacak akan kejadian yang berlaku sebentar tadi. Dia pun menghulurkan bantuan.

1. (1) dilihat	(2) kelihatan
(3) lihatkan	(4) terlihat
2. (1) ditimbang	(2) menimbang
(3) terlimbangan	(4) perlimbangan
3. (1) kejutan	(2) dikejut
(3) mengejut	(4) terkejut
4. (1) bawakan	(2) dibawa
(3) membawa	(4) ter bawa
5. (1) berehat	(2) direhakan
(3) merehakan	(4) rehakan

Comprehensive Questions

Questions test students' understanding of key topics and trains their language skills.

KUNCI JAWAPAN

Darjah 2

<p style="text-align: center;">UJIAN KECIL 1</p> <p>Bahagian 1</p> <p>1. 1 2 1 3 1 4 1 5 2 6 1 7 2 8 1 9 1 10 1</p> <p>Bahagian 2</p> <p>11 2 12 2 13 2 14 2 15 1</p> <p>Bahagian 3</p> <p>16. hospital 17. kolam 18. lori 19. menunggang 20. kicaps</p> <p>Bahagian 4</p> <p>21. Amir mudi yang sangat rajin. 22. Dia dibarek sebagai seorang pengawas. 23. Beliau bersekolah sebagai guru sukarela. 24. Beliau bersekolah sebagai pelajar berprestasi. 25. Setelah itu, dia juga seorang pelajar yang hebat.</p> <p>Bahagian 5</p> <p>26. Faidah ialah seorang pembuat roti. 27. Faidah membuat bahan-bahan untuk membuat roti di Pasar Raya Juru atau kedai kedai. 28. Faidah memeringkat tempat jualan dalam keadaan membuat roti dengan hati-hati. 29. Apabila mendengar orang berkecuali di ganggang. 30. Nama roti itu ialah Roti Comberoy.</p> <p>Bahagian 6</p> <p>31. basikal empat roda 32. mendapati sebuah kat 33. lori dan ayah 34. basikal pembantu 35. sesuatu alat sekatan</p>	<p style="text-align: center;">UJIAN KECIL 2</p> <p>Bahagian 1</p> <p>1. 1 2 2 3 2 4 1 5 1 6 2 7 1 8 1 9 2 10 1</p> <p>Bahagian 2</p> <p>11 2 12 2 13 1 14 1 15 1</p> <p>Bahagian 3</p> <p>16. mudi 17. basikal 18. mengemas 19. basikal 20. kerosa</p> <p>Bahagian 4</p> <p>21. Rais suka membaiki. 22. Raisikan Rais ialah dari licat. 23. Raisan Rais seorang pegawai polis yang sangat rajin. 24. Rais ialah seorang mudi bu dan suka suka. 25. Setelah itu, dia juga seorang mudi yang rajin.</p> <p>Bahagian 5</p> <p>26. Menaka bersetia dan di Naman Bihun. 27. Menaka bersetia baik dia ada bersetia di bawah persembahan. 28. Menaka menanggung tanggunj dengan erat apabila dia bersetia. 29. Bu yang memujuk Menaka. 30. Menaka ialah seorang lelaki buaya yang bersetia di bawah persembahan.</p> <p>Bahagian 6</p> <p>31. menyempul ulang tahunnya 32. semasa ulang tahun 33. sangat baik dan jujur 34. gairah penuh 35. dia mendapat banyak hadiah</p>
--	--

KUNCI JAWAPAN

Darjah 4

Kata Beribuhan)

2 3 1
3

(Peribahasa)

1 8 8 9 7

(Melengkapkan Teks)

5 12 9 13 3

(Kefahaman 1)

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adalah dia menginginkannya bermain bola setelah melihatnya kelihatan
21 Dia meminati memenangi pertandingan bola sepak bersama rakan-rakaninya (2 markah).
22 menyamakan
* Satu masalah diorang jika ada sebarang bahasa yang mengancam nama jawapan atau jenggot tidak terdengar.
* Jawapan-pawapan lain yang munsabah boleh diterima.

Latihan 2

Bahagian A (Kata Beribuhan)

1 2 2 4 3 2
4 3 5 2

Bahagian B (Peribahasa)

6 6 7 1 8 8 9 7

Bahagian C (Melengkapkan Teks)

10 4 11 7 12 10
13 3 14 5

Bahagian D (Kefahaman 1)

13 1 16 4
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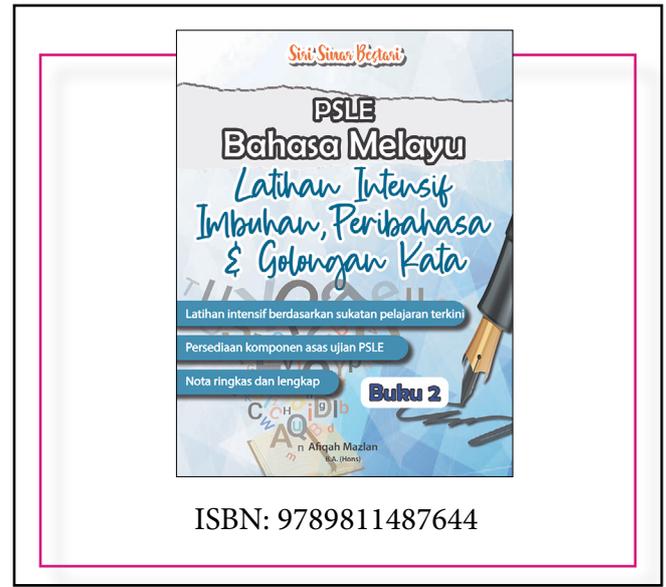
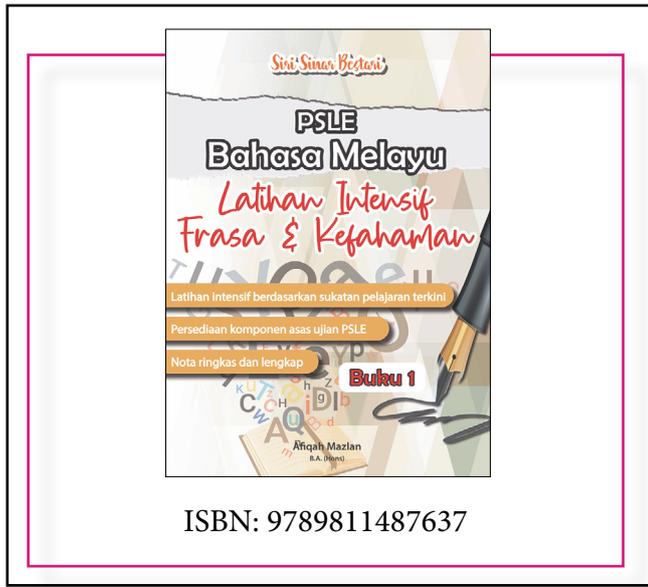
adalah dia menginginkannya bermain bola setelah melihatnya kelihatan
21 Dia meminati memenangi pertandingan bola sepak bersama rakan-rakaninya (2 markah).
22 menyamakan
* Satu masalah diorang jika ada sebarang bahasa yang mengancam nama jawapan atau jenggot tidak terdengar.
* Jawapan-pawapan lain yang munsabah boleh diterima.

Answer Key

Detailed answer key provided for students to learn from their mistakes and to enhance their understanding.

PSLE Bahasa Melayu

Siri Sinar Bestari is a collection of books that focuses on intensive practices based on the latest PSLE syllabus. Students are provided with challenging exercises similar to the PSLE examination. Each book comes complete with guided notes that emphasise Malay phrases and comprehension, and Malay prefixes/suffixes, proverbs and group words respectively.



PSLE Bahasa Melayu Buku 1 Latihan Intensif Frasa dan Kefahaman

Contoh

Jurujual: Sila masak, Encik. Boleh saya tolong?
Encik Omar: Saya hendak beli selendang sutera untuk (1) topkalian di mana tempayang?
Penasang: Respons ini tepat untuk dijadikan jawap yang diiktirafkan Jurujual lahu. Maaf Encik dikurangkan, membenarkan pembayar.
Encik Omar berketik dengan harga.

Jurujual: Boleh, Encik. Mari ikut saya. Selendang pilahlah yang mana Encik rasa sesuai.
Encik Omar: Berapa harganya? Boleh awak (2) kusa?

Jurujual: Maaf Encik, harganya tidak boleh dikur kami semanya (3) dibuat daripada kain itu khas daripada Taiwan.
Encik Omar: Respons ini tepat untuk dijadikan jawap membenarkan pembayar yang berketik.

Jurujual: Bagaimana kalau saya beli tiga helai?
Encik Omar: Respons ini tepat untuk dijadikan jawap membenarkan kamu yang berketik dengi.

PSLE Bahasa Melayu Buku 2 Latihan Intensif Imbuhan, Peribahasa dan Golongan Kata

Fungsi Imbuhan
Setiap jenis imbuhan mempunyai fungsi yang tersendiri dan membentuk kata nama, kata kerja ataupun kata adjektif yang baru.

Kata Nama

Imbuhan	Kata dasar	Contoh kata nama	Fungsi
ke-	kasih	kekasih	penanda orang dengan memberi tumpuan kepada maksud kata dasar
peN-	lutis	peNlutis	orang yang melakukan sesuatu pekerjaan
	pandu	peNpandu	
	adil	peNadil	
	sepu	peNsepu	nama alat yang digunakan untuk membuat sesuatu
	padam	peNpadam	
	curi	peNcuri	
	warna	peNwarna	nama bahan yang ditambahkan kepada sesuatu
	manis	peNmanis	Sifat ataupun tabiat seseorang
	marah	peNmarah	
	tekat	peNtekat	
	sabar	peNsabar	
	kotor	peNkotor	
-an	tabu	tabu-an	Hasil daripada melakukan sesuatu
	baca	baca-an	
ke-...-an	riha	keRiha-an	Kawasan tempat atau daerah
	kegiatan	kegiatan-an	
	berani	keBeranian-an	Hasil perbuatan kata dasar
	percaya	kepercayaan-an	
	indah	keindahan-an	Menyatakan sifat yang terdapat dalam kata dasar
peN...-an	periksa	peNeriksa-an	Menujuk kepada perbuatan atau proses melakukan sesuatu
	gih	peNgih-an	
	hantar	peNhantar-an	
	bayar	peNbayar-an	
	labur	peNlabur-an	Menujuk kepada hasil daripada sesuatu perbuatan
	bangun	peNbangun-an	

Guided Notes

Guided notes include comprehensive examples to explain the concepts of each chapter.

Practices

Practices formatted similarly to the PSLE examinations will allow students to be better prepared for the exams.

Buku 4 - RANGSANGAN GRAFIK

Arahan: Berdasarkan borosr tadi, pilih jawapan yang paling sesuai bagi soalan 1 dan soalan 3. Kemudian, tulis angka jawapan kamu di tempat kosong yang disediakan. (soalan 4, tulis jawapan kamu di tempat kosong yang disediakan di halaman selepas)

- Sambutan Majulah-Singapura ini diadakan khas _____
(1) untuk orang ramai dan sesapa sahaja yang ingin hadir
(2) sempena sambutan Hari Kebangkitan Singapura 2019
(3) secara percuma untuk semua yang hadir
(4) untuk memkmati siaran langsung NDP
- Selapa yang berminat menyertai Peraduan 'Sing Singapore' harus _____
(1) mendaftar tema "Negeraku, Singapura"
(2) berusia di bawah 15 tahun
(3) dianggunkan sekurang-kurangnya 8 orang
(4) mengesahkan tiga buah lagu hasil kebangsaan
- Sambutan Majulah-Singapura ini dianjurkan oleh _____
(1) Syarikat Rakaman DreamDay
(2) M2 Catering
(3) Kolida Masyarakat Pasir Rits
(4) Sekolah Seni Singapura
- Kamu mahu mengajik rakan kamu menghadiri sambutan Majulah Singapura bersama kamu untuk menonjolkan saron langsung NDP. Untuk mengajikan rakan kamu itu, kamu harus menonjolkan kepantasan dia foodth yang dapat diraih daripada menghadiri acara sambutan itu.
Gunakan informasi dalam borosr untuk melengkapkan pesanan ringkas di bawah.

Ayu, selain dapat menyertai pelbagai peredaran serta menjumi selera dengan makanan ringan yang disediakan semasa siaran langsung.

PSLE Bahasa Melayu Buku 2 Latihan Intensif Imbuhan, Peribahasa dan Golongan Kata

Latihan 15
Arahan: Pilih perkataan yang paling sesuai bagi setiap tempat kosong dalam petikan kerangin di bawah ini.

Tanga berelngah lagi, aku dan Zanna menuju ke pejabat pengetua sekolah. Kami meminta (1) _____ untuk masuk dan bejumpanya. Kami membentahunya tentang rancangan kami untuk mengutip derma daripada murid-murid untuk Cikgu Hannah. Suami Cikgu Hannah telah meninggal dunia (2) _____ satu kemalangan jalan raya beberapa hari yang lalu.

"Caderani kamu baik, usoha yang malak," kata Cikgu Adam, pengetua sekolah. Kata kutanya membenarkan kekuatan kepada kami. Kami berdua terus menjalinkan tugasi (3) _____ derma daripada sebuah kelas ke sebuah kelas. Pada mulanya, ada yang teragak-agak tetapi apabila kami menerangkan tujuan (4) _____ dan sebabnya, ramai yang menderma.

Wang sebanyak \$327 dari kutipan itu kami serahkan kepada Cikgu Hannah pada keesokkan harinya. Semasa kami menyerahkan sampul surat yang berisi wang itu, aku lihat air mata (5) _____ di pipinya.

- (1) maaf
- (2) pendapat
- (3) izin
- (4) nasihat
- (5) diambil
- (6) mengumpul
- (7) dijumpai
- (8) menjemput
- (9) mengumpul
- (10) berminat
- (11) mengajikan
- (12) berketik
- (13) mengajikan
- (14) berketik

Tamil Specimen Papers

Each book in this series contains 8 specimen papers. The specimen papers are written based on the various sections found in examination papers. These will help students to learn Tamil and prepare well for their school assessments and examinations.

தொடக்கநிலை 1 தமிழ் தேர்வுத்தாள்கள்



Based on the latest Primary Tamil syllabus

- ✦ எட்டுத் தேர்வுத்தாள்கள் மாணவர்களின் பயிற்சிக்காக
- ✦ கல்வி அமைச்சின் புதிய பா.ததிட்டத்தின் அடிப்படையில் எழுதப்பட்டுள்ளன
- ✦ விவகார புகைத்தாள் இறுதியில் அமைப்பட்டு

S. Vijay
M.A. (Ed), O.W.U., B.A. (Hons), M.Phil., M.Ed.

ISBN: 9789811481215

தொடக்கநிலை 2 தமிழ் தேர்வுத்தாள்கள்



Based on the latest Primary Tamil syllabus

- ✦ எட்டுத் தேர்வுத்தாள்கள் மாணவர்களின் பயிற்சிக்காக
- ✦ கல்வி அமைச்சின் புதிய பா.ததிட்டத்தின் அடிப்படையில் எழுதப்பட்டுள்ளன
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S. Vijay
M.A. (Ed), O.W.U., B.A. (Hons), M.Phil., M.Ed.

ISBN: 9789811481208

தொடக்கநிலை 3 தமிழ் தேர்வுத்தாள்கள்



Based on the latest Primary Tamil syllabus

- ✦ எட்டுத் தேர்வுத்தாள்கள் மாணவர்களின் பயிற்சிக்காக
- ✦ கல்வி அமைச்சின் புதிய பா.ததிட்டத்தின் அடிப்படையில் எழுதப்பட்டுள்ளன
- ✦ விவகார புகைத்தாள் இறுதியில் அமைப்பட்டு

S. Vijay
M.A. (Ed), O.W.U., B.A. (Hons), M.Phil., M.Ed.

ISBN: 9789811460555

தொடக்கநிலை 4 தமிழ் தேர்வுத்தாள்கள்



Based on the latest Primary Tamil syllabus

- ✦ எட்டுத் தேர்வுத்தாள்கள் மாணவர்களின் பயிற்சிக்காக
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S. Vijay
M.A. (Ed), O.W.U., B.A. (Hons), M.Phil., M.Ed.

ISBN: 9789811460562

தொடக்கநிலை 5 தமிழ் தேர்வுத்தாள்கள்



Based on the latest Primary Tamil syllabus

- ✦ எட்டுத் தேர்வுத்தாள்கள் மாணவர்களின் பயிற்சிக்காக
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S. Vijay
M.A. (Ed), O.W.U., B.A. (Hons), M.Phil., M.Ed.

ISBN: 9789811444807

தொடக்கநிலை 6 தமிழ் தேர்வுத்தாள்கள்



Based on the latest Primary Tamil syllabus

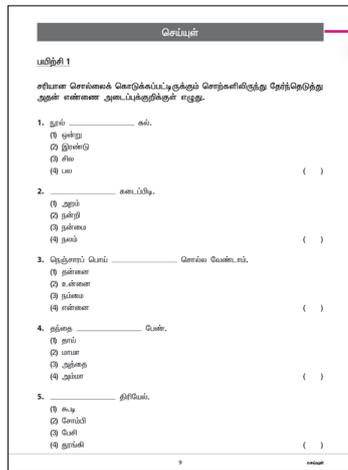
- ✦ எட்டுத் தேர்வுத்தாள்கள் மாணவர்களின் பயிற்சிக்காக
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S. Vijay
M.A. (Ed), O.W.U., B.A. (Hons), M.Phil., M.Ed.

ISBN: 9789811444814

Tamil Topical Exercises

This series contains Tamil language exercises essential for every Tamil student. All exercises in each book are based on the respective Tamil language syllabus. The books are divided into sections on proverbs, semantics, phonetic distinction, adjective and prepositions. There are also test/exam papers at the end of each book that will prepare students well for their school assessments/exams.



Topical Exercises

In targeting primary school students who want to master their Tamil language skills, this book consists of topical practices that target individual components of a typical test paper. These will help students master each topical component before moving to the next.

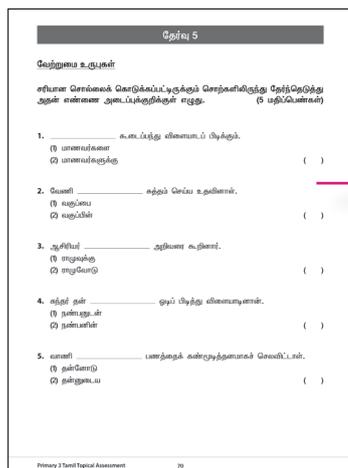
Creative Exercises

Apart from the typical MCQ and open-ended questions, there are creative exercises that engage students in their mastering of the Tamil language. Interesting activities that go beyond MCQs and open-ended questions will keep students engrossed in the variety of exercises.

பயிற்சி 8

கீழ்க்கண்ட சொற்களைச் சரியான வகைத்திரை பயிற்சி எழுது.

சொற்கள்	சரியான வகை	திரை
1. சிவந்தெழுத்து	_____	_____
2. _____	உள்ளகம்	_____
3. _____	_____	திரை
4. _____	பாடுபெயர்	_____
5. எழுத்து	_____	_____
6. _____	_____	பயிற்சி
7. உட்கொடுப்பு	_____	_____
8. _____	_____	சிறந்தெழுத்து
9. வினையாற்றிகள்	_____	_____
10. _____	ஆடும்	_____



Exam Papers

In order to ensure that students have grasped the language at an examinable level, this book also consists of eight test papers to assess students' language skills. Each test paper contains all the components that have been practised before.

◀ Secondary Level

▶ English

▶ Mathematics

▶ Science

▶ Bahasa Melayu

▶ Humanities

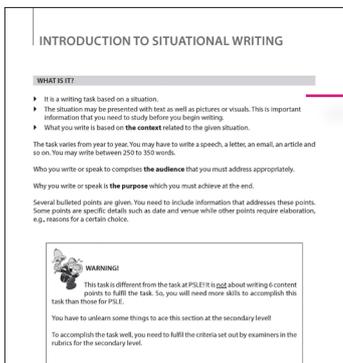
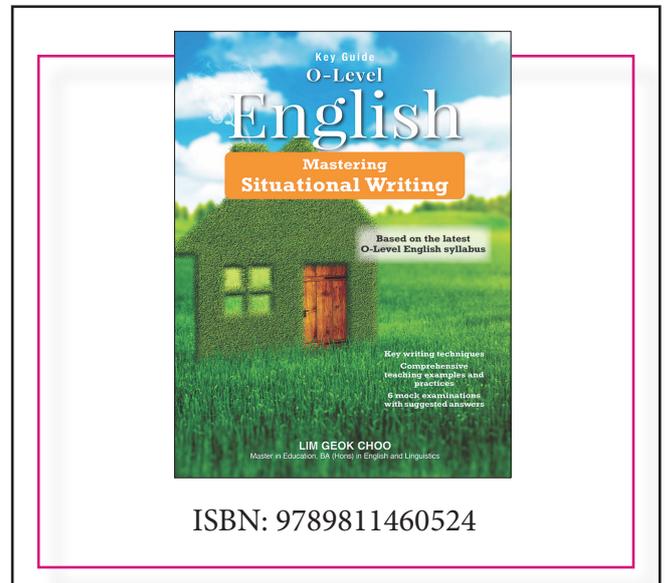
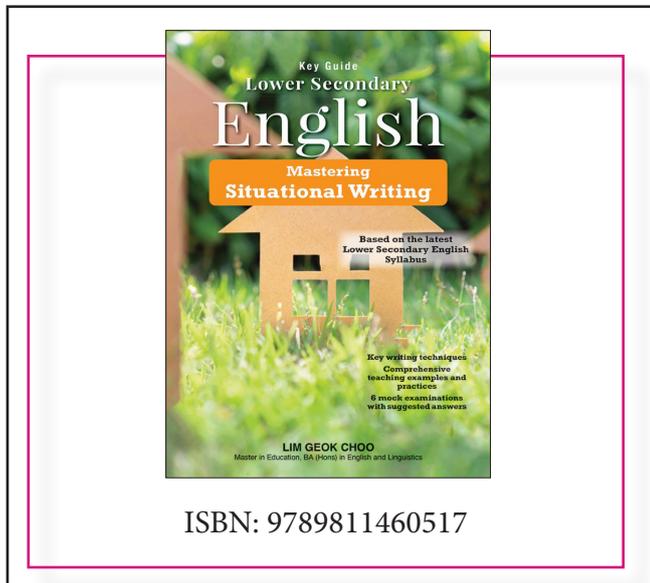
▶ Tamil

▶ Principles of
Accounts

▶ IGCSE

Mastering Situational Writing

This series provides students with a smooth transition from the situational/functional writing task at the PSLE level to the more demanding task of situational writing at the secondary level. It helps students do a comprehensive revision of the situational writing component in Paper 1 of the English Language examinations.

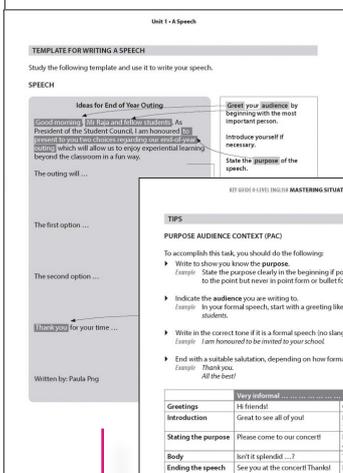
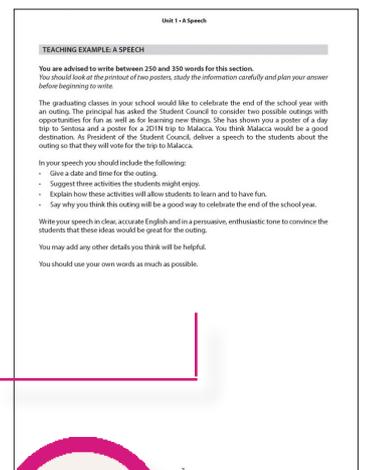


Clear Explanations

Each topic is clearly defined to help students understand what skills are needed to earn marks.

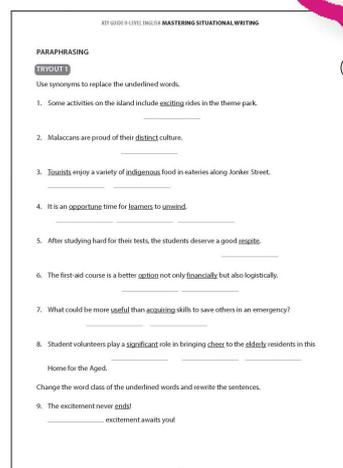
Teaching Examples

An example of each type of situational writing task is shown.



Templates & Tips

Templates and tips are provided to help students plan out each task.



Practice Tasks

Students can immediately apply what they have learnt from the teaching examples. Suggested answers are also provided for students to understand what is expected for each writing task.

Comprehension Practice Papers

English Comprehension Practice Papers is a collection of comprehension exercises designed to help students gain confidence in their comprehension ability, and be better prepared to ace and handle the demands of English comprehension in Paper 2 of English Language examinations.

In this series, students will find a wide array of questions to equip them with the necessary skills and experience in answering comprehension questions at each level. These skills include reading and understanding, inferring, rephrasing and paraphrasing, comprehending language use for impact, analysing the use of figurative language, discerning vocabulary in context, and summary writing.

Each practice paper follows the Singapore Ministry of Education's comprehension format.

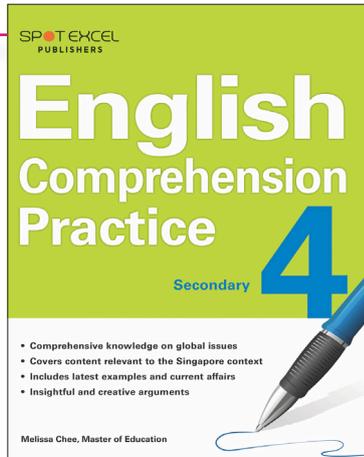
<h2>ENGLISH</h2> <h3>COMPREHENSION PRACTICE PAPERS</h3> <p>Secondary 1</p> <ul style="list-style-type: none"> Mastering the skills and strategies of comprehension Visual, narrative and non-narrative practices Comprehensive answers provided for self-evaluation <p>Afiqah Mazlan BA (Hons), Sociology Consultant: Andrew Smith</p>	<h2>ENGLISH</h2> <h3>COMPREHENSION PRACTICE PAPERS</h3> <p>Secondary 2</p> <ul style="list-style-type: none"> Mastering the skills and strategies of comprehension Visual, narrative and non-narrative practices Comprehensive answers provided for self-evaluation <p>Afiqah Mazlan BA (Hons), Sociology Consultant: Andrew Smith</p>	<h2>ENGLISH</h2> <h3>COMPREHENSION PRACTICE PAPERS</h3> <p>Secondary 3</p> <ul style="list-style-type: none"> Mastering the skills and strategies of comprehension Visual, narrative and non-narrative practices Comprehensive answers provided for self-evaluation <p>Afiqah Mazlan BA (Hons), Sociology Consultant: Andrew Smith</p>	<h2>ENGLISH</h2> <h3>COMPREHENSION PRACTICE PAPERS</h3> <p>Secondary 4</p> <ul style="list-style-type: none"> Mastering the skills and strategies of comprehension Visual, narrative and non-narrative practices Comprehensive answers provided for self-evaluation <p>Afiqah Mazlan BA (Hons), Sociology Consultant: Andrew Smith</p>
ISBN: 9789811410352	ISBN: 9789811410369	ISBN: 9789811423055	ISBN: 9789811426742

<p>PRACTICE PAPER 10</p> <p>SECTION A</p> <p>Text 1</p> <p>Study the advertisement below and answer Questions 1 to 4.</p> <p>YOUTH DASH</p> <p>It's never too early to start running!</p> <p>Discover the joy of running with Youth Dash!</p> <p>The race is a unique and fun chance for athletes in the making to experience the buzz of a big race.</p> <p>Register now at youthdash@energiefitness.com and enjoy special early bird price!</p>	<p>PRACTICE PAPER 10</p> <p>SECTION A (5 MARKS)</p> <p>Refer to the advertisement (Text 1) to answer Questions 1 to 4.</p> <ol style="list-style-type: none"> Who is the target group of the advertisement? [1] Which sentence summarises the main message of the advertisement? [1] Explain why the picture was chosen to illustrate the 'Youth Dash'. [2] Each runner will receive an exclusive Youth Dash t-shirt, a finisher's medal and a goody bag. Why is this sentence effective in attracting readers? [1] 	<p>Section A</p> <p>Questions based on a visual text [5 marks]</p>	<p>PRACTICE PAPER 10</p> <p>SECTION C (25 MARKS)</p> <p>Refer to Text 1 to answer Questions 15 to 21.</p> <ol style="list-style-type: none"> In your own words, explain what the writer means by: <ol style="list-style-type: none"> poaching fuelled by horny sales' (line 2) 'took the worst hit' (line 4) With reference to paragraph 2, state what caused the elephant's extinction. Answer in your own words. '... their worst nightmare came true ...' (line 13) What does the worst nightmare refer to? Here is part of a conversation between Kayla and Xavier, which read the article. <ol style="list-style-type: none"> With reference to paragraph 4, identify TWO efforts undertaken by Kayla to support her view. [2] [2] [2] 	<p>COMPREHENSION PAPER 10</p> <p>SECTION B</p> <p>Text 2</p> <p>The text below is an excerpt from the short story 'Count Dracula' by Bram Stoker. Answer Questions 5 to 15.</p> <ol style="list-style-type: none"> Somehow in Transylvania, Dracula, as exposure to the sun's rays we... The sun is nearly down and it he starts to stir and emerges with he transforms himself into a bat, by trusting neighbour, the baker and the unsuspecting couple. 'Count Dracula. What a surprise choice he has by this time assumed charmingly.' 'What brings you here so early?' 'Our dinner date. You did invite me, but that's not for another 10 to watch the total act up with us!' 'Come along! Look out the window!' 'Oh, it's in big trouble!' Count addresses the baker 'if you'll excuse me.' 'Going! But you just came. Count Dracula begins to think of an end left the lights on in the castle. The noise.' 'When the baker and his wife is another pathless across. Really the counts across land, and his response ignoring his glass, the baker is nothing about. It's no wonder you let Dracula manage a weak smile about the baggies to fumble forward only to find a closed instead.' 'Oh, where is the front door?' The baker and his wife begin to 'Dracula'. 	<p>PRACTICE PAPER 2</p> <p>SECTION B (20 MARKS)</p> <p>Refer to Text 2 to answer Questions 5 to 15.</p> <ol style="list-style-type: none"> ... exposure to the sun's rays would surely cause him to perish' (line 2) In your own words, explain what would happen to Count Dracula if he is exposed to the sun's rays. [1] Which word from paragraph 2 shows that Count Dracula is safe in his coffin? [1] Quote TWO phrases from paragraph 2 which tell you that the baker and his wife were easy prey for Count Dracula. [2] In your own words, explain what Count Dracula did to ensure that his victims remain unsuspecting (line 7) when he arrived at their doorstep? [2] Why was the baker's wife surprised to see Count Dracula when she opened the door? [1] Why did Count Dracula feel that he was in big trouble' (line 16)? [2] ... the baker and his wife just shrug' (line 22) In your own words, explain why the baker and his wife reacted in this way. [2]

Section C

Questions based on non-narrative passage [10 marks], and one question to test the student's summary skills [15 marks]

Comprehension Practice



ISBN: 9789811170959

This book focuses on Sections B and C (excluding the summary part) of a comprehension paper.

With passages on global issues and current affairs that bring insightful and creative arguments, this book aims to provide greater reading sources for students to have a better command of the English Language, and hence be able to better understand passages.

This book also includes a guide on identifying different types of questions and the literary and rhetorical devices of the English language.

Guide

Different question types and literary devices are introduced with examples.

About Comprehension Section B

Below are typical question types of the 'O' level syllabus. But be careful, some question types do overlap, especially in questions with parts.

Section B Question Types

Question Type	Example
Analysis of the writer's intent	In Paragraph 5, the narrator describes his excitement as 'thrilled'. Explain why the word 'thrilled' is effective in describing her emotions? In Paragraphs 5 and 10, the woman tells Manuel that the fish 'ought to be thrown back.' What is the intended effect of this repetition?
Direct/Literal	Give three reasons from Paragraph 3 why the visitor had attention drawn to her, apart from the fact that she had arrived with an infant.
Inference	What does the phrase 'dreams that had lost my food and pleasant rest' in Paragraph 6 suggest about the narrator's view of his dream?
Justification	Explain how the language used in this paragraph conveys the control she had over her performance with supporting details.
Identify key words or phrases	Identify key words or phrases in the paragraph that supports the writer's intended effect and explain how in terms of context and connotations.

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Secondary 4 English Compen

Literary device	Definition	Example
Allegory	A representation of an abstract meaning. Sometimes it can be a single word or phrase. Often, it's a symbolic narrative that has not only a literal meaning, but a larger one understood only after reading the entire passage/story.	Famine Queen by Edmund Spenser is a moral and religious allegory. In the story, the good characters are representatives of the various virtues, whereas the evil characters are representatives of the various vices.
Alliteration	Repeated consonant sounds at the beginning of words placed near each other in the same sentence. A somewhat looser definition is that it is the use of the same consonant in any part of adjacent words.	i) Fast and furious ii) We gatted the pony
Allusion	A brief reference to some person, historical event, work of art, Biblical, mythological situation or characters.	Chocolate is her Achilles' heel. In this manner, it means that chocolate is her weakness. Achilles in Greek mythology was thought to be invincible as his mother had dipped him in magical water when he was a baby. However, she had missed a spot, which was his heel as she had held him by the heel when she dipped him. Thus, his heel was his only weakness.

viii Secondary 4 English Compen

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Practice 1

Text

The boy's shorts were faded, his feet barefoot. Carlos could see the patch of moist skin where from mosquito bites. The socks streaked with dirt lay in the gutter. The boy was dangling out over the waste.

A stud interrupted made one convulsive leap pavement. The boy looked gutter.

Carlos let his thought it would be big ends in without breathing do accommodation in the cigarette and leaned as fishing.

A couple was appar seemed to have wander and portly, she was slim of weariness. "What a nasal drawl as she bent of the lines of washing on it."

"It's going to die if I. Do you think he wants it. He seemed on edge."

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Practice 1

Text

The depth of our intelligence hinges on our ability to transfer information from working memory, the scratch pad of consciousness, to long-term memory, the mind's filing cabinet. In moving information from long-term memory, we are that give richness to our thought to long-term memory also term memory has an almost only a relatively small amount term storage is fragile: A bit from our mind.

Imagine filling a bathtub in moving information from When we read a book, the which we can control by ve single-minded concentration information, thimbleful by r the rich associations essent. On the Net, we face many irf thimble overflows as we ru jumble of drops from differe. Psychologists refer to the info cognitive load. When the load is, we're unable to retain the memories. We can't retain ability to learn authors, and our

The Internet is an inte to accessible it. There's the p kinds of media coming at numerous studies—includ surveyed people, and even users of two academic data

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Practice 1

Questions

1. What is the difference between long term memory and working memory?
2. What happens when our cognitive load exceeds our mind's ability to process and store information?
3. In Paragraph 5, it is said that "Office workers often glance at their inboxes 30 to 40 times an hour." What is said about this?
4. Quote a phrase from Paragraph 6 that suggests that shifting our attention puts a mental strain on us?
5. Here is a part of a conversation between Ryan and Brianna. Ryan: We are better able to retain information from books than the Net. Brianna: Not the Net too brings us benefits. i) Pick out two pieces of evidence from Paragraphs 2 and 3 that Ryan can use to explain his position.

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Practice 1

1. He came from a poor family and often faced hardships. (Under short and "hardship" suggest that the family is too poor to afford a new pair or afford a pair of shoes for him.) ("gaily" and "swaid lines suggest a hard life—one that definitely is not sheltered).
2. The phrase is "she had convulsive leap". (First line of paragraph 2) (A phrase is a group of words that expresses an idea).
3. He did not know what the tourists wanted from him since he did not understand the language they spoke, that he was wary of their intentions.
4. a. Judging Manuel's clothes, she concluded that he was worthy of more respect given to him. ("Clad in the once-washed-down suit, she shied").
5. She is a person who judges people based on their appearance. ("With a more respectful tone than she had used with the boy").
6. a. The woman is more concerned with the dying fish than the plight of the little boy. b. "Tourist" ignorance of the society they visit and its current affairs may prevent them from seeing the little situation and hence empathising with them. In this case, the woman's ignorance of the boy's poverty or the current plight in which the fishing village is being visited to make way for a new hotel prevented her from seeing the boy's poverty and hence empathising with him.
6. As the boy fished, Manuel may have deduced that he is from the fishing village which was being visited to make way for a new hotel and pitied him. He hoped to make the boy feel less uncomfortable and that he may always be.
7. His huge exterior appearance does not intimidate the woman as she is not afraid of him. ("Fetopod shoulders" suggests a lack of confidence). The woman clearly perceives similarities in their relationship through her "shuffling" (he had nervously "balded her" and her "ignoring" him in the passage).
8. It emphasises her discomfort in seeing animals abused.
9. The woman has no regard for either Manuel or the boy.
10. It was the boy's alien way of thinking Manuel and expressing his gratefulness for his help in setting the fish, hence helping the financial situation.

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Section B - Answer Key

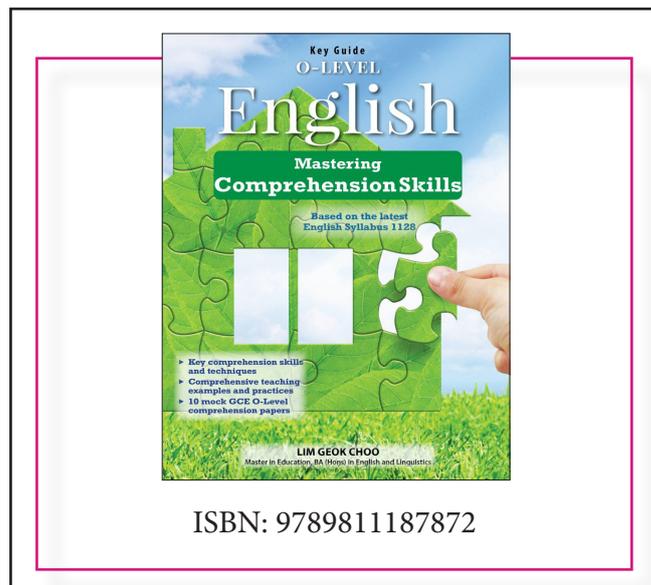
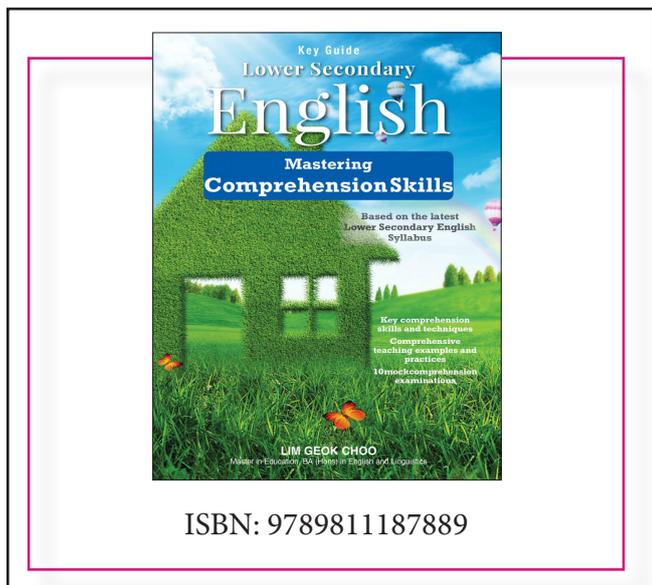
Secondary 4 English Compen 107

Practices with Answers

10 practice texts are included for each section, and each practice comes with an elaborate answer key for self-evaluation.

Mastering Comprehension Skills

This series helps students in their comprehensive revision of essential skills in all three sections of the comprehension component (Paper 2) of the English language examination. It is suitable for both class revision and self-revision at home.



1 TARGET READER QUESTION

WHAT IS IT?

- A visual text is written for an intended or target group of readers.
- This group could be the general public.
- This could also be a specific group of people.

The target reader question tests if you know who this target group is.

Some common examples of specific target groups include the following:

- Parents
- Students
- Teenagers
- Drivers
- Smokers
- Young couples
- Families with young children
- Tourists
- Pregnant women
- Gambling addicts
- Job-seekers
- Computer enthusiasts
- Sports groups such as cyclists, rock climbers, runners
- Information technology buffs
- Nature lovers
- Environmentalists

HOW TO ANSWER THE TARGET READER QUESTION?

1. Read the **headings and/or subheadings** for clues about the target reader.
2. Study the **pictures and information** that hint at the target reader.
3. Some visual texts may clearly state their target group of readers. Look for words that tell you this, e.g. **intended for ...**, **suitable for ...**, **for ...**, etc.

Detailed Explanations

Explanations of each question type help students understand how to get the correct answers to earn marks.

Examples

The examples come with answers and hints on how to answer the question effectively.

KEY GUIDE LOWER SECONDARY ENGLISH MASTERING COMPREHENSION SKILLS

EXAMPLE 1

Who is the target reader of the flyer?

In conjunction with Anti-Smoking Week 2020

Writing Competition for Secondary School Students

Every year, a variety of activities are conducted nationwide during Anti-Smoking Week to raise awareness of the harmful effects of smoking. The Writing Competition for Secondary School Students is one such activity. The competition offers participants the opportunity to express their personal opinions or share their experiences about the harmful effects of smoking.

ANSWER The competition is for secondary school students.

ANSWER The target reader is a secondary school student (who can write well).

Mock Exams

Apart from practice questions, there are also 10 full mock examination papers with answers provided.

MOCK EXAM 1

SECTION A
Text 1

Home Our team Services Useful links

Family Centre: Family Help

A website that helps to strengthen family ties, by the Family Centre.

Keys to Understanding your Parents
Workshop Series 2

Through this series of workshops, Dr Charlene Lee will help you understand how important it is to build a strong parent-child relationship on the four keys to a better understanding of the adults in your life.

About the Speaker
Dr Charlene Lee is a psychologist registered with the Family Counseling Council. She has been counselling families for 10 years. She is the author of 'Habit of Happy Family'.

Committed to helping families grow in together
Recipient of National Day Silver Award 2018 and National Day

MOCK EXAMINATION 3

SECTION C
Text 3

The following text discusses the characteristics of mountain guides. Read the text carefully and answer Questions 14 to 16. (22 marks)

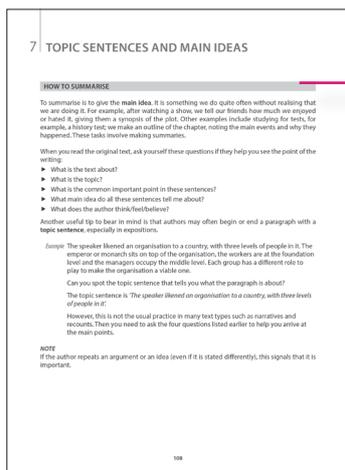
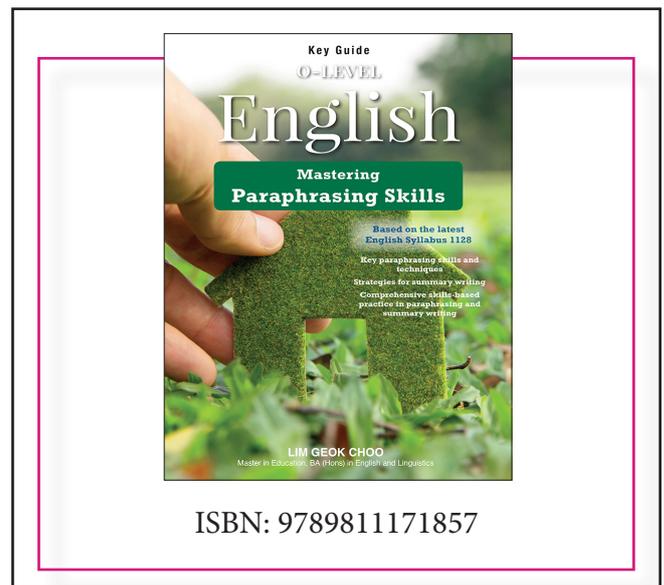
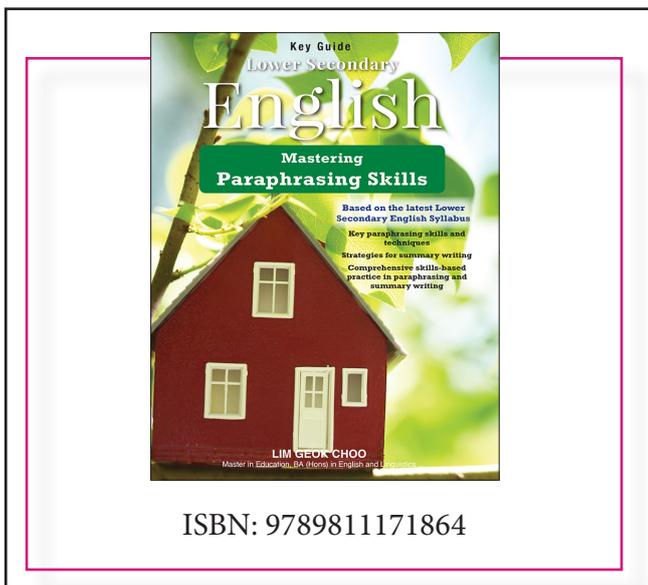
- 1 Mountain guides are supposedly among the most skilled climbers yet statistics show that many of them died in accidents that did not have to be fatal. The numbers are high, prompting an analysis of the personalities of risk takers. These people are supposed to have control of their environment and know how to respond in a crisis, but something went wrong. Importantly, what distinguishes the climbers who died from those who lived? Many climbers face perilous situations, but some make better decisions than others, despite the fact that they had similar training.
- 2 In a published report, one guide was leading a small expedition over a snow covered peak when an avalanche swept over them, leaving four members of the party fasted in snow. The guide, not deep under the snow, got to the surface in about a minute. The other three members were under too much snow to dig their way out. Rather than try to unearth them himself, the guide chose to go down the mountain to seek help. He returned thirty minutes later, but it was too late. The climbers had frozen to death. If the guide had tried to uncover them, he may have saved their lives because there was ample time and he knew where to locate them. Other guides and climbers have experienced similar crises, but they survive and so do members of their expeditions.
- 3 Perhaps the most important distinction between the survivors and those who did not avert disaster is an ability to recognise their own emotions. A disability or deficiency in processing emotions, in psychological terms, is called alexithymia. Those who understand their emotions can recognise when they are afraid, relaxed or calm, and most importantly, they know their limits. Climbers who cannot identify their own feelings do not know when they are up against a challenge beyond their ability to overcome safely.
- 4 In addition to alexithymia, there is agnosia as well as strained relationships in many cases. Dangerous guides seek to impress with their daring feats. The more they build themselves up, the more likely they are to let others fall in jeopardy. Good guides do not need to boast about their skills. Dangerous guides also have a troubled family life. They have difficult relationships with parents or other family members. Alexithymic, these guides ignore the negative emotions caused by the strained relationship, developing emotional numbness. If they do not recognise anger, fear or sadness, they respond by taking risks. This is why emotional detachment is undesirable.

Mastering Paraphrasing Skills

These key guides help students do a comprehensive revision of skills in sections of the comprehension component of the English Language examinations, where paraphrasing is required.

The key skills for paraphrasing, answering literal and inferential questions, and summarising are explained, with examples and comprehensive warm-ups and exercises. The warm-ups help students practice their paraphrasing skills, and acquire new vocabulary and skills that are reinforced during the later exercises.

Each book also includes a full comprehension test based on the latest syllabus and format. Answers to all exercises are also provided for self-evaluation.

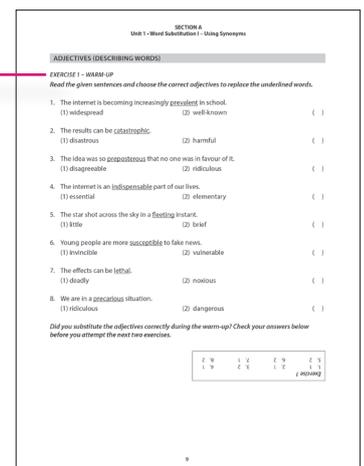


How To

Each unit begins with a “How to” section, explaining the key skills, techniques and strategies through examples.

Warm-Ups

Comprehensive warm-ups exercises with answers provided on the same page allow students to practise and review their answers. They will then be able to attempt the subsequent exercises with confidence.



FULL COMPREHENSION TEST

TEXT 1
Study the advertisement below and answer Questions 1 to 4. (5 marks)

Vote for your Lead Woman of the Year!

Lead Organizer
These candidates have won company awards for their exceptional leadership. They represent the best in business, like leadership, innovation, and vision. Help us choose the woman who has made the most significant contribution to our success.

Lead Investor
Dr Angela Mason made local headlines when she launched a campaign for the leading women in business. With a track record of successful investments, she is one of the products she developed that has put Singapore on the world map again.

TEXT 1

- In what way does the main text in the first box aim to attract readers to cast their votes for the Lead Woman of the Year? [1]
- How does the advertisement make achievements rather than looks an important criterion in the choice of women when voting? [1]
- Write down two phrases that suggest citizens and people overseas would have read about or heard of two of the women. [2]
- Which sentence tells us that one woman took a great risk in her career? [1]

KEY SKILLS IN ENGLISH - MASTERING PARAPHRASING SKILLS

TEXT 2
In the text below, a woman finds meaning in life. Read the text carefully and answer Questions 5 to 9. (20 marks)

- "There has to be more to life than making money," Angelina Jess sighed as she sat alone in the dark. Angelina had all the Hollywood trappings: a million-dollar contract for each movie, a mansion in a prime location, a newly furnished yacht and a garage full of luxury cars. She ought to be very satisfied and living it up, but a void in her life made her miserable instead.
- Her friends concluded that she might be suffering from burnout, which was not unknown in the hectic world of acting. On their recommendation, Angelina jumped on an airplane and set off for a five-week backpacking trip in Asia. Incognito, she moved freely from city to city.
- The poverty-stricken scenes in the wretched bar heart. There were no churches, and only in a few pieces of the streets for scraps. Fights broke out after the contents of an overturned metal bucket of garbage poked, including bowls of rice, metal cups, and a few pieces of bread. Hundreds of people were huddled together, their faces gaunt and their eyes dead.
- A Cambodian friend took her to a local market to buy some fresh fruit. She bought a few items and returned to her hotel. She had a good night's sleep, but she was still thinking about the scene in the market.
- Angelina decided to stay in Phnom Penh, Cambodia, for a few months. She had rented a flat and had a good night's sleep. She had a good night's sleep, but she was still thinking about the scene in the market.
- With her supportive husband, six children, the couple plan to have six and live a staff of eight. These days, a husband that there has to be more to life than making money.

FULL COMPREHENSION TEST

- Angelina ought to be happy and living it up but she is not. Pick three words that suggest she is not as happy as she ought to be or living it up. [3]
- What does the recommendation in paragraph 2 imply about how celebrities cope in life? [1]
- In paragraph 2, how was Angelina able to travel freely? Answer in your own words. [2]
- How does the author describe what Angelina saw in such a way that it is heart-wrenching? [2]
- What was Angelina's understanding of absolute poverty? [2]
- The author uses figurative language in paragraph 5 to show the change in Angelina. Complete the table below to show the author's use of a metaphor and personification. [2]

Figurative language	Meaning
Metaphor: She bade farewell to Hollywood.	
Personification:	Angelina no longer had the ambition to be an outstanding movie star.

FULL COMPREHENSION TEST

TEXT 3
The following text suggests that men do not regard women as their equals. Read the text carefully and answer Questions 10 to 19. (25 marks)

- A recent survey brought the plight of women into the limelight again. According to the survey conducted by a non-profit organisation, it will take a hundred years for women to catch up with men in terms of education, employment and political empowerment. This was worse than earlier surveys which predicted that it would take eight years to bridge the gender inequality gap.
- This does not sound gender inequality is only women. In fact, 10% of men are also regarded as 'second-class citizens'. In this supposedly enlightened age, you would think men and women have equal rights but it is not so. Women should have won their independence years ago and should now enjoy the same educational opportunities as men. Yet this is not so in many parts of the world, particularly in the developing countries.
- Some men talk about 'gender equality' but in reality, they are not. They are heartless and do not care for women. They are not even statistically supported. In cases for fewer accidents to drive like men. Driving for those few more women women do well, putting me teachers, engineers come frequently accused of being heartless.
- Statistics do not lie. The gender inequality complex, it is superior and they are all of state of affairs has nothing to do with us. We have to wait one hour if men had their way, they should start counselling for

KEY SKILLS IN ENGLISH - MASTERING PARAPHRASING SKILLS

TEXT 3

- Using your own words, state the three areas studied in the recent survey mentioned in paragraph 1. [3]
- What is the difference between the earlier survey and the recent one? [1]
- What would be a reasonable expectation in a 'supposedly enlightened age' in paragraph 2? [1]
- What is the irony mentioned in paragraph 2. Explain fully in your own words. [2]
- Here is part of a conversation between two teachers who are discussing their transport plans to the venue of a meeting.



- Referring to paragraph 1, explain why Ali had Linda should be the one driving to the venue. Give two reasons. [2]
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-

Full Comprehension Test

By attempting the full comprehension test as a timed practice, students can be better prepared for their school examinations.

Answers

Answers are provided for the exercises and the full comprehension test. This enables the student to understand what is expected for each question and learn from mistakes.

ANSWERS

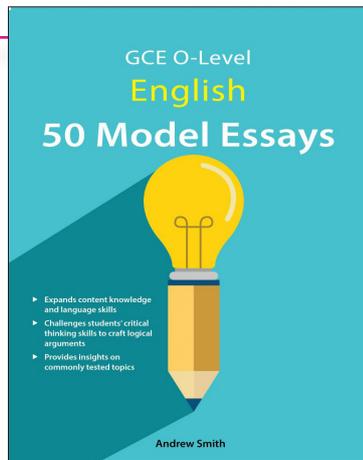
Note: Also accept other possible answers for students who may not have used the full range of helping words provided in the boxes at the end of answers.

- Unit 1**
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KEY SKILLS IN ENGLISH - MASTERING PARAPHRASING SKILLS

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Model Essays



ISBN: 9789811413100

GCE O-Level English – 50 Model Essays is a collection of 50 model essays designed to present students with insights on commonly tested topics, including science, technology and the arts. This wide array of questions will equip students with the necessary skills to tackle essay writing at the secondary school level.

This book aims to prepare students for the O-Levels by providing ample examples of essay questions and answers that they can learn from. Students are encouraged to attempt the questions before referring to the respective model essays.

Contents	
Essay	Topic
1	Do you think it is wise for someone to pursue perfection?
2	"Travel can reduce prejudice: Do you agree with this statement?"
3	Passion is the prime consideration when one chooses a profession.
4	Would you rather live in the countryside or live in the city?
5	"Travel has made our lives more meaningful and interesting." What are your views?
6	"Technology has taken over from teachers: Is this a fair assessment of education today?"
7	Should humour be treated seriously?
8	Freedom is not a good thing. What are your views?
9	Discuss some of the advantages and disadvantages of social media.
10	"Sports has the ability to incite substantial change to the world." To what extent do you agree with this statement?
11	"Living in the city is isolating." Do you think that city life is lonely?
12	"It is impossible to attain true happiness." Do you agree?
13	"Young people lack the ability and knowledge to deal with the problems of the future." Discuss.
14	Do you think your society advocates diversity?
15	Write about a time you felt stressed and how you managed your emotions.
16	What are some of the most memorable times of your school life and how did they impact your growth as a person?
17	What is your idea of beauty? Describe some people, places and objects that you think are beautiful.
18	What are some of the problems and challenges you and other teenagers face? How do you overcome these difficulties?
19	Do you agree that it is important to read widely in today's modern society?

50 Model Essays

ESSAY 1

Topic: Do you think it is wise for someone to pursue perfection?

MODEL ESSAY

The idea of attaining perfection is perhaps what many would consider to be an endless pursuit. It has always been man's inherent desire to achieve perfection be it in their academic endeavours or careers. More often than not, perfection is not merely defined by personal standards but being substantially better than others who are competing against you. The pursuit of perfection is a grueling process for I believe that perfection can never truly be obtained. While the pursuit of perfection may motivate one to work hard to accomplish one's goals, being constantly obsessed with the idea of perfection disabled with oneself and this can be detrimental to one's well-being. I believe that it is not wise for someone to constantly achieve perfection.

Firstly, perfection would imply being the best at what an expectation that many people tend to set up for themselves. The on people to meet this seemingly unattainable goal and falling often has a huge blow on their self-esteem. Personally, in school often find ourselves studying not only for personal fulfillment but the fear of academic in Singapore is highly competitive and we and worth solely on their academic standing. This unrealistic hopes and dreams of youth who cannot fit into this ideal from results in a degradation of self-worth and confidence in their self-growth and development. Hence, these lofty and unattainable makes it unwise to want to achieve perfection.

Secondly, the relentless pursuit for perfection has also pushed means of accomplishing their form of perfection. When the pressure for one to cope, one may end up backing under great unlawful methods. The adoption of underhand techniques is sporting world where athletes use performance-enhancing drugs that extra advantage and improvement in performance against their opponents. There are multiple instances of such in something used performance-enhancing drugs to boost his advantage of immoral methods not only undermines the useless and complex that the meaning of sportsmanship. The desire for expense of one's morals, and thus it is not a wise goal.

GCE O-Level English

Be that as it may, the pursuit of perfection motivates people to put in their best effort and empowers individuals into accomplishing feats that are seemingly impossible to achieve. Personally, as a dancer, I would continuously practice to strengthen my technique on certain movements to make them smoother and improve the transitions between moves to craft a more seamless performance. The idea of people watching in me as I dance and acknowledging my efforts in my form of perfection. I believe that having an insatiable thirst of perfection is an extremely strong compelling force of motivation and pushes one to follow one's innate desire for greatness. Hence, it is undeniable that the pursuit of perfection is wise for it is an extremely effective mechanism for motivation.

In a nutshell, I believe it is paramount that one constantly strives to push oneself and become the best version of oneself. However, one should not get overly caught up on seeking perfection and should instead find the right balance between being motivated with the idea of perfection and setting unattainable goals, only then can one be truly contented with one's endeavours.

50 Model Essays

ESSAY 26

Topic: Examination results are prime focus in education. What are your views?

MODEL ESSAY

In this increasingly competitive society, there is a high premium placed on education and students believe that achieving stellar examination results is perhaps the only way for them to accomplish their goals and aspirations. There is a heavy emphasis on performing well academically and this leaves students feeling constantly stressed and pressured to do well for tests and examinations. Be that as it may, one has to have a good moral compass and exhibit values of integrity, being self-motivated and disciplined in order to truly strive in the real world. Hence, I do not agree that examination results are the top priority in education.

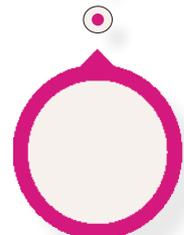
To begin, I believe that examination results should not be of top priority in education since the basic of education should be on empowering individuals with knowledge and capability to have a positive impact on society. Lifelong learning is paramount in ensuring that people are self-motivated and take the initiative to better their respective societies. Personally, my secondary school encourages us to discover our passions and the joy of learning by having career dialogues, excursions to different corporations in Singapore as well as allowing students to occasionally facilitate lessons in class. These experiences have taught me that while examination results are important, they should not always be the prime focus of education. It made me realise that as students, we have to go beyond what is taught in the classroom in order to truly realise our potential and make a positive impact on society in the future. Therefore, I do not agree that examination results are the prime focus in education.

Secondly, examination results used to judge one's intellectual capabilities and stream students accordingly can have negative effects on the self-confidence of students labelled as 'slow learners'. Students are segregated and categorised based on their learning abilities. For those who are regarded as less intelligent, they are limited to pre-determined boundaries and are given certain specific tailored educational programs that are intended for them. For instance in Singapore, children are made aware of their weaknesses and their limitations in certain areas. This can have detrimental effects on the mental state and self-esteem of most children. They may feel less worthy compared to others and lack the confidence to perform and reach their maximum potential. With this in mind, I believe that examination results should not be the top priority in education.

Be that as it may, I believe that other aspects of learning should be held in higher regard as oppose to their examination results. Students need to be taught to be morally upright in order to make rational decisions. For example, in most education systems around the world, there are moral education and civics lessons integrated into the curriculum to give students a

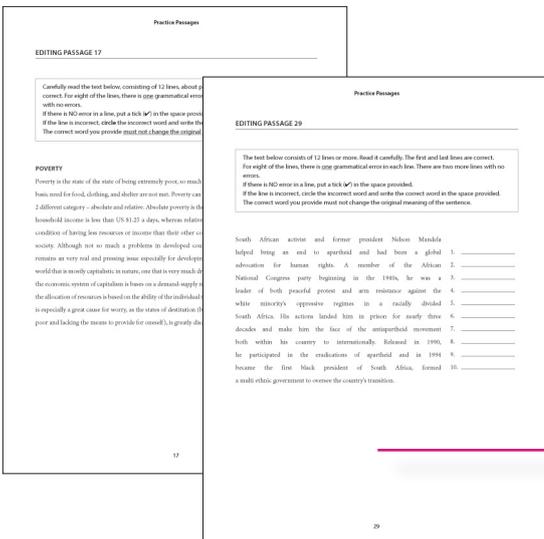
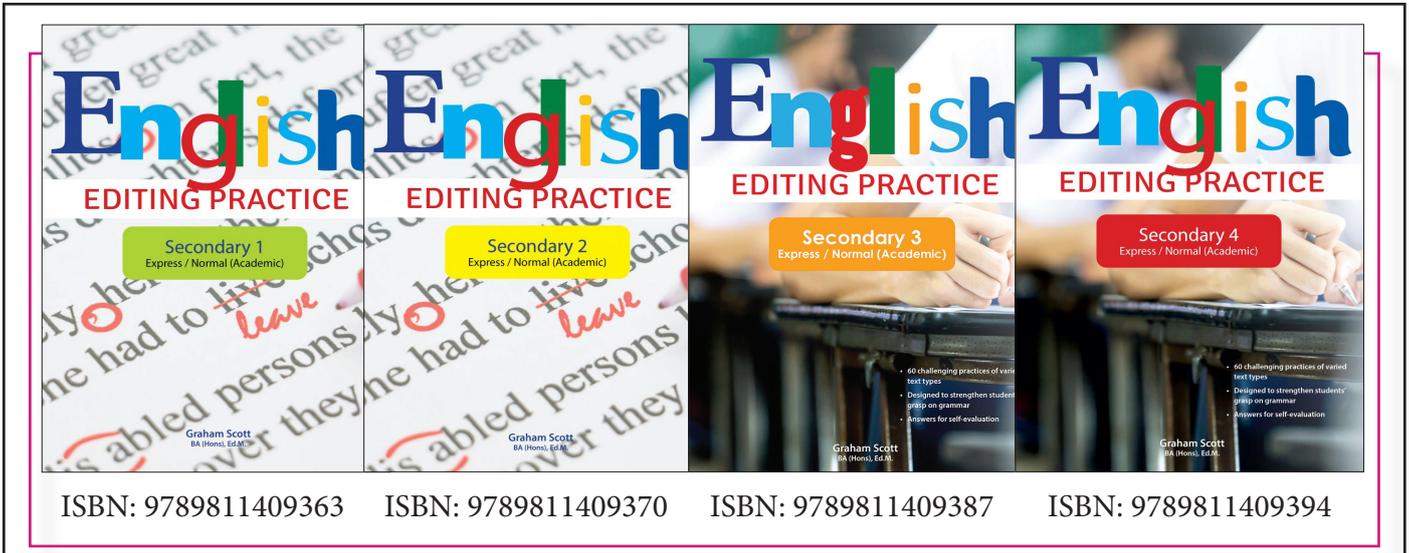
Extensive Topics

Model essays cover a broad list of topics so that students are equipped with the skills to tackle questions on any subject.



Editing Practice

The English Editing Practice series aims to develop both Express and Normal (Academic) students' editing skills, which require a good grasp of grammar in the English Language. Each book contains ample practices of varied text types for students to practise and strengthen their grammar knowledge. Answers are provided for self-evaluation and to learn from mistakes.

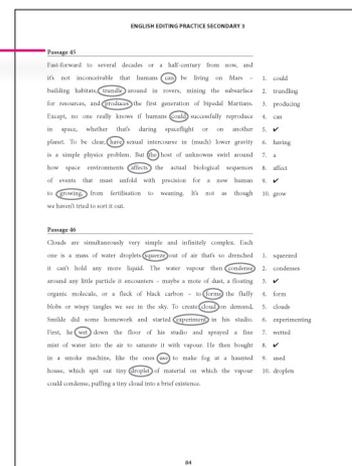


Comprehensive Topics

Topics covered in practices are extensive to expose students to the various subject matter they may encounter in other aspects of their English language papers.

Answers Provided

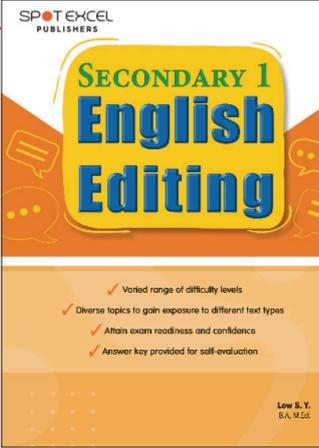
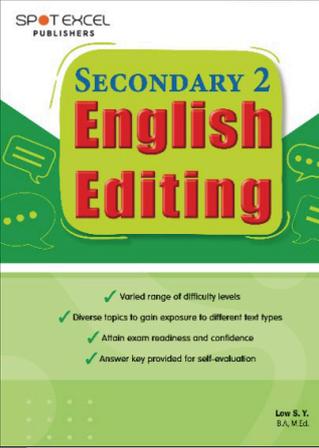
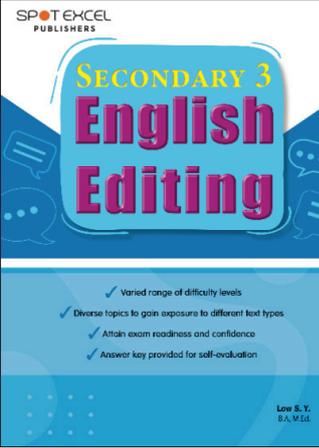
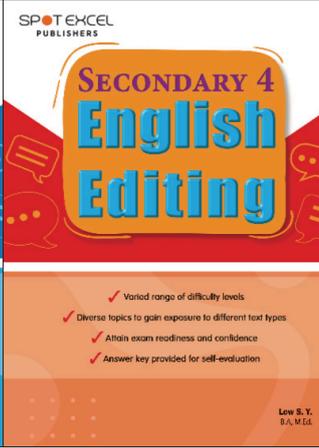
Answers for each practice are provided for students to check their own work against.

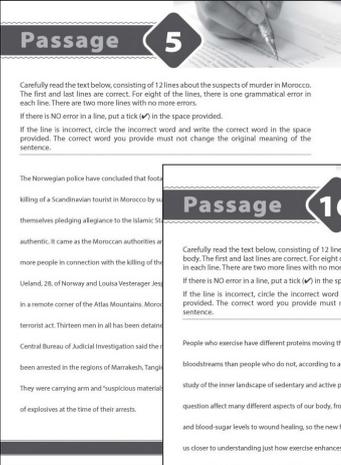
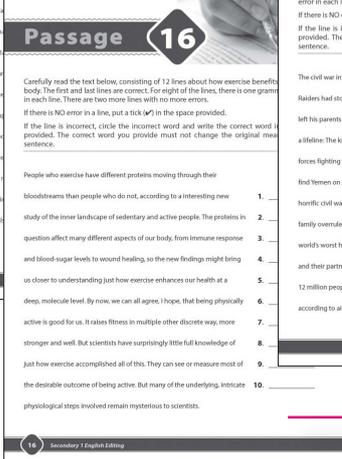
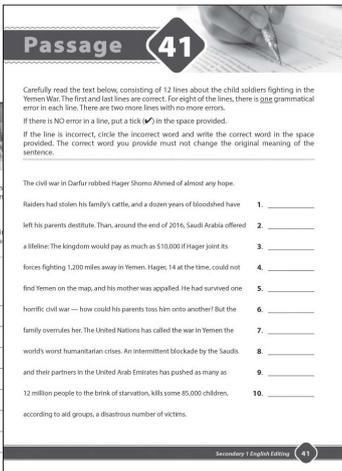


English Editing

Each book in this English Editing series is a collection of 60 editing passages designed to provide students with sufficient practice to tackle the editing section.

It aims to prepare students for the O-Levels by providing ample exercises to allow students to master the necessary skills to ace the editing section.

 <p>SPOT EXCEL PUBLISHERS</p> <h3>SECONDARY 1 English Editing</h3> <ul style="list-style-type: none">✓ Varied range of difficulty levels✓ Diverse topics to gain exposure to different text types✓ Attain exam readiness and confidence✓ Answer key provided for self-evaluation <p>Low S. Y. B.A., M.Ed.</p>	 <p>SPOT EXCEL PUBLISHERS</p> <h3>SECONDARY 2 English Editing</h3> <ul style="list-style-type: none">✓ Varied range of difficulty levels✓ Diverse topics to gain exposure to different text types✓ Attain exam readiness and confidence✓ Answer key provided for self-evaluation <p>Low S. Y. B.A., M.Ed.</p>	 <p>SPOT EXCEL PUBLISHERS</p> <h3>SECONDARY 3 English Editing</h3> <ul style="list-style-type: none">✓ Varied range of difficulty levels✓ Diverse topics to gain exposure to different text types✓ Attain exam readiness and confidence✓ Answer key provided for self-evaluation <p>Low S. Y. B.A., M.Ed.</p>	 <p>SPOT EXCEL PUBLISHERS</p> <h3>SECONDARY 4 English Editing</h3> <ul style="list-style-type: none">✓ Varied range of difficulty levels✓ Diverse topics to gain exposure to different text types✓ Attain exam readiness and confidence✓ Answer key provided for self-evaluation <p>Low S. Y. B.A., M.Ed.</p>
ISBN: 9789811483042	ISBN: 9789811483059	ISBN: 9789811493737	ISBN: 9789811493744

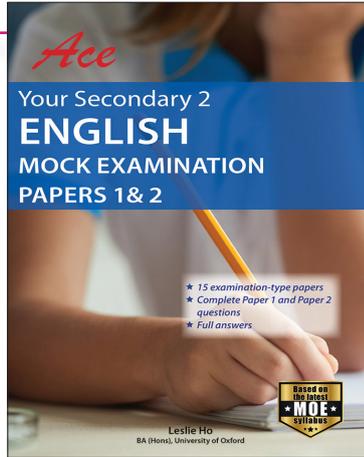
 <p>Passage 5</p> <p>Carefully read the text below, consisting of 12 lines about the suspects of murder in Morocco. The first and last lines are correct. For eight of the lines, there is one grammatical error in each line. There are two more lines with no more errors.</p> <p>If there is NO error in a line, put a tick (✓) in the space provided.</p> <p>If the line is incorrect, circle the incorrect word and write the correct word in the space provided. The correct word you provide must not change the original meaning of the sentence.</p> <p>The Norwegian police have concluded that foot-killing of a Scandinavian tourist in Morocco by themselves pledging allegiance to the Islamic State authentic. It came as the Moroccan authorities are more people in connection with the killing of the United, 28, of Norway and Louisa Vestreager, Jens in a remote corner of the Atlas Mountains. Moroccan terrorist act. Thirteen men in all has been detained. Central Bureau of Judicial Investigation said they been arrested in the regions of Manakhez, Tangi. They were carrying arm and 'suspicious material' of explosives at the time of their arrests.</p>	 <p>Passage 16</p> <p>Carefully read the text below, consisting of 12 lines about how exercise benefits body. The first and last lines are correct. For eight of the lines, there is one grammatical error in each line. There are two more lines with no more errors.</p> <p>If there is NO error in a line, put a tick (✓) in the space provided.</p> <p>If the line is incorrect, circle the incorrect word and write the correct word in the space provided. The correct word you provide must not change the original meaning of the sentence.</p> <p>People who exercise have different proteins moving through their bloodstream than people who do not, according to a interesting new study of the inner landscape of sedentary and active people. The proteins in question affect many different aspects of our body, from immune response and blood-sugar levels to wound healing, so the new findings might bring us closer to understanding just how exercise enhances our health at a deep, molecule level. By now, we can all agree, I hope, that being physically active is good for us. It raises fitness in multiple other discrete way, more stronger and well. But scientists have surprisingly little full knowledge of just how exercise accomplished all of this. They can see or measure most of the desirable outcome of being active. But many of the underlying, intricate physiological steps involved remain mysterious to scientists.</p>	 <p>Passage 41</p> <p>Carefully read the text below, consisting of 12 lines about the child soldiers fighting in the Yemen War. The first and last lines are correct. For eight of the lines, there is one grammatical error in each line. There are two more lines with no more errors.</p> <p>If there is NO error in a line, put a tick (✓) in the space provided.</p> <p>If the line is incorrect, circle the incorrect word and write the correct word in the space provided. The correct word you provide must not change the original meaning of the sentence.</p> <p>The civil war in Darfur robbed Hager Shomo Ahmed of almost any hope. Raiders had stolen his family's cattle, and a dozen years of bloodshed have left his parents destitute. Then, around the end of 2016, Saudi Arabia offered a lifeline: The kingdom would pay as much as \$10,000 if Hager joined its forces fighting 1,200 miles away in Yemen. Hager, 14 at the time, could not find Yemen on the map, and his mother was appalled. He had survived one horrific civil war — how could his parents toss him onto another? But the family overrules her. The United Nations has called the war in Yemen the world's worst humanitarian crisis. An intermittent blockade by the Saudis and their partners in the United Arab Emirates has pushed as many as 12 million people to the brink of starvation, kills some 85,000 children, according to aid groups, a disastrous number of victims.</p>
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Extensive Practices

Passages of varied difficulty levels and diverse topics for students to gain exposure to editing different text types.

Ace Your Sec 2 English



ISBN: 9789811801501

This book is a compilation of the latest practice questions in accordance with the latest syllabus issued by the Ministry of Education.

With contributions from teacher consultants who have decades of experience, the examination practices in this book aim to be a one-stop and comprehensive guide for English learning. The questions are challenging and specifically hand-picked for their value in teaching students important concepts and examination techniques.

Mock Examination Papers

The book consists of 15 mock examination papers following the format of real examination papers. This allows students to be better prepared for the examinations.

Full Answers

Help students to discover weaknesses in their answering techniques which they may not be aware of.

Mock Examination 1
PAPER 1 – WRITING

SECTION A (10 MARKS)
Carefully read the text below, consisting of 12 lines about hats. For eight of the lines, there is a gap grammatical error in each line. If there is NO error in a line, put a W in the space provided. If the line is incorrect, circle the incorrect word and write the correct word in the space provided. The correct word you provide must not change the original meaning of the text.
Example: I arrived to my destination at 2 p.m.
My mother always wears sensible clothes.

SECTION B (30 MARKS)
You are advised to write between 250 and 350 words for this section. You should look at the poster on the Back-to-School project, study the information carefully and plan your answer before beginning to write.

The Back-to-School project is a community project to raise funds to help poor, needy or homeless children. Help to alleviate the financial burden on the families of these less fortunate children to have an education. The project was launched by the non-profit organisation WeCare to raise funds. You are passionate about the project and you are invited to participate in the Flag Days.

Using the relevant information in the poster, write a speech to include:

- Three reasons why you would like your school to participate in the project.
- How the project will benefit the underprivileged.
- What your schoolmates will learn from the project.

Write your speech in clear accurate English and in a persuasive style. You should use your own words as much as possible.

Back-to-School project

SIGN UP
Sign up for our next Flag Day through any of the following ways:
Calling our hotline: 6476 2975
Sending an email to backtoschool@wecare.com
Leaving us a message on our Facebook page

Meeting points
Meet our representatives at the following MRT stations on the first day of each month to collect your donation boxes, and your Flag Day badges:
Bugis MRT Station, Bishan MRT Station, Jurong East MRT Station, Christmas MRT Station.

Timing and other details will be provided when you sign up.

Benefits of participating in our Flag Days

- The funds that you raise will go a long way towards helping less fortunate children afford their school fees, school textbooks and their school stationery.
- Without your participation, some of these children may be at a disadvantage in school despite their willingness to learn.
- Some of the children may be very grateful towards you and write personal thank you notes to show their gratitude!
- For those who participate often, you may get a Certificate of Participation and you can include it in your portfolio.

ANSWERS

Section A

History, the study of past events, is of great importance. This is so as history gives us insights into tragic disasters of the past, which allows us to prevent a repeat of such incidents. When we study the successes and failures of the past, we are able to learn from our mistakes. Through the study of history, world leaders of today understand the importance of diplomacy. They engage in dialogue with other countries to negotiate and resolve peace settlements in order to prevent wars and conflicts from happening. Given the importance of history, it is saddening to see the subject being dropped in schools. This is especially so as the study of history also develops our critical thinking skills, and sharpens our mental faculties. Such thinking skills are important for many areas in life.

Section B

1. The purpose of the poster is to recruit people to work at Pando Restaurant.
2. It suggests that people at Pando Restaurant care about and support their employees just how they would take care of and support their own family.
3. It shows Pando Restaurant employees smiling and enjoying themselves while working, suggesting a positive work environment.
4. The phrase is 'our legendary dishes'.
5. Sebti would carve a small opening at the head of the goat, remove the seeds, put in the leaves and salt it and then place the outside of the goat's head.
6. It means an antique / nouven / knock knock / baric / a baric / novelty shop (1m for any 1 ans)
7. It means to stand nailed / fixed (1) in the spot for a long time (1).
8. He gave a disgusted look because he could not accept that fact that a male child (1) of his spent his time on such useless (1) hobbies.
9. Sebti was indulging in a hobby (1) that is more commonly associated with females (1).
10. He thought that boys with such hobbies had no future.
11. She felt that she had failed (1) to fulfil her role as a mother in teaching her son (1).
12. It was because Sebti's mother felt extremely embarrassed (1) and humiliated (1).
13. Sebti's father might scold Sebti (1) and force him to throw away his goods (1).
14. Paragraph 2: neutral
Paragraph 3: unperturbed
Paragraph 4: proud
Paragraph 6: frightened

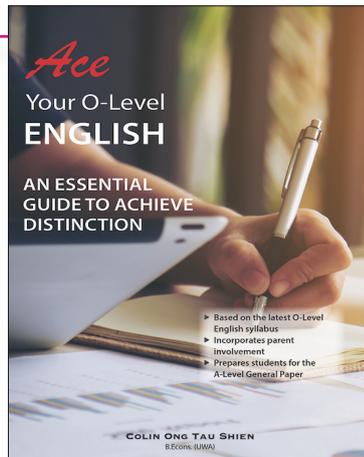
Section A

15. The slope was filled with only sand (1), some lonely plants of wild flowers and a few cactus plants (1).
16. A child learns instinctively (1) about the world around him by using his senses to draw conclusions (1) and then confirming these conclusions through experiments (1).
17. They help children discover how objects in the natural world behave (1) and allow them to use their imagination (1).
18. (a) Lisa playing freely with a baby can help him/her overcome anxiety and insecurity.
(b) Insecure children will become too dependent (1) and afraid to make choices on his/her own (1).
19. Points:
- provide a variety of natural objects to play with
- let children discover how natural objects behave
- encourage them to use their imagination
- play with their children
- help them overcome anxiety and insecurity
- give them confidence through games that involve physical movement
- encourage their child to play with teddy bears or toys to learn to interact with others
- refrain from dismissing or controlling a child or the way he/she plays
- give approval to children in order to encourage them
- make suggestions to promote learning

Section A

Hamsters are often regarded as 'starter' pets for children. Such a perception is probably erroneous. Hamsters are extremely small and fragile creatures and if not treated with proper care and restraint, can easily suffer bodily harm. Hamsters are also rather shy and solitary creatures by nature, which means they may not be the ideal pet for companionship. As hamsters are naturally prey, they tend to spend most of their time in hiding and are circulary active primarily during twilight hours when predators will not normally be around. Therefore, they may not be as good a pet choice as other animals such as cats or dogs. Some parents buy hamsters for cats their children to teach them how to be responsible and care for their pets. Unfortunately, this often fails and many of these hamsters end up neglected. Some of these hamsters do not survive.

Ace Your O-Level English



ISBN: 9789811460531

The Ace Your O-Level English: An Essential Guide to Achieve Distinction book aims to act as a catalyst to help students ace their O-Level English exams without stress and help them become more globally-aware.

There are ample opportunities for parents to add value to their child's journey in O-Level English. This book also prepares students for the A-Level General Paper and supports the flipped classroom learning concept.

Contents

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Wide Range of Content

The book covers key skillsets required to achieve distinction in the O-Level English exams.

UNIT 2 Books for Discussion

Reading builds mental stamina and helps the student focus when attempting the reading comprehension component of the exam. The books in this section can be borrowed from most libraries.

Book 1
5000-1, the Leicester City story: How we beat the odds to become the Premier League Champions
-Tanner, Rob

1. Describe 3 interesting parts of this book.

2. What do you think Singaporeans can learn from this book?

Books for Discussion

Various books are recommended for reading, to build up students' reading comprehension. Questions are also posted for each book to test their understanding of the contents.

Supplementary Activity

- Step 1** Collect your own book reviews.
Step 2 Create a book review site like the one below.



Pointer The rule of three is a writing principle that suggests that a trio of events or characters is more humorous, satisfying, or more effective than other numbers in executing a story and engaging a reader.

Note Listening and watching these videos will help prepare the student for oral and listening comprehension.

Recommended videos

- BBC videos:**
<https://www.youtube.com/watch?v=3Z2g4e>
<https://www.youtube.com/watch?v=3Z2g4e>
<https://www.youtube.com/watch?v=3Z2g4e>
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<https://www.youtube.com/watch?v=3Z2g4e>

Pointer The poverty gap index, sometimes referred to as the poverty gap ratio or PG index, is defined as an average of the ratio of the poverty gap to the poverty line.

Flipped Classroom

The flipped classroom learning concept is incorporated throughout the book, such as this supplementary activity example of creating a book review site.

Parent's Involvement

Various activities are included in the Parent's Zone unit that encourage parents to work with their children to improve results.

UNIT 10 Parent's Zone

In this section, parents are encouraged to work with their children to improve results. In some activities, the children will get an insight into their parents' work.

Activity 1

Locate metaphors from here:
<http://www.enrichmentforanyblog.com/famous-metaphors>

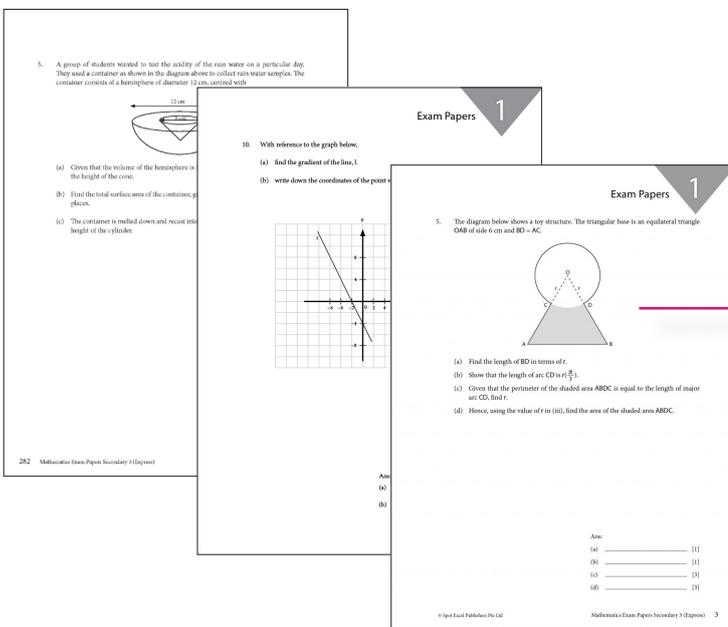
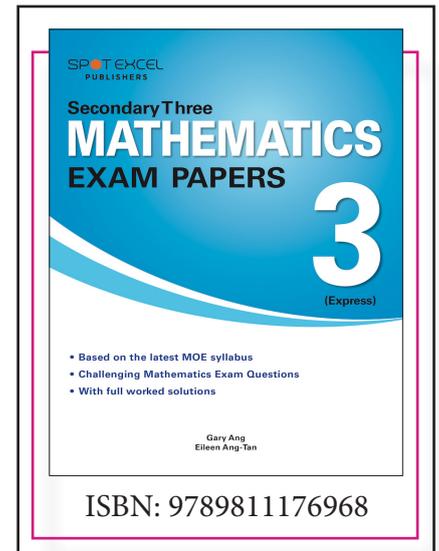
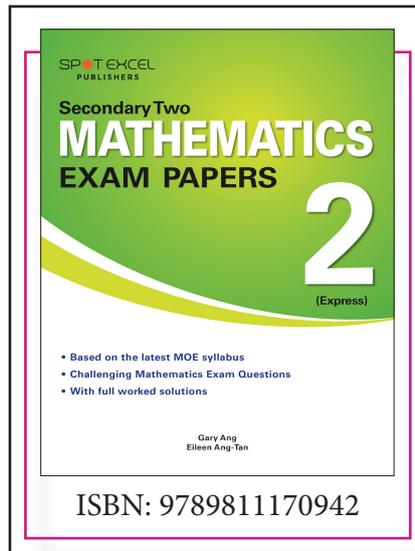
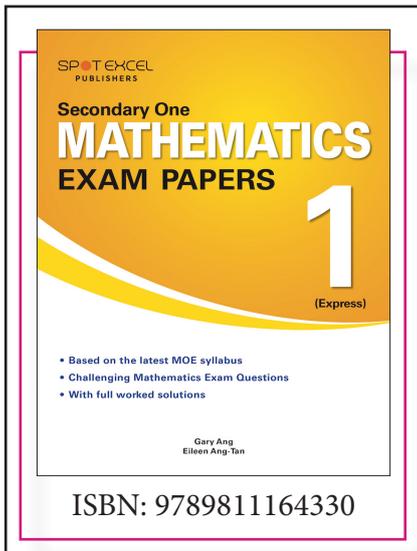
- Step 1** Select metaphors that motivate or describe a particular sentiment.
Step 2 Get cue cards and print each chosen metaphor on different cards.
Step 3 Pin them up and create a table of reference.

Here are some to get you going:

- "The Big Bang" -- Fred Hoyle
- "All the world's a stage, and all the men and women merely players. They have their exits and their entrances." -- William Shakespeare
- "Art washes away from the soul the dust of everyday life." -- Pablo Picasso
- "All religions, arts and sciences are branches of the same tree." -- Albert Einstein
- "Chaos is a friend of mine." -- Bob Dylan
- "All our words are but crumbs that fall down from the feast of the mind." -- Khalil Gibran
- "If you want a love message to be heard, it has got to be sent out. To keep a lamp burning, we have to keep putting oil in it." -- Mother Teresa

Mathematics Exam Papers

The transition from primary mathematics to secondary mathematics may not be easy for some students. The transition to using equations, symbols, and negative numbers from solving problems using models can all add up to make mathematics difficult and not as enjoyable. Modelled after top schools' examinations, this series aims to provide students with more examination-styled questions so that they can further hone their skills to perfection. It is hoped that this series will help students become more confident and competent in their mathematics.



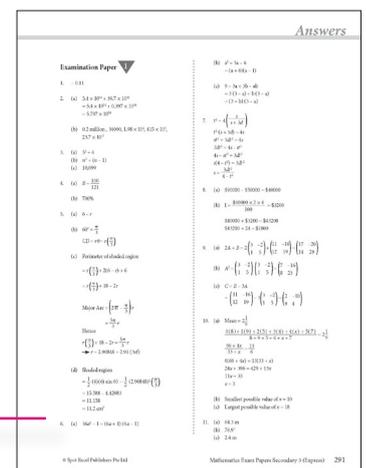
Challenging Problems

This series includes questions and problems that are more challenging to increase students' exposure to different types of questions.



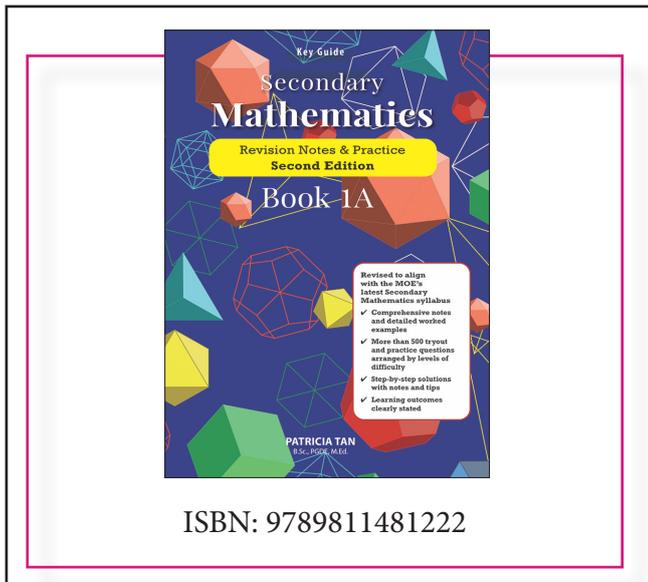
Answers Provided

Full worked solutions are provided so that students or parents can carry out self-checking.

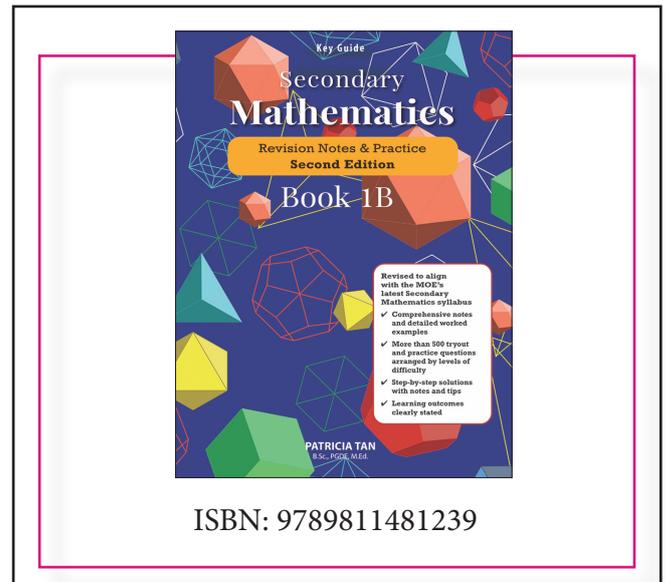


Revision Notes & Practice

Key Guide: Secondary Mathematics – Revision Notes & Practice is a two-volume guide (Books 1A and 1B) designed specifically for students who self-study. This Second Edition is revised to align with the latest Secondary Mathematics syllabus issued by the Ministry of Education, Singapore. A comprehensive set of notes, worked examples and practice questions with complete solutions are presented to help students better understand the fundamentals in mathematics, learn to manipulate mathematical objects as well as revise in a more effective and efficient manner.



ISBN: 9789811481222



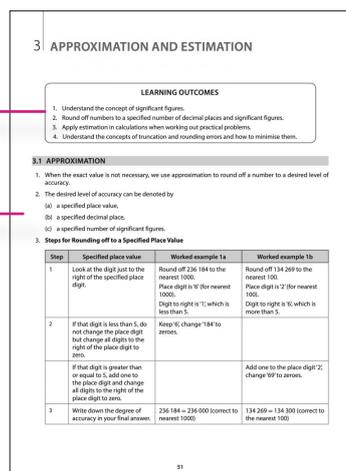
ISBN: 9789811481239

Learning Outcomes

Help students focus on the key learning concepts of each topic.

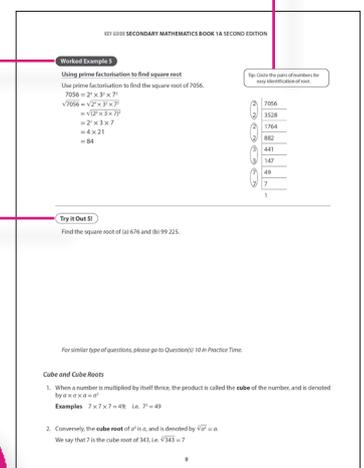
Tips & Notes

These useful bubbles highlight manipulations, strategies and common pitfalls that students may make in the course of their learning.



Worked Examples

Illustrate mathematical concepts presented and help students see how mathematical concepts are applied.



Notes

Explains concepts and consolidates learning.

Try it Out!

The questions in this section are designed to dipstick and reinforce learning immediately after a concept, sub-topic or skill.

107 U2018 SECONDARY MATHEMATICS BOOK 1A SECOND EDITION

PRACTICE TIME

Basic Level

1. Write the following numbers correct to
 (i) the nearest whole number,
 (ii) 2 decimal places and
 (iii) 3 decimal places.

(a) 46.8345

(b) 0.000 92

(c) 172.9405

2. Using a calculator, express
 (a) $\frac{1}{3}$ as a decimal correct to 3 decimal places,
 (b) $\frac{2}{5}$ as a decimal correct to 6 decimal places.

3. 6338 people attended a concert at the Singapore Indoor Stadium. Express this number correct to the nearest
 (a) 10 000,
 (b) 1000,
 (c) 100.

4. State the number that is closest to
 (a) 1000,
 (b) 100,
 (c) 10.

Number
(a) 0.1296
(b) 1.2960
(c) 0.012 96
(d) 0.012 960
(e) 1.296
(f) 0.012 960
(g) 0.000 129
(h) 0.000 129
(i) 0.000 129
(j) 12.96
(k) 12.960
(l) 12.960

5. Write each of the number of 14
 (a) 7495.

107 U2018 SECONDARY MATHEMATICS BOOK 1A SECOND EDITION

3 - Approximation and Estimation

17. The web blockbuster *Star Wars: The Force Awakens* took 12 days to gross USD 1 billion at the worldwide theatre. Find the average box office earnings per day, correct to the nearest ten thousand.

18. In 2014, readership for *The Straits Times* and *Today* newspapers are 1.34 million and 565 000 respectively. How many times is the *The Straits Times* readership over the *Today* readership? Correct your answer to 3 significant figures.

19. Given that $\sqrt{287} = 16.94$, without using a calculator, evaluate $\sqrt{28700}$.

20. Given that $\sqrt{432} = 20.78$ and $\sqrt{432} = 6.573$, without using a calculator, evaluate
 (i) $\sqrt{432}$.

21. Evaluate
 (a) $\sqrt{432}$ to 3 decimal places,
 (b) $\sqrt{432}$ to 5 significant figures.

107 U2018 SECONDARY MATHEMATICS BOOK 1A SECOND EDITION

Advance Level

30. Steven and Julie are each given a seedling to grow over a period of four weeks. At the end of the period, Steven's plant measured 52 cm, while Julie's plant had grown to 48 cm. In the nearest 5 min, what are the maximum and minimum margins that Julie had won by?

31. Mr. Lim drove 346 km, correct to the nearest kilometre. He used 48.8 litres of petrol, correct to the nearest tenth. Find the maximum and minimum amount of petrol consumption in km/l for the journey. Give your answer to 2 decimal places.

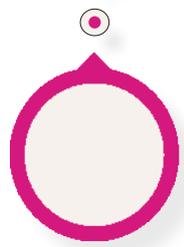
32. Using as much of the given information as is necessary, evaluate
 (a) $\sqrt{5200}$ to 1 s.f.,
 (b) $\sqrt{\frac{100}{225}}$,
 (c) $\sqrt{52.4}$,
 without using a calculator
 ($\sqrt{1.78} = 1.34$, $\sqrt{1.78} = 5.64$, $\sqrt{1.78} = 1.47$, $\sqrt{1.78} = 3.17$)

33. When a number 124 P34 is corrected to 3 significant figures, it becomes 124 000. Given that P is a prime number, deduce the largest possible number for P? Write down reasons for your deduction.



Practice Time

Questions are categorised into three levels of learning – Basic, Intermediate and Advanced – to help students work through, develop and strengthen their understanding of the mathematical concepts.



Solutions

Detailed solutions with tips and notes guide students to work out the most efficient solution to the questions.

Answers & Solutions

UNIT 9

Try It Out 11

(a) $141 \times 208 = 116\ 208$
 $\div 29112$
 Multiply each term by 100 to obtain whole numbers.
 $\frac{141 \times 208}{29112} = \frac{14100 \times 20800}{291120000}$
 Cancel each term by 100.
 $\frac{141 \times 208}{29112} = \frac{141 \times 208}{29112}$
 Cancel each term by 100 and 120.
 $\frac{141 \times 208}{29112} = \frac{141 \times 208}{29112}$
 $\therefore \frac{141 \times 208}{29112} = \frac{141 \times 208}{29112}$

(b) $350 \text{ kg} \times 1.25 \text{ kg} = 350 \times 1.25 \text{ kg}$
 $= 437.5 \text{ kg}$
 $\div 20$
 $= 21.875$
 Divide each term by 100 to obtain whole numbers.
 $\frac{350 \times 1.25}{20} = \frac{35000 \times 125}{200000}$
 Cancel each term by 100 and 125.
 $\frac{350 \times 1.25}{20} = \frac{350 \times 1.25}{20}$
 $\therefore \frac{350 \times 1.25}{20} = 21.875$

(c) $480 \text{ m} \times 1.25 \text{ m} = 480 \times 1.25 \text{ m}$
 $= 600 \text{ m}$
 $\div 100$
 $= 6$
 Divide each term by 100 to obtain whole numbers.
 $\frac{480 \times 1.25}{100} = \frac{48000 \times 125}{1000000}$
 Cancel each term by 100 and 125.
 $\frac{480 \times 1.25}{100} = \frac{480 \times 1.25}{100}$
 $\therefore \frac{480 \times 1.25}{100} = 6$

Try It Out 20

Let the amount of money received by Victoria = 7x.
 Then the amount of money received by Elizabeth = 4x,
 and the amount of money received by Terry = 3x.

(a) $7x + 4x + 3x = 200$
 $14x = 200$
 $x = \frac{200}{14}$
 $x = 14.2857$
 \therefore Total amount of money shared = $(4 + 3 + 7) \times 14.2857$
 $= 170$

(b) Amount of money received by Victoria = 7×14.2857
 $= 100$
 Amount of money spent by Victoria = $100 - 100 = 0$

Try It Out 21

(a) $4 = 4 - 20 \times 16$
 $4 = 4 - 320$
 $4 = -316$
 $\therefore 4 = -316$

(b) $5 = 5 - 20 \times 16$
 $5 = 5 - 320$
 $5 = -315$
 $\therefore 5 = -315$

(c) $6 = 6 - 20 \times 16$
 $6 = 6 - 320$
 $6 = -314$
 $\therefore 6 = -314$

Try It Out 22

(a) $5x + 3y = 10$
 $2x + 4y = 10$
 Divide both sides by 2.
 $\frac{5x + 3y}{2} = \frac{10}{2}$
 $\frac{2x + 4y}{2} = \frac{10}{2}$
 $\frac{5x + 3y}{2} = \frac{2x + 4y}{2}$
 Multiply both sides by 2.
 $5x + 3y = 2x + 4y$
 $5x - 2x = 4y - 3y$
 $3x = y$
 $\therefore \frac{y}{3} = x$

(b) $3x + 2y = 10$
 $4x + 3y = 10$
 Multiply each side by 3.
 $9x + 6y = 30$
 $12x + 9y = 30$
 Subtract the second equation from the first.
 $9x + 6y - (12x + 9y) = 30 - 30$
 $9x + 6y - 12x - 9y = 0$
 $-3x - 3y = 0$
 $-3x = 3y$
 $x = -y$

Try It Out 41

(a) $3x - (2x - 2) = 3x + 2 = 18$
 $3x - 2x + 2 = 18$
 $x + 2 = 18$
 $x = 18 - 2$
 $x = 16$

(b) $2x^2 + 4x - 10 = 0$
 $x^2 + 2x - 5 = 0$
 $x = \frac{-2 \pm \sqrt{2^2 - 4(1)(-5)}}{2(1)}$
 $x = \frac{-2 \pm \sqrt{4 + 20}}{2}$
 $x = \frac{-2 \pm \sqrt{24}}{2}$
 $x = \frac{-2 \pm 2\sqrt{6}}{2}$
 $x = -1 \pm \sqrt{6}$

(c) $3x^2 + 5x - 2 = 0$
 $x = \frac{-5 \pm \sqrt{5^2 - 4(3)(-2)}}{2(3)}$
 $x = \frac{-5 \pm \sqrt{25 + 24}}{6}$
 $x = \frac{-5 \pm \sqrt{49}}{6}$
 $x = \frac{-5 \pm 7}{6}$
 $x = \frac{-5 + 7}{6} = \frac{2}{6} = \frac{1}{3}$
 $x = \frac{-5 - 7}{6} = \frac{-12}{6} = -2$

Try It Out 51

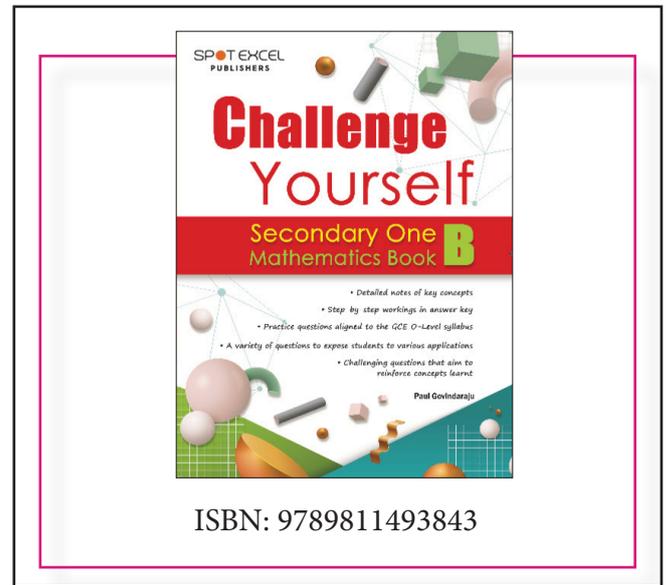
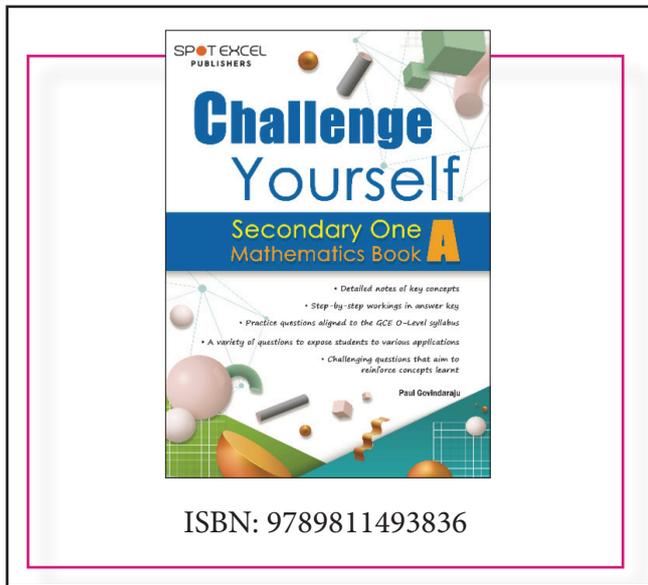
(a) Interest at end of 1 year 3 months = $2700 \times \frac{3}{4} \times \frac{1}{100}$
 $= 2025 \times \frac{1}{100}$
 $= 20.25$
 \therefore Total amount at end of 1 year 3 months = $2700 + 20.25$
 $= 2720.25$

(b) Interest at end of 1 year 3 months = $2700 \times \frac{3}{4} \times \frac{1}{100}$
 $= 20.25$
 \therefore Total amount at end of 1 year 3 months = $2700 + 20.25$
 $= 2720.25$

(c) Interest at end of 1 year 3 months = $2700 \times \frac{3}{4} \times \frac{1}{100}$
 $= 20.25$
 \therefore Total amount at end of 1 year 3 months = $2700 + 20.25$
 $= 2720.25$

Challenge Yourself

This series of Challenge Yourself Mathematics books contains detailed notes of key concepts and a variety of practice questions aligned to the GCE O-Level syllabus to expose students to various applications. The questions are challenging and aim to reinforce concepts learnt. Step-by-step workings are also provided in the answer key for self-evaluation.



CHAPTER 1
PRIMES, FACTORS AND MULTIPLES

Big Ideas Measurement and Notations

Learning Outcomes

No.	Learning Objectives	Tick
1	Recognise factors, and multiples of a number	
2	Recognise prime numbers	
3	Express a composite number as a product of its prime numbers	
4	Express a number in index notation	
5	Find the highest common factor (HCF) and lowest common multiple (LCM) of a group of numbers by using prime factorisation.	
6	Evaluate squares, cubes and square root and cube roots using prime factorisation.	

1.1 Factors
A number may be made by multiplying two whole numbers together. The numbers that are multiplied together are called **factors** of the final number.

Example 1
The number 24 can be expressed as a product of 2 whole numbers as follows:
 $3 \times 24 = 24$
 $2 \times 12 = 24$
 $3 \times 8 = 24$
 $4 \times 6 = 24$
We say 1, 2, 3, 4, 6, 8, 12 and 24 are factors of 24.

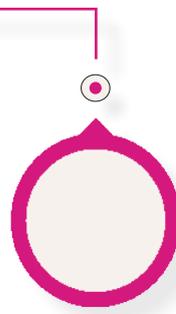
Example 2
The number 27 can be expressed as a product of 2 whole numbers as follows:
 $3 \times 27 = 27$
 $3 \times 9 = 27$
We say 1, 3, 9 and 27 are factors of 27.

The **common factors** of two numbers are the factors that are found in both the numbers.
Step 1 List the factors of the two numbers.
Step 2 Identify common numbers as factors of both numbers.

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Learning Outcomes

A checklist of learning outcomes is included at the start of each chapter for students to track their learning progress.



1 - Primes, Factors & Multiples

Method 2: By ladder method

30	75	Ladder method for HCF
15	25	Step 1 Divide the numbers by a factor common to both numbers.
5	5	Step 2 Continue until there are no common factors.
		Step 3 Write the HCF as a product of the divisors.

Highest common factor of 30 and 75 = $3 \times 5 = 15$

Method 3: Using index notation

$30 = 2 \times 3 \times 5$
 $75 = 3 \times 5 \times 5$

1. List the prime factorization of each number in index notation.
2. Pick the common factors.
3. Multiply the lowest power of each prime factorization.

HCF = $3 \times 5 = 15$

The highest common factor of 30 and 75 is 15.

1.7 Lowest Common Multiple (LCM)
The smallest common multiple of a group of numbers is called the lowest common multiple (LCM) of the given numbers. There are 3 ways to find LCM.
• Method 1: By listing all factors.
• Method 2: By ladder method (preferred method).
• Method 3: Using index notation (unpreferred method).

Example 1
Find the lowest common multiple of 24 and 36.

Method 1: By listing all factors
Multiples of 24 are: 24, 48, 72, 96, 120, 144, 168, 192, 216, ...
Multiples of 36 are: 36, 72, 108, 144, 180, 216, ...
The common multiples of 24 and 36 are 72, 144, 216, ...
The lowest common multiple of 24 and 36 is 72.

Method 2: By ladder method

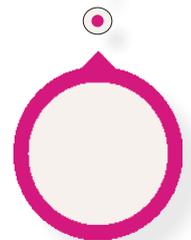
24	36	Ladder method for LCM
12	18	Step 1 Divide the numbers by a factor common to both numbers.
6	9	Step 2 If there are no more common factors, divide by one of the remaining quotients (3 or 3).
2	3	Step 3 If a number is not divisible, carry it down to next line.
1	1	Step 4 Continue Step 2 & 3 until only 1 remains.
		Step 5 To obtain LCM, multiply all the divisors.

The lowest common multiple of 24 and 36 = $2 \times 2 \times 3 \times 3 \times 3 = 72$

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Detailed Examples

Examples with various methods and clear step-by-step guides are provided.



Practice Questions

1. Find the common factors of the following.

(a) 15 and 20
Ans: _____

(b) 20 and 24
Ans: _____

(c) 25 and 40
Ans: _____

(d) 30 and 50
Ans: _____

(e) 12, 18 and 42
Ans: _____

(f) 24, 32 and 36
Ans: _____

2. Find the first 3 common multiples of the following.

(a) 4 and 6
Ans: _____

(b) 15 and 20
Ans: _____

(c) 9 and 12
Ans: _____

(d) 30 and 40
Ans: _____

(e) 4, 8 and 16
Ans: _____

(f) 5, 10 and 30
Ans: _____

Challenge Yourself Secondary One Mathematics Book A

3. From the numbers 1, 2, 3, 4, 5, 6, 7, 8 and 9, find the sum of the prime numbers.
Ans: _____

4. List all the prime numbers between 20 and 35.
Ans: _____

5. Express 38 as a sum of two different prime numbers.
Ans: _____

6. List all the prime numbers from the following list: $\frac{1}{2}, -2, 6, 1, 2, \sqrt{2}, 7$
Ans: _____

7. Express each of the following numbers as a product of its prime factors in index notation.

(a) 50
Ans: _____

(b) 42
Ans: _____

(c) 120
Ans: _____

(d) 140
Ans: _____

(e) 300
Ans: _____

(f) 4500
Ans: _____

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Practice Questions

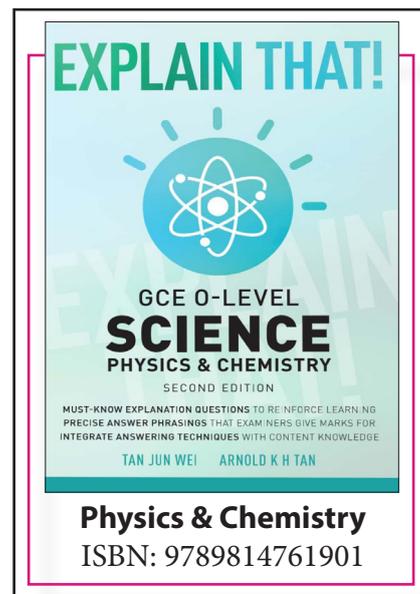
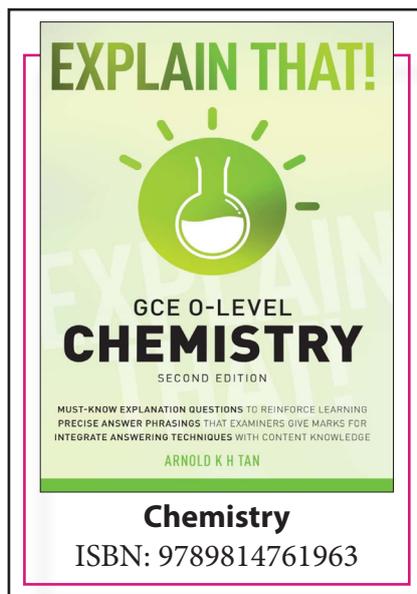
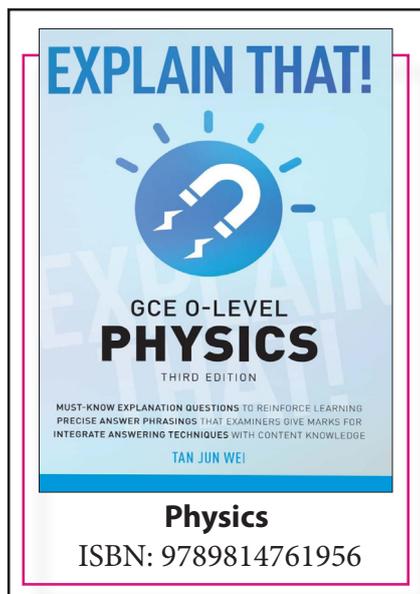
Multiple practice questions for each concept to reinforce what was learnt.



Explain That!

Explain That! is a series of comprehensive guides designed to help students master the skill of answering qualitative questions. Each title comprises a well-curated selection of questions which cover a variety of key ideas and concepts. These books train students to construct their explanations using examiner-style phrasing, giving them greater confidence before and during examinations.

The Explain That! series of books contains questions that have been summarised, distilled and refined from over hundreds of exam papers, spanning different schools, and national and international examinations.



105 The following diagram shows the design of a disposable coffee cup. Using ideas about pressure, explain why the design includes an air hole on the lid of the coffee cup.

side view top view

When a person drinks from the drinking hole of a coffee cup without an air hole, the pressure of the air above the coffee decreases. Since the atmospheric pressure is greater than the pressure of air in the cup, the flow of coffee out of the drinking hole reduces to a trickle.

The air hole on the lid allows the surrounding air to enter the cup, keeping the air above the coffee at atmospheric pressure. This ensures that the coffee can flow out from the drinking hole into the person's mouth.

107 Explain how a change in pressure enables a person to suck liquids out of a cup using a straw.

When a person sucks air out of a straw, the pressure inside the straw decreases. Atmospheric pressure pushes the liquid from outside the straw into the straw column, followed by the person's mouth.

Pressure

106 What are the metals which can be extracted using coke (carbon powder)?

All metals below carbon (zinc, iron, tin and lead) can be extracted by heating a mixture of a metal oxide with coke over a strong heat source, in the absence of oxygen.

$$\text{ZnO (s)} + \text{C (s)} \rightarrow \text{Zn (s)} + \text{CO (g)}$$

$$\text{PbO (s)} + \text{C (s)} \rightarrow \text{Pb (s)} + \text{CO (g)}$$

Any oxygen present will oxidise the metals formed. The more reactive the metal, the more stable the metal oxide, hence a stronger heat source is required. A constant stream of nitrogen or a noble gas can be used to provide an inert environment.

4.5 Iron

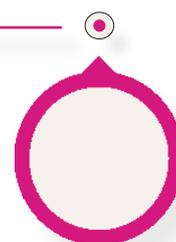
108 Apart from iron, which other element is always present in steel alloys? Explain why this is so.

Carbon is present in all steel alloys because there is always residual carbon during the manufacture of iron in the blast furnace.

Iron 85

Informative Diagrams

Detailed diagrams are provided to promote clear understanding of concepts.



Range of Questions

Each topic contains a wide range of questions to help explain concepts, and equip students with skills to answer them.

2.3 Ionic, Covalent and Metallic Bonding

105 Explain why the melting point of magnesium oxide is twice that of sodium chloride even though they have the same crystal lattice structure.

The charges on the magnesium and oxide ions are higher than the charges on the sodium and chloride ions. Magnesium oxide has a stronger ionic bond which requires more energy to overcome.

106 Why do ionic compounds conduct electricity only when molten or dissolved in water?

In a solid or lattice structure, ions are held in their fixed positions by strong electrostatic forces between oppositely charged ions. However, ions can move when molten or when dissolved in water to conduct electricity.

107 What is the difference between valence electrons and the valency of an element?

Valence electrons (or outermost shell electrons) refer to the electrons found in the outermost shell of each element, whereas valency is the number of electrons which an element can gain or lose from a hydrogen atom. For example, a sodium atom has 1 valence electron and a valency of 1, since Na can lose an electron to a hydrogen atom, to form sodium hydride (NaH). A chlorine atom has 7 valence electrons but a valency of 1, since chlorine gains a single electron from hydrogen to form the chloride ion (Cl⁻).

105 Explain why a fuse must be placed in the live wire instead of the neutral wire.

If the fuse is placed in the neutral wire, the electrical appliance may become or remain live in the event of an electrical fault, as the large current that flows through the live wire will not flow through the neutral wire. By placing the fuse in the live wire, the electrical appliance will not be live when an electrical fault occurs as the fuse will melt and break the circuit, making the electrical appliance safe.

106 When choosing a fuse, explain why the fuse rating should not be too large compared to the working current of the electrical appliance.

If the fuse rating is too large, it allows an excessive amount of current to flow into the faulty appliance without melting. The amount of excessive current is much larger than the working current, and this may result in an electrical fire.

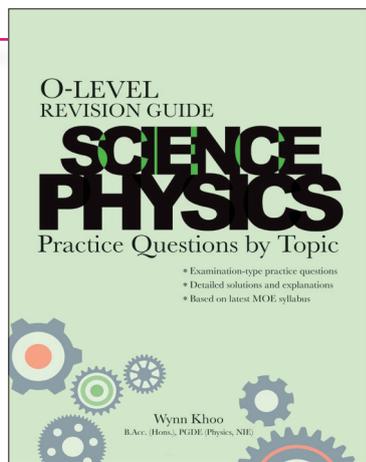
105 An appliance is rated 12 V, 8 W. Explain what this means.

When there is a potential difference of 12 V across the appliance, 8 W of power is dissipated.

106 Explain the importance of using a miniature circuit breaker in a consumer unit.

Circuit breakers are safety devices that trip and turn off the electricity supply whenever an excessive current flows through the live wire. This prevents the appliance from being live, and ensures the safety of the person handling the faulty electrical appliance.

O-Level Revision Guide Series



Science (Physics)

ISBN: 9789811130847

This revision practice book was written specially to help students comprehend the topics in the new Physics syllabus better. The contents are well organised and systematic to help students self-study and revise in an effective way.

The book begins with an introductory chapter on physical quantities and measurements and follows the sequence of the school textbooks closely. Each chapter consists of examination-type questions that will stretch and widen students' exposure to different variations of questions. Answers to the exercises are also provided for students to evaluate their own learning.

Today's education arena is very competitive. This book aims to equip students with the necessary knowledge and give them an additional edge in the examinations.

GET THAT SOLUTION!

O-LEVEL REVISION SCIENCE PHYSICS PRACTICE BY TOPIC

4. Two solid cubes are made from the same material. One cube has sides that are two times as long as the other.

When placed on one side, the small cube exerts a pressure P on the ground. If one area of each side of the small cube is A , determine the pressure exerted by the large cube standing on one of its faces.

A 13 P B 8 P C 4 P D 2 P

7. The figure shows a hydraulic device that transmits pressure exerted at Piston A to Piston B. In liquid is incompressible. Piston A has an area of 0.25 m² and Piston B is 0.25 m². What is the force exerted at piston B given that pressure exerted at A is the same as pressure exerted at B?

A 100 N B 20 N C 15 N D 5 N

8. The system shown in the diagram contains a liquid.

A downward force of 80 N is exerted on piston K. What will be the upward force exerted by the liquid on piston L?

A 4 N B 1600 N C 1200 N D 6400 N

9. A pin is squeezed between the finger and the thumb.

Which of the following statements is correct?

A The force of the pin is larger on the finger than on the thumb.
 B The force of the pin is larger on the thumb than on the finger.
 C The pressure of the pin is larger on the finger than on the thumb.
 D The pressure of the pin is larger on the thumb than on the finger.

GET THAT SOLUTION!

UNIT 19 - Magnetism

11. Fig. 11.1 shows a light aluminium rod resting between the poles of a magnet. A current is passed through the rod from two brass strips connected to a power supply.

Fig. 11.1

(a) Explain what is meant by a magnetic field.

(b) Describe and explain the direction which the rod will move when the switch is closed.

(c) Suggest two ways to increase the force acting on the rod.

(d) Copy the aluminium rod onto your answer sheet. Draw the pattern of the magnetic field due to the current in the rod only. Indicate clearly the direction of the current flow and magnetic field.

Examination-type Questions

Each chapter consists of multiple-choice questions and structured questions.

Detailed Solutions

Solutions come with detailed explanations, even for multiple-choice questions.

ANSWERS

Unit 1

Multiple-Choice Questions

1. D 2. C 3. B 4. 6000 g, 72 000 000 L, 0.0002 g
 5. (a) 200 A 7. (b) 200 A
 8. (a) 300 A, 0.0001 V

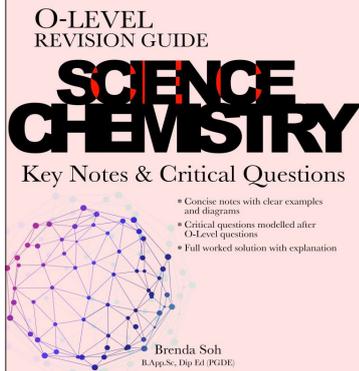
Unit 2

Multiple-Choice Questions

1. B 2. C 3. D 4. C 5. B 6. A 7. A 8. A
 9. C 10. B 11. D 12. B 13. A 14. D 15. A

Structured Questions

1. (a) 4.4 (b) 2.0 (c) 1.0
 2. (a) 1.0 m/s (b) 1.0 m/s
 3. (a) 1.0 m/s (b) 1.0 m/s
 4. (a) 1.0 m/s (b) 1.0 m/s
 5. (a) 1.0 m/s (b) 1.0 m/s
 6. (a) 1.0 m/s (b) 1.0 m/s
 7. (a) 1.0 m/s (b) 1.0 m/s
 8. (a) 1.0 m/s (b) 1.0 m/s
 9. (a) 1.0 m/s (b) 1.0 m/s
 10. (a) 1.0 m/s (b) 1.0 m/s
 11. (a) 1.0 m/s (b) 1.0 m/s
 12. (a) 1.0 m/s (b) 1.0 m/s
 13. (a) 1.0 m/s (b) 1.0 m/s
 14. (a) 1.0 m/s (b) 1.0 m/s
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 17. (a) 1.0 m/s (b) 1.0 m/s
 18. (a) 1.0 m/s (b) 1.0 m/s
 19. (a) 1.0 m/s (b) 1.0 m/s
 20. (a) 1.0 m/s (b) 1.0 m/s
 21. (a) 1.0 m/s (b) 1.0 m/s
 22. (a) 1.0 m/s (b) 1.0 m/s
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 31. (a) 1.0 m/s (b) 1.0 m/s
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 44. (a) 1.0 m/s (b) 1.0 m/s
 45. (a) 1.0 m/s (b) 1.0 m/s
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 76. (a) 1.0 m/s (b) 1.0 m/s
 77. (a) 1.0 m/s (b) 1.0 m/s
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 79. (a) 1.0 m/s (b) 1.0 m/s
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 81. (a) 1.0 m/s (b) 1.0 m/s
 82. (a) 1.0 m/s (b) 1.0 m/s
 83. (a) 1.0 m/s (b) 1.0 m/s
 84. (a) 1.0 m/s (b) 1.0 m/s
 85. (a) 1.0 m/s (b) 1.0 m/s
 86. (a) 1.0 m/s (b) 1.0 m/s
 87. (a) 1.0 m/s (b) 1.0 m/s
 88. (a) 1.0 m/s (b) 1.0 m/s
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 91. (a) 1.0 m/s (b) 1.0 m/s
 92. (a) 1.0 m/s (b) 1.0 m/s
 93. (a) 1.0 m/s (b) 1.0 m/s
 94. (a) 1.0 m/s (b) 1.0 m/s
 95. (a) 1.0 m/s (b) 1.0 m/s
 96. (a) 1.0 m/s (b) 1.0 m/s
 97. (a) 1.0 m/s (b) 1.0 m/s
 98. (a) 1.0 m/s (b) 1.0 m/s
 99. (a) 1.0 m/s (b) 1.0 m/s
 100. (a) 1.0 m/s (b) 1.0 m/s



Science (Chemistry)
ISBN: 9789811133961

This guide covers the entire O-Level Science Chemistry syllabus. It is an ideal study guide for the preparation of assessments and examinations, with units arranged in chronological order under sub-topics.

Each unit consists of concise notes with clear examples and detailed diagrams to facilitate effective learning and knowledge building. The critical questions found at the end of each chapter consist of a range of essential questions modelled after O-Level questions to assess different aspects of the learning outcomes. Fully worked solutions with explanation are also provided.

UNIT 12
CHEMICAL ANALYSIS

12.1 TEST FOR CATIONS

- Cations can be identified by using sodium hydroxide solution or aqueous ammonia. These reagents are added dropwise to a sample, until the reagents are in excess.
- Cations can be identified by observing:
 - the colour of the precipitate formed on adding a few drops of reagent,
 - the solubility of the precipitate in excess reagent,
 - the evolution of ammonia gas on warming with sodium hydroxide solution.
- Both sodium hydroxide and aqueous ammonia are alkalis which contain hydroxide ions, OH⁻. The formation of precipitate is due to the formation of insoluble metal hydroxides.

$$\text{Mg}^{2+} + \text{H}^+\text{OH}^- \rightarrow \text{OH}^-\text{Mg}^+ \rightarrow \text{Mg}(\text{OH})_2$$

green solution from sodium hydroxide green precipitate
or aqueous ammonia
- The following table summarises the observations obtained when each of the cations is tested with sodium hydroxide solution and aqueous ammonia.

Cation	Sodium hydroxide, NaOH(aq)	Aqueous ammonia, NH ₃ (aq)
Al ³⁺ Aluminium	White precipitate formed, precipitate soluble in excess to form a colourless solution.	White precipitate formed, precipitate insoluble in excess.
Ca ²⁺ Calcium	White precipitate formed, precipitate insoluble in excess.	No precipitate formed.
Cu ²⁺ Copper(II)	Blue precipitate formed, precipitate insoluble in excess.	Blue precipitate formed, precipitate soluble in excess to form a deep blue solution.
Fe ²⁺ Iron(II)	Green precipitate formed, precipitate insoluble in excess.	Green precipitate formed, precipitate insoluble in excess.
Fe ³⁺ Iron(III)	Reddish-brown precipitate formed, precipitate insoluble in excess.	Reddish-brown precipitate formed, precipitate insoluble in excess.
Pb ²⁺ Lead(II)	White precipitate formed, precipitate soluble in excess to form a colourless solution.	White precipitate formed, precipitate insoluble in excess.
Zn ²⁺ Zinc	White precipitate formed, precipitate soluble in excess to form a colourless solution.	White precipitate formed, precipitate soluble in excess to form a colourless solution.
NH ₄ ⁺ Ammonium	No precipitate formed. On warming, colourless and pungent gas evolved which turns moist red litmus paper blue. Ammonia gas is evolved.	

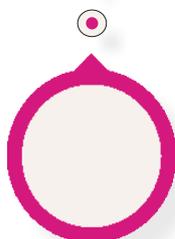
Easy-to-read Tables

Detailed information is placed into tables for easier reading and better understanding.



Thinking Process

Thought process required to reach the answer are emphasised under 'Thinking Process' so that students can learn them easily.



O-Level Science Chemistry Key Notes & Practice by Topic

2. Insoluble salts are prepared by the precipitation method.

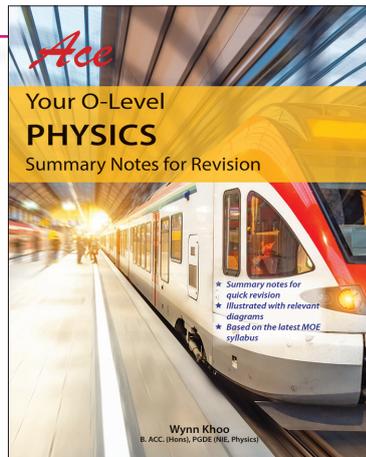
Example: Steps in preparing a dry sample of dry silver chloride salt:

- 20 cm³ 2M silver nitrate solution
- 20 cm³ 2M sodium chloride solution
- 20 cm³ 2M silver nitrate solution
- 20 cm³ 2M sodium chloride solution

Word equation: silver nitrate + sodium chloride → silver chloride + sodium nitrate
Chemical equation: $\text{AgNO}_3(\text{aq}) + \text{NaCl}(\text{aq}) \rightarrow \text{AgCl}(\text{s}) + \text{NaNO}_3(\text{aq})$

- Add equal volumes of silver nitrate solution to sodium chloride solution in a beaker. Stir the mixture.
- Filter the mixture to obtain silver chloride as residue and sodium nitrate solution as filtrate.
- Wash silver chloride salt with distilled water.
- Dry silver chloride salt between sheets of filter paper.

Ace Your O-Level Physics



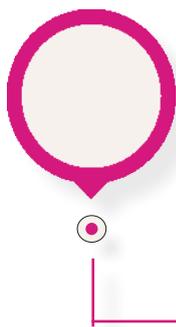
ISBN: 9789811803703

Ace Your O-Level Physics – Summary Notes for Revision is written based on the latest syllabus of code 6091 for students taking the O-Level examination from 2018 and beyond.

The book is organised by topic and provides notes that summarise the key concepts of Physics for students. The book aims to help students comprehend key concepts of Physics by following the syllabus requirements and topics closely.

Informative Diagrams

Diagrams are included in the notes to help students better understand and visualise the concepts. They also help students achieve success and excel in their O-Level Physics examination by making concepts easier to understand.



Ace Your O-Level Physics – Summary Notes for Revision

Vectors and Scalars
 Vectors are quantities with both magnitude and direction. Examples are velocity, displacement, acceleration.
 Scalars are quantities with only magnitude. Examples are distance, speed, energy.

Vector addition by graphical method includes the head-to-tail and parallelogram method. When a vector changes in direction, its sign convention changes as well.

Example:

Head-to-Tail Method

Parallelogram Method

When given the vectors A and B, a parallelogram can be drawn by drawing a line parallel to vector B and connected to vector A, and a line parallel to vector A and connected to vector B. From the diagram above, an arrow joining one end of the parallelogram to the other would be the addition of both vectors.

CHAPTER 1: MEASUREMENTS

Precisions

Metre rule	0.1 cm
Vernier calliper	0.05 mm
Micrometer screw gauge	0.001 mm
Stopwatch	0.01 s
Electronic balance	0.01 g

Vernier Calliper
 Precision: 0.01 mm or 0.1 mm
 Negative zero error: -0.03 mm
 Note: Negative zero errors are read from the back.

If there is a positive error of +0.05 mm
 Reading is: 3.34 cm - (+0.05 cm) = 3.29 cm
 If there is a negative error of -0.03 mm
 Reading is: 3.34 cm - (-0.03 cm) = 3.37 cm

No Zero Error

CHAPTER 2
KINEMATICS

Distance is the length of the path travelled while displacement is the shortest distance from a specified distance from a fixed point.

In the example above, the bicycle travels from point A to B to C. In this case, the total distance travelled is 4 + 3 = 7 m. However, the displacement of the bicycle from point A to C is 5 m as it is the shortest distance from A to C.

Taking right to be positive and the lamp post as a fixed point, P has a displacement of 5 units from the lamp post while Q has a displacement of -6 units from the lamp post. This example illustrates the importance of the direction from the fixed point when calculating displacement.

Speed is the distance moved over the time taken.
 Velocity is the displacement moved over the time taken.

In the example above, P is travelling in the positive direction, thus, its velocity is positive. Q is travelling towards the left, thus, it has a negative velocity. However, both of their speeds are positive.

CHAPTER 2: KINEMATICS

Average speed ($m\ s^{-1}$) = $\frac{\text{Total distance travelled}}{\text{Time taken}}$

The concept of average speed is useful when the object is moving at different speeds throughout its journey.

The bicycle could travel from A to B at a speed of 1 m/s and then travel from B to C at 2 m/s. Time taken from A to B is 4 s and time taken from B to C is 2 s. Since the bicycle travels at different speeds throughout its journey, the average speed would be = $\frac{4 + 3}{1.5 + 1} = 1.27\ m/s$.

Average velocity would however be = $\frac{\text{Total displacement}}{\text{Total time}} = \frac{5}{1.5 + 1} = 0.91\ m/s$

Acceleration is the rate of change of velocity over time.
Uniform acceleration means that velocity increases at a constant rate over time and acceleration of object remains constant.

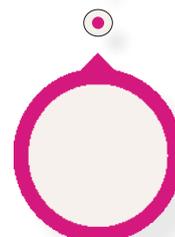
Acceleration ($m\ s^{-2}$) = $\frac{\text{Change in velocity}}{\text{Time taken}} = \frac{v - u}{t}$

Non-uniform acceleration means that velocity does not increase at a constant rate. One example is an object falling from a height when air resistance is not negligible. Air resistance acts as a **drag force** in the opposite direction of the direction of movement of the object.

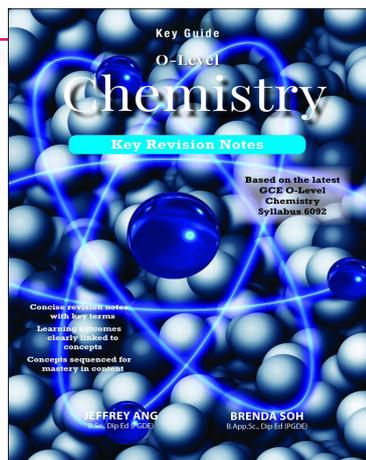
At $t = 0$,
 Initially, the object is stationary.
 The only force acting on the object is gravity, g .
 The object falls with an acceleration of 9.81 m/s^2 .

Examples

There are several worked examples in the book where answers are given. This is to help students apply the equations and concepts learnt to solve questions.



Chemistry Key Revision Notes



ISBN: 9789811172663

The main purpose of this guidebook is to enable students to master Chemistry effectively and efficiently. It incorporates insights the authors have acquired from their many years of teaching the subject in schools. Within a topic, sub-topics are carefully sequenced to build on existing prior knowledge and ensure a good grasp of fundamental Chemistry concepts. This prevents misconceptions which are common pitfalls of many students. This guidebook not only meets the requirements of the revised GCE O-Level Chemistry Syllabus but is also highly relevant to students who are in the Integrated Programme.

Clear Diagrams

Diagrams are provided to illustrate concepts for better understanding.

REVISION LEVEL: CHEMISTRY - KEY REVISION NOTES

Example: Electrolysis of dilute aqueous sodium chloride using graphite electrodes

In the electrolyte, there are sodium cations, hydrogen cations, chloride anions and hydroxide anions. The processes at the two electrodes are summarised in the table below:

Electrode	Ions present	Half equation	Explanation	Observation
Cathode	Na^+ , H^+	$2\text{H}^+(\text{aq}) + 2\text{e}^- \rightarrow \text{H}_2(\text{g})$	Hydrogen ions are more reactive and less stable than sodium ions. Hydrogen ions are preferentially discharged.	Bubbles form. Colourless gas evolved.
Anode	Cl^- , OH^-	$4\text{OH}^-(\text{aq}) \rightarrow 2\text{H}_2\text{O}(\text{l}) + \text{O}_2(\text{g}) + 4\text{e}^-$	Hydroxide ions are more reactive and less stable than chloride ions. Hydroxide ions are preferentially discharged.	Bubbles form. Colourless gas evolved.

Overall equation: $2\text{H}_2\text{O}(\text{l}) \rightarrow 2\text{H}_2(\text{g}) + \text{O}_2(\text{g})$

Note: The overall equation for the electrolysis of aqueous sodium chloride is the decomposition of water into its constituent elements – hydrogen gas and oxygen gas.

Note: The volume of hydrogen gas produced is approximately double that of oxygen gas due to the mole ratio represented in the overall equation.

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Notes

Important points to take note of are emphasised under Notes section for easier referencing.



REVISION LEVEL: CHEMISTRY - KEY REVISION NOTES

7. The industrial conditions for the Haber Process are the following:
 (a) Temperature of 450°C
 (b) Pressure of 200 atm
 (c) Finely divided iron catalyst

8. The conditions used in the Haber Process and reasons are summarised in the table below:

Condition	Reason
Temperature of 450°C	A low temperature increases yield but results in a very slow rate of production. A high temperature increases the rate of production but results in lower yield and higher production costs. A moderately high temperature of 450°C is used to ensure a reasonable rate of production and yield.
Pressure of 200 atm	At higher pressures, stronger pipes and equipment that could withstand the high pressure are needed, which add on to production cost.
Finely divided iron as catalyst	Catalyst increases rate of production of ammonia. The finely divided catalyst increases the surface area, which speed up the rate of reaction further.

9. The raw materials for the Haber Process are nitrogen and hydrogen. Nitrogen is obtained from the fractional distillation of liquid air while hydrogen is obtained from the cracking of hydrocarbons (Refer to Chapter 20.3 – Cracking).

Note: Ammonia has a higher boiling point than hydrogen and nitrogen. When the mixture of hydrogen, nitrogen and ammonia enters the condenser, the ammonia condenses into liquid but the other gases do not.

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Detailed Examples

Examples are provided along with explanations to aid students' revision of topics.

REVISION LEVEL: CHEMISTRY - KEY REVISION NOTES

6. The total proton and neutron in the atom is known as the **relative atomic mass** or **nucleon number**. It is represented by **A**.

7. The proton number and the relative atomic mass are represented in the periodic table as either of the following:

$\begin{matrix} \text{Relative atomic mass} \rightarrow A \\ \text{Proton number} \rightarrow X \\ \text{Chemical symbol} \end{matrix}$

$\begin{matrix} \text{Proton number} \rightarrow X \\ \text{Relative atomic mass} \rightarrow A \\ \text{Chemical symbol} \end{matrix}$

8. Each element has a unique proton number. No two different elements have the same proton number.

9. To calculate the sub-atomic particles in an atom:
 Number of protons: proton number
 Number of electrons: equal number of protons
 Number of neutrons: relative atomic mass – proton number

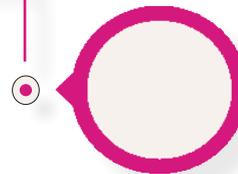
Example:

Group	Nitrogen atom	Sodium atom
	$\begin{matrix} 14 \\ \text{N} \\ 7 \\ \text{Nitrogen} \\ 14 \end{matrix}$	$\begin{matrix} 23 \\ \text{Na} \\ 11 \\ \text{Sodium} \\ 23 \end{matrix}$
	Number of protons: 7 Number of electrons: 7 Number of neutrons: 14 – 7 = 7	Number of protons: 11 Number of electrons: 11 Number of neutrons: 23 – 11 = 12

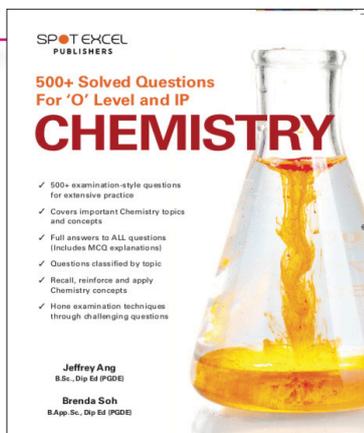
10. When a beam comprising protons, electrons and neutrons is passed through an electric field, the protons and electrons are deflected according to the diagram below.

Note: Neutrons (zero charge) are not deflected.
 Protons (positively charged) are deflected towards the negative plate.
 Electrons (negatively charged) are deflected towards the positive plate.
 The angle of deflection is dependent of the relative masses and charge of the particles.

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500+ Solved Questions for O-Level & IP Chemistry



ISBN: 9789811489129

This book allows students to master Chemistry concepts and tackle questions with confidence in their Chemistry examinations. It meets the requirements of the revised GCE O-Level Chemistry Syllabus (6092) and is highly relevant to students who are in the Integrated Programme.

Questions are classified according to major topics in the syllabus to allow students to work methodically and hone their answering techniques. There are more than 500 examination-style questions for extensive practice and full answers to all questions are provided to facilitate independent learning and allow students to improve on their answering techniques.

This book should be used in conjunction with Key Guide O-level Chemistry Key Revision Notes by the same authors. The suggested answers complement the notes in the guidebook.

13. Three experiments were set up to investigate the reactivity of three metals, magnesium, copper and zinc as shown below. A deposit was formed in all three test tubes.

Metal X could be

- Aluminium
- Calcium
- Silver
- Zinc

14. Four bubbles of copper(II) sulphate solution were prepared. Excess zinc dust and magnesium powder were added separately into the beakers of copper(II) sulphate solution. How many blue solutions will be obtained after a few days?

- 0
- 1
- 2
- 3

15. The table below summarises the reactions of metals F and G with cold water, steam and dilute sulphuric acid.

metal	cold water	steam	dilute sulphuric acid
F	✓	✓	✓
G	x	x	✓

Which of the following statements is **not** correct?

- F would displace G from a salt solution of G.
- F can be extracted from its ore by heating with CO.
- The cathode of F is thermally more stable than the cathode of G.
- The oxide of F decomposes upon strong heating.

(b) When aqueous chlorine is added to potassium iodide, a chemical reaction takes place. (i) Write an ionic equation for the reaction.

(c) State and explain what would be observed during the reaction.

(c) Describe what would be observed when aqueous silver nitrate is added to separate tubes containing chloride and iodide ions respectively.

(d) Tin (IV) oxide was added to an acidified solution containing chloride ions. The oxidation ionic equation is:

$$\text{Sn}(\text{O})_2 + 4\text{Cl}^- + 2\text{H}^+ \longrightarrow \text{SnCl}_2(\text{aq}) + \text{Cl}_2(\text{g}) + \text{H}_2\text{O}(\text{l})$$

(i) Write a balanced ionic equation for the reaction.

(ii) Explain, in terms of oxidation state, whether $\text{Sn}(\text{O})_2$ is acting as an oxidising agent, including agent.

31. Terrene, T, is a newly-discovered element. A few properties of terrene and its known compounds are shown in the table below.

	melting point / °C	boiling point / °C	electrical conductivity	solubility in water
Terrene	72	145	poor	soluble
Barium terrene	2340	5000	High when molten	insoluble
Iodide terrene	1380	2450	High when molten	soluble

(a) Explain why terrene is unlikely to be found in Group 0.

(b) Scientists discovered that barium terrene has the chemical formula of Ba_2T . Which group of the Periodic Table is terrene likely to be found in?

(c) Using your answer in (b), explain why terrene exists as diatomic molecules.

(d) Suggest why the melting point of barium terrene is about twice that of the iodide terrene.

Practice Questions

A collection of examination-style questions for students to practise on.

Detailed Solutions

Full answers to all questions are provided, including explanations for multiple-choice questions.

26. (d) The oxidation state of sodium, oxygen, nitrogen and hydrogen do not change in the reaction. Hence the reaction does not involve oxidation or reduction. Since all the reactants are in aqueous solution, the reaction is not a redox reaction.

The oxidation state of copper changes from +2 in CuSO_4 to 0 in Cu. The oxidation state of oxygen changes from -2 in O_2 to -2 in H_2O . The oxidation state of magnesium changes from 0 in Mg to +2 in MgSO_4 .

27. A

- The oxidation state of chlorine, sulfur and oxygen do not change in the reaction. Hence this is not a redox reaction.
- The oxidation state of chlorine changes from 0 in Cl_2 to +1 in Cl^- and -1 in ClO^- .
- The oxidation state of nitrogen changes from 0 in N_2 to +2 in NO .
- The oxidation state of sodium changes from 0 in Na to +1 in NaCl .

28. D

- The oxidation state of silver changes from +1 in AgNO₃ to 0 in Ag and the oxidation state of bromine changes from -1 in AgBr to 0 in Br₂.
- The oxidation state of copper changes from +2 in Cu^{2+} to 0 in Cu and to Zn²⁺ is +2 in Zn^{2+} .
- The oxidation state of iron changes from +2 in Fe^{2+} to +3 in Fe^{3+} and to Fe^{2+} is +2 in Fe^{2+} .
- The oxidation state of sulphur, oxygen, hydrogen and chlorine do not change in the reaction. Hence this is not a redox reaction.

29. D

$$10\text{I}^- (\text{aq}) + 2\text{Fe}^{3+} (\text{aq}) + 16\text{H}^+ (\text{aq}) \longrightarrow 2\text{Fe}^{2+} (\text{aq}) + 2\text{I}_2 (\text{s}) + 8\text{H}_2\text{O} (\text{l})$$

A mole of copper(II) sulphate (159.6 g) reacts with 1 mole of magnesium (24.3 g) to produce 1 mole of copper.

30. B

The oxidation state of Fe changes from 0 in Fe to +2 in FeCl_2 . Silver is a transition metal. It is a moderately reactive metal which reacts with hydrochloric acid. The catalytic charge of the reaction suggests that the average level of the reaction is higher than the products. All redox reactions involve the transfer of electrons between reactants to products.

31. C

The oxidation state of mercury changes from +1 in Hg_2Cl_2 to 0 in Hg and +2 in HgCl_2 . Mercury has undergone both oxidation and reduction in the same reaction.

32. D

The oxidation state of iodine goes from 0 in I_2 to +5 in HIO_3 and 0 in H_2SO_4 .

25. (a) $\text{C}_2\text{H}_6 (\text{g}) + \text{HCl} (\text{g}) \longrightarrow \text{C}_2\text{H}_5\text{Cl} (\text{g}) + \text{H}_2 (\text{g})$

(b) For every 1 mol of ethane reacted, 2 mol of hydrogen is produced. For every 1 mol of ethane reacted, 1 mol of energy is absorbed. Hence for ethane reacted = 1.0 (1000) × (2 + 1) = 3.0000 = 3.00 g (1 mol).

36. (a) $2\text{H}_2\text{O}_2 (\text{l}) \longrightarrow 2\text{H}_2\text{O} (\text{l}) + \text{O}_2 (\text{g})$

(b) Sodium hydroxide acts as a catalyst for the reaction. Addition of sodium hydroxide increases the rate of decomposition of hydrogen peroxide.

(c) Aqueous bromine

(d) (i) All the hydrogen peroxide has been decomposed. (ii) The volume of oxygen produced from the diluted hydrogen peroxide is half that from the original hydrogen peroxide because there is only half the number of moles of hydrogen peroxide in the diluted solution. As the concentration of the diluted hydrogen peroxide is lower, the rate of effective collisions among the reactant particles decreases and hence the rate of reaction decreases. The curve would be steeper and the reaction will end at a shorter time. The total volume of oxygen produced would be the same.

(e) The volume of gas produced from the diluted hydrogen peroxide is half that from the original hydrogen peroxide because there is only half the number of moles of hydrogen peroxide in the diluted solution. As the concentration of the diluted hydrogen peroxide is lower, the rate of effective collisions among the reactant particles decreases and hence the rate of reaction decreases. The curve would be steeper and the reaction will end at a shorter time. The total volume of oxygen produced would be the same.

(f) When more catalyst is added, the total rate of reaction increases resulting in a steeper gradient. However, the total amount of oxygen gas produced will remain the same since the number of moles of hydrogen peroxide and remains the same.

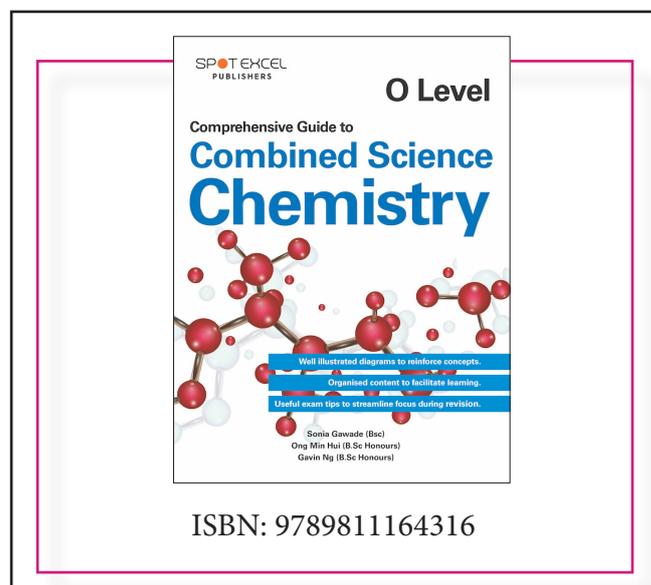
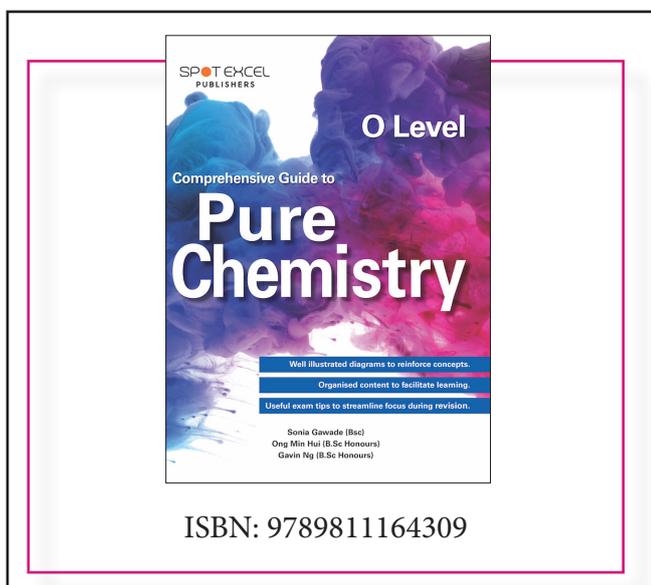
(g) No. of mol of O_2 produced = $\frac{2.000}{22.4} = 0.0893$ mol
 Molar ratio $\text{H}_2\text{O}_2 : \text{O}_2 = 2 : 1$
 0.0893 mol O_2 needs 0.1786 mol H_2O_2
 Concentration of $\text{H}_2\text{O}_2 = \frac{0.1786}{0.025} = 7.144 \text{ mol dm}^{-3}$

Comprehensive Guide to Chemistry

This series distinguishes itself from other self-help books by:

1. Attempting to provide more comprehensive explanation behind concepts, so that students are able to grasp with better understanding for each section.
2. Providing examination focused tips to aid students to streamline importance during revision.
3. Organising content in such a way that only important examination concepts to be tested are focused on, as well as application concepts linking to other topics.

Given the varying content taught to students across Singapore for Chemistry, the author hopes that these guidebooks can help to standardise the content taught, so that each student is able to have a common understanding of what will be tested and avoid unnecessary content that may impede their learning progress.



Descriptive Diagrams

Includes informative diagrams which help to enhance learning for more effective memorisation.

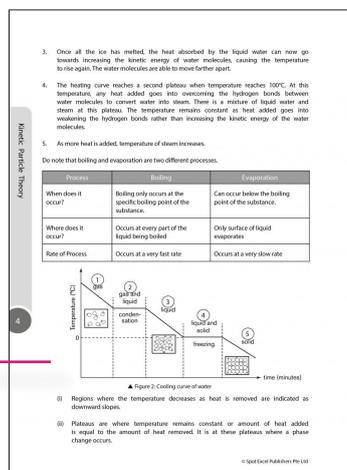


Table Format

Information is arranged in easy-to-read tables for better reading and an overall more efficient learning experience.

Characteristics	Solid	Liquid	Gas
Volume and Compressibility	Fixed Particles in a solid are very closely packed hence they have a fixed volume. Thus, a solid cannot be compressed.	Fixed Particles in a liquid are slightly further apart, however the liquid particles are still relatively packed closely together. Hence, liquids can be compressed only slightly.	Not Fixed Particles in a gas are spread very far apart from one another as compared to particles in a liquid. The empty space between the gas particles, allow for a gas to be compressed. Hence a gas does not have a fixed volume.
Movement of Particles	Solid particles have only sufficient kinetic energy to vibrate and rotate around their fixed positions.	Liquid particles have more kinetic energy than solid particles, hence they are able to move in random motion at relatively fast speeds.	Gas particles possess a huge amount of kinetic energy that allows for them to move in random motion and at very high speeds.
Forces of Attraction	Very strong forces of attraction which helps keep solid particles close to one another in an orderly manner.	Liquid particles have weaker forces of attraction as compared to solid particles. These weaker forces of attraction allows for liquid particles to flow.	Gas particles have negligible forces of attraction which allows for them to move very far apart from one another.

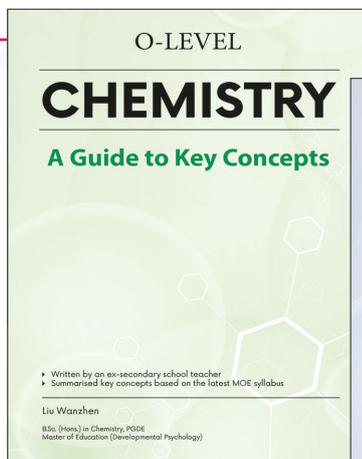
SOME EXAM TIP
It's good knowledge to practice drawing out the arrangement of solid, liquid and gas particles.

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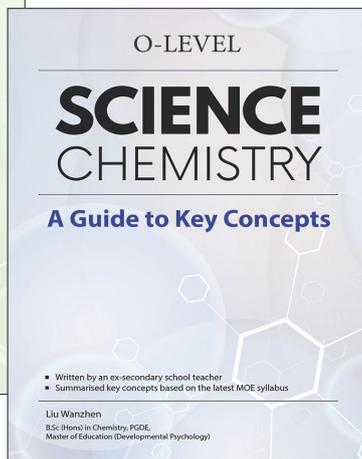
Exam Tips

Useful exam tips are included to help streamline focus during revision.

Chemistry: A Guide to Key Concepts



ISBN: 9789814996112



ISBN: 9789811479083

These books are guides to key concepts in O-Level Chemistry or Combined Science Chemistry based on the latest MOE syllabus.

Important Chemistry concepts are presented in simple and concise points for quick and easy reference, making it ideal for quick revision before a test or an examination. Relevant examples and diagrams are also provided to facilitate the understanding of important Chemistry concepts.

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 Key Concept 2 Find the number of particles in a substance
 Key Concept 3 Limiting reagent
 Key Concept 4 Concentration of solutions

Chapter 1 EXPERIMENTAL METHODS

Physical quantity	SI unit	Other common units	Measuring instrument	Accuracy	Example of readings recorded
Mass	Kilogram (kg)	Grams (g) Tonnes (t)	Beam balance Electronic balance	± 0.01 g ± 0.03 g	25.03 g 0.03 g
Time	Seconds (s)	Minute (min) Hour (h)	Analytical stopwatch Digital stopwatch	± 0.1 s ± 0.01 s	25.3 s 25.03 s
Temperature	Kelvin (K)	Degree Celsius ($^{\circ}\text{C}$) Fahrenheit ($^{\circ}\text{F}$)	Mercury thermometer Alcohol thermometer	± 0.5 $^{\circ}\text{C}$ (rounded off to the nearest 0.5 $^{\circ}\text{C}$) ± 0.5 $^{\circ}\text{C}$ (cannot be 25.3 $^{\circ}\text{C}$, 25.4 $^{\circ}\text{C}$)	25.0 $^{\circ}\text{C}$ 25.5 $^{\circ}\text{C}$ 25.5 $^{\circ}\text{C}$ [cannot be 25.3 $^{\circ}\text{C}$, 25.4 $^{\circ}\text{C}$]
Volume of liquid	Cubic metre (m^3)	Cubic centimetre (cm^3) Cubic decimetre (dm^3)	Beaker Measuring cylinder Burette Pipette	Inaccurate gives approximate measurement ± 0.5 cm^3 (rounded off to the nearest 0.5 cm^3) ± 0.05 cm^3 (rounded off to the nearest 0.1 or 0.05 cm^3) Exact volumes of 20.0 cm^3 or 20.00 cm^3 ONLY (in the syllabus)	About 50 cm^3 25.0 cm^3 25.30 cm^3 25.5 cm^3 25.0 cm^3 Exactly 25 cm^3
Volume of gas	Cubic metre (m^3)	Cubic centimetre (cm^3) Cubic decimetre (dm^3)	Gas syringe	± 1 cm^3	25 cm^3 24 cm^3

Key Concepts

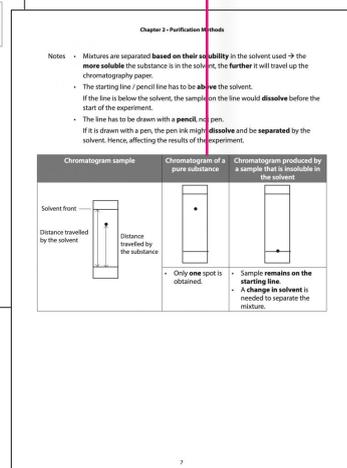
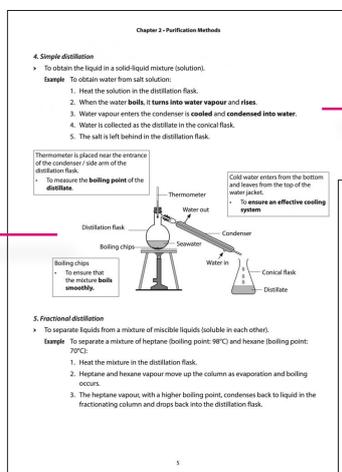
Key concepts covered are based on the latest MOE syllabus.

Simple and Concise Points

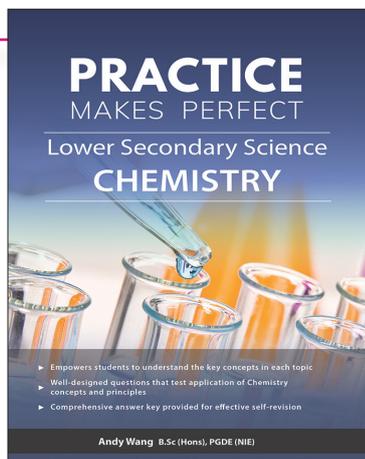
Points are simple and concise, with some in easy-to-read table formats for easier reading and better understanding.

Descriptive Diagrams

Includes informative diagrams which aid in effective memorisation.



Practice Makes Perfect: Science (Chemistry)



ISBN: 9789811481581

Practice Makes Perfect: Lower Secondary Science (Chemistry) is written to help students master chemistry more effectively and efficiently. This book aims to help students apply the concepts they are taught in school such that they are able to tackle a variety of problems at the current level, as well as build up a strong foundation for them to proceed to take on chemistry at a higher level. The chapters are based on latest Lower Secondary Science syllabus issued by the MOE.

Practice Makes Perfect Lower Secondary Science (Chemistry)

Section A: Multiple Choice Questions

1. In the diagram, circles of different sizes are used to show different atoms. Which diagram represents molecules of an element?

A B C D

2. Which diagram represents a mixture of two compounds?

A B C D

3. Which of the following properties can be used to show a compound?

A. Colour
B. Density
C. Boiling point
D. Solubility in water

UNIT 4: Atoms and Molecules

Section B: Structured Questions

1. Atoms may lose or gain electrons to form ions.

(a) Explain why an atom is said to be electrically neutral.

(b) The table below shows some atoms of elements and the corresponding ions formed by them. Complete the table.

	Number of valence electrons	Number of protons	Number of neutrons	Electronic configuration	Chemical symbol of ion
P	19	20			
Q		18	22		—
R		12	12		
S		9	10		

(c) Atom Q will not lose or gain electrons to form ions. With reference to the table as shown above, explain why this is so.

(d) Draw the electronic structure of an atom of P in the space provided below.

2. (a) Explain why a calcium atom is electrically neutral.

Topical Questions

Section A consists of MCQ questions and Section B consists of structured questions. The questions are selected to test the mastery of various concepts and application of the concepts taught in school.



Answer Keys

The answer keys consist of key words and template for answering questions when students sit for tests or examinations.

ANSWERS

(9)

oxide ion

10. (a) W: Condensation
X: Electrolysis
Y: Combustion/oxidation/combustion
(b) Carbon + oxygen → carbon dioxide
Change is irreversible.
New products formed.

11. Heating / Oxidation

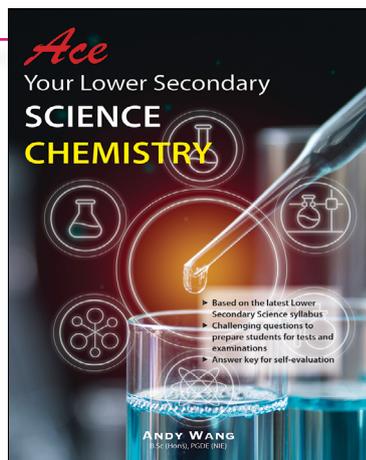
12. (a) Identify: Solid candle wax melting to form liquid wax.
Explain: Liquid wax can be cooled and solidified to form solid candle. Melting is a reversible change.
(b) (i) Identify: Burning of candle (wick).
Explain: New product is formed/ Carbon dioxide is produced/ Reaction is irreversible.
(ii) Oxygen
(iii) Carbon + Oxygen → (heat) → Carbon dioxide
(c) Advantage: Provides energy for machines to function.
Disadvantage: Produces poisonous gas when burning.
Energetic Combustion of fuel.

13. (a)

Substances added	Is there a chemical reaction?	Name of products formed
Calcium + Sodium nitrate	No	Nil
Zinc oxide + Hydrochloric acid	Yes	Zinc chloride + Water
Sodium carbonate + Nitric acid	Yes	Sodium nitrate + Water + Carbon dioxide

14. (a) A physical change has no new product formed, whereas a chemical change has one or more new products formed.
(b) It is a single substance that breaks up into two or more simpler substances when it is heated.
(c) (i) Iron oxide and carbon monoxide
(ii) Iron and carbon dioxide
(iii) Heat is needed.

Ace Your Science (Chemistry)



ISBN: 9789814996310

Ace your Lower Secondary Science (Chemistry) is written to help students master Chemistry more effectively and efficiently.

This book aims to help students apply the concepts they are taught in schools such that they are able to tackle a variety of problems in the current level, as well as build up a strong foundation for them to proceed to take on Chemistry at a higher level.

Ace your Lower Secondary Science (Chemistry)

Section A: Multiple Choice Questions

- Which of the following statements about elements is **not** true?
 - A. Elements are building blocks of all matter.
 - B. Elements cannot be broken down by chemical means.
 - C. Elements only occur naturally on Earth.
 - D. Elements combine to form compounds.
- Which of the following lists contains an element, a mixture and a compound?
 - A. air, copper, sodium chloride
 - B. air, pure water, copper(II) sulfate
 - C. magnesium, lead, copper
 - D. magnesium, steam, copper(II) sulfate
- Which of the following sets contains only elements?
 - A. Air, Neon and Oxygen
 - B. Mercury, Gold and Neon
 - C. Gold, Sulfur and Brass
 - D. Hydrogen, Steel and Oxygen
- Diagrams X, Y and Z represent three different substances.

X

Y

Z

○ Atom of element P
● Atom of element Q

Which row in the table correctly describes X, Y and Z?

	X	Y	Z
A	Compound	Element	Mixture
B	Compound	Mixture	Element
C	Mixture	Element	Compound
D	Mixture	Compound	Element

Ace your Lower Secondary Science (Chemistry)

- Which group of substances contains an element and a mixture?
 - A. zinc and air
 - B. air and water
 - C. potassium and copper(II) sulfate
 - D. oxygen and beryllium

Section B: Structured Questions

- Matter can be classified in many ways. Fill in the blanks below using the words provided.

Compounds	Elements	Mixtures	Pure substances
Metal	Solutions	Suspensions	Non-metal

MATTER

```

graph TD
    MATTER --> PureSubstances
    MATTER --> Mixtures
    PureSubstances --> Elements
    PureSubstances --> Compounds
    Elements --> Metal
    Elements --> NonMetal
    Mixtures --> Solutions
    Mixtures --> Suspensions
            
```
- The information of substances X, Y and Z are found in the table below.

Substances	Description
X	Speckled grey and white. The grey particles are attracted to a magnet.
Y	Has a fixed melting and boiling point. Decomposes into two elements when heated.
Z	Colourless gas. It burns in oxygen to form water vapour only.

Topical Questions

Topical exercise questions are divided into 2 sections: Section A consists of MCQ questions and Section B consists of structured questions.

Based on the MOE syllabus chapters, the questions are selected to test the mastery of various concepts and application of the concepts taught in school.

Answers

Answers consist of key words and templates in answering questions when students sit for tests or examinations.

ANSWERS

Unit 1 Exploring Diversity of Matter by its Chemical Composition

Section A: Multiple Choice Questions

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
C	A	B	D	C	B	D	C	D	D	B	C	A	D	A

Section B: Structured Questions

- MATTER**

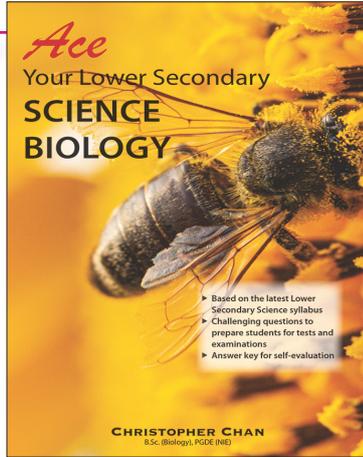
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graph TD
    MATTER --> PureSubstances
    MATTER --> Mixtures
    PureSubstances --> Elements
    PureSubstances --> Compounds
    Elements --> Metal
    Elements --> Non-metal
    Mixtures --> Solutions
    Mixtures --> Suspensions
            
```
- (a) Y
(b) X
- (a) An element is a pure substance which cannot be broken down into simpler by chemical processes/reactions.
(b) (i) Q and T
(ii) S
(iii) Q
(c) Carbon Dioxide (Carbon and Oxygen), Nitrogen Dioxide (Nitrogen and Water (Hydrogen and Oxygen))

Ace your Lower Secondary Science (Chemistry)

- | | | | |
|------------|----------------------------------|---------------------------|---|
| ○ ○ | ● ○ | ● ● | ● ○ ● |
| An element | A compound comprising of 3 atoms | A mixture of two elements | A mixture of one element and one compound |
- A. Melted copper
 - B. Oxygen gas
 - C. Saltwater
 - D. Pure water
 - E. Copper wire
 - F. Air
- (a) (i) Lead, selenium, mercury, cadmium
 - (ii) Lead: cathode ray tube (CRT) in computer monitors and TV sets, mobile phone Selenium: keyboard Mercury: switches and housing of the CPU, CRT in TV sets, mobile phone, batteries Cadmium: semi-conductors in CPU, CRT in TV sets Effects: Lead: damage the vital organs, leading to coma or death from lead poisoning Selenium: chemical pneumonia and tachycardia Mercury: attacks the central nervous and endocrine systems and cause mental disturbances and neuromuscular changes Cadmium: affects the lungs and kidneys
 - (b) (i) Good electrical conductors: essential in electrical appliances. High melting and boiling point; do not melt easily.

Ace Your Science (Biology)



ISBN: 9789811481246

Ace Your Lower Secondary Science (Biology) is written to help students understand Biology on a topic-by-topic basis. The content is organised to effectively aid students' revision. This book aims to equip students with the necessary knowledge and also provide them with an additional edge over others in examinations.

Each chapter of this book consists of questions that will challenge students while exposing them to a variety of possible questions. An answer key is also provided to allow students to evaluate their own learning.

UNIT 1
Model of Cells – The Basic Units of Life

Section A: Multiple Choice Questions

- Which of the following substances can pass through the cell membrane?
A. Starch and glucose
B. Proteins and malaise
C. Polypeptides and amino acids
D. Glycerol and amino acids
- The plasma membrane is _____
A. fully permeable
B. partially permeable
C. non-permeable
D. only permeable to gases
- Which cell structure is partially permeable to both oxygen and carbon dioxide?
A. Cell membrane
B. Cell wall
C. Cytoplasm
D. Nucleus
- Which of the following statements is false?
A. Energy is needed to repair damaged cells.
B. Food is needed to maintain body temperature.
C. Energy is not used while we are sleeping.
D. Energy obtained from the digestion of food sustains cellular activities.
- The figure below shows a liver cell and an onion cell.

UNIT 7: Photosynthesis and Respiration

9. The figure below shows a species of an "ant plant" and one of its modified, hollow, sac-like leaves cut to show the activities taking place inside the sac.

- Name the process used by the plant to manufacture carbohydrates.
- Explain how this process is beneficial to the ants living in the modified leaves.
- Apart from adapting to mineral poor soils, suggest one other abiotic factor that the "ant plant" needs to overcome. Explain how you arrived at your answer.

Topical Questions

Each topic includes a comprehensive set of multiple-choice and structured questions to prepare students for the examinations.

Answers

Model answers are provided for self-evaluation and learning.

ANSWERS

Unit 1
Section A

1	2	3	4	5	6	7	8	9
D	B	A	C	A	D	A	D	C
10	11	12	13	14	15	16	17	18
A	B	C	C	B	A	D	C	D

Section B

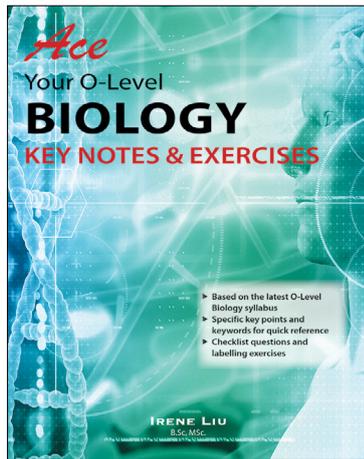
- A cell is the basic unit of life that carries out all life processes.
- | Animal cell | Plant cell |
|---|--|
| 1 No cell wall; Irregular shape | Cell wall present; Regular shape |
| 2 No chloroplast; Smaller central vacuole | Chloroplast present; One large central vacuole |
- | | |
|--------------|---------------|
| Jelly bean | Vacuole |
| Rail | Nucleus |
| Plastic bag | Cell membrane |
| Thick liquid | Cytoplasm |
- Nucleus
(ii) The nucleus contains chromosomal genetic material which control cell division/production.
 - Red blood cell has circular nucleus shape vs amoeba does not have a fixed regular shape / no nucleus vs amoeba has nucleus / Red blood cell has presence of haemoglobin vs amoeba has no haemoglobin.
- The bacteria has no nucleus while the cells of the plant does. The plant cells do not have a flagellum which the bacteria do.

Unit 2
Section A

1	2	3	4	5	6	7	8	9	10
B	A	A	A	B	D	D	C	C	B
11	12	13	14	15	16	17	18	19	20
B	D	B	A	B	A	A	C	A	D

Section B

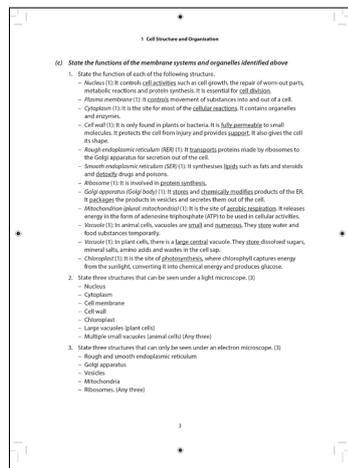
- Diffusion: Solute molecules move from a region of higher concentration to the cell/plane bag into the water in the beaker, which is a region of lower solute concentration.
 - Partially permeable membrane: Smaller solute molecules can pass through but not larger starch molecules.
- Osmosis is the net movement of water molecules from a region of higher water potential to a region of lower water potential through a partially permeable membrane.
 - (i) A: The water potential in distilled water is 0. No sucrose solution.
(ii) The water potential of liquid B is higher than in liquid C. Water molecules move out of dialysis tubing containing liquid B, causing it to shrivel.
 - Cell membrane
- Osmosis: A, B, D, C (highest to lowest)
 - The concentration of sugar solution that potato disc A is immersed in is higher than potato disc C. The difference in the water potential between potato disc A and sugar solution is higher as compared to potato disc B and its solution, hence more water molecules will move out of potato disc A than B to osmosis.
 - Transport organs around the body from the lungs.
(ii) The arteries will have more red blood cells to transport more oxygen around the body. This will support efficient respiration during the competition.
- The water potential in the dialysis tubing is lower than that in the beaker. Solute molecules enter the dialysis tubing via osmosis through the partially permeable membrane.
 - Glucose being smaller molecules, can leave the partially permeable membrane of the dialysis tubing via diffusion. Sucrose being larger molecules, cannot escape the dialysis tubing.
- X
 - Y



ISBN: 9789814996228

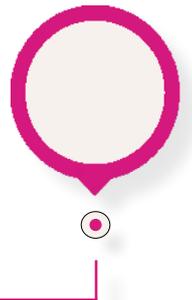
Most students find Biology very difficult to score in examinations because knowing the content does not always ensure maximum marks. In order to score well in the exam, certain details and specific keywords have to be incorporated into their answers. As key points and keywords are essential to obtaining a good score in the Biology exam, this book presents suggested answers keys for students, which can be used as a quick reference source, enabling students to save time on revision.

The answers are given in a question and answer format in this book. The questions are designed based on the learning outcomes in accordance with the latest O-Level pure Biology syllabus issued by the Ministry of Education of Singapore.



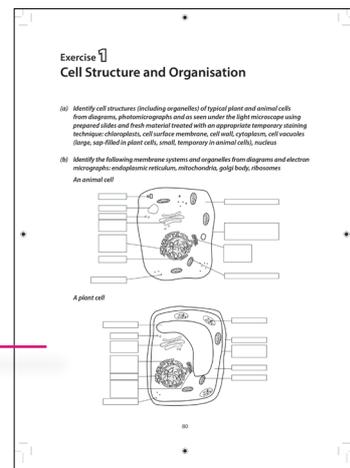
Learning Points

Specific key points and key words are highlighted for effective revision.

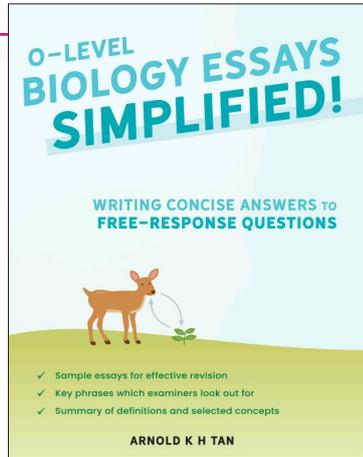


Revision Questions

Comprehensive questions, such as diagram-labelling exercises, are included to prepare students for examinations.



Biology Essays Simplified



ISBN: 9789814761796

Master the skill of answering O-Level Biology Essay Questions by using examiner-style phrasing to construct accurate responses. With a comprehensive selection of 239 free-response questions, students will learn how to write essays that score well at the examinations.

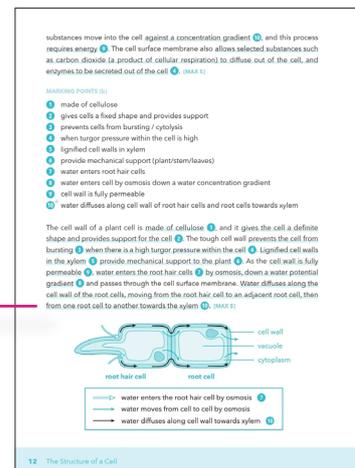
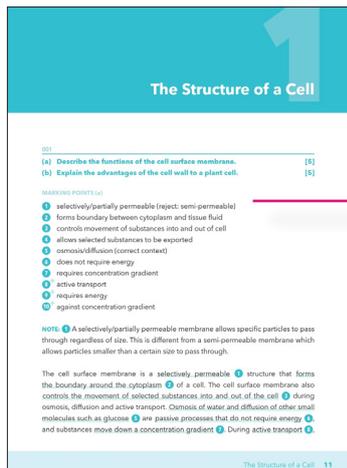
The sample essays included in this book demonstrate how students can organise the relevant marking points into a concise answer.

Model Essays

Model essays are provided for students to learn how to write them effectively.

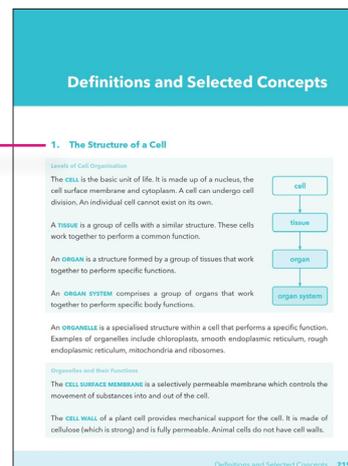
Marking Points

Key phrases for scoring are highlighted under the marking points section for easy learning.

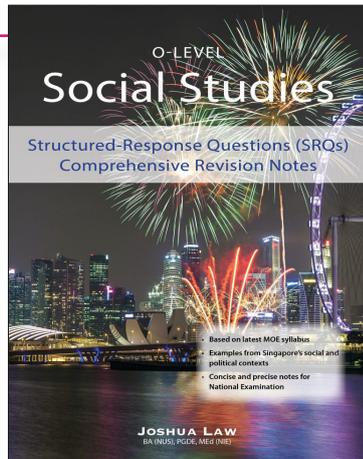


Summaries

Important definitions and selected concepts are summarised in one section for quick referencing.



Social Studies SRQs



**SRQs Comprehensive
Revision Notes**
ISBN: 9789811417535

O-Level Social Studies: Structured Response Questions (SRQs) Comprehensive Revision Notes is a collection of revision notes designed to teach students how to tackle Social Studies SRQs. Students will be presented with concise notes to equip them with the necessary content and knowledge required to answer SRQs at the O-Levels.

This book aims to prepare students for the O-Level examinations by providing ample resources to allow students to master the subject.

CHAPTER 5 Why is there Greater Diversity in Singapore now?

1. Immigration Policy

1.1 Post-independence from 1965 to 1970s: Support labour intensive industries

- Singapore third-world country after independence in 1965.
- Setting up Jurong Industrial Estate marked the start of industrialisation; began with expansion of factories.
- High demand for workers addressed through issuing work permits to foreign workers seeking employment in Singapore in 1971.
- Workers needed in construction sites, factories, shipyards.
- Foreign workers not allowed to stay permanently or start families in Singapore.
- Influx of foreign workers with work permits supported labour intensive industries; made Singapore attractive place for foreign investment and helped achieve high economic growth.

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O-Level Social Studies Structured Response Questions (SRQs) - Comprehensive Revision Notes

- ▶ Smaller firms could keep their operations going as they could obtain financing with reduced interest rates and increased subsidies.
- ▶ New businesses/small companies granted tax exemptions.
- The support was able to help local businesses stay afloat and retain employment; helped families maintain comparable standard of living during this recession. Singapore was thus able to survive Global Financial Crisis and still achieve growth of 1.5%.

2. Economic Impact on Companies

2.1 Positive Impact: Higher Profits/Market Share

- Developments in transport and technology have allowed many countries to benefit from globalisation; many companies are able to widen market reach by expanding their production and sales of goods worldwide.
- Expansion benefits come in terms of higher profits and larger market share, but there is also increased competition.
- MNCs can obtain higher profits by setting up operations in different locations; allows access to new markets abroad, access to lower labour costs and cheaper resources like land and raw materials.
- American companies dominate global companies as they take advantage of opportunities arising from global economy. Example: Walmart in China through understanding of the markets and culture of a different market; Walmart opened and became popular in China, enabling them to benefit from higher profits.
- ▶ Singapore government help (loans, grants etc) enables companies to take advantage of opportunities presented by globalisation. Example: beverage manufacturer Super Group Ltd identified long term potential of relatively 'spiced' markets like Thailand and Myanmar. Super gained the trust of consumers through tight quality control of its products and expanded sales to markets, gaining higher profits.

O-Level Social Studies Structured Response Questions (SRQs) - Comprehensive Revision Notes

2.2 Negative Impact: Lower Profits/Market Share

- Globalisation caused increased competition for companies, making it harder to compete for a share of profits in the global economy.
- A company must constantly innovate and reinvent itself to stay successful.

Small/Medium Enterprises (SMEs)

- SMEs are businesses with an annual turnover of less than \$100 million or total workers not exceeding 200.
- SMEs contribute more than 50% of economic output and 70% of employment in Singapore.
- Many SMEs are unable to compete with larger companies that offer the same products or services; unable to sustain operations due to lesser resources.

Responses by SMEs to globalisation

a. Innovation and understanding local conditions by SMEs

- Some SMEs can respond positively to competition as they understand local conditions and can appeal to locals.
- Example: MNI Holdings supplier of hard disk drives for US-based MNC Seagate; allowed MNI Holdings to carve out an important niche market and avoid intense competition from MNCs that could lower its profits.
- Example: Goh Hoo Jin Pie Ltd (New Moon and Mill) stays competitive by offering wide range of food products. Diversification allowed them to reduce dependence on one product and makes the company less vulnerable and more prepared to meet external shocks; ensures the company will remain stable.
- Example: Super Group Pte Ltd took control of manufacturing and quality processes. Helped Super maintain tight quality control of its products and compete effectively in markets where similar established quality beverage manufacturers have not ventured; enabled them to remain competitive.

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O-Level Social Studies Structured Response Questions (SRQs) - Comprehensive Revision Notes

1.2.3 Tensions arising from Singapore's integration policy

Economic tension

- Singapore is home to many MNCs and non-profit organisations run by foreigners; their presence adds to numerous jobs for the local economy, adds to economic vibrancy of the country.
- Some Singaporeans feel their job security has been compromised as they now must compete with immigrants.
- Immigrants are blamed for causing increases in prices, traffic congestion and greater breakdowns (MRT).
- Example: Survey in 2014 showed 73.2% of Singaporeans believed job opportunities will be reduced for local born Singaporeans if we have more immigrants. 53.9% also believed that the government attracted immigrants to Singapore at the expense of locals.
- This caused tension as some felt threatened and are not comfortable with the inflow of foreigners; they are against the influx of immigrants as they felt their needs being side-lined by the government.

Social Tension

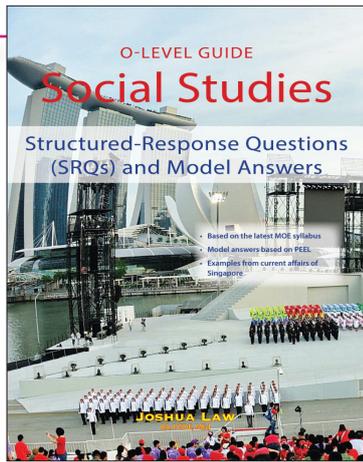
- Tensions have built up recently; some Singaporeans feel that the large number of immigrants have affected social cohesion.
- Some immigrants' inability to speak English and different social norms become obstacles to successful integration.
- Many felt the government has not integrated immigrants sufficiently and have begun to feel uncomfortable with the inflow of foreigners; caused tensions between locals and immigrants.

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Comprehensive Notes

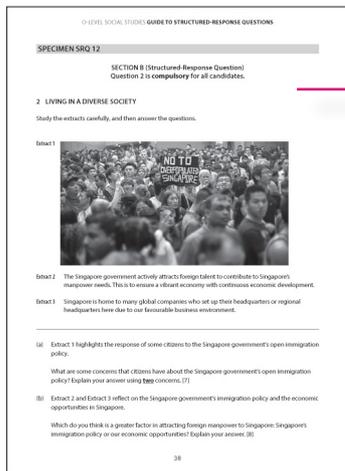
Includes examples on Singapore's social and political contexts.



SRQs and Model Answers
ISBN: 9789811409400

In light of the many challenges that students face in answering SRQs, this Model Answers for Social Studies book will help students to master skills and techniques to approach assessment requirements of the latest Social Studies syllabus.

Written in the P.E.E.L format (Point, Elaboration, Explanation, Link), this guidebook will give students many exemplars on how to craft a high-level response answer. Using examples discussed in the new syllabus course book and relevant current affairs topics, students are presented with a variety of model questions and detailed answers for the three Social Studies issues.

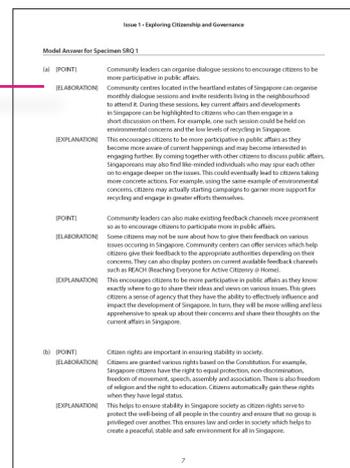


Current Affairs

Questions are based on current affairs in Singapore.

PEEL Format

Model answers are written in P.E.E.L format for students to learn to structure their writing.



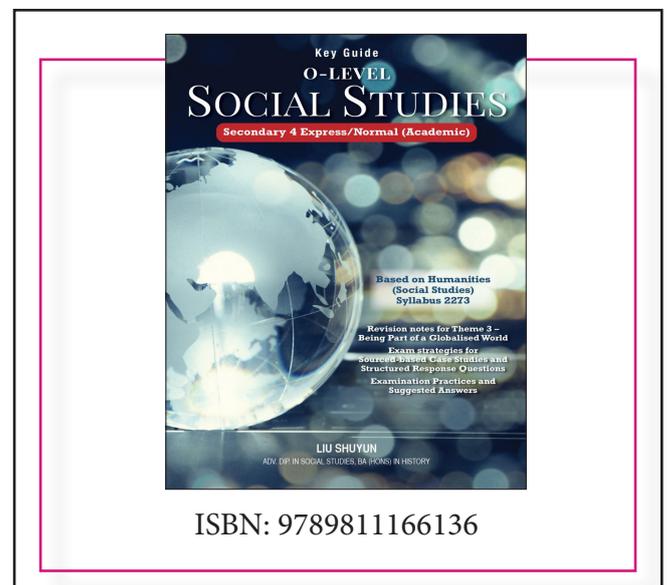
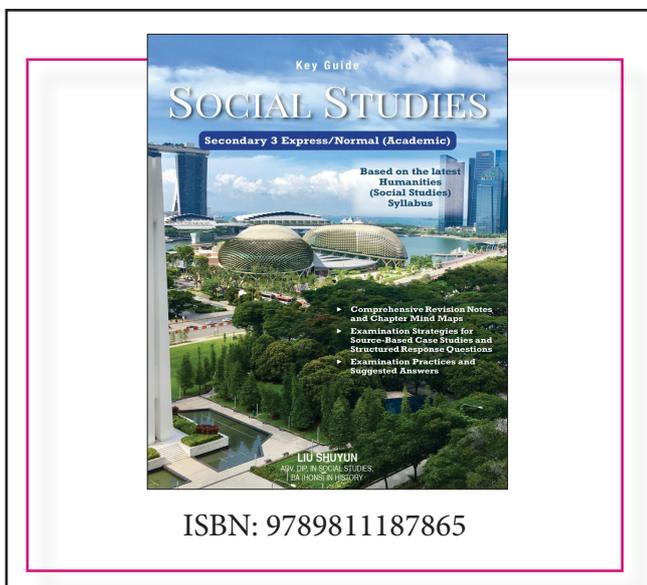
Social Studies Key Guides

This series is a teaching and learning tool written in three parts to summarise what students need to know to do well in their Social Studies examination.

Part 1 focuses on understanding the concepts in Social Studies and the assessment guidelines that frame the GCE O-Level and N-Level Social Studies examination.

Part 2 gives the learning outcomes and useful notes for students' revision. This includes understanding the Social Studies curriculum for the GCE O- and N-Level which will enable them to see how the various chapters are interlinked.

Part 3 presents literary approaches and devices that students can use to answer Source-Based Case Studies (SBSCS) and Structured Response Questions (SRQs).



1 UNDERSTANDING CITIZENSHIP

OBJECTIVES

- You will be able to learn:
 - How can you understand citizenship?
 - What are some characteristics of citizenship?
 - What does it mean to be citizens of a country?

1.1 HOW CAN YOU UNDERSTAND CITIZENSHIP?

- Citizenship may be seen as the relationship between a person and the state.
- Today, citizenship refers to the legal rights, duties and responsibilities that one has towards a country and the way decisions are made in a government.
- The modern idea of citizenship came mainly from the West and only developed after the 17th century.
- The term citizenship has generally Western origins and comes from Ancient Greece. Athenian citizenship. Greek philosophers like Aristotle believed that a citizen is a person full potential and personality could not be achieved without civic citizenship in a Greek polis or city-state gave a person benefits like freedom, his own well-being, a chance to win honour by guiding and defending his city.
- Roman citizenship. The Romans believed that citizenship had more to do with loyalty on relationships between citizens and various rights of citizenship like voting rights, eligibility to hold government positions and the legal right for Roman rights involved the right to intermarry and trade.
- Historically, the Chinese, Indian and Malay civilisations saw citizenship very differently.
 - Confucian philosophy. According to the Chinese philosopher Confucius (551-479 BC), a citizen should know his place in society. Attention was placed on morality and some anyone wanted to be politically involved, he had to sit for Imperial Examinations for the Civil Service. The highest honour was to serve the state and uphold philosophy. According to Indian writer Kautilya (350-283 BC), a ruler's order in society. Everyone was governed by dharma or the Universal Law. The dharma is based on his observation of custom or law.
 - Malay Raffles. In Malay culture, the Malay Raffles referred to the condition that the Raffles was organised around the raja (king) and was based on unity.
- Between the 17th century and 19th century, political philosophers and thinkers developed the idea of citizenship. Some of the prominent philosophers include the following:
 - Thomas Hobbes (1588-1679). Hobbes was an English philosopher who lived in the 17th century when there was a struggle for power between Parliament and the King. Hobbes was influenced by scientific thought and felt that simple principles to explain the complex nature of society. He felt that governments protect us from selfishness and evil. The power or a king or authority figure was needed to provide leadership for the country.

1.1 Understanding Citizenship

Characteristics of citizenship

1. There are 4 ways for people to gain citizenship status in different countries.

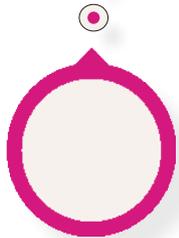
Scenario	1. By descent	2. By country of birth	3. By marriage	4. By naturalisation
One of your parents is a citizen of the country.	You are born in the country. Parents may not be citizens of the country.	You grow up and marry someone from another country. The foreigner takes up the citizenship of the spouse.	You migrate to a country to live and work there for a number of years. In some cases, you may need to pass a test to get citizenship.	
1957: Singapore sought to achieve self-government. Singapore was part of Malaysia and a merger was important for Singapore's political and economic survival.	All residents born in Singapore and Malaysia could be citizens.	Anyone born in Malaysia could apply to be a citizen.	A person married to a Singapore citizen could be a citizen.	(a) A person who had lived in Singapore for ten years could be a citizen. This gave 220,000 foreign-born Chinese the right to be citizens and to vote in elections. (b) British citizens who were resident in Singapore for two years could be citizens. (c) All residents must be willing to swear an oath of allegiance to Singapore.
1965: Singapore separated from Malaysia on 9 August 1965. 2015: Singapore, 50 years after independence.	Any child born to a Singapore citizen.	Not applicable.	A person married to a Singapore citizen could be a citizen. They need to live in Singapore for at least two years.	A person who has been a Permanent Resident (PR) for two to five years can apply for citizenship. A person who has been a PR for two to five years can apply for citizenship.

3

Learning Objectives

Key learning objectives and notes are summarised for easy revision.





Additional IT Resources

Provides useful supplementary information for the topic.

Key Guide 1: Level Social Studies Secondary 4 (LRS4)

Global Financial Crisis (2008)
<https://www.pedagogical.com/business/2008/02/2008-financial-crisis-overview/>
<https://www.youtube.com/watch?v=PC0Z7A6u0d0>
 Video from A Storm on How Singapore was impacted by the Global Financial Crisis
<https://www.youtube.com/watch?v=0679WYQ28-5c>

What is a sovereign wealth fund?
 Sovereign wealth funds (SWFs) are state-owned investment funds owned by national governments and financed by the country's foreign currency reserves (dollars, euros, yen), often through their central banks or through direct investments.
 The term sovereign wealth fund was introduced in 2005 but the first SWF was introduced in 1953 by the government of Kuwait (Kuwait Investment Authority, a commodity SWF).
 These funds are now major players in the world financial markets. The combined assets of the major SWFs is estimated at US\$1.1 trillion in assets under management as of March 2015.
 Singapore has two sovereign wealth funds:
 • Government of Singapore Investment Corporation (GIC Private Limited), with around \$344 billion, founded in 1981 and
 • Temasek Holdings, with assets of \$193 billion, founded in 1974.

European Debt Crisis (2009)
 The European debt crisis occurred during a period when several European countries faced the collapse of their financial institutions and high government debt. In 2008, Ireland's banking system collapsed and Greece, Portugal, Ireland, Italy and Spain. Many European businesses and economies were badly affected. The European Union, led by Germany and France, struggled to support these members. They turned to the IMF (International Monetary Fund) and the ECB (European Central Bank) and IMF (International Monetary Fund).

Dealing with economic downturns
 1. Many developed countries took extreme measures to deal with the Global Financial Crisis because the potential damage to their financial systems was immense. In Singapore, the following measures were taken to deal with the 2009 Global Financial Crisis.
 2. A S\$25 billion Resilience Package was introduced as part of the Singapore Budget 2009 to help Singapore ride out the crisis. Singapore was able to do this because of its large reserves.
 • The most important of this was the Jobs Credit Scheme, which gave businesses a cash grant based on the wages of Singapore and PR employees if workers were all employed by the firms at the end of three months. This was to encourage businesses to continue to hire workers.
 • For businesses, reliable Singapore businesses were able to continue to get bank loans and credit to do business. The idea was to get banks to continue to lend money to them.
 • Other companies were given tax exemptions, which means that they paid little or no taxes.

STRATEGIES TO ANSWERING EXAMINATION QUESTIONS
 CHAPTER 8
 HANDLING SOURCE-BASED CASE STUDIES (SBCS)

HANDLING DIFFERENT KINDS OF SBCS
 This section covers the different kinds of source based questions that you may encounter. Some teachers categorise them into six broad ABs.

Inference questions
 1. To infer means to explain the reasoning involved in making a conclusion or judgment on the basis of circumstantial evidence and prior conclusions.
 2. In such questions, you are making a deeper conclusion. It goes beyond what some information.

Inference questions that test the 'message' of the source
 1. Some of the questions take this form:
 • What can you learn from Source A about [a certain issue]?
 • Do you think that Source A supports [a certain issue]?
 • What can you infer about ...
 • What is the message of Source A?
 2. Your evidence must be derived and observable from the source.
 3. It is important to go beyond just quoting or paraphrasing the source. Explain your understanding of what the problem is, the proposed solution or the its context.

Figure 10.2
 Answering inference-type questions

1. Read the question carefully. Identify the source and the question type.
 2. Read the source carefully. Identify the main message and the supporting details.
 3. Answer the question using the main message and supporting details from the source.

12 HANDLING STRUCTURED RESPONSE QUESTIONS (SRQs)

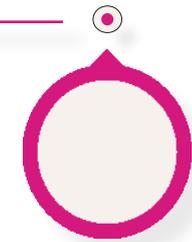
1. As a guideline, there are two kinds of SRQ questions assessable in the Social Studies syllabus.

Type of question	Response skills needed for such questions
Reasoned argument and problem solving	<ul style="list-style-type: none"> Explain causes of a social issue/problem. Explain the consequences/impact of a social issue/problem. Suggest strategies to resolve social issues.
Explanation/judgment	<ul style="list-style-type: none"> Explain factors that cause a social issue. Explain consequences/impact of a social issue. Compare and weigh different factors on a social issue.

Example 1 Explain 1 states that there are more foreigners taking up citizenship in Singapore. In your opinion, how can Singapore integrate new citizens into Singapore's society better? Explain your answer using two strategies.
 Note: N-Level students are required to come up with one cause or recommendation.

Example 2 Explain 2 used job about the importance of neoconfucianism and providing a stable for everyone as principles of good governance in ensuring Singapore's political and economic stability. Do you think that neoconfucianism is more important than providing a stable for everyone in building a more inclusive Singapore? Explain your answer.
 Note: N-Level students are required to explain two factors without weighing them.

101 HEADING EXTRACTS/STIMULUS IN STRUCTURED RESPONSE QUESTIONS (SRQs)
 1. SRQs come with extracts or stimulus that take the following form.
 • Text-based extracts (letter, text or extract)
 • Non-text extracts: Cartoons, statistics, photographs
 2. There are two important guidelines in reading such extracts for SRQs.
 • The text or stimulus and should not be analysed as Source-based Questions. This means that you do not quote or make reference to it in your answer.
 • The main purpose is to get you think about a problem, issue or concept that is highlighted in the extract.



Answering Strategies

Various chapters are written with diagrams and steps to provide both visual and textual models on how to deal with Source Based Case Studies (SBCS) and Structured Response Questions (SRQ).

Examination Practice

A range of SBCS and SRQs for students to practice, with differentiated questions for N- and O-Level students to try out at their own pace.

CHAPTER 10 - Examination Practice Papers

EXAMINATION PRACTICE 1

Section A (Source-Based Case Study)
 Question 1 is compulsory for all candidates.

1. BENEFITS AND CHALLENGES OF GLOBALISATION ON SMALL MEDIUM ENTERPRISES (SMEs) IN SINGAPORE

Study the Background Information and the sources carefully, and then answer all the questions.
 You may use any of the sources to help you answer the questions, in addition to these sources which you are told to use. In answering the questions, you should use your knowledge of the issue to help you interpret and evaluate the sources.

(a) Study Source A
 What is the message of the cartoon? Explain your answer. [5]

(b) Study Source B and C
 How similar are these two sources? Explain your answer. [6]

(c) Study Source D
 Does Source D prove that the use of new generation resource planning technology (ERP) enables SMEs to succeed in a globalised economy? Explain your answer. [7]

(d) Study Source E
 Why do you think the Prime Minister made this speech? [7]

For O-Level students
 (e) 'SMEs in Singapore can succeed in today's world to become internationally-oriented companies' Using sources in this case study, explain how far you would agree with this statement? [16]

For N-Level students
 (f) How far do the sources show that SMEs in Singapore can succeed in a globalised world? Explain your answer. [16]

STRATEGIES TO ANSWERING EXAMINATION QUESTIONS
 CHAPTER 11
 SUGGESTED ANSWERS TO EXAMINATION PRACTICE PAPERS

EXAMINATION PRACTICE 1

Section A (Source-Based Case Study)
 1. Benefits and Challenges of Globalisation on Small Medium Enterprises (SMEs) in Singapore

(a) Study Source A
 What is the message of the cartoon? Explain your answer. [5]

Suggested answer
 L1 Surface description of the cartoon but no valid message 1 m
 L2 Answer based on misinterpretation of the source 2 m
 L3 Valid interpretation of the source, not explained using source details. 3 m
 L4 Valid interpretation of the source, explained using source details. 4-5 m

Example The cartoon shows us that globalisation is a threat to local businesses (i.e. small and medium sized enterprises). This is seen in the cartoon where globalisation and localisation is portrayed as competitive forces in a boxing match. The larger boxer represents globalisation and MNCs, which have more resources, whereas the smaller boxer represents SMEs, which have fewer resources. In such a situation, the SMEs are seen as being disadvantaged. This satirises how that the message of the cartoon is to highlight the unfair competition that exists between MNCs and SMEs in a globalised world.

(b) Study Source B and C
 How similar are these two sources? Explain your answer. [6]

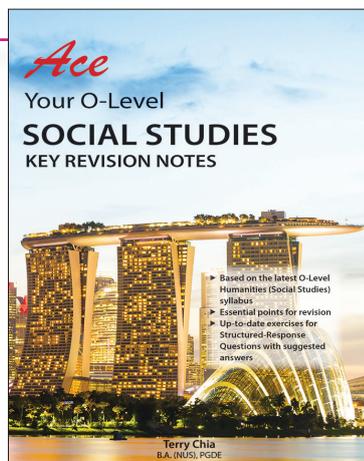
Suggested answer
 L1 Similarity or difference, based on provenance/ source type 1 m
 L2 Fuller matching of criteria when comparing
 L3 Similarity or difference in content (must be valid matches). i.e. direct matching of content to make direct comparisons. 3-4 m
 L4 Both aspects of L3
 Example Both sources are similar because they reflect the difficulties that businesses face in getting local Singaporean workers to join SMEs.
 This is seen in Source B when the forum letter relates the incident of how a woman wanted to join the SME but felt that as MNC or government job offered better prospects than SMEs. It cites that Singaporean workers don't have a "hunger to create value and take pride in working for SMEs" there by criticising Singaporean workers for their aversion to hard work and discomfort. This shows that Source B shows that businesses have difficulties in hiring local Singaporean workers.
 This criticism against Singaporean workers is similarly seen in Source C. In this source, the writer gives the example of an international fragrance company that cannot find

Answers with LORMs

Suggested answers are provided with Levels of Response Mark Schemes (LORMs) to allow students to learn how to structure their answers more effectively.



Ace Your O-Level Social Studies



ISBN: 9789811493171

Part 1 of this book focuses on understanding the concepts in Social Studies. This book provides the essential points that students must know, as well as information and insights into Singapore as a nation, and her past and present, enabling students to possess a more well-rounded view of topics in the syllabus.

Part 2 of this book provides up-to-date exercises for Structured Response Questions with suggested answers. This serves as a learning guide on how answers are layered and argued. The suggested answers provide students with a well-structured approach to tackling examination-style questions and shows how answers are assessed. This will prepare them for examinations by equipping students with the essential skills and techniques to tackle the new syllabus questions in examinations.

CHAPTER 1

What Does it Mean for Me to be a Citizen of My Country?

1. Different ways to be a citizen

1.1 Citizenship shaped by legal status
What are citizens?
Citizens of a country have certain rights granted to them such as freedom of religion, however they also have responsibilities towards their country and to follow its laws.

- Ways to become a citizen**
- By descent
In order to gain citizenship by descent, a person must have a parent who is a citizen of that country.
 - By country of birth
A small number of countries grant citizenship to all those born in their country.
 - By marriage
In many countries, a person can become a citizen by marrying a citizen of that country.
 - By naturalisation
Many countries grant citizenship to a person who registers as a citizen after living in the country for a certain number of years. Some may also require the person to pass a test and/or to give up their original citizenship.

In Singapore, those seeking to become citizens through naturalisation must first apply for Permanent Resident (PR) status first.

1.1.1 Citizenship in a democracy
Citizenship varies depending on what type of government a country has. In democracies such as France and the United States of America, citizens have the right to elect their representatives to government. To understand what being a citizen in Singapore means, first need to understand what is a democracy.

What Does it Mean for Me to be a Citizen of My Country?

1.2.1 Citizenship shared by identity
Citizenship can be defined by a shared national identity. A sense of national identity comes from a shared sense of belonging towards the same country. For example, Singaporeans share many aspects of their daily lives and share similar feelings about certain things.

Example This can be seen by how many Singaporeans take pride in our country being seen as a food haven that has all kinds of different food scattered across the country.

We also have common experiences.

Example 1 Singing the National Anthem and taking the National Pledge during our school years.

Example 2 Celebrating national holidays like National Day together.

1.2.2 Citizenship shared by participation
Citizenship can also be defined by shared participation in a country's society. When a country's citizens feel closer to one another and the country, other positive outcomes may result, such as a willingness to care for others and work together to improve society. Besides having a sense of identity, participation in public affairs or matters of general concern in society (issues that are of general interest or concern to most people in society) also shapes a person's citizenship.

Conclusion
The three attributes that shape citizenship are legal status, having a sense of identity and participation in public affairs. Some people regard citizenship as having a series of rights that allow individuals the freedom to do as they choose within the law. There are also those who view citizenship as more than just a duty to follow the laws of the country. They see citizenship as also requiring participation in making a contribution to society. Finally, there are also those who believe citizenship would require sharing a common purpose and bond with fellow citizens. These attributes are closely related to one another.

Example Those without the legal status of citizenship, like refugees, would find it difficult to integrate and develop a bond with the citizens of their host country. Without a legal status, refugees will not be able to go through formal schooling, gain employment and establish themselves in the community. They would thus not have many of the common experiences that others in the country had and would not be able to participate in society as legal citizens can.

Hence, all these attributes are equally important in shaping citizenship.

Essential Points for Revision

Key points for each topic in the syllabus are covered, with supporting examples.

CHAPTER 12

Model Structured-Response Questions and Suggested Answers

Issue 1 Exploring Citizenship and Governance

Practice One

Study the extracts carefully and then answer the questions.

Extract 1

National identity can be measured by two aspects: citizens' sense of belonging and their sense of obligation or patriotism to the nation. However, this sense of obligation or patriotism to the nation. However, this

Some Singaporeans are too ready to blame the country or except themselves, on many issues, policies and happenings to distrust of the government and dilution of the sense of belonging to national identity.

Extract 2

The organised groups such as NGOs and VWOs in Singapore helping the government to improve the holistic development work done by organised groups in terms of social, economic and cultural issues.

Extract 3

Singaporeans from different backgrounds, including grass-roots private sector, academics and political office-holders, regard find some consensus on key issues.

Questions

(a) Extract 1 states that the dilution of Singaporean national identity is a problem for Singapore.

In your opinion, what do you think is the impact of a weak identity? Explain your answer using two impacts. (7)

(b) Extracts 2 and 3 reflect on the roles of organised groups in government decisions.

Do you think the role of organised groups is more important in working for the good of society? Explain your answer. (8)

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Suggested Answer

(a) Extract 1 states that the dilution of Singaporean national identity may become a very real problem for Singapore.

In your opinion, what do you think is the impact of a weak sense of Singaporean national identity? Explain your answer using two impacts. (7)

Describes + Explains factors

Award 6-7 marks for explaining two factors.

Award 6-7 marks for explaining two factors.

One impact may be the **occurrence of a brain drain**. With an increase in competitiveness to fulfil the citizens' needs such as employment and housing, due to globalisation, there might be a loss of trust in the country's government. When the citizens feel that their needs are not met, they may start to seek alternative places to live in. The desire to leave also rises steeply with higher education as more graduates are expressing their desire to seek employment in other countries and reside there as well due to a perceived better quality of life due to a lower cost of living. If uncontrolled by the sense of belonging created by a strong national identity working to keep Singaporeans from leaving, Singapore will lose its best and brightest people and the population will decline. As a result, Singapore will eventually find it harder to keep up with the demanding needs of the modern world as with the lack of natural resources, Singapore is dependent on her people to contribute to the progress of the country. Therefore, a strong national identity is important for Singapore to ensure her pool of population.

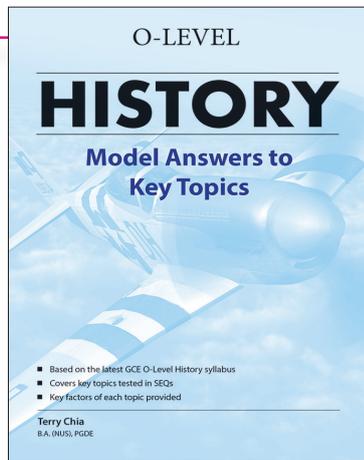
Another impact may be the **increase in individualism**. Without a strong sense of obligation to serve the country, people will start to put themselves first before others. They might not express the need to fulfil their responsibilities as a citizen. This will have negative social, economic and political consequences on Singapore. If this persists, it will be harder for the government to convince the people to agree to their political decisions. When the people's sense of belonging is lacking, they will find it hard to participate in policies implemented for the greater good. As a result, this will decrease the efficiency of the government in addressing the needs of the people and encouraging the growth of the nation. Therefore, a strong national identity is important to ensure that Singaporeans have a sense of responsibility to participate in helping the growth of the country.

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Practices with Answers

Structured Response Questions come with suggested answers and marking schemes to allow students to learn how to structure their answers more effectively.

History Model Answers to Key Topics



ISBN: 9789811493188

This book is written for students taking the GCE O-Level History examinations. The book focuses on making History accessible through the provision of model essays for Structured-Essay Questions. The essays capture the main points of the content covered in the GCE O-Level History Syllabus (Code: 2273) in a format similar to what students might encounter in the O-Level examinations. Students can attempt the essays from the list of practice questions, after which, they can refer to the model essays to check their scripts.



Essay Writing Skills

The first chapter of the book provides tips on how to answer different types of essay questions.

1 Essay Writing Skills

STEPS TO ANSWERING AN ESSAY QUESTION

When encountering a history essay question, here are some steps you can take to prod good answers.

1. Identifying the requirements of the question

There are two types of history questions in the GCE O-Level Elective History Syllabus (Code: 2273). They are typically divided into a 6a type question worth 8 marks and a 6b type question worth 12 marks. There is a degree of overlap between the kind of answers expected from each type of question. However, there are also differences. Let us examine these similarities and differences.

Type of question	Requirements
(a) question	Explain two factors
(b) question	Explain two factors and weigh their importance in comparison to each other

Let us look at examples of such questions to better understand the difference.

(a) question

Explain two reasons why the League of Nations was weak in maintaining peace. [8]

In such a question, the topic that your essay should be written on is spelt out for you. In this case, it is the reasons why the League of Nations (LON) was weak in maintaining peace. To answer questions, you will need to write out two paragraphs (one for each reason) that explain the factors answer the question.

You will need to identify two of the weaknesses of the LON and then expand on them. For example, in this case, you can choose to expand on the limited membership of the LON and post-World War I (WWI) attitudes of the major powers as your factors.

We will explore how to write such a paragraph later.

1 - Essay Writing Skills

Let us explore some examples of PEEL paragraphs for the 6a type question below.

Explain two reasons why the League of Nations was weak in maintaining peace. [8]

Point	Elaboration
The attitude of the major powers was a reason why the LON was weak in maintaining peace.	The major powers viewed their own concerns and interests as more important than the LON's goal of maintaining world peace and security.
Example	Britain and France had suffered greatly during WWI and were unwilling to fight another war. At the same time, the United States of America (USA) followed the policy of isolationism, which made the LON even more ineffective as the country which had suggested the setting up of the LON was not involved in its decision-making processes.
Link	Thus, they allowed acts of aggression to go unpunished which weakened the LON as it was unable to maintain peace in the world.

Note that in some cases you may also shift around the position of the example and elaboration portions of a paragraph and instead use the elaboration to expand on how the example relates to the factor raised in the point. See the example below:

Point	Elaboration
The limited membership of the LON was a reason why it was weak in maintaining peace.	The absence of the USA deprived the LON of the support of the world's most powerful country, leaving it without the USA's strength and wealth. On the other hand, Germany was not allowed to join at first as it was considered to have been guilty of causing WWI, while Russia was not accepted as it had recently been taken over by a communist government.
Example	For example, the USA was never a member of the LON. Moreover, countries like Germany and Russia were not allowed to join the LON initially.
Link	This meant that some countries were cut out of the decision-making process and were therefore unable to go along with the LON's policies, thus making the LON weak. The limited membership thus weakened the LON greatly as it needed strong countries as members in order to enforce its sanctions effectively.

Writing two paragraphs in this format is enough to answer a 6a type question. However, to answer a 6b type question, we must also weigh the relative importance of the two factors.

2 Impact of World War I in Europe

BREAKDOWN OF TOPICS

To assist you in answering the sample questions for this chapter, here is a breakdown of the various topics it covers.

- The aims and motivations of the various countries that drafted the Treaty of Versailles at the Paris Peace Conference
 - Factor 1 The USA's aims and motivations
 - Factor 2 France's aims and motivations
 - Factor 3 Britain's aims and motivations
 - Factor 4 Italy's aims and motivations
 - Factor 5 Japan's aims and motivations

- The Impact of the Treaty of Versailles on Germany
 - Factor 1 German humiliation
 - Factor 2 German territorial reductions
 - Factor 3 German military weakness
 - Factor 4 German economic weakness
 - Factor 5 Self-determination and the creation of new borders

- Weaknesses of the LON
 - Factor 1 Post-WWI attitudes of the major powers

Structural weaknesses

- Factor 2 Lack of authority and credibility
- Factor 3 Limited membership of the LON

Successes and Failures of the League of Nations

- Factor 4 The LON's successes at handling territorial disputes in the 1920s
- Factor 5 The LON's failures at handling territorial disputes in the 1930s

Breakdown of Topics

Each topic is broken down into their various factors to aid students in answering the sample questions for each chapter.

Model Answers

A model answer is provided for each sample question as a reference.

GCE O-Level History Model Answers to Key Topics

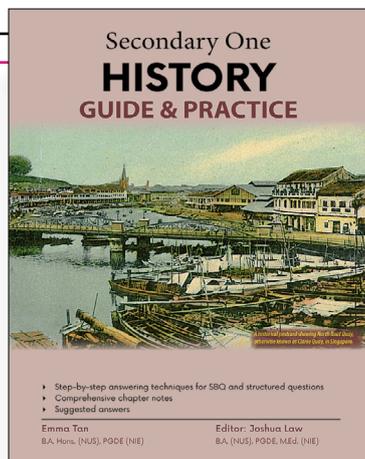
Question 1
Explain how the implementation of the Treaty of Versailles brought about peace in Europe in the 1920s. [8]

Model Answer

The implementation of the Treaty of Versailles brought about peace in Europe in the 1920s as the military reductions forced on Germany negated its ability to start another war. The harsh limitations placed on Germany's armed forces meant to ensure that Germany would not be able to start another war. For example, the size of the German army was limited to only 100,000 men. In addition, the size of its navy was also limited to 15,000 tons. Finally, Germany was also not allowed to have an air force, tanks and submarines. The aim of all these restrictions was to ensure that Germany would no longer be in a position to use its military force to start another war and threaten its neighbours such as France again. Furthermore, this also meant that Germany was significantly less able to defend itself against the Allied powers in the event of a military attack from its neighbours. The demilitarisation of the Rhineland also meant that Germany was not allowed to defend its borders with France. As such, this brought about peace in Europe in the 1920s as the terms of the Treaty of Versailles had negated the threat that had previously been exhibited by Germany.

The territorial reductions, the War Guilt Clause and the reparations that it justified provided a severe demerence to Germany and other potential aggressor states, while providing closure for states that were damaged by Germany and the fighting. As part of the Treaty of Versailles, Germany was left with extremely punitive terms. For a start, the Germans had to accept the War Guilt Clause, whereby Germany had to take complete blame for causing WWI according to Article 231 of the Treaty. Germany also had to pay compensation for all the damages caused in the war. The reparations demanded in 1921 were 16,600 million. Finally, to make things worse for Germany, the Treaty of Versailles also saw to the removal of key German territories. Much of the land that belonged to Germany before the war was reallocated amongst the Allied powers. For example, Germany lost all its overseas colonies in Africa and the Asia-Pacific, Alsace-Lorraine and the profits from the coal-producing Saar region was handed over to France, and the territory between Germany and East Prussia became the Polish Corridor. Finally, Germany was also banned from uniting with Austria. The economy heavy reparations meant that Germany was designed to avoid a sticky-inflation message to both Germany and any other potential belligerents to ensure that they would refrain from starting a new war. In addition, by punishing Germany severely, the Allied powers had also missed out some form of justice, allowing those states devastated by the war to move on. As such, the Treaty of Versailles had brought about peace in Europe in the 1920s by allowing countries leading justice to move on while also sending a strong message to deter countries from causing instability in the region.

Secondary One History Guide & Practice



This guide provides comprehensive Source Base Question (SBQ) skills and chapter content notes to prepare students for the examinations. It consists of the following features.

ISBN: 9789814996464

Answering Techniques for Section A and Section B

Section A: Source Based Questions (SBQ)

SKILL Inference

What is an inference?

- ▶ Inference is a conclusion about the past that can be obtained using details from sources.
- ▶ Inference questions are WHAT questions.

Examples of inference questions

- ▶ What does the source tell you about Singapore before 1819? Explain your answer.
- ▶ What can you learn from the source about Raffles? Explain your answer.
- ▶ What can you infer from this source? Explain your answer.

Example: What does Source A tell you?

Answering format

Inference: Source A tells me that ...

Explain: This is because ... as ...

Support: This can be seen in the source ...

Evidence gathered from the source that you used to make your inference.

Written source (Text): Quote directly from the source e.g. This can be seen in the source "sentence/phrase from the source."

Pictorial source (Image): Describe details from the source

*Note: If the source has 2 inferences, do IS twice.

Step-by-step Answering Technique for SBQ and Structured Questions

The skill notes provide student with the ability to identify question types and apply the appropriate answering format accordingly. Common mistakes and a success criteria checklist for each question type is also provided for students to avoid making careless mistakes and score well.

Comprehensive Chapter Notes

The chapter notes are organised and written in a concise manner for students to recall important details to be written for the structured questions.

Answering format

Point:

- ▶ What is the main point?
- ▶ Is the point given? If not, state the point.
- ▶ If the point is in the question, copy the given point and the question focus.
- ▶ Use the same phrasing and words from the question in order to **directly answer the question**.

Example 1: Explain the external developments that impacted Singapore's economy from 1869 to 1942.

Point is NOT given, you should state the point.

Example: One external development that impacted Singapore's economy from 1869 to 1942 was the opening of Suez Canal.

Explanation: Provide explanation - must refer to the question focus (what the question is asking for)

- ▶ What? - Give an elaboration on what the point means
- ▶ Why? - Explain how/why the point came about

Example: Provide relevant examples/evidence to support your point

- ▶ Examples must be **specific and detailed**
- ▶ Who? What? Where? When? (numbers, dates, etc)

Link: Link the point/factor back to the question

- ▶ Explain the **impact/consequence** of the point in relation to the question
- ▶ Do not just repeat the point

Success Criteria

- I have done the following for the Structured Question:
 - ▶ 2 paragraphs of PEEL
 - ▶ E Explained the "what" and "why" of the point
 - ▶ E Provided relevant examples to support the point, by using SWHH as far as possible
 - ▶ L Linked back to the Question Focus by explaining the impact of the point. Did not merely repeat the point.

Suggested Answers

The suggested answers are written according to schools' Level Of Response Marking (LORMS). This allows students to understand and check for their level of understanding for each question and to develop better answering techniques.

INTRODUCTION

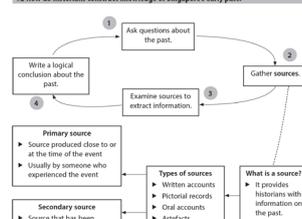
What is History all about?

#1 Introduction to History

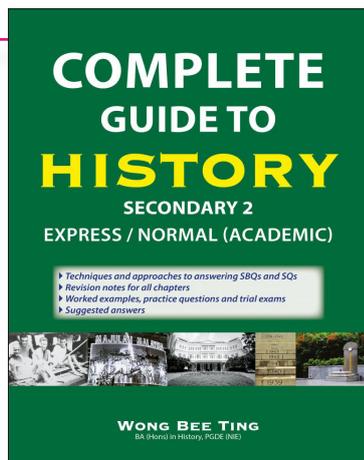
What are some words that come to your mind when you think of "History"?

What is History?
History is the study of the past.

#2 How do historians construct knowledge of Singapore's early past?



History Complete Guides



ISBN: 9789811111730

This book is written as a guide for Lower Secondary students studying for their History examinations. All History examinations test students' abilities in handling Source-Based Questions (SBQs) and Structured Questions (SQs). This book offers guidance and tips on how to answer SBQs and SQs well and ace the examinations.

This book comprises the following:

- Chapters 1–4: Skills in answering SBQs
- Chapter 5: Skills in answering SQs
- Chapters 6–9: Revision notes for the Secondary Two History syllabus and practice questions
- 2 Semestral Examinations

CHAPTER 2 – Inferring on Purpose

Worked Example 2 – Full of Singapore

Study Source B
Why do you think this was published? Explain your answer. [6]

Source B *Adapted from a South Times editorial on 8 December 1941.*
We have come to Malaya. Let us be frank at once that the situation is well in hand. There is no cause for panic, but there is need for forthright personal discipline and instant obedience to every order given by an officer of the forces, the police and the defence services. The first air raid on Singapore shortly after three o'clock this morning (8 December 1941) was repulsed in only a few minutes.

Step	Details
Task-type: ATQ	
Text-type published because:	
1. Context	Japanese troops had landed on Malaya in an attempt to conquer Malaya and Singapore. This had caused alarm among the people in Singapore.
• Trigger event + Concern that makes it necessary to produce the source.	
2. Message	The Japanese forces were no match for the British forces and everything was under British control.
• Infer on what the source is trying to tell you.	
• Quote the evidence.	This is evident from Source B, which states, "The situation is well in hand... The first air raid on Singapore shortly after three o'clock this morning was repulsed in only a few minutes."
3. Audience	People in Singapore.
• Read the proemium to find out about the target audience.	
4. Outcome	To reassure the people in Singapore that the British had everything under good control so that they would continue to support the British forces and cooperate with them.
• Feeling + Action	

Suggested answer
This was published [1] because Japanese troops had landed on Malaya in an attempt to conquer Malaya and Singapore [2]. This had caused alarm among the people in Singapore. This was published to convince the people in Singapore [3] that the Japanese forces were no match for the British forces and everything was under British control [4]. This is evident from Source B, which states, "The situation is well in hand... The first air raid on Singapore shortly after three o'clock this morning was repulsed in only a few minutes." This was published to reassure the people in Singapore that the British had everything under good control so that they would have confidence in the British [5] and continue to support the British forces and cooperate with them [6].

Worked Examples

Step-by-step worked examples to demonstrate how to answer the questions using the author's suggested steps.

Revision Notes

Revision notes include mind maps/graphic organisers to give an overview of the key points covered in the chapter. There is also a glossary of key terms and definitions, and detailed descriptions and explanations (wherever appropriate) of causal factors.

Chapter 9

REVISION NOTES

HOW FAR WERE PEOPLE'S LIVES TRANSFORMED AFTER INDEPENDENCE?

OVERVIEW

Developments that took place from 1965 to 1975

- 1. Promoting a common identity
- 2. Building Singapore's defences
- 3. Promoting economic development
- 4. Providing housing

GLOSSARY

Key word
Conscription
Financial hub
Infrastructure
Multinational corporations (MNCs)
Squatter settlements

Definition
Refers to compulsory military service.
Refers to a city, a country or a region that is considered to be a major center for providing financial services such as banking.
Refers to basic facilities that are needed to support a society, examples are: communications, transport systems and power supply network.
Refer to huge companies that have their offices and factories in more than one country.
Refer to areas where people live that do not belong to them or have not been approved for residential purposes by the government. Such areas are often characterised by poor living conditions and lack of basic services.

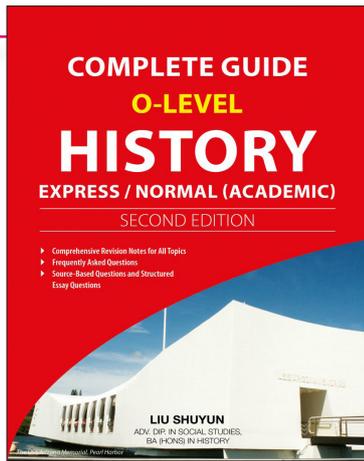
COMPLETE GUIDE TO HISTORY (SECONDARY 2 EXPRESS / NORMAL (ACADEMIC))

REVISION NOTES

Development that took place from 1965 to 1975

Point 1 Promoting a common identity
Source: (Source not available) (Source)
After independence, the government was concerned that some people did not feel a sense of belonging to Singapore and were indifferent toward Singapore's future. The government wanted to develop a common identity and instil a strong sense of belonging and loyalty among the people.
(a) The national symbols were important means to forge a common identity in the people.
• National Flag created in 1959 following Singapore's attainment of internal self-government.
• State Crest
• National Anthem
• National Pledge created in 1965 following Singapore's independence.
(b) Foster a sense of belonging where men of different races and backgrounds bond together as they undergo military training.

Point 2 Building Singapore's defences
Strategies to build up Singapore's defence forces
Source: (Source not available) (Source)
It was urgent to develop Singapore's own defence forces quickly because:
• Events such as the 1964 race riots and the Indonesian Konfrontasi showed that the lack of a strong defence force made Singapore vulnerable to external and internal threats.
• British decision to withdraw its military forces from Singapore in 1971 meant that Singapore was left with a very small and weak defence force.
(a) Introduction of National Service (NS)
• To overcome the problem of limited manpower resources, the government introduced National Service, a form of conscription, whereby male citizens had to undergo compulsory military training for a period of time as national servicemen.
• After completing their training, these men would continue to be part of the reserve forces.
Point 3 Promoting economic development
• The introduction of NS helps to increase the number of men who are trained to receive and can defend Singapore in times of crisis. This helps to strengthen Singapore's defence forces and contributes to ensure the peace and security of the country.
• In addition, it also helps to instil a sense of national loyalty and foster a national identity among the people as it provides a platform for men of different races and backgrounds to interact and bond with one another. This common experience and bonding builds camaraderie and promotes racial integration among the people.



ISBN: 9789811434327

Updated for the latest syllabus, Complete Guide: O-Level History Second Edition is written as a guide for teachers and students taking the History Elective Paper on Modern World History at the GCE O-Level examinations in Singapore. It may also be used as a revision guide for students studying Modern World History (1918–1991) in various examination systems across the world. Understanding the main features of the book will enable users to make effective use of this revision guide.



History Bytes

Provide extra historical information which might be useful to gain deeper insight into the topics covered.

COMPLETE GUIDE: O-LEVEL HISTORY SECOND EDITION

THE COURSE OF WORLD WAR I

- The Central and Allied Powers fought to a stalemate along the Western Front, which had been dug from Belgium to the Swiss border. Barbed wire and protective fortifications were dug up and built and were seen. This tactic strategy of trench warfare resulted in hundreds of thousands of deaths.
- Between 1915 and 1917, more powers got involved in the war. Christian Turkey fought on the side of the Central Powers, Italy and the USA fought on the side of the Allied Powers.
- 1917 was a decisive year because the USA entered the war on 17 April. President Wilson also made it clear that the USA was entering the war based on the 14 Points.
- Russia was, however, knocked out of the war in October 1917 because of the Russian revolutions. The Bolsheviks overthrew and a new communist government was set up in Russia in October.

HISTORY BYTE

The USA and World War I
The USA entered the war because of the following reasons:
Unrestricted submarine warfare: The move that German submarines attacked ships carrying supplies to the Allies, even passenger ships like the RMS Lusitania, was seen, which resulted in the loss of civilian lives.
The Zimmerman Telegram: This was a telegram sent from the German foreign secretary, Arthur Zimmermann to Mexico proposing a Mexican-German alliance in the case of war between the USA and Germany. It was leaked and published by US newspapers.
Wilson's Internationalism and 14 Points: When the USA entered the war, US President Woodrow Wilson issued his 14 Points as the basis for a negotiated peace. It was to also make a new world order based on 15 ideas of internationalism. Some of the main ideas of the 14 Points include the following:
 • League of Nations: An international organisation to provide collective security and prevent war.
 • Self-determination: The right of peoples to freely choose their sovereignty and international political status without external interference.
 • Open diplomacy: Open agreements that are transparent and open for all to scrutinise. No secret alliances and agreements.

HISTORY BYTE

Treaty of Brest-Litovsk in March 1918 between Germany and Russia
The new communist government in Russia signed the Treaty of Brest-Litovsk in March 1918 and the terms were very harsh on Russia:
 20% of its territory 24 million square km
 32% of its industry – Independence of Ukraine, Georgia and Finland
 – Russia and the Baltic states (Lithuania, Latvia and Estonia) to Germany
 – Other territories were given to Austria-Hungary and Turkey
 A large portion of its stock, coal and other mineral rights were given
 34% of its population 55 million people

CHAPTER 3 The Treaty of Versailles

1. Germans resented losses of territory

- Germany lost 13% of its territories and 13.5% of its population. These included the loss of Alsace and Lorraine to France; Eupen and Malmedy to Belgium; West Prussia to Poland; and the Saar coalfields to France for 15 years.
- Germans were also angry that they had to treat Poland as a great power. Poland had long been dominated and divided up between Russia, Germany and Austria-Hungary and had ceased to be a sovereign state for 123 years.

Self-determination not applied

- Wilson's principle of self-determination was applied to form new independent countries like Czechoslovakia, Hungary, Poland, Lithuania, Latvia and Estonia.
- However, Germans who lived in Flanders, Mecklenburg, Upper Silesia, the Sudetenland and elsewhere were not consulted. These territories were simply given away. Ethnic Germans who lived in these places saw their nationality changed overnight to become ethnic minority groups in newly created states.

VIEWPOINT **Alfred views to the Treaty of Versailles**

Those who see the Treaty of Versailles as a fair treaty look at the many different perspectives and concessions that were made between the USA, Britain, France and others. The result was the following:

- Germany was not reduced into a nation made up of small states.
- They still had an army of 100,000 men and six battle ships.
- The Treaty of Versailles was also not as punishing as the Treaty of Brest-Litovsk that the Germans had imposed on the Russians.

Comparisons of terms	Treaty of Versailles	Treaty of Brest-Litovsk
Territory lost	13%	32%
Population lost	13.5%	34%
Industry lost	Nearly 30%	30%
Coal industries lost	10%	30%
Reparations	132 billion marks (4.6 billion pounds)	4 billion marks

- Wilson's 14 Points were not formally adopted as the main principles necessary for hammering out the details of the Treaty of Versailles settlement. Germany had also ignored the 14 Points when it was announced in January 1918 because there was still German hopes for military success in that period. It therefore did not make sense to apply the question of self-determination in Germany.

Viewpoints

Give different perspectives and historical interpretations of events.



Frequently Asked Questions

Provides brief and comprehensible answers to questions which students might have.



COMPLETE GUIDE: O-LEVEL HISTORY SECOND EDITION

- To make matters worse, the aims of the League of Nations were threatened by the aggressive foreign policy of various countries.
 - Japan's invasion of Manchuria in 1931
 - Italy's invasion of Abyssinia in 1935
 - Germany's decision to walk out of the League of Nations in 1933 and its foreign policy aims of rearmament and expansion in Europe.

FREQUENTLY ASKED QUESTIONS
Impact of World War I

- Why was Britain and France the two most important powers in the League of Nations?

It was because the USA did not want to involve itself in European affairs. The USA felt that World War I occurred because the European powers were competing with each other for colonies.

It was also because Russia was communist and Lenin wanted to spread communism overseas through revolutions. This made its government distrust the USSR. Moreover, in 1917 Lenin signed the Treaty of Brest-Litovsk, which ended World War I. The Allies saw this move as an act of betrayal to the Allies.

Germany was not invited to join because it was a defeated power in World War I and the European countries were determined to make Germany pay for the war economically and morally. That left the world with only two European countries that would be the most important members in the League – Britain and France.
- Did Germany want to enter the League of Nations?

Germany was at first not allowed to join because it was defeated in World War I. However, Germany became members of the league in 1926. This was under Chancellor Gustav Stresemann, who was willing to pay reparations and to improve relations with the West through such treaties as the Locarno Treaty.
- What is the Locarno Treaty?

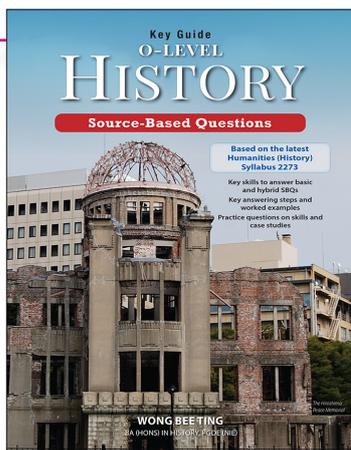
The Locarno Treaty is a treaty signed between Italy, Britain, Belgium, France and Poland in 1926. Germany promised to keep the borders in the west and not to take back Alsace and Lorraine. In 1926 the German foreign minister, Gustav Stresemann, proposed that France, Germany and Belgium should recognise an permanent their frontiers that was agreed at Versailles. This included the promise not to send German troops into the Rhineland and the acceptance that Alsace-Lorraine was permanently part of France. The French foreign minister, Aristide Briand, agreed with Stresemann's proposals and signed the treaty. However, as Germany refused to guarantee its eastern frontiers, France agreed to protect Poland and Czechoslovakia by signing treaties with them.

The Treaty of Locarno was signed in October 1925. This enabled Germany to be admitted to the League of Nations. However, Adolf Hitler revoked the treaty when he sent in the German army into the Rhineland in 1936.
- What is the Rapallo Treaty?

On 16 April 1922, representatives of the governments of Germany and the USSR signed the Rapallo Treaty at a World Economic Conference at Rapallo in Italy. The treaty re-established diplomatic relations, renounced financial claims on each other and pledged future cooperation between the USSR and Germany.

History Key Guides

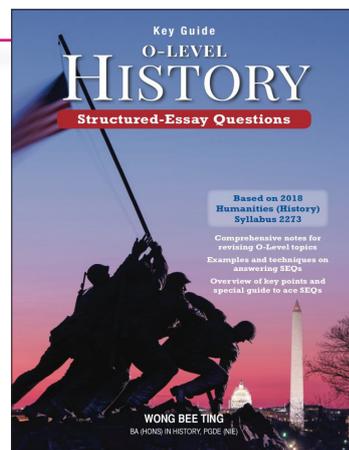
This series is written for students taking Humanities History (2273) at O-Level. The new O-Level Humanities History examination tests students' abilities in handling Source-Based Questions (SBQs) and Structured-Essay Questions (SEQs). These books provide notes, guidance, examples, practices and suggested answers on how to handle SBQs or SEQs effectively and score well in the examination.



Source-Based Questions

ISBN: 9789811148040

This book includes key skills and steps in answering SBQs, worked examples, practice questions with suggested LORMs, writing frameworks and suggested answers.



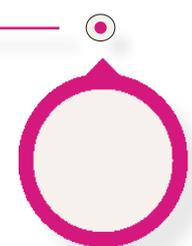
Structured-Essay Questions

ISBN: 9789811148033

This book includes key revision notes, summaries, practice questions with suggested LORMs, mind maps, examples of examination questions and timelines of key events as well as a special guide to ace SEQs.

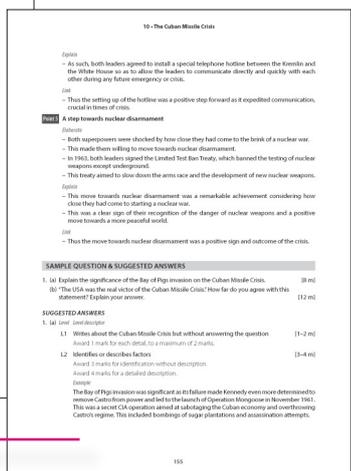
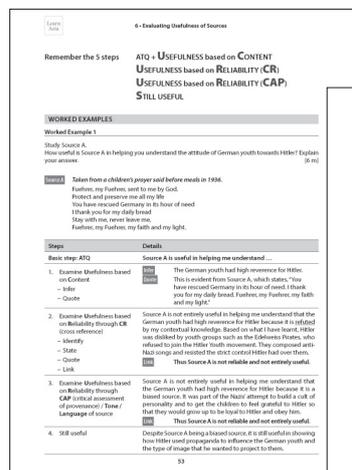
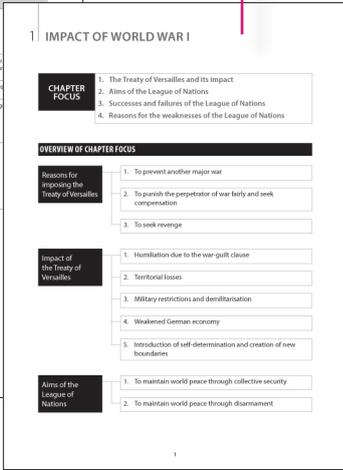
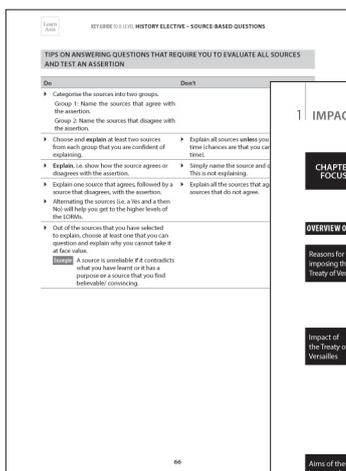
Key Notes

Key skills or contents for each chapter are summarised in easy-to-read formats.

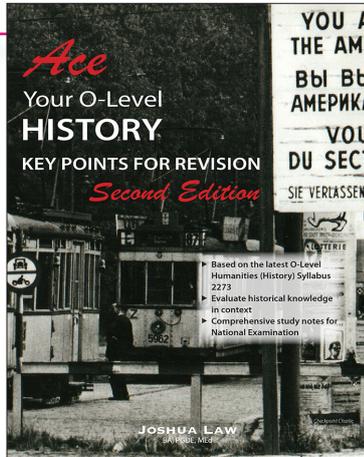


Worked Examples/Answers

Examples are worked out with clear steps and guidance on scoring for the questions.



Ace Your O-Level History



ISBN: 9789811440595

This book contains content notes on the World History for students taking History Elective. The aim is to engage students actively in historical enquiry so as to develop critical thinkers, enabling students to acquire knowledge and an understanding of history.

Through the contents of this book, students will be equipped with necessary historical knowledge, understanding, dispositions and skills to score well in their GCE O-Level examinations.



MOE Syllabus

Chapters are based on the latest O-Level Humanities (History) Syllabus.

Contents		
Chapter 1	Impact of WW1 in Europe	1
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Impact of the Treaty of Versailles

- German Humiliation**
 - Germans angered at accepting total blame for the war – called the treaty 'dictated peace'.
 - German people felt humiliated and wronged – felt they did not deserve it.
 - New Weimar government forced to agree.
 - Many accused politicians who signed the treaty as betraying German interests – called 'November Criminals'.
 - Weakened the credibility and support of the Weimar Government.
- German Territorial Reductions**
 - Land losses of about 13% of Germany's total land area.
 - By claiming territories that were valuable economically, it became difficult for Germany to pay reparations.
 - Germany lost colonies and resource-rich Rhineland, Saar coal region, Poland – injured German pride & economy.
 - Treaty prevented further German expansion through merger of territories – especially former Austria-Hungary.
 - Many German nationalists wanted German-speaking Austrians to join Germany.
 - When hard times came, extremists like Hitler played on weakness of German people.
- German Military Weakness**
 - Demilitarisation meant to ensure Germany would not start another war – significantly less able to defend itself.
 - No other country made to demilitarise.

2. Key terms of the Treaty

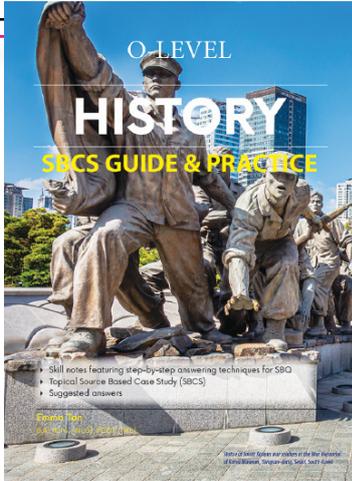
War Guilt Clause	Reparations	Armed Forces
Treaty stated that Germany had to accept blame for all the loss and damage to Allied countries.	Germans made to pay compensation to Allies for civilian damages (Reparations Committee set up) \$6.6 billion – mostly to Belgium & France.	Severe limits placed on German army/navy. Army limited to 100 000 men.
Germans felt this clause was unfair.	Germans made to pay unreasonable amount for the war, were concerned reparations would cripple them.	Navy restricted to 6 battleships, 24 smaller ships, no submarines, aeroplanes/tanks/heavy guns banned.
Felt that responsibility should be shared.		German troops not allowed into Rhineland (became demilitarized buffer zone).
		Germany felt that an army of 100 000 men was not enough to defend Germany. It was also unfair that only Germany was disarmed (not the UK or France).

Comprehensive Notes

Notes are presented in point and table forms for students to study more efficiently for exams.



O-Level History SBCS Guide & Practice



ISBN: 9789814996433

Upper Secondary History Elective: SBCS Guide & Practice provides comprehensive Source Base Question (SBQ) skills to prepare students for the examinations. This book consists of the following features:

Step-by-step Answering Technique for SBQ

The skill notes provide student with the ability to identify question types and apply the appropriate answering format accordingly. Common mistakes and a success criteria checklist for each question type is also provided for students to avoid making careless mistakes and score well.

Chapter 1 Notes on SBCS Skills

SKILL INFERENCE

Inference questions are WHAT questions.

Examples of Inference Questions

- What can you infer about...? Explain your answer.
- What does the source show you about...? Explain your answer.
- What does the source tell you about...? Explain your answer.
- What is the message of the cartoon? Explain your answer.

Suggested Answering Frame: IEE + CK

I nfer **E** xplain **E** vidence **C** ontextual **K** nowledge

Example: What can you infer about Source A? Explain your answer.

Step 1 Use the IEE method to address the question. Remember to explain your inference.
I can infer from Source A that... as... (E). This can be seen from the source, "... (E).
If there is a second inference:
I can also infer from Source A that... as... (E). This can be seen from the source, "... (E).

Step 2 Provide Contextual Knowledge

Based on my contextual knowledge, ...
Provide some factual information on the topic that either supports or disagrees with the inferences you have made from the source(s).

SKILL PURPOSE

Purpose questions are the WHY questions.

Examples of Purpose Questions

- Why do you think the cartoonist drew this cartoon? Explain your answer.
- Why did Stalin make this speech? Explain your answer.
- Why was the poster published? Explain your answer.
- What is the purpose of the source? Explain your answer.

Suggested Answering Frame: PAMIE + CK

Purpose word **C**ontextual **A**udience **M**essage **I**mpact **E**vidence **K**nowledge

What does PAMIE stand for?

- P**urpose: What purpose words involve an action. Include words like: For positive: *praise, encourage*. For neutral: *convince, persuade, influence, appeal*. For negative: *Mock, criticise, condemn, criticise*.
- A**udience: Who is this source targeted at? People from which country or community (i.e. gender, race, age group)? Or could it be the international community as a whole?
- M**essage: What do you think this source is trying to tell you? Make an inference, remember to explain here.
- I**mpact: What will the audience do after looking at the source? Take note the impact must be an action done by the audience you have identified earlier. i.e. This is so that the Russians (A) will support Stalin's 5 year plans and work harder for the country.
- E**vidence: This can be seen from the source, "..."
- CK** Contextual Knowledge: Based on my contextual knowledge, ...

Sample Question and Answer

Study Source B

What is the purpose of the Hitler Youth poster? Explain your answer. (5)

Source B: A Nazi poster, with a caption reading: "Officers of Tomorrow".



Step 1 Write your answer using the PAMIE answering format.

The purpose of the Hitler Youth Postcard is to convince (P) the German youth (A) that Hitler Youth was a good organisation to be part of as they would benefit from being trained into leaders to lead and protect Germany in the future (M). This is so that the German youth will be encouraged to join Hitler Youth to fight for the Nazi regime (E). This can be seen from Source B, a young boy who is smiling in the foreground with a strong Nazi officer in the background with the caption that reads "Officers of Tomorrow" (E).

Step 2 Provide Contextual Knowledge

Based on my contextual knowledge, the Hitler Youth posters were often used as propaganda, to emphasise on the bright future of German youth under Hitler's leadership. Its success could be seen from the stark increase in Hitler's youth membership, from 1000 members in 1923 to 2.3 million members by 1933.

Topical Source Based Case Study (SBCS)

Each SBCS is set according to the relevant examination format. This allows students to be familiar with the national examination style so that they can be prepared for the varied question types.

O-LEVEL HISTORY SBCS GUIDE & PRACTICE

(5) Study Source D

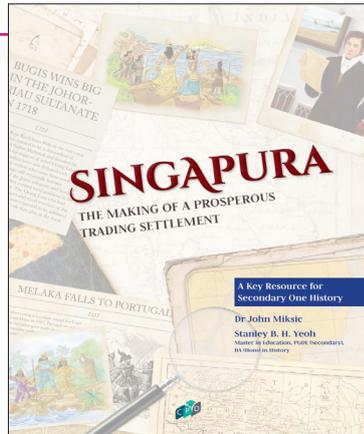
How useful is this source as evidence of Trotsky as a leader? Explain your answer. (5)

Level	Observation	Mark
L1	Yes or No. Usefulness based on prevalence	1 - 2
Repeats information from the source		
e.g. Source D is useful, as it is written by Lenin. [1] As Lenin had worked with Trotsky since the days of the October Revolution, he would know Trotsky well. [2]		
L2	Yes or No. Usefulness based on content	2 - 3
Award 2m for valid inference, unsupported		
Award 3m for valid inference, supported		
e.g. Source D is useful as evidence of Trotsky as a leader. Source D tells me that Trotsky was an incapable incompetent leader as he did not have clear ideas of his own beliefs as a leader. This can be seen from Source D. He has never yet held a firm opinion on any important issue about Communism.		
Accept also: Trotsky was an arrogant leader.		
L3	Yes or No. Usefulness based on cross-reference to contextual knowledge	4 - 5
Award 1m higher mark for elaborated inference/ contextual knowledge		
e.g. Source D is useful as it is supported by my contextual knowledge. Based on my contextual knowledge, Trotsky was not a competent leader as his ideologies were neither convincing nor popular amongst the people. Trotsky promoted the idea of permanent revolution but failed to convince fellow Party members to support him as they were tired of war and violence after WWI and the civil war in Russia. Instead, many of them preferred Stalin's idea of Socialism in one country. The inability to convince his party members shows that Trotsky was indeed incapable. As Source D is supported by my contextual knowledge, it is reliable and thus a useful source.		
Note: Can only CF to CK as all sources provided in this case study are unreliable sources.		

Suggested Answers

The suggested answers are written according to schools' Level Of Response Marking (LORMS). This allows students to understand and check for their level of understanding for each question and to develop better answering techniques.

Singapura



ISBN: 9789811138898

Singapura: The Making of a Prosperous Trading Settlement is a vital resource for students learning History as well as teachers teaching History at Secondary One.

Closely aligned to the Ministry of Education's Lower Secondary History syllabus, this book has been designed to supplement budding young historians with more information about Singapore's rich and interesting history, including additional sources to provide more in-depth knowledge about the role Singapore played in the region throughout the 14th to 19th century.

The Practising History section consists of notes and 3 practice papers for students to apply the skills learnt on source-based and structured questions.

Timeline

The book features a running timeline on the sides for quick and easy chronological reference.

Engaging Illustrations

Comics-style illustrations to help students visualise past events.



Archaeological Evidence

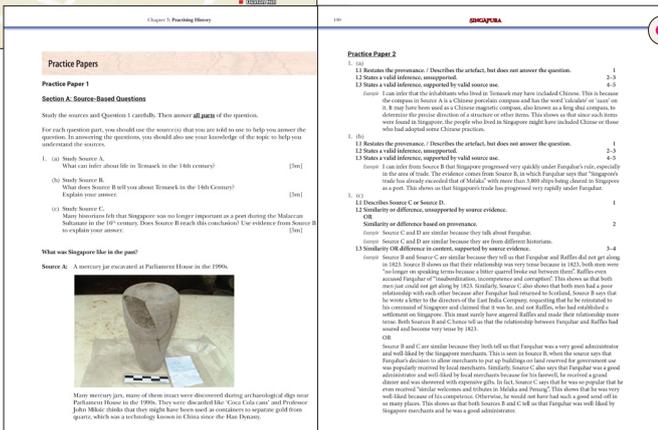
Actual archaeological sources are provided for activities in investigation.

Glossary

Explanations and detailed information about historical terms found in a chapter.

Practice Papers

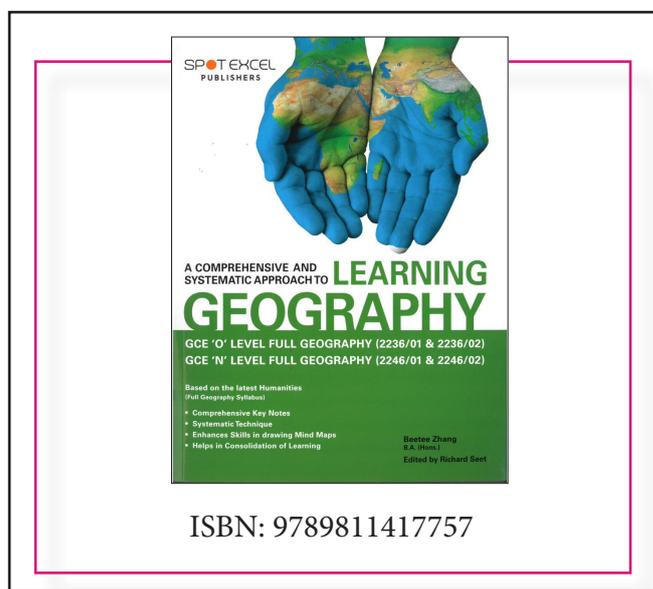
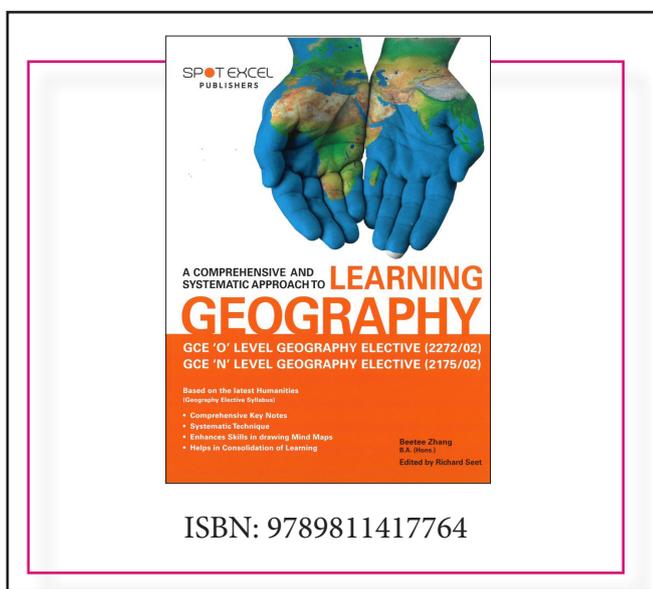
The practice papers come with answer schemes for students to learn the different levels of answers required.



Learning Geography

This Comprehensive and Systematic Approach to Learning Geography series has been specially designed and written in simple language and at times in point form, to assist students in extracting factors, reasons, strategies and roles of stakeholders in relation to an issue at a glance. It is hoped that the comprehensive and systematic format will help students consolidate their learning. Students are advised to use the books as guides to enhance their proficiency in drawing their own mind maps to understand and apply the information faster and better.

Students are also advised to use the guide books along with other learning resources used by their schools such as the textbook for maps, diagrams and graphs to describe distribution, explain formation of physical features and analyse trends as well as videos, hands-on activities, online interactive activities, concepts and inquiry skills taught in class.



What phenomena are found at plate boundaries and how are they formed? Earthquakes

Earthquakes & aftershocks
Earthquake is a sudden release of stored elastic strain energy through the breaking of rocks. It is caused by sudden slip along a fault. The sudden slip releases energy which radiates away from the rupture surface as seismic waves. The force that causes this slip is the result of stresses that have built up in the earth's crust. The energy is released as seismic waves.

Factors that affect extent of earthquakes

1. **Magnitude** (energy released) from 1 to 9, measured by Richter scale. For each increase of magnitude, energy released is 32 times more intense than previous one. It was greatest recorded in 1960 Chilean earthquake (9.5).
2. **Depth of focus** (where rupture occurs) by near surface, intermediate depth, or very deep, ranging from 0 to 700 km deep. Deep focus earthquakes are associated with subduction zones. Shallow earthquakes are associated with transform faults and strike-slip faults.
3. **Population density** if quake occurs in densely populated area, death toll high. Example: magnitude 7.2 1976 Tangshan earthquake in China killed 242,769 people.

Point of easy release is the focus and the point directly above focus is the epicentre

After an earthquake, there will be smaller aftershocks that follow along the fault.

Learning Exercises

Exercises are provided in the books as checkpoints for the students' learning.



From the description, state how people use coasts.

Description	Use of coasts by people
<ul style="list-style-type: none"> Due to increasing demand for fish and declining fish stock resulting from overfishing, fishermen need to resort to fish activity. This activity contributes about 33% of world's fish supply. Coastal areas are homes of fishermen who build their houses on stilts in the water. Wooden walkways are built to link the houses. Boats serve as a means of transport and communication along a coast. Living near the coast is a way of life for fishermen. Daily debris discard household waste. Coastal areas are scenic, windy, peaceful and great places for relaxation and recreation. Local authorities make full use of coastal areas by building resorts, spas, theme parks and conservation of marine ecosystem to attract tourists. 	
<ul style="list-style-type: none"> Due to some coastal areas being endowed with deep, well-sheltered harbours, local authorities capitalise on such advantages by building ports. Port activities eg. import/export trade boost the economy of countries eg. Singapore. 	

Summary Highlights

A summary highlights is included at the end of each book for a quick recap on the topics.



SUMMARY HIGHLIGHTS

COASTS: Should Coastal Environments Matter?

RQ 1: How and why are coastal environments different and dynamic?

What FACTORS cause coastal environments to change and be dynamic?

1. Waves	2. Tides	3. Currents	4. Geology	5. Types of ecosystems	6. Human activities
----------	----------	-------------	------------	------------------------	---------------------

What are the two main types of waves?

1. Constructive waves	2. Destructive waves
<ul style="list-style-type: none"> Powerful wash Weak backwash Seash has powerful than backwash 	<ul style="list-style-type: none"> Weak wash Powerful backwash Seash has powerful than backwash

What are the three main coastal processes?

1. Sediment erosion	2. Sediment transport	3. Sediment deposition
<ul style="list-style-type: none"> Hydraulic action Attrition Solution (Corrosion) 	<ul style="list-style-type: none"> Transported by longshore drift Influenced by longshore current zig-zag movement of wash and backwash along coast 	<ul style="list-style-type: none"> Quality of gently-sloping coasts Soak stronger than beach

What are the main types of erosional landforms?

1. Cliffs and shore platforms (wave-cut platforms)	2. Headlands and bays	3. Caves, arches and stacks
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What are the main types of depositional landforms?

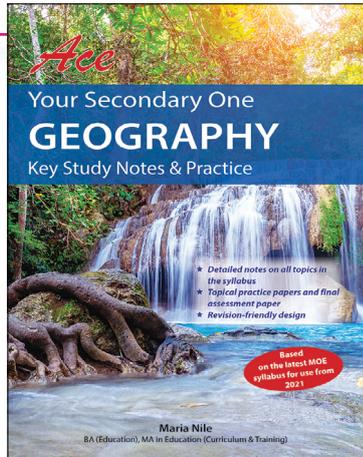
1. Beaches	2. Spits	3. Tombolos
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Column Layout

Information is presented in columns and key words are bolded or underlined for easier learning.

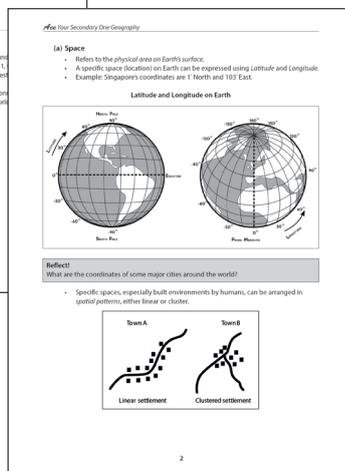
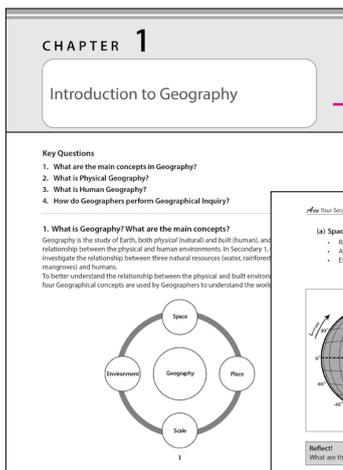


Ace Your Geography



Secondary 1
ISBN: 9789814996273

This book was designed based on the latest Lower Secondary Geography Syllabus issued by the Ministry of Education in 2021, with the intent of guiding Secondary 1 students new to the subject of Geography. The book aims to equip new students with both content knowledge and geographical skills aligned with the learning outcomes in MOE's syllabus, as well as to assess their learning through various forms of written assessment.

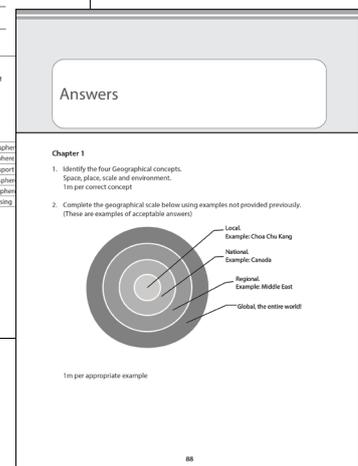
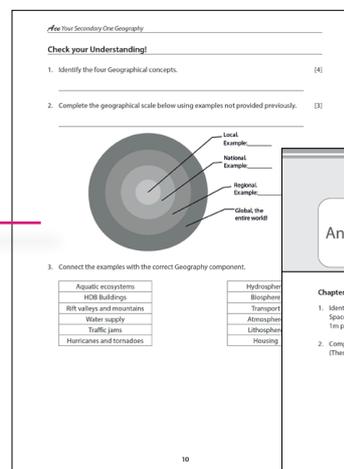


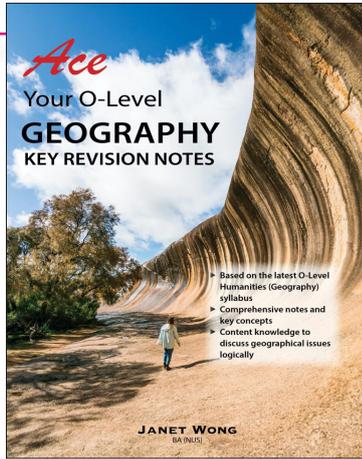
Detailed Notes

Each chapter consists of detailed notes covering key questions. Illustrations and reflection questions are also included for easier revision and encouraging thought processes.

Practices

Topical practice papers and a final assessment paper with answers detailing the mark allocation are provided.





O-Level

ISBN: 9789811426735

This guide book is specially designed to help students in their revision for the O-Level examinations. It contains comprehensive Geography notes and key concepts that students are required to apply to their answers. All notes are based on the latest MOE Geography Elective syllabus.

This book equips students with the necessary knowledge to be able to discuss geographical issues in a logical manner. Students will also be able to apply this knowledge seamlessly to form sound explanations and provide clarity in their answers. The notes are organised in a clear manner to aid in students' revision.

Contents

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 - Gateway 1: How and why are coastal environments different and dynamic?
 - Gateway 2: Why are coastal areas valuable?
 - Gateway 3: How can we manage coastal areas in a sustainable manner?
- Unit 2 Living with Tectonic Hazards: Risk or Opportunity? 17
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 - Gateway 2: What landforms and associated tectonic phenomena are found at plate boundaries?
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- Unit 3 Variable Weather and Changing Climate: A Continuing Challenge? 32
 - Gateway 1: Why do different places experience different types of weather and climate?
 - Gateway 2: What is happening to the earth's climate?
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 - Gateway 3: How can we manage the current and future spread of infectious diseases?
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MOE Syllabus

Notes are based on the latest O-Level Humanities (Geography) Syllabus.



Comprehensive Notes

Comprehensive notes are provided with key concepts and illustrations for effective revision.



Unit 1 - Coasts: Should Coastal Environments Matter?

What are waves and how are they generated?

- Waves are generated when wind energy blowing across oceans is transferred to water surfaces. Movement is affected by wind direction. E.g., onshore winds push waves towards the coast and crash onto shore.

Wave terminology

- Wave length: Horizontal distance from crest to crest through trough.
- Wave height: Vertical distance between the crest and trough.
- Wave crest: Highest part of a wave.
- Wave trough: Lowest part of a wave.
- Wave particles: Move in an orbit, motion decreases with depth.

Wave energy depends on the following factors

Factor	Strength and size of wave
Wind speed	The faster the wind blows, the stronger the waves.
Wind duration	The longer the wind blows, the stronger the waves.
Fetch (distance travelled by the wind over sea and oceans)	The greater the fetch, the more powerful the waves.

- The amount of energy in waves can be observed from the wave steepness.
- The higher the wave energy, the steeper the wave, the shorter the wave.

Waves in the open ocean

- They have long wave lengths and low wave heights. Water particles in an orbit (motion decreases with depth).

Waves close to the coastline

- Although water particles move in circular motion, this motion changes as waves approach the coastline.
- Nearer the coastline: Water is shallow, interacts with the seabed and starts to become steeper and topples over, leading to the wave breaking and releasing energy.
- When energy within the wave is released on the coast, it breaks rocks all into smaller particles which are transported to other parts of the coast. Forces in the changing or creation of coastal environments.

Unit 1 - Coasts: Should Coastal Environments Matter?

Why do coastal landforms and features vary from place to place?

Coastal processes

- Hydraulic action**
When waves strike against the rock surface, air is trapped and compressed within the rock joints, exerting pressure on joints. After repeated compression of air, joints are weakened and rocks shatter eventually.
- Ablation (corrosion)**
As waves break, sediments such as sand and rocks (which are carried by waves) are hurled against the coast. The loosened sediments will knock and scrape against coastal cliffs, weakening the surface and breaks down the coast. Over time, it can undercut a cliff.
- Attrition**
When rock particles rub or collide against each other, they break into smaller pieces and become smoother and rounder over time.
- Solution (corrosion)**
Seawater reacts chemically with water-soluble minerals in rocks and dissolves them. Eg. Limestone rocks are soluble and easily eroded by carbonic acid. Hence, the rocks will be eventually disintegrate.

Sediment transport
Sediments transported along coasts through longshore drift and beach drift (waves approaching coast at an angle).

Land (Beach)

Sea

- Waves approach at an angle.
- Sediments move up the beach at an angle via wash.
- Due to gravity, sediments are brought back in the sea at right angle (move perpendicularly downwards) through backwash.

Are You O-Level Geography - Key Revision Points

- Repeated wash and backwash will cause zig-zag movements of sediments along the coast called beach drift.
- When waves approach the coast at an angle, they generate longshore currents. Together with longshore currents, beach drift moves sediments away from the coast forming the longshore drift. Longshore drift is most rapid when waves approach straight coast at an angle of 40° to 50°.

Sediment deposition

- Deposition occurs when waves lose energy and are no longer able to transport sediments. Location of coasts influences the deposition of sediments.
- Deposition of fine sediments happens at sheltered areas with calm waters. Eg., mangrove coasts create sandy beaches. It also takes place in shallow waters with gentle-sloping coasts.
- Coarser sediments are usually deposited in more exposed and smaller bays with higher energy waves to remove finer sediments, leaving behind bigger sediments which form stony beaches.

In what ways do coastal landforms and features vary from place to place?

Erosional landforms

Cliffed coasts

- Cliffs and Shore Platforms**
Cliff: Steep and near-vertical rock face found along coasts, produced from undercutting a steep, rocky coast.

During high tide, repeated erosion causes cliff to erode and collapse into the sea.

Constant erosion will cause beach to erode with a wash.

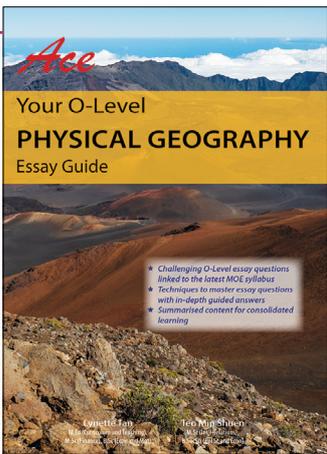
This notch will widen and deepen to form a slight hollow space called cove.

Over time, repeated erosion will cause coastline to retreat inland. A three-pronged feature formed at the base of the cliff which will be submerged during high tides.

Ace Your O-Level Physical/Human Geography – Essay Guide have been written in accordance with the latest syllabus taught by the Ministry of Education, Singapore. The books focus on the essay techniques and effective ways to answer Physical/Human Geography questions. Questions in these books are set to be more challenging so that students can gain insights to answering questions that are more difficult.

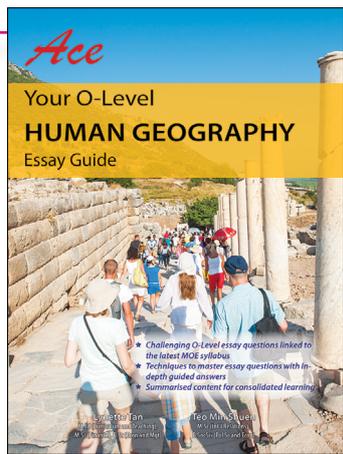
Using a step-by-step explanation guide with suggested phrasing of answers, the books aim to help students master the skill of effectively structuring their essays to obtain maximum marks. Ultimately, they hope to strengthen students' foundation in Physical/Human Geography essay writing and enable them to independently develop their own answers.

The books serve as guides to both teachers and students preparing for the O-Level Pure Geography and Elective Geography Examinations (Physical/Human Geography) and are suitable for students learning both Pure and Elective Geography.



O-Level Physical Geography
ISBN: 9789814996181

The book covers the topics:
(i) Essay Writing Skills; (ii) Coasts;
(iii) Weather and Climate; and (iv) Living with Tectonic Hazards.



O-Level Human Geography
ISBN: 9789814996174

The book covers the topics:
(i) Essay Writing Techniques; (ii) Tourism;
(iii) Food Resources; and (iv) Health and Diseases.

Chapter 2 Tourism Essay Questions

Gateway 1 How does the nature of tourism vary from place to place?

1.1 How do tourist destinations differ from one another?

Sample Essay 1
"A destination with rich culture and heritage will always be attractive to tourists." How far do you agree with this statement? Explain your answer with relevant examples.

Analysing the question
Topic: Tourism (Gateway 1) How the nature of tourism varies from place to place.
Sub-topic: Different factors attracting tourists to different destinations.
Identify the given factor:
- Places with rich culture and heritage (Heritage tourism; Film festival tourism; heritage tourism)
Other keywords:
- Always attractive
Other factors which can be attractive to tourists:
1. Places with scenic beauty (Honey-pot tourism)
2. Places with conflicts (Dark Tourism)
3. Places with good facilities (MICE Tourism; Theme Parks; Medical Tourism)

Paragraph 1
Introduction:
I agree to a [learning point 1] small extent that a destination with rich culture and heritage [learning point 2] will always be attractive to tourists as tourists are also drawn to places with [learning point 3] scenic beauty.

Learning points
* Apart from the given factor (rich culture and heritage) which must be discussed in the first body paragraph, you are free to choose any other factors that can differentiate a place elsewhere.
1. Depending on your preference, 'to tourism' is not compulsory if just helps you to answer the question directly.
2. You must always address the given factor (rich culture and heritage) in the question before discussing other factors in the introduction.
3. You can choose any of the other factors that you are comfortable discussing.

Paragraph 3
Body: Explain one other factor of your choice
Places with scenic beauty
(This statement – learning point 3. However, apart from visiting a place with rich culture and heritage, tourists often visit places with scenic beauty as these landscapes are unique and can offer breathtaking views to tourists who are nature lovers. (Singapore) Honey-pot tourism refers to tourism that draws a significant number of tourists due to sites and intriguing scenery. These scenic sites are unique to different areas and attract people to their unique physical features. (Singapore) For instance, the Grand Canyon National Park in the US attracts a large number of tourists every year due to its unique combination of geologic colours and distinctive features. (UK) Hence, a place with scenic beauty attracts tourists because tourists visit these destinations in order to get closer to nature, as well as to explore different landscapes and physical features in different parts of the world.

OR

Learning point 3: Other possible factors
Places with Conflicts – Dark Tourism
(This statement) Tourists are also attracted to places with conflicts to understand how past events associated with death and tragedy could unfold. (Singapore) Dark tourism refers to tourists travelling to different sites where genocide, assassination, incarceration, ethnic cleansing, war or disaster – either natural or accidental – have occurred. People travel to such places to gain more understanding of the different events, and to sympathise with those who have been the victims of these events. (Singapore) For example, the Cu Chi Tunnels in Vietnam offers tourists an experience into the tunnels dug by the North Vietnamese in their fight against the Americans during the Vietnam War. Guided tours bring tourists into these caves, allowing them to experience how war was fought. These allow them to have first-hand experience with the events that occurred in the past, allowing them to gain a deeper insight about how events had unfolded. (UK) Hence, tourists are attracted to places with conflicts because it allows them to better understand political events and tragedy that have occurred.

Paragraph 4
Conclusion:
In conclusion, I agree to a [learning point 1] small extent that a destination with rich culture and heritage will always be attractive to tourists as tourists are also drawn to places with [learning point 3] scenic beauty.

Chapter 2: Tourism Essay Questions

4. Address the other factor (rich culture and heritage) and answer directly to the question in a strong point statement summarising your argument. Follow the PEEE format as taught above.

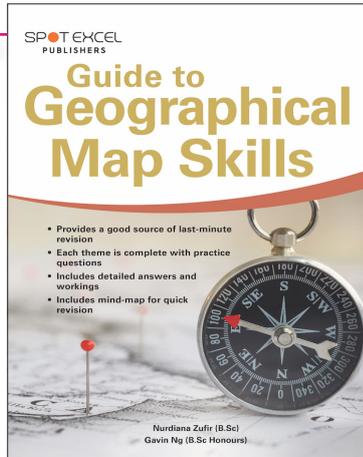
5. You can decide to cover any of the other factors raised in the 3rd paragraph. You may also add this in as an additional content paragraph (optional if you are able to write 2 content paragraphs in depth).



Comprehensive Sample Essays

Each topic includes several sample essays with an analysis of the question, in-depth guidance on what to write for each paragraph and accompanying learning points.

Geographical Map Skills



ISBN: 9789811164354

This Geography Topographical Map Skills guidebook is designed to help students understand each theme concisely. The illustrated diagrams and detailed workings provided give students a step-by-step breakdown of answering map skills questions in Geography.

The guidebook is broken down into several main themes that are tested under geographical map skills. Each theme is equipped with practice questions to test students' understanding of the concepts. This book also includes a set of relevant application questions that students can use for revision.

Through this book, students will become familiar with the common types of questions in geographical map investigations and will hopefully be able to answer examination questions confidently.

Practice Questions

1. The figure below shows a map of Sandy Gold Town. Use the map to answer the following questions.

Legend:

- Grass Hospital
- Lighthouse
- Sea
- River
- Settlements
- Police Station
- Market
- Woods
- Island

(a) Find the four-figure grid reference of the

- lighthouse,
- market,
- settlement I
- Grace Hospital.

Practice Questions

At the end of each chapter, there are some practice questions to reinforce the concepts learnt.

Chapter 6 Applications of Maps

Revision Questions

1. The map below shows an area within the Bukit Timah Nature Reserve, Singapore. Study the map carefully and answer the questions that follows.

Map 1

- Shelter
- Bus stop
- Building
- Stream
- MRT
- Catchment Hut
- Visitor Centre

a) Name the table of the map that shows the list of symbols. [1]

b) Express the scale of the map in the form of 1 : n. [1]

c) State the four-figure grid reference of

- Dairy Farm Hut. [1]
- Catchment Hut. [1]

d) State the six-figure grid reference of Hillview MRT Station. [1]

Revision Questions

In the last chapter, there are some revision questions based on unique maps, testing different concepts discussed in the book.

Chapter 3 Measuring Distances on a Topographic Map

Scale

To calculate distances between features on a map, we have to first understand the use of the scale in the map.

The scale is a ratio of a distance on the map to the actual distance on the Earth's surface.

Scale 1 : 100 000

Example 1

What does the scale of 1 : 50 000 on a map mean?

Map : Earth's surface (reality)

1 cm	= 50 000 cm
1 cm	= 50 000 ÷ 100 = 500 m
1 cm	= 500 ÷ 1000 = 0.5 km

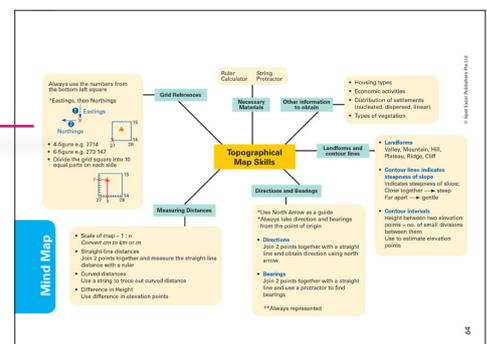
Hence, the scale of 1 : 50 000 means that every 1 cm on the map represents 0.5 km on Earth's surface.

Worked Examples

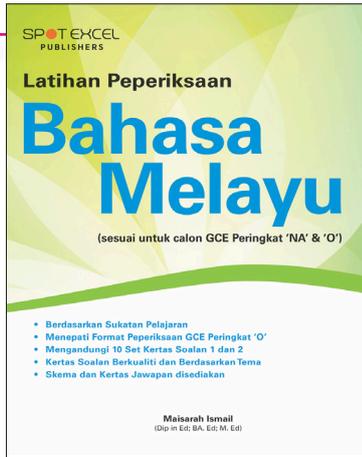
Examples are provided after each concept is discussed, demonstrating how the concepts can be used to solve the problems given.

Summary Mind Map

A summary mind map is included at the end of this book to help recap the various concepts discussed.



Exam Practices



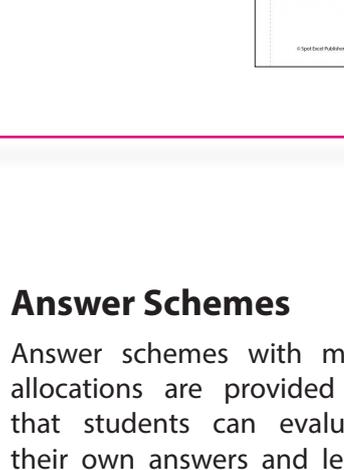
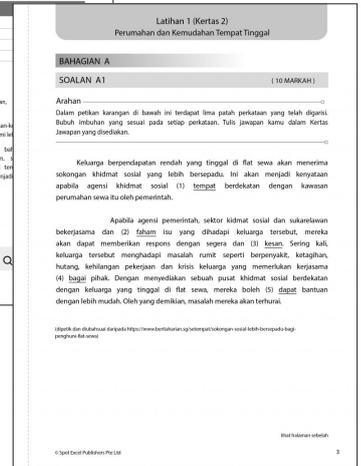
ISBN: 9789811407970

The practices in this book are based on the latest syllabus for the Malay language and prepare students for the GCE NA and O-Level examinations. Each practice contains two parts, namely Paper One and Paper Two. All aspects of the exam items are covered, including email and stimulus graphics.

With this series of exam practices, students will gain more confidence to achieve excellent results for their Malay language examination.

Practice Papers

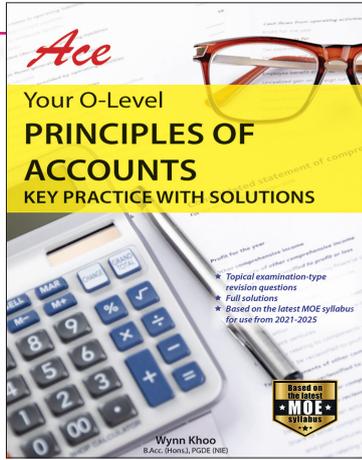
There are 10 practice papers for students to master various word associations in the Malay language.



Answer Schemes

Answer schemes with mark allocations are provided so that students can evaluate their own answers and learn how to score marks.

Ace Your O-Level Principles of Accounts



ISBN: 9789814996006

This guidebook on revision and practice was written specially to help students comprehend the topics in the new syllabus better. The contents are well-organised and systematic to help students self-study and revise in an effective way.

The book begins with an introductory chapter on accounting, following the order of the MOE-approved textbook closely. Each chapter includes examination-type questions to widen students' exposure to different variations of questions.

2 THE ACCOUNTING INFORMATION SYSTEM

- Stanley is starting a business and requires an explanation of the following financial terms.
 - State the purpose for each of the following source documents:
 - Receipt
 - Credit note
 - Explain the difference between a cash transaction and a credit transaction.
- Amanda owns Am's Jewellery, a business selling accessories and jewellery. Am's Jewellery had the following transactions in the month of March 2006.

20th	Bought \$7 200 worth of jewellery on credit from supplier Magic Co.
Mar 8	Returned \$1 800 worth of jewellery to supplier Magic Co. as they were spoilt.
Mar 17	Sold jewellery for \$4 600 on credit to customer Shermaine. The cost of the jewellery was \$2 200.
Mar 25	Bought a computer for \$1 870 and paid by cash.

 - Explain the difference between a cash transaction and a credit transaction.
 - Amanda uses source documents to record her business transactions. State and explain the accounting concept related to the use of source documents in recording business transactions.
 - Identify the source documents for the above transactions and whether the business will issue or receive them.

Date	Source Document	Issued or received
Mar 1		
Mar 8		
Mar 17		
Mar 25		

PRINCIPLES OF ACCOUNTS

- Jermaine buys and sells hair accessories.

The following transaction took place in her business in the month of January 2006.

Jan 1	Paid rent \$910 by cash.
Jan 3	Purchased goods of \$1 200 from Jazrel on credit.
Jan 17	Sold goods on credit to Kai En for \$1 000.
Jan 20	Purchased machinery of \$18 000 from Georgia on credit.
Jan 20	Received cheque from Kai En for the amount bought on 17 January.

Complete the table below for each of the above transactions. The first item has been completed as an example.

20th	Source document
Jan 1	Payment voucher
Jan 3	
Jan 17	
Jan 19	
Jan 20	
- The following transactions took place in Lynette's business.

20th	
June 1	Paid maintenance expense, \$2 000, by cheque
3	Sold goods on credit to Chun Kang for \$1 600.
5	Chun Kang returned spoilt goods invoiced at \$70.

 - Complete the table below for each of the above transactions. The first item has been completed as an example.

20th	Source document
June 1	Payment voucher
June 3	
June 5	
 - Explain the going concern concept.

Answers

Full solutions with tables are included for students to evaluate their own learning.

Examination-type Questions

Revision exercises comprise of examination-type questions arranged by topic.

ANSWERS

1. Introduction to Accounting

- Greater funds/capital to run the business. Banks are more willing to provide loans.
 - To enable business to determine its performance at certain accounting intervals and make the necessary decisions. This is based on accounting period theory.
- Decision making. Accounting provides financial statements to communicate financial information to stakeholders to make informed decisions regarding the business.
 - Internal stakeholders: Sole proprietor/manager. To plan, control and monitor the performance of the business. Employees: To assess job prospect and stability.
 - External stakeholders: Bank/creditor/lenders: To decide whether to grant loans to the business. Suppliers: To decide whether to allow the business to buy on credit. Government: To decide on tax obligations of the business. Customers: To decide if the company is stable to provide good after-sales service. Competitors: To decide on how to improve their business.
- The accounting entity theory states that the business and the owner are separate and distinct entities. Only business activities and not the personal activities of the business owner are recorded.
 - Manage Owner
 - Integrity, Objectivity
- The role of accounting is to allow stakeholders to make informed decisions regarding the management of resources and performance of businesses.
 - Accounting is the process of recording, summarizing, analyzing, interpreting and reporting the financial information of an organization.
 - A trading business buys goods to sell while a service business provides services to generate revenue.
 - Either bank or suppliers or shareholders/creditors.

Business situation	Accounting Objective	Accounting Theory
1. The value of a motor vehicle bought for \$20 000 is \$15 000 at the end of the year.	Accounting Theory	Historical Cost Theory
2. The value of a motor vehicle bought for \$20 000 is \$15 000 at the end of the year.	Accounting Theory	Historical Cost Theory
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Practice Guide



ISBN: 9789811498527

ISBN: 9789811498534

These Practice Guides are suitable for Secondary 3 and 4 students, based on the latest MOE syllabus.

The Standard Tamil book contains a wide range of cloze passages, idioms, creative phrases, sentence structuring exercises, MCQ and open-ended comprehension along with a vocabulary list.

The Higher Tamil book contains a wide range of cloze passages, editing, word blending, MCQ and open-ended comprehension and summary practices, along with a vocabulary list.

Both books also contain several tips and tricks for students to score their desired 'A' grade.

மரபுத் தொடர்கள் கிணை வாராழிகள்

கூ. எண்	வார்த்தையின் பொருள்	கிணை	அர்த்தம்
1.	தூக்கம்	உறங்குதல்	Unable to keep awake
2.	தூங்கிப் பழை	உறங்கிப் பழை	Talk idly
3.	தூங்குதல்	உறங்குதல்	Advice
4.	தூங்குதல்	உறங்குதல்	Spreading rumors
5.	தூங்குதல்	உறங்குதல்	Disobedient talk
6.	தூங்குதல்	உறங்குதல்	Challenge
7.	தூங்குதல்	உறங்குதல்	Fix the resolution
8.	தூங்குதல்	உறங்குதல்	Comfort
9.	தூங்குதல்	உறங்குதல்	Formal talk
10.	தூங்குதல்	உறங்குதல்	Distract
11.	தூங்குதல்	உறங்குதல்	Interrupt
12.	தூங்குதல்	உறங்குதல்	Talking truth
13.	தூங்குதல்	உறங்குதல்	Make up story
14.	தூங்குதல்	உறங்குதல்	Trash talk
15.	தூங்குதல்	உறங்குதல்	Trash talk
16.	தூங்குதல்	உறங்குதல்	Good heart
17.	தூங்குதல்	உறங்குதல்	Dreaming
18.	தூங்குதல்	உறங்குதல்	Shock
19.	தூங்குதல்	உறங்குதல்	Not knowing what to do

https://tamilsigma.com.sg

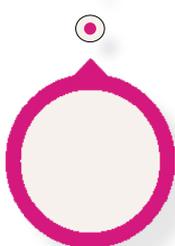
Idioms Examples & Exercises

The Standard Tamil book contains pages of idioms with explanations (in both Tamil and English) to help students understand and memorise the phrases.



Comprehension Cloze Exercises

The Higher Tamil book contains challenging exercises of comprehension cloze that train students' vocabulary usage.



Oral Examination Guide

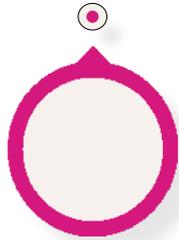


ISBN: 9789811412165

Targeting secondary school students who want to master their Tamil oral language skills, this book consists of 30 oral practices with guiding starters. In order to guide students to focus their conversation on the given topic, each practice in the book comes with short pointers to help students.

The book is based on the latest MOE syllabus where important topics have been covered. Moreover, proverbs and common sayings have been included towards the end of the book for students to include in their oral practice.

Overall, this book is ideal for Tamil students who want to excel in their oral examinations.



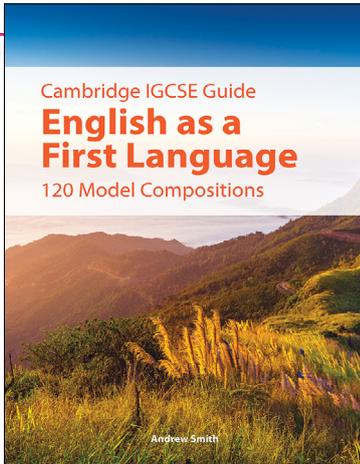
Wide Variety of Topics

From local culture to current themes, such as online shopping, this oral book is ideal for exposing students to diverse topics to practice their oral on.

வெள்ளக்கூடம்		
பக்கம்	தலைப்பு	பக்கம்
	வாய்மொழித் தேர்வு நூல் அமைப்பின் கருத்துரை	6
	வாய்மொழித் தேர்வு	7
1.	சிங்கப்பூர் கலாச்சாரம் (Singapore's Culture)	13
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18.	சுற்றுச்சூழல் பாதுகாப்பு (Environmental Protection)	67



English as a First Language



Cambridge IGCSE Guide
**English as a
 First Language**
 120 Model Compositions

Andrew Smith

120 Model Compositions
 ISBN: 9789814996037

This book consists of 120 model essays written in the different essay styles tested at the IGCSE for English as a First Language: Descriptive, Narrative and Argumentative style. There are 40 essays in each writing style.

Cambridge IGCSE Guide English as a First Language 120 Model Compositions

Descriptive Essay 1
Describe your favourite place to relax in.

The quiet. The calm. The peace. The soft thudding of shoes against the smooth cement floor. The hushed whispers. The rustling of pages; some yellowed over time and some as new as a baby. The library.

My favourite place to relax is at the library near my house. It was recently renovated and has six floors for people to enjoy. Although all floors have something for everyone, my favourite floor is the top floor where the adult section of English and Chinese books are at. The floor is not frequented by many people and most of them there are either the elderly flipping through newspapers or avid readers like me, engrossed in a good book.

The interior of the top floor of the library is amazing. It is spacious with wide cement floors. In the middle, there are chairs, sofas and a set of wide wooden tables to relax. The area is carpeted, muzzling the sound of shoes thudding against cement floor. To further enhance the cozy atmosphere in the library, every equispaced with a small lamp giving out soft, warm light that can be switched on or off with a pull switch. On an average day, you can see people either reading a book, magazines or taking a light nap in one of the comfortable chairs.

My favourite spot in the library is a wide chair with a thick blanket placed in the middle, located next to the floor-length window. I can see my whole neighbourhood being able to people-watch is a relaxing pastime of mine. Not only that, but when it rains, you can breathe taking too, the view of the grey skies and even slightly in the heavy rain is something I never fail to appreciate. This is especially when the floor resonates with the sound of the raindrops hitting the roof and I would curl up on the wide chair while taking sips of hot tea from my tumbler, close me into another world.

As such, my favourite place to relax is in the library, its quiet atmosphere and warmth which are enhanced by the solid furniture in the library, being in me a sense of peace and comfort, thereby giving me time and space to relax.

Part 1 Descriptive Essay

Descriptive Essay 2
Describe the time when you lost something/someone important to you.

Once, when I was much younger and therefore more immature, I did something I came to regret. I lost my best friend because of my childish feelings of hatred, envy and jealousy. However, that was what I was like back then, and how I wish I could turn back time to correct my mistake.

In middle school, I was determined to achieve excellent academic grades and attain a prestigious scholarship. I participated in a variety of activities, joined a number of co-curricular clubs and even held a couple of leadership positions. My grades were decent and I was a teacher's pet. Naturally, everyone, including myself, thought that I would be a scholarship recipient.

Both my best friend and I had applied for the same scholarship. She said I thought that I would be the recipient of the scholarship. On the day of the results, the two of us sat side by side with our eyes glued to our email inboxes on our phones. At exactly ten in the morning, my mailbox chimed. I tapped on my phone excitedly, expecting the words 'Application Successful' to appear on my screen. However, what I saw put me in a state of shock.

"Dear Lydia, we regret to inform you that your scholarship application was unsuccessful." The dreadful words were written in bold, black capital letters. I was devastated. I stared at my phone screen for a full minute, speechless. Meanwhile, my best friend had a huge toothy grin on her face as she waved her phone eagerly in my face.

"I got it! I got it! You did, too, right? Oh my, I am so happy for us! We can go for all those courses and study in all those countries together..." she blabbered on and on passionately, her arms waving about in the air wildly.

Feelings of sadness, disappointment and self-hatred bloomed in my chest. Why didn't I get it? What made me less worthy of that scholarship than her? Subsequently, feelings of envy, jealousy and hatred directed towards my best friend arose as well. She obviously could not be better than me. She did not hold any form of leadership position nor were her results as good as mine. She should not have gotten the scholarship. She did not deserve it.

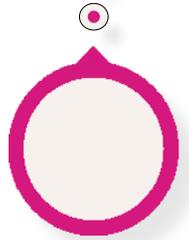
When my best friend realised my silence and saw my confounded face, she immediately grabbed my phone, read the email, and opened her mouth to speak. "Lydia, I am so..."

"No," I snapped. "Don't. You don't deserve it. I should have gotten it. Sorry, but we can't be friends anymore!" With that, I stood up and walked away from her. I have not spoken to her since then. Neither has she.

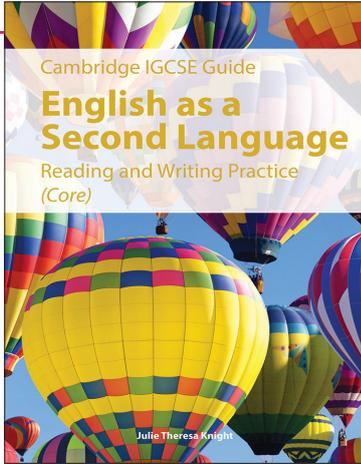
Looking back at the incident now, I am still overcome with regret and shame. It was horrible for me, as a best friend and as a human being, to treat someone in that manner. I now realise that perhaps the interviewers saw my real character in that short span of an hour and decided I did not deserve the scholarship. My then best friend did. And I completely agree.

Model Essays

A collection of model essays on various topics, genres and issues for students to learn from.

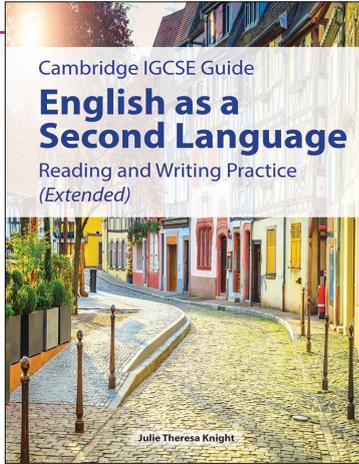


English as a 2nd Language



Reading and Writing Practice (Core)

ISBN: 9789811449291



Reading and Writing Practice (Extended)

ISBN: 9789814996013

These books are excellent for students to prepare for the final examinations. Students can focus on the areas of the reading and writing paper that they are weak in while practising other sections. Students can also use one practice from each section to complete a whole paper. They may wish to do this to practise completing a full exam paper within the time limit.

Contents	
Extended Paper Part 1	1
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Extended Paper Part 2	
Reading Comprehension 2	
Extended Paper Part 3	
Note Making	
Extended Paper Part 4	
Summary Writing	
Extended Paper Part 5	
Email Writing	
Extended Paper Part 6	
Essay Writing	
Extended Paper Part 7	
Review Writing	
English as a Second Language	
Speaking practices	
Suggested Answers	

IGCSE Guide English as a Second Language Reading and Writing Practice (Extended)

EXERCISE 1A

Read the following newspaper article about a lighthouse keeper and answer questions 1 to 6. *Total mark: 12*

On the Rocks

Mark McFarlane works independently doing one of the loneliest and most important jobs in the world. He is the single lighthouse keeper at the Braich Rock station, in the Atlantic Ocean, off the west coast of Scotland. He lives alone for two months at a time, noting passing ships, and most importantly, keeping the light shining to guide ships so that they can safely pass by the dangerous rocks. It is a job that he inherited from his father. He has been doing this for over 17 years.

Mark is taken out to the lighthouse every three months by a local boat from the port of Llandudno. He changes places with the other permanent keeper. They also exchange logbooks, notes and important technical details about the light and the generation that supplies all the electricity in the lighthouse. Mark is also a skilled practical engineer, and this is a useful skill to have in a place where there is no one to come and help if things go wrong.

He sleeps, eats, cooks and relaxes in a small circular room which has the very basic equipment needed to live comfortably for two months. There is a small bed, a table, two chairs and basic cooking facilities. Mark says that it is important to be able to entertain yourself and manage your own time while you are on duty. As there is often limited internet access, he reads a lot and listens to the radio during the long evenings. For Mark, his favourite parts of the job are this isolation, the chance to see nature up-close and the fact that it is a useful job. On the negative side, long periods of bad weather mean that he is cut-off from other humans for days.

Mark says that he has always had a huge interest in the sea and was brought as a child to the lighthouse by his father, the previous keeper. Through him, Mark learnt the tricks of the trade, the functions of a good keeper and the practical skills needed to keep the light bright and visible for the

...tell them to
...add them and
...are involved in
...st-aid training
...never sought
...is own son or
...he would hate

QUESTIONS

- In which country is the lighthouse? (1)
- How long does Mark work for at a time? (1)
- How does the lighthouse get electricity? (1)
- What is unusual about his living room? (1)
- Give ONE positive and ONE negative aspect of the job. (2)
- Who taught him the skills needed for the job? (1)
- How many rescues has he been involved in? (1)
- When will he retire from the job? (1)
- What skills do you need to be a successful lighthouse keeper? (4)

Examination Components

Reading comprehension, note-making, summary writing, email writing, essay writing and speaking practices are included in the books.

Email and essay titles can provide students adequate practice in planning their essays as this is a skill they will need in the examination.

Students can study the exemplar essays and summaries when checking their own work, and take notes on specific areas such as style, linking words and paragraphing.

Speaking Cards

The speaking cards contain advice and tips on how to use them to prepare for this part of the examination.

IGCSE English as a Second Language Speaking Practices

SPEAKING CARD 7

Housing

Candidates Card

We all have to live somewhere.

- You are going to talk about this topic with the examiner.
- You have 2-3 minutes to prepare and to ask the examiner any questions.

Please use these bullet points, in the order given, to structure the conversation:

- talk about the place that you live in
- describe your dream home
- explain what the leisure facilities are like in your local community
- compare the benefits of a city and a countryside house
- suggest ways of improving housing conditions of poor people
- explain how far you support the idea of building houses from recycled materials

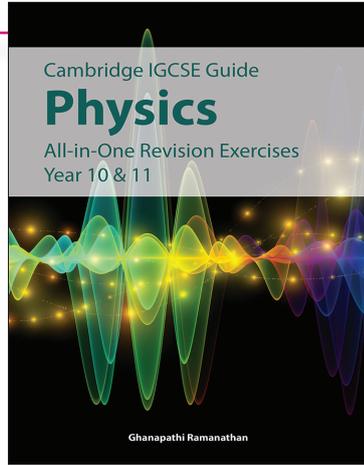
You may also talk about other ideas of your own related to the topic.

Remember, you are not allowed to make any written notes.

NOTES ON SPEAKING PRACTICES

123

Physics All-in-One Revision Exercises



ISBN: 9789811449260

Cambridge IGCSE Guide: Physics All-in-One Revision Exercises is written based on the latest Cambridge IGCSE Physics syllabus (0625) for Year 10 & 11 students. The content is specifically tailored to hone critical thinking and problem-solving skills in students.

Diagrams & Tables

This book presents comprehensive explanations and detailed diagrams to give students the most salient information they need.

CHAPTER 1 GENERAL PHYSICS

1.1 Length and Time

- A rule (ruler) is used to measure length for distances between 1 mm and 1 metre; the SI unit for length is the metre (m).
- Volume
 - The volume of regular and irregular solids can be measured by using water.

Diagram 1.1: Measuring the volume of regular and irregular solids

(b) The eureka can (displacement can) is also used to measure the volume of irregular solids which are too big for a measuring cylinder.

Diagram 1.2: Measuring the volume of an irregular solid with a eureka can

- Vernier callipers
 - A Vernier calliper is used to measure:
 - small objects
 - depth of a hole
 - external diameter of a cylinder or pipe
 - internal diameter of a pipe or tube

Cambridge IGCSE Guide: Physics All-in-One Revision Exercises Year 10 & 11

(b) A Vernier calliper gives readings to an accuracy of 0.01 cm.

Diagram 1.3: Vernier calliper

(c) How to take a reading with Vernier callipers:

Diagram showing how to take a reading with Vernier callipers

(d) Zero Error

Actual reading = Measurement - Zero error

Example: Measurement = 23.8 mm

Positive zero error: $23.8 - (+0.2) = 23.6$ mm

Negative zero error: $23.8 - (-0.4) = 24.2$ mm

Cambridge IGCSE Guide: Physics All-in-One Revision Exercises Year 10 & 11

5. Time

- Stop clocks and stopwatches can be used to measure **time intervals**.
- An important factor when measuring time intervals is **human reaction time**. This can have a significant impact upon measurements when the measurements involved are noticeably short (less than a second).
- Long periods of time are measured with a clock or a watch. Short times are measured with a stopwatch.
- The SI unit of time is second, denoted by s. The smaller units of time are centisecond, millisecond, microsecond and nanosecond.

1.2 Speed, Velocity and Acceleration

Term	Definition
Distance, s	1. Distance is the total path length travelled from one location to another. 2. Quantity: scalar 3. SI unit: metres (m)
Displacement, d	1. The distance in a specified direction. 2. The distance between two locations measured along the shortest path connecting them in a specific direction. 3. The distance of its final position from its initial position in a specific direction. 4. Quantity: vector 5. SI unit: metres (m)
Speed, v	1. Speed (measured in metres per second) is the distance moved by an object each second. 2. The average speed of an object is given by the equation: $\text{Average speed} = \frac{\text{Distance moved}}{\text{Time taken}}$ 3. You can rearrange the equation with the help of the formula triangle:
	4. Quantity: scalar 5. SI unit: m s ⁻¹

Answers

Multiple-choice and structured questions at the end of each chapter test and reinforce students' understanding of concepts and formulae.

Clear, step-by-step solutions are provided as an easy way to check students' workings and answers.

ANSWERS

Chapter 1

Multiple-Choice Questions

- A 2. B 3. B 4. A
- C 6. A 7. E 8. A
- C 10. C 11. E 12. C
- A 14. C 15. C 16. E
- A 18. A 19. B 20. A
- A 22. A 23. A 24. C
- A 26. B 27. A 28. B
- A 30. C

Structured Questions

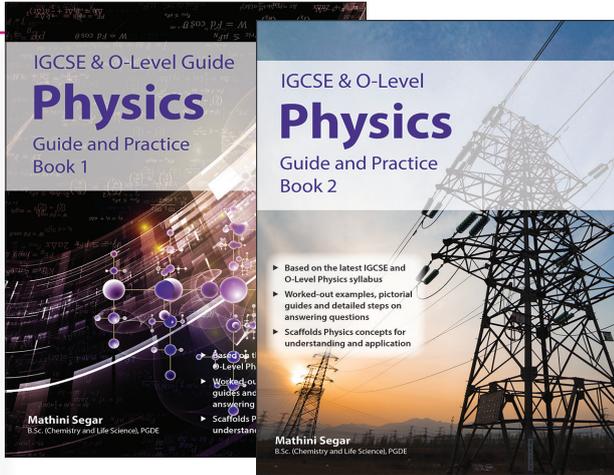
- (a) Length
(b) 1.03 cm
(c) Vernier calliper/Micrometer screw gauge
(d) Parallax error
- (a) Ratchet
(b) To prevent too much pressure being exerted on the object.
(c) Reading = 1.85 - (-0.02) = 1.87 mm
- (a) Depth measuring blade
(b) Measure depth
(c) Negative zero error
(d) -0.07 cm
- (a) (i) Zero error/Systematic error
(ii) 0.62 cm
(b) (i) $1 = 1.20 \times 1.2 \times 1.2$
(ii) $\frac{1}{1.2} = \frac{1.2}{1.2^3} = 0.365$ m
- (a) Principle of Conservation of Momentum
(b) In the same direction as the direction of the boy.
(c) $(45)(2.0) + (15)(0) = (45 + 15)v$
 $90 = 60v$
 $v = 1.5$ m/s
(d) Snooker/banking a penalty kick

6. (a) Hooke's law

(i) Spring constant, k
(ii) Energy stored = $\frac{1}{2}Fx$
 $= \frac{1}{2}(35.84 \times 10^{-7})$
 $= 0.017$ J

7. (a) Work is the product of the force acted on an object and the distance moved by the object in the direction of the applied force.
(b) (i) The force applied is the same, i.e. 20 N.
(ii) The distance moved in Figure M is 5 m with the distance moved in Figure N is zero.
(iii) Work done in Figure M = $F \times d$
 $= 20 \times 5$
 $= 100$ J
(iv) Work done in Figure N = $F \times d$
 $= 20 \times 0$
 $= 0$ J
(c) (i) Gravitational PE = mgh
 $= (90)(10)(5)$
 $= 4500$ J
(ii) Useful power developed = $\frac{\text{Energy}}{\text{Time}}$
 $= \frac{4500}{30}$
 $= 150$ W
(d) (i) Spring constant - high - able to store a large amount of energy when fully wound.
(ii) Resilience to shock - high - able to last longer without loss in performance.
Shape - - space saving, does not occupy too much space in the car.

IGCSE & O-Level Physics Guide and Practice



ISBN: 9789811493102

ISBN: 9789811493126

These books are foolproof Cambridge IGCSE Physics (0625) guides. The books will scaffold concepts and have diagrams that guide students to understand and apply concepts learnt.

The worked-out examples, pictorial guides and detailed steps on how to answer questions will indeed guide students to score well. There are sufficient questions to aid them in checking their understanding on all topics.

CHAPTER 1 PHYSICAL QUANTITIES, UNITS AND MEASUREMENT

LEARNING OUTCOMES

- Show an understanding that all physical quantities consist of a numerical magnitude and a unit.
- Recall the following base quantities and their units: mass (kg), length (m), time (s), current (A), temperature (K), amount of substance (mol).
- Use the following prefixes and their symbols to indicate decimal sub-multiples and multiples of the SI units: nano (n), micro (μ), milli (m), centi (c), deci (d), kilo (k), mega (M), giga (G).
- Show an understanding of the orders of magnitude of the sizes of common objects, ranging from a typical atom to the Earth.
- Describe how to measure a variety of lengths with appropriate accuracy by means of tapes, rules, micrometers and callipers, using a Vernier scale as necessary.
- State what is meant by scalar and vector quantities and give common examples of each.
- Add two vectors and determine a result by the graphical method.

KEY WORDS	physical quantity	derived quantity	base quantity	measuring tapes	accuracy	main scale	temperature	magnitude	instrument	substance	speed

Physical quantities

A physical quantity is a quantity that can be measured. It consists of a numerical magnitude and unit. Some examples of physical quantities are shown below.

Examples of physical quantities



Learning Outcomes & Key Words

Key learning outcomes and key words are listed for each chapter so students know what to focus on.

Guide Notes

Guide notes consist of detailed pictures, steps and examples for easy understanding and revision of each concept.

Micrometer Screw Gauge

To measure the diameter of the wire, the thickness of a piece of paper and other short lengths, a micrometer screw gauge (commonly known as micrometer) can be used. The micrometer allows us to measure to a precision of 0.01 mm. The micrometer has two scales - the main scale on the sleeve and the circular scale on the thimble. There are 50 divisions on the thimble. One complete turn of the thimble moves the spindle by 0.50 mm. Hence, each division represents a length of $0.50 \text{ mm} / 50 = 0.01 \text{ mm}$.

Taking measurements using a micrometer screw gauge

- Check for zero error. Clean surfaces of anvil and spindle and check for zero error.
- Place the object between the anvil and spindle to take a measurement. Place the object between the anvil and the spindle from the ratchet a few times and tighten the lock. This will ensure that there are no gaps between the anvil and spindle. The thimble should never be too tight as it may damage the screw mechanism in the instrument and compress the object being measured.
- Take reading from the main scale.
- Take reading from the circular scale where the line exactly coincides with the datum line on the sleeve.

Dealing with zero error for a micrometer

Methods to deal with zero error after taking measurements with the micrometer are shown below.

Checking for zero error	Corrected reading
The two zero marks coincide: no zero error	Reading = 8.90 mm (No zero error correction required)
Zero mark on the datum line to the left: a positive zero error of +0.03 mm	Reading = 8.93 mm Corrected reading = $8.93 \text{ mm} - (+0.03) = 8.90 \text{ mm}$ (The positive zero error is subtracted from the reading)
Zero mark on datum line to the right: a negative zero error of -0.03 mm	Reading = 8.87 mm Corrected reading = $8.87 \text{ mm} - (-0.03) = 8.90 \text{ mm}$ (The negative zero error is added to the reading)

Measurement of time

To measure a time interval, a timing device is used. Such devices may be mechanical or electronic. They include ordinary clocks and watches, stopwatches, ticker-tape timers and electronic light gate timers. Timing devices need to be checked periodically to ensure that they do not run too fast or too slow. The SI unit for time is the **second**.

Stopwatch
Stopwatches are used to measure short intervals of time. There are two types of stopwatches: the digital stopwatch and the analogue stopwatch. The digital stopwatch is more precise as it can measure time in intervals of 0.01 s while the analogue stopwatch can only measure time in intervals of 0.1 s.

Practice

Summary Questions

- Fill in the blanks.
 - A physical quantity is a quantity that can be measured and **unit**.
 - There are two types of physical quantities: **scalar** and **vector**.
 - List three examples of base quantities: **mass, length, time**.
 - List three examples of derived quantities: **area, volume, speed**.
 - The precision of a metre rule is **1 mm**.
 - The precision of the Vernier callipers is **0.02 mm**.
 - The precision of a micrometer screw gauge is **0.01 mm**.
 - Scalar quantities are quantities that have **only magnitude**.
 - Vector quantities are quantities that have both **magnitude and direction**.
 - List three examples of scalar quantities: **mass, length, time**.

Answers

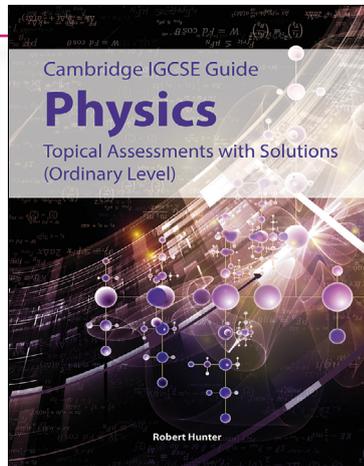
Chapter 1

- (a) numeric value, unit
(b) base quantities, derived quantities
(c) mass, time, temperature
(d) density, speed, weight
(e) 0.1 cm
(f) 0.01 cm
(g) 0.01 mm
(h) magnitude
(i) mass, time and temperature
- | | | | | | | | | | |
|----|---|----|---|----|---|----|---|----|---|
| 2 | 0 | 3 | C | 4 | A | 5 | B | 6 | C |
| 7 | B | 8 | A | 9 | A | 10 | B | 11 | B |
| 12 | A | 13 | D | 14 | B | 15 | A | 16 | C |
| 17 | A | 18 | D | | | | | | |
- Using a scale of 1 cm : 1 N, the resultant force, R, is 2.5 N and it makes an angle of 18° with the 0 N force.
- (a) A vector quantity is a physical quantity that has both magnitude and direction.
(b) A scalar quantity is a physical quantity that has magnitude only.
(c) As the forces are in equilibrium, $T_1 = T_2 = 30^\circ = 200 \text{ N}$ (3000).
 $T_3 = 173 \text{ N}$
 $T_4 = T_5 = 200 \text{ N}$
 $T_6 = 200 \text{ N}$ (3.50)
 $T_7 = 100 \text{ N}$
- (a) resistance
(b) resultant force, resultant force, acceleration
(c) an object remains at rest or in uniform motion in a straight line unless a force is applied to it.
(d) mass and acceleration, same as (b)
(e) the centre of the circle
(f) $F = kx$, where
 F = elastic spring force, x = spring constant,
 x = extension / compression of spring
(g) (i) length
(ii) direction
(iii) label

Practice Questions

Practice questions with answers allow students to test their understanding of each concept and self-evaluate.

Physics Topical Assessments with Solutions



ISBN: 9789811449277

This book is written based on the latest Cambridge IGCSE Physics syllabus (0625) to hone critical thinking and problem-solving skills in students.

A balanced mix of simple and challenging questions tests and reinforces students' understanding of concepts and formulae. Answers are provided for reference.

Extensive Chapters

The five topics of the syllabus are divided into 24 chapters that each provide a focused and comprehensive coverage of the subject matter.

Contents

Chapter 1	Measurements	1
Chapter 2	Describing Motion	4
Chapter 3	Forces and Motion	7
Chapter 4	Momentum	10
Chapter 5	Turning Effect of Forces	13
Chapter 6	Forces and Matter	17
Chapter 7	Energy	21
Chapter 8	Energy Resources	24
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Chapter 23	Nuclear Atoms	63
Chapter 24	Radioactivity	65
	Answers	67

Multiple-Choice Questions

Meticulously crafted, multiple-choice questions are presented in this book to test students regarding the most salient content in the syllabus.

CHAPTER 1
MEASUREMENTS

1. The density of a liquid is 1.2 g/cm³. What are the mass and volume of the liquid?

Mass (g)	Volume (cm ³)
A. 4	8
B. 6	5
C. 8	3
D. 10	5

2. Metal object

What is the length of the metal object?

A. 4.5 mm
B. 9.5 mm
C. 4.5 cm
D. 4 mm

3. Which instrument can accurately measure the internal diameter of a pipe?

A. Metre ruler
B. Micrometer
C. Vernier calliper
D. Measuring cylinder

4. Energy is measured in joules. Which is the correct symbol for mega joules?

A. mJ
B. MJ
C. MJJ
D. mj

Cambridge IGCSE Guide Physics Topical Assessments (Ordinary Level)

5. Which of the following is the correct unit of the quantity?

Quantity	Unit
A. Density	kg/m ³
B. Energy	W
C. Weight	kg
D. Work	J

6. A sheet of paper has a grammage of 70 g/m². This means that 1 m² of the paper has a mass of 70 g. The thickness of the paper is 0.1 mm. What is the density of the paper?

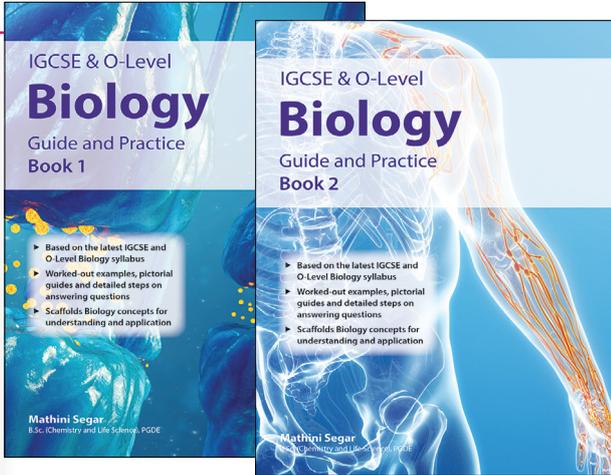
A. 70 kg/m³
B. 700 kg/m³
C. 7000 kg/m³
D. 700000 kg/m³

7. A pendulum is swinging and the time is recorded. The time taken for 15 swings is 25 s. What is the period of the pendulum?

X Y Z

A. 1.67 s
B. 0.6 s
C. 0.67 s
D. 1.6 s

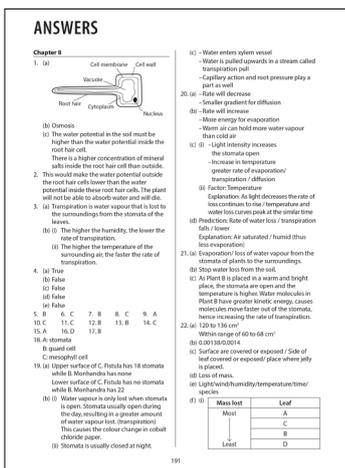
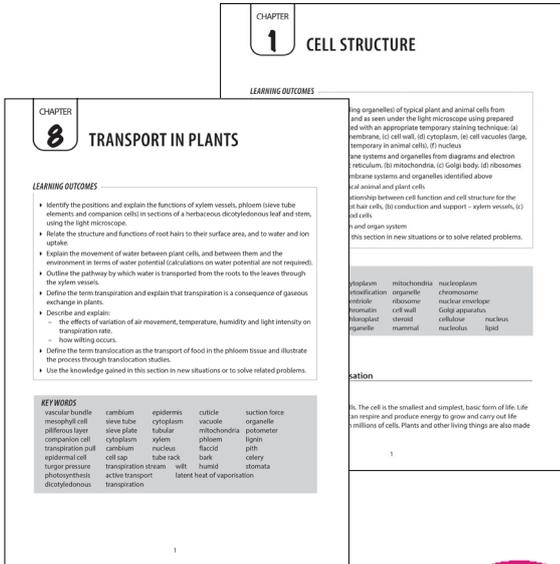
IGCSE & O-Level Biology Guide and Practice



ISBN: 9789814996198 ISBN: 9789814996495

This book is an extremely easy to use guide for Cambridge IGCSE and O-Level Biology. The book will scaffold concepts and has diagrams that guide students to understand and apply concepts learnt.

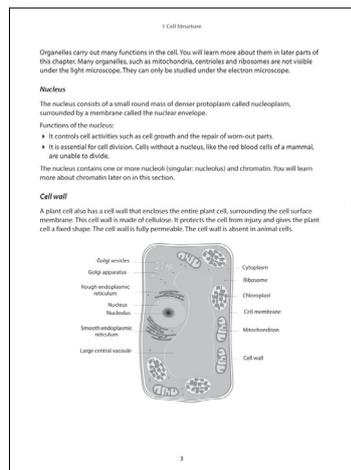
The worked-out examples, pictorial guides and detailed steps on how to answer questions will equip students to score well. There are sufficient questions that would aid them to check their understanding on all topics.



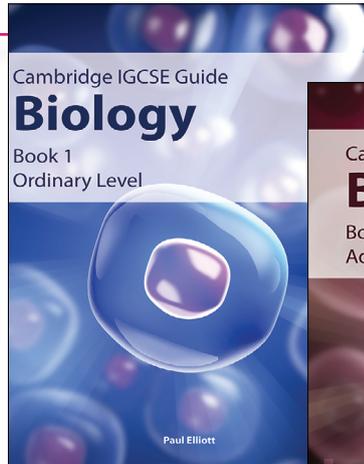
Organised Chapters
Includes learning objectives and key words to help students in their revision.

Detailed Diagrams
Diagrams are detailed to enhance understanding of key topics.

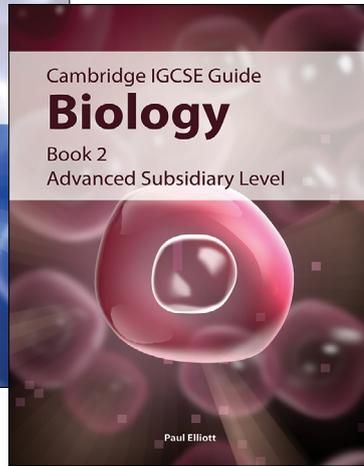
Answer Key
Answer key provided for effective revision.



Biology



ISBN: 9789811449246



ISBN: 9789811449253

New biological discoveries are made each day, which add to our knowledge and understanding of the world and make it a safer and healthier place to live. These books explore these discoveries in a way that not only provides an assessment of facts, but also considers the moral, ethical and economic implications which they present.

These books aim to make a successful evaluation of students' study. They will help students to reach their highest potential and achieve the best possible grade. Unlike traditional revision guides, they also give advice on improving answers, helping to show what examiners expect of candidates.

Contents

1	THE MICROSCOPE	1
2	THE CELL	4
3	FOOD TESTS	19
4	CARBOHYDRATES	23
5	LIPIDS	33
6	PROTEINS	44
7	WATER	73
8	GENERAL QUESTIONS ON BIOMOLECULES	76
	ANSWERS	89

ASSESSMENT 1

- A living organism cell obtains energy to survive by performing its own metabolic reactions and getting rid of metabolic by-products. Which characteristics are these?
 - Nutrition and movement.
 - Metabolism and excretion.
 - Sensitivity and respiration.
 - Respiration and excretion.
- Mimosa pudica leaves defend themselves by drooping and folding inwards when touched or shaken. The leaves re-open a few minutes later. What other five processes must Mimosa pudica carry out to stay alive?
 - Excretion, sensitivity, growth, respiration and movement.
 - Excretion, movement, growth, nutrition and respiration.
 - Nutrition, growth, reproduction, respiration and excretion.
 - Nutrition, movement, reproduction, sensitivity and excretion.
- Euglena is a genus of single cell protist that has chloroplasts and moves towards light by the means of the flagella. Which characteristics are these?
 - Growth, respiration and movement.
 - Nutrition, sensitivity and movement.
 - Nutrition, respiration and movement.
 - Growth, sensitivity and movement.
- Cyanobacteria are a phylum of bacteria that obtain their energy through photosynthesis. Their colonies can be produced through binary fission. Which characteristics are these?
 - Nutrition, respiration and reproduction.
 - Nutrition, excretion and reproduction.
 - Nutrition, sensitivity and reproduction.
 - Growth, sensitivity and respiration.

Cambridge IGCSE Guide Biology Book 2 Advanced Subsidiary Level

10. Which structure synthesizes proteins for use outside the cell?

11. Which organelle(s) in plant cells has/have a double phospholipid bilayer?

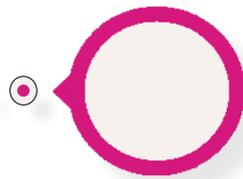
- Chloroplast
- Lysosomes
- Mitochondria
- Nucleus

12. Which of the following properties about plant and animal cells are correct?

Plant Cell	Animal Cell
A. Has both cell wall and plasma membrane; may contain glycogen	Has no cell wall but has plasma membrane; may contain starch
B. Has both cell wall and plasma membrane; may contain starch	Has no cell wall but has plasma membrane; may contain glycogen
C. Has no cell wall but has plasma membrane; may contain glycogen	Has both cell wall and plasma membrane; may contain starch
D. Has no cell wall but has plasma membrane; may contain starch	Has both cell wall and plasma membrane; may contain glycogen

13. What is the function of the cell wall in a plant cell?

- Active transport of ions.
- Communication with other cells by means of glycoproteins.
- Formation of vesicles for transport of large molecules.
- Prevents excessive water uptake by the cytoplasm.



Aligned to Syllabus

The chapters are arranged in the same sequence as the O level, AS level and A2 level Cambridge Biology syllabus. The assessment questions cover the requirements as well.

Answers

Answers provided come with clear breakdowns of the mark allocations.

ANSWERS

Chapter 1

1. A 2. A 3. B 4. A 5. B
6. C 7. C 8. A 9. D 10. B

Chapter 2

1. A 2. C 3. B 4. C 5. B
6. C 7. C 8. D 9. B 10. C
11. C 12. B 13. D 14. D 15. C
16. A 17. A 18. B 19. B 20. C
21. B 22. B 23. B

24. The Golgi body is a stack of flattened sacs / cisternae. [1]
More than one Golgi body may be present in a cell. [1]
The stack is constantly being formed at one end from vesicles which bud off from the ER [1] and are broken down again at the other end to form Golgi vesicles. [1]
The Golgi body collects, processes and sorts molecular (particularly proteins from the rough ER [1]) to prepare these molecules for transport to Golgi vesicles to other other parts of the cell or out of the cell (secretion). [1]

25. The ER, an extensive system of flattened membranes sac-like structure consisting through the cytoplasm [1], is continuous with the outer membrane of the nuclear envelope. [1]
The rough ER is covered with many tiny organelles called ribosomes. [1]
These ribosomes have a 25-nm diameter and are composed of two subunits: a large subunit and a small subunit. [1]
The ribosomes which are composed of ribosomal (ribonucleic, acid) and protein. [1] are the sites of protein synthesis. [1]

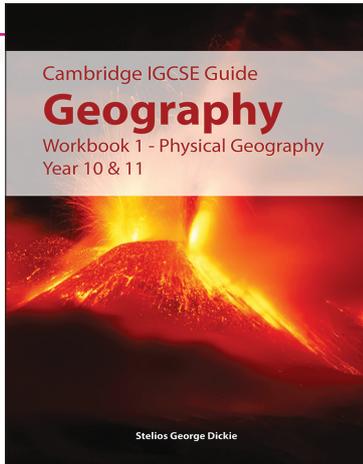
26. Centriomes consist of a pair of centrioles at right angles [1] that is involved in nuclear division [1] and acts as MTOCs. [1]
A centriole is formed by a ring of microtubules which act as the MTOCs for the assembly of the microtubules [1] that make up the spindle during nuclear division. [1]

27. Mitochondria are usually about 1 µm in diameter and can be in various shapes, often sausage-shaped. [1]
They are surrounded by 2 membranes (an inner one and an outer one) and the space between the two membranes is called the intermembrane space. [1]
The outer membrane contains a transport protein called porin which forms wide aqueous channels [1] that allow the easy access of small, water-soluble molecules from the surrounding cytoplasm into the intermembrane space. [1]
The inner membrane is folded to form finger-like cristae which project into the central cavities, or matrix. The inner membrane is much more selective and controls precisely what ions and molecules can enter the matrix. [1]
Mitochondria carry out aerobic respiration which produces ATP [1] through a process known as oxidative phosphorylation. [1]
The ATP produced in the mitochondria readily diffuses to parts of the cell where energy is needed. [1]
The mitochondria is postulated to have evolved from bacteria as it shares the same ribosome size (70S) and circular DNA features as bacteria. [1]

28. Lysosomes are spherical sacs with a diameter of 0.5–0.5 µm [1] and are surrounded by a single membrane and have internal structure. [1]
The lysosomes contain digestive (hydrolytic) enzymes [1] and are responsible for the breakdown (digestion) of unwanted structures such as old organelles or even whole cells. [1]

29. The main function of chloroplasts is to carry out photosynthesis. [1]
Chloroplasts have a diameter of about 3 to 10 µm and have a highly-organized membrane system. [1]

Physical Geography



Cambridge IGCSE Guide
Geography
Workbook 1 - Physical Geography
Year 10 & 11

Stelios George Dickie

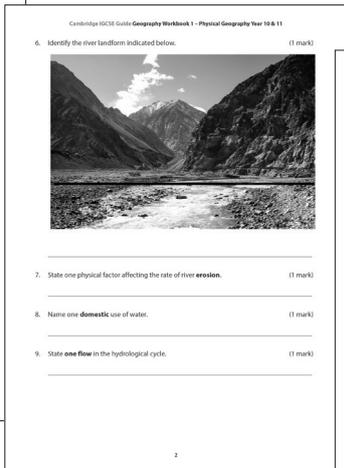
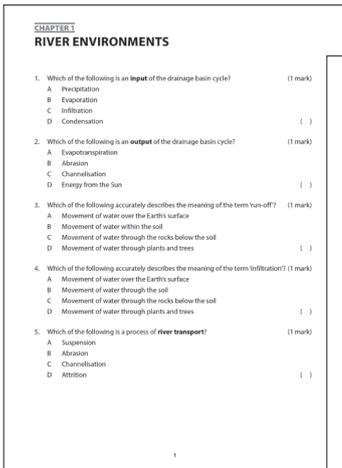
ISBN: 9789811449338

Cambridge IGCSE Guide: Geography Workbook 1 – Physical Geography Year 10 & 11 is written based on the latest IGCSE Geography syllabus.

The questions are designed to stimulate and reinforce the different skills required for the examination.

Various Practice Questions

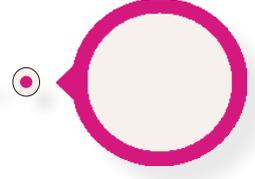
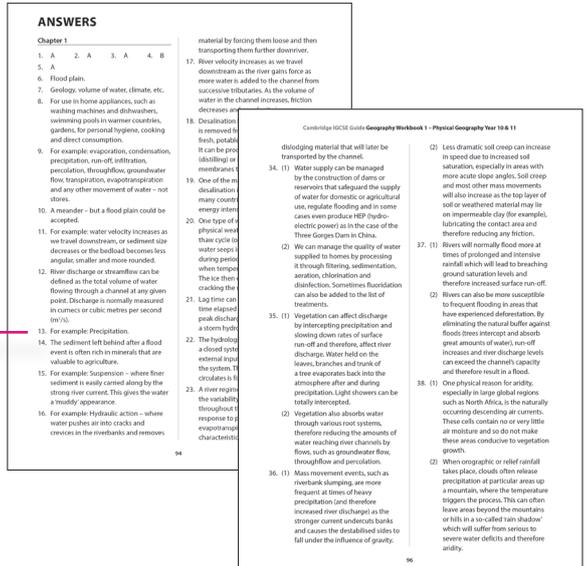
This book features multiple choice, structured and short essay questions that thoroughly cover the subject matter.



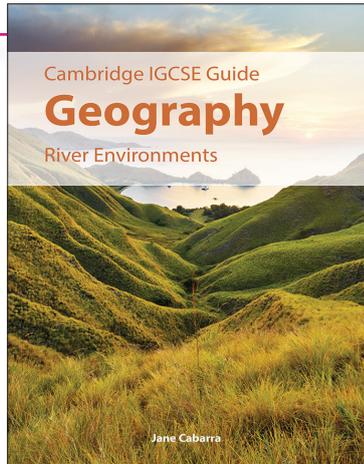
Answers

Detailed answers for structured and short essay questions are provided to teach students how to construct their answers in a cogent manner.

Answers also impart to students real-world information and statistics that are essential to tackle case study questions.



Geography – River Environments



ISBN: 9789811449284

Cambridge IGCSE Guide: Geography – River Environments is written based on the latest IGCSE Geography syllabus. This book provides comprehensive information on the processes, features and management of river environments.

CHAPTER 3
RIVER REGIMES AND HYDROGRAPHS

The amount of water that flows down the river is called **discharge**. Discharge is the amount of water in a river measured at a certain point. The amount of river discharge varies over time and is also influenced by both physical and human factors. Hydrographs are used to show the changes that take place in a river over time. It is important to understand the factors that affect river discharge as a significant rise in a river's discharge could lead to flooding.

HYDROGRAPHS

All rivers have a **river regime**. This is the day-to-day variations of a river's discharge (measured in $\text{cm}^3 \text{ s}^{-1}$). The regime of a river is connected to the climatic conditions of that area. For example, a **hydrograph** for Bangladesh will show high rainfall during the monsoon season and very little at other times of the year, whereas a river in the UK will likely see fluctuations and variations.

A hydrograph shows variables in the river channel.

STORM HYDROGRAPHS

A storm hydrograph is used to measure the changes in discharge as a result of a storm event. The hydrographs show two variables: the amount of rainfall and discharge in the river as a result of this event. It records the discharge in the river after a rainstorm. You need to know and be able to label the key terms, such as lag time, peak flow (peak discharge), base flow, throughflow and rising and falling limbs, and explain what they mean.

Topic Summaries

Each chapter provides a convenient summary of the various key terms and concepts.



IGCSE Guide: Geography – River Environments

Task 3.1

Study the figure below, which shows storm hydrographs for Rivers A and B.

(a) What was the lag time for River A?

(b) Identify one way in which Rivers A and B differ in terms of: lag time

peak discharge

Tasks

Students can attempt tasks to recall and apply their knowledge.



Exam Questions, Model Answers

This is a chapter with tips and guides on how to answer and attain full marks for each question in a typical examination.

CHAPTER 13
EXAM QUESTIONS, MODEL ANSWERS

When answering exam questions, first look at the use of command words such as **describe**, **explain** and **evaluate**. These words will give you an idea of the details needed. Then, look at the **marks allocated**. If the exam question is asking for one example but is worth 3 marks, then you need to expand and give further explanation of the initial point raised. **Only write what the question is asking for**. If it is asking you to describe something, do not waste time on explanations or reasons for this.

MODEL ANSWERS

Question 1

Answer to include any relevant point referring to river erosion:

- Climate/temperature/rainfall
- Slope/gradients
- Geology/resistance of rocks
- Altitude
- Aspect
- Velocity/energy

Question 2

To achieve the full 2 marks, there needs to be an initial point about physical weathering (AO1) then an explanation of this fact (AO2).

- Freeze-thaw is a type of physical weathering. Water gets inside cracks in rocks. As the temperature drops and the water freezes, the water expands. This pushes the crack further apart until the rock breaks.
- Wind can blow grains of sand against rocks which can result in the rocks being worn away.

Question 3

Answer can be any of the following:

- Traction
- Suspension
- Solution



Fieldwork

A detailed, step-by-step guide to river fieldwork prepares students before they embark on their field trips. Students can monitor their learning progress by referring to the checklist.



CHAPTER 14
FIELDWORK

Students are required as part of this specification to carry out two fieldwork tasks. One of these is from the topic studied in Section A of the course.

Skills that will be examined are practical skills, map skills, interpretation of photographic evidence and on-site sketching.

Following on from the practical tasks, students are expected to be able to demonstrate their ability to analyse data, use statistical skills such as those needed to present and analyse results, evaluate findings and be able to identify errors or unreliable data.

Fieldwork will be based on familiar and unfamiliar situations. Those set in the familiar context will require students to interpret, analyse, evaluate and make judgements on their own fieldwork experience (AO3). Students will be asked to communicate their findings (AO4).

Questions in the unfamiliar setting will use data obtained from a fictitious fieldwork event. For this, students will need to apply their fieldwork skills to interpret and analyse the data.

OVERVIEW OF FIELDWORK REQUIREMENTS

An investigation of river processes through the use of primary and secondary data.

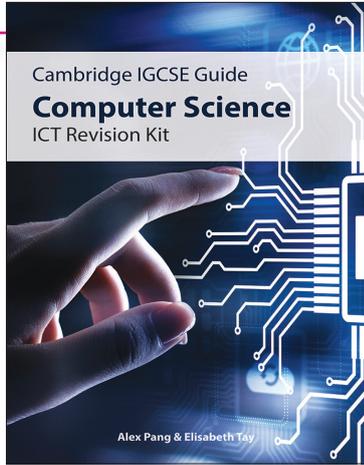
Primary data:

- Quantitative
 - Channel measurements – velocity, width, depth and gradient
 - Measurements of bedload – size and shape
- Qualitative
 - Annotated field sketches of the river channel and its features
 - Photographs of the river to show downstream changes

Secondary data:

- Quantitative
 - Use of GIS, such as ArcGIS online, Google Earth
 - Local data on river regimes (Environment Agency)

Computer Science ICT Revision Kit



ISBN: 9789811449345

This book has been written to meet the requirements of students who are reading the IGCSE 0417 syllabus. Ever since this syllabus was introduced, there has been a demand for a guide with questions and answers.

A dedicated attempt has been made to make the book useful and stimulating. Students often lack confidence when answering certain questions due to a lack of practise. In response, this book aims to equip both students and teachers with a basic approach to answering questions.

Comprehensive Questions & Tasks

The questions cover the topics in the syllabus. There are also tasks that are a combination of different topics as the applications can be overlapping.

Contents

QUESTION SECTION

- Introduction
- Chapter 1 Types and Components of Computer Systems
- Chapter 2 Input and Output Devices
- Chapter 3 Storage Devices and Media
- Chapter 4 Networks and the Effects of Using Them
- Chapter 5 The Effects of Using IT
- Chapter 6 ICT Applications
- Chapter 7 The Systems Life Cycle
- Chapter 8 Safety and Security
- Chapter 9 Audience
- Chapter 10 Communication

COMBINED TASKS FOR CHAPTERS

Tasks 1 to 12

ANSWERS TO QUESTIONS

ANSWERS TO COMBINED TASKS FOR CHAPTERS

CHAPTER 1 TYPES AND COMPONENTS OF COMPUTER SYSTEMS

1. Name and explain two components of a computer.

2. Name three internal hardware devices and explain their functions.

3. (a) Name three parts that make up a CPU.

(b) State the function of a CPU.

4. (a) List two types of main memory.

Cambridge IGCSE Guide Computer Science ICT Revision Kit

7. Choose the correct word from the helping words given and match it to each device pictured below.

CD-ROM Printer Flash drive Monitor Memory card Projector
Keyboard Barcode reader Speakers Microphone External hard drive

A _____ B _____
C _____ D _____
E _____ F _____
G _____ H _____
I _____ J _____
K _____



Cambridge IGCSE Guide Computer Science ICT Revision Kit

Task 1

1. (a) Graphics manipulation allows bitmap and vector images to be changed.
 - (i) True
 - (ii) False
- (b) Video editing software allows a user to manipulate videos to produce an edited video.
 - (i) True
 - (ii) False
- (c) Virtual Reality is an artificial environment which is viewed by software.
 - (i) Database is used to organise, manipulate and retrieve data.
 - (i) True
 - (ii) False
 - (ii) Photo editing allows a user to manipulate digital photographs stored on a computer.
 - (i) True
 - (ii) False
 - (iii) Device drivers are the programs that enable one or more hardware devices to communicate with the computer's operating system.
 - (i) True
 - (ii) False
 - (iv) Motherboard is a printed circuit board found in all computers.
 - (i) True
 - (ii) False
 - (v) Linker is a computer program that takes one or more object files produced by a compiler and combines them into a single program that can run on a computer.
 - (i) True
 - (ii) False
 - (vi) Utilities are software that has been designed to carry out specific tasks on a computer.
 - (i) True
 - (ii) False
- (d) Visual verification:
 - (i) Text or data is usually compared with original data.
 - (i) True
 - (ii) False
 - (ii) Double data entry:
 - (i) Data is typed in twice and a computer compares the two versions.
 - (i) True
 - (ii) False
 - (ii) Gender:
 - (i) Customer number/ID
 - (ii) Address
 - (iii) Postal code
 - (iv) Home/Mobile phone number
 - (v) Home/Mobile phone number
 - (vi) Email address
 - (vii) Car registration number(s)
 - (iii) Button to clear the form:
 - (i) Button to the first record/form
 - (ii) Button to end of the previous record
 - (iii) Button to the previous record/form
 - (iv) Button to the next record/form
 - (v) Submit/confirm button
 - (vi) Space to enter required record number
 - (vii) Search facility/lookup
 - (viii) Button to go to sub-form
 - (e) Flight/pilot simulation/training:
 - (i) Large scale chemical experiments
 - (ii) Design of foreground slides
 - (iii) Design of large buildings/bridges
 - (iv) Traffic control
 - (v) Building the simulation
 - (vi) Car driving simulation
 - (vii) Drug trials
 - (viii) Real thing may be too expensive to build
 - (ix) Real thing requires too large a time scale
 - (x) Real thing is too vast a scale to carry out
 - (xi) Real thing may occur too rarely
 - (xii) Rate of change can be obtained for the human eye to detect.
 - 3. Keyboarding in data:
 - (i) Barcode reader:
 - (i) A magnetic stripe reader
 - (ii) Touch screen
 - (iii) Scanning barcode/using magnetic stripe/ touch screen allows for fast data entry/typing in data manually can be slow
 - (iv) Scanning barcode/using magnetic stripe/ touch screen reduces error/typing in data manually can lead to data errors
 - (v) Magnetic barcode screens are robust/barcodes can be blurry

Task 2

1. (a) Characteristics:
 - (i) Interview
 - (ii) Examination of documents
 - (iii) Observation
 - (iv) To detect typing errors/data entry errors/ transcription errors

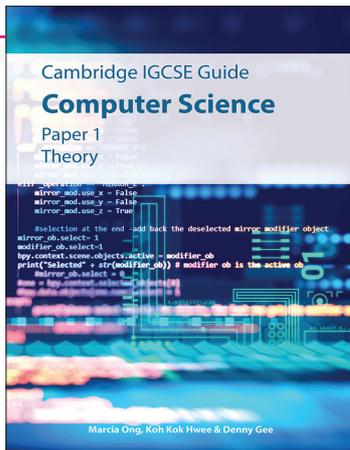


Answers

Answers are provided for self-evaluation and understanding of how to answer the questions.

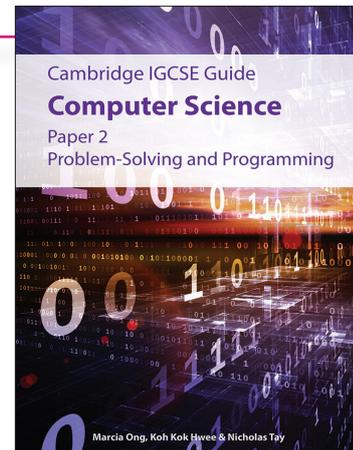
Computer Science

These books were written to aid students in their revision for the Cambridge IGCSE Computer Science examination. The questions and answers were selected to be representative of what students should expect to encounter in the actual examination. It is our hope that using this book as a revision aid will adequately prepare students for the nature and difficulty of the questions they will likely encounter, and the appropriate way to answer them.



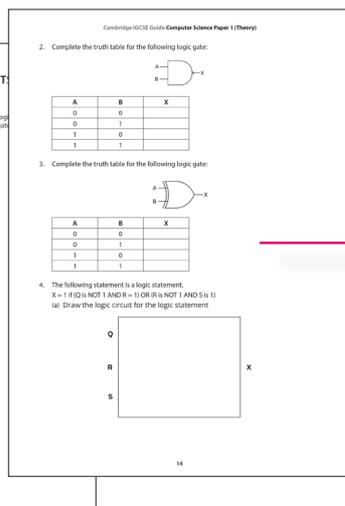
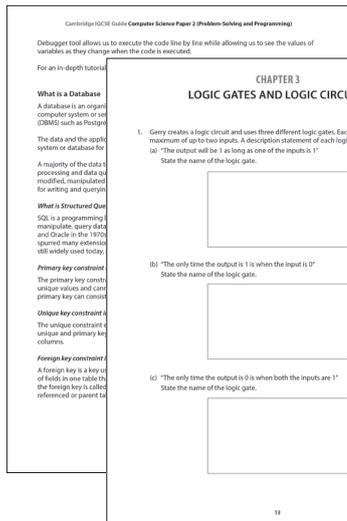
Paper 1
ISBN: 9789814996099

The first chapter of this book serves as a quick introduction to the tools students will need as well as some basic information to get started. The next three chapters contain practice questions to prepare for the examination.



Paper 2
ISBN: 9789814996020

The questions included in this book have been split into eight chapters for the students' ease in identifying and revising for the assessed topics in the syllabus.

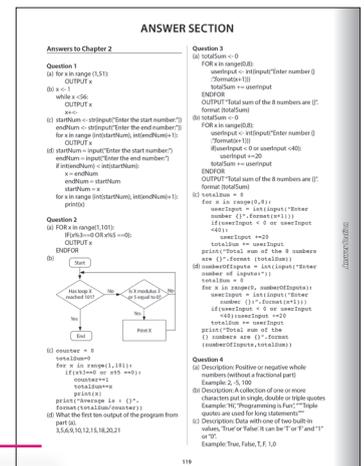


Practice Questions

Plenty of practice questions for students to apply what was learnt for each chapter.

Answers

Answers can be found at the back of the books for marking and correction after the practice questions have been attempted.





A-Level

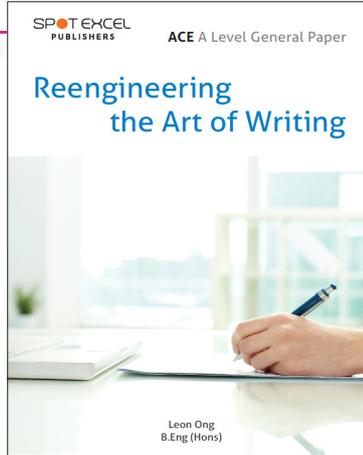
▶ General Paper

▶ Mathematics

▶ Science

▶ Economics

Reengineering the Art of Writing



ISBN: 9789811476525

Reengineering the Art of Writing aims to help JC students tackle the nuances behind effective writing. A book like no other, it expands on the TEEL formula. The author explores in great detail what conditions a student must fulfil to accomplish a great Topic Sentence, Elaboration, Example and Evaluation as well as a noteworthy Conclusion. Along with other techniques to spice up a paragraph, the reader is left with the takeaway that elegant writing can be practised in an enjoyable way.

As part of the book, the author also imparts a revolutionary formulaic approach to writing – the Science and the Arts approach. Through this methodology, students will be able to

identify the most relevant examples and permanently retain them. Couple this approach with the ability to fully address the crux of any question at hand and pre-examination preparation for Paper One will be a breeze.

TEEL Format

Teaches students an effective way to structure their essays for better writing.

As a recap, we have covered the TEEL formula with the inclusion of a "Regulation" for better level management. The flow is now ripe to showcase the main difference between the Secondary School expository paragraph and that in Junior College.

Presenting... the basic JC paragraph.

Abbreviation	Level	Sample Sentence
T Topic Sentence	Global	Technology elevates the quality of life of people as its ability to overcome human physical weakness has allowed greater independence to and empowerment in its users.
E Elaboration	Global	In particular, technology excels remarkable prowess in leveling the playing field between the healthy and the disabled. By instilling confidence and independence, technology has allowed man to achieve greater equality and brotherhood in our weaker ranks.
E Example & Evaluation	Example	One good example is Oscar Pistorius, the South African Blade Runner, who as a double amputee and with the help of prosthetics, was able to compete on an equal footing with fully able-bodied runners at the 2012 Olympics.

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Back to basics Chapter 1 9

Question Parameters

Show strategies for planning of essays.

Parameters For Assignment Question 02

Question	Science gathers knowledge much faster than society gathers wisdom (Isaac Asimov). Do you agree?
Function	Enough Regulations (previously Play God)
Domains	AI (Supported by similar Example cloning)
Examples	ISG, 2019 AI Regulation Framework
Logic	Disagree with question, show that man has shown wisdom in his pursuit of Science.
Clue 01	What are the values exemplified by man here to show wisdom?
Clue 02	What is the difference between and purpose of the principles? What are the broad areas that these two principles are trying to govern?
Clue 03	You might wish to consider this regulation from the perspective of "to do the harm and allow the benefits to pass through"

98 Chapter 7 Practice Assignments

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4 Writing The Example & Evaluation

In my own classes, I often find it easier to address the Example and the Evaluation together as they reside on the same level in writing – the Example level.

Instead of starting with what we should do, let's begin with one common mistake we should avoid.

COMMON MISTAKE – DO NOT STACK EXAMPLES

This is a common mistake made by many students. Most students find it highly intuitive to reorganize their examples in sequence, especially students who are well read and have many similar examples at their disposal. Let's return to the SAT question to have a look at why this might be a problem.

Below are a few similar examples on "Prosthetics"

Country	Individual	Description
(South Africa)	Oscar Pistorius	Oscar Pistorius, the South African Blade Runner, is a double amputee who, with the help of prosthetics, was able to compete on equal footing with able-bodied runners at the 2012 Olympics.
(USA)	Bethany Hamilton	Bethany Hamilton returned to professional surfing after suffering a shark attack with the help of a prosthetic arm.
(UK)	Kieran Sorokin	Kieran Sorokin was born without ears – a condition called microtia. Doctors in UK performed a cosmetic medical procedure to craft ears for him from the cartilage of his elbow. His psychological well-being improved as he stopped standing out from his friends and other children stopped teasing him. After the operation, he was able to interact at an elevated social capacity.

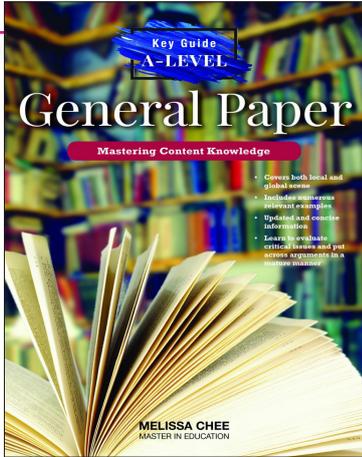
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Writing the example & evaluation Chapter 4 41

Common Mistakes

Common mistakes are shown so that students can learn not to make them.

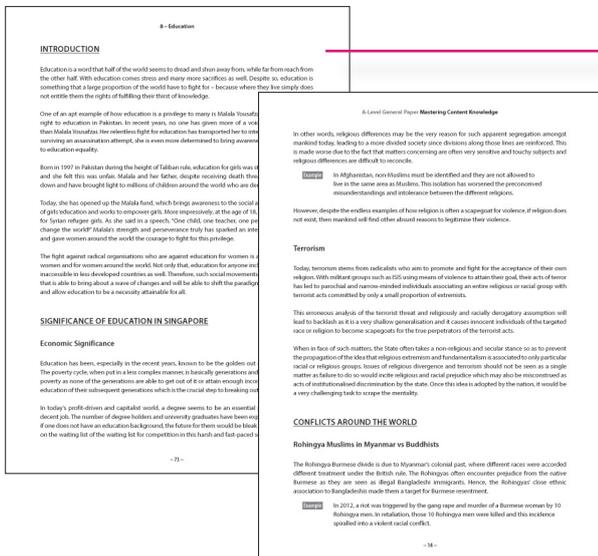
Content Knowledge



**Mastering
Content Knowledge**
ISBN: 9789811184345

Following the syllabus, this book covers a diverse range of topics including the broader subjects such as education, equality, sports, governance, etc. It aims to present updated and concise information on specific topics, while offering inter-topic linkages and all rounded arguments. This encourages students to make use of their critical thinking to look at issues that affect not just themselves, but others around the world. Multiple conflicts and examples, along with explanations and evaluations are also presented to help students learn to evaluate issues and put across their arguments in a mature manner.

While students will be given a stepping stone in content by the end of the book, they should supplement their skills by brainstorming other arguments to add in their personal voices. This way, they will be able to craft creative yet mature essays quickly during the examination.



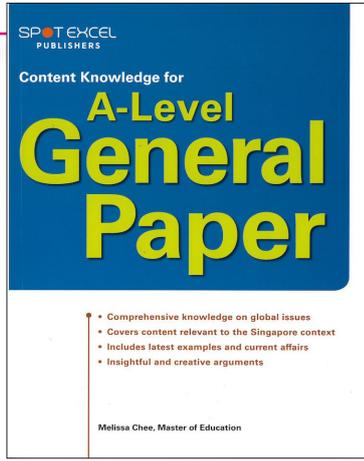
Global Issues

Content includes both national and international issues for a greater scope.

Examples

Relevant examples are included for each topic referenced to increase students' knowledge.

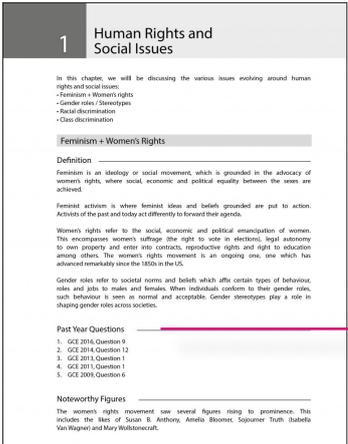




**Content Knowledge
for A-Level GP**
ISBN: 9789811164323

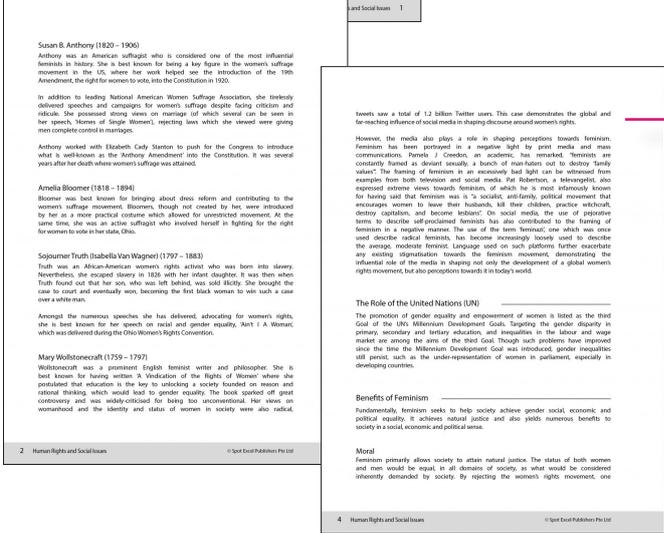
Students must carefully study the arguments and add their personal voices to ensure that at the end of the book, they have a competitive advantage in expressing creative, critical and mature responses under tight time conditions.

As per the syllabus demands, this book discusses a range of topics including, but not limited to, science and technology, the arts, global concerns and local interests. It aims to deliver alternative perspectives, inter-topic linkages and evaluation, along with plain content. This stimulates the student's ability to develop mature understanding of the environment in which we live in, to think about the issues that plague our world today, and helps to broaden their outlook while remaining mindful and grounded to our local experiences. Multiple arguments and conflicts are also provided as suggestions to guide students to evaluate issues according to their implications and significance on individuals and society as a whole.



Past Year Questions

The appearance of the topic in past years' GCE A-Level examinations is listed.

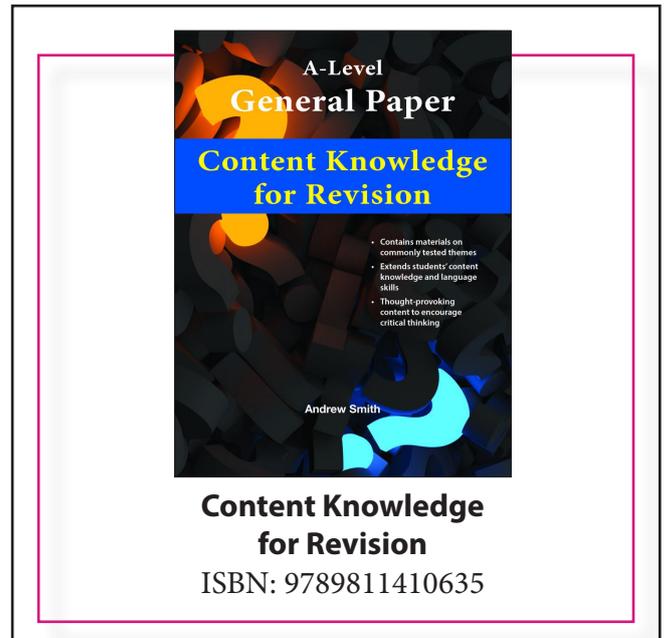
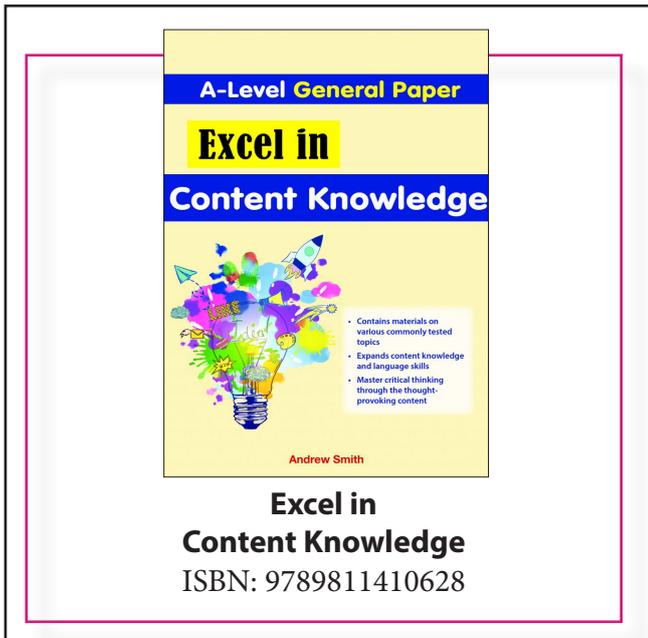


Comprehensive Content

Information such as definition, noteworthy figures, roles and benefits are also included to broaden students' knowledge on the topics.

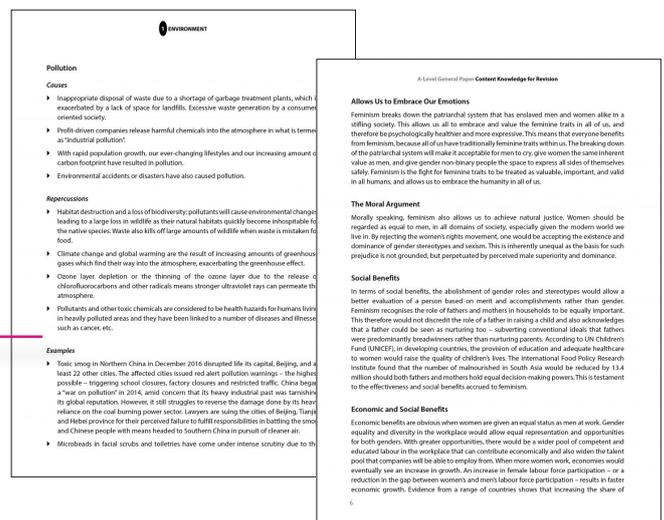
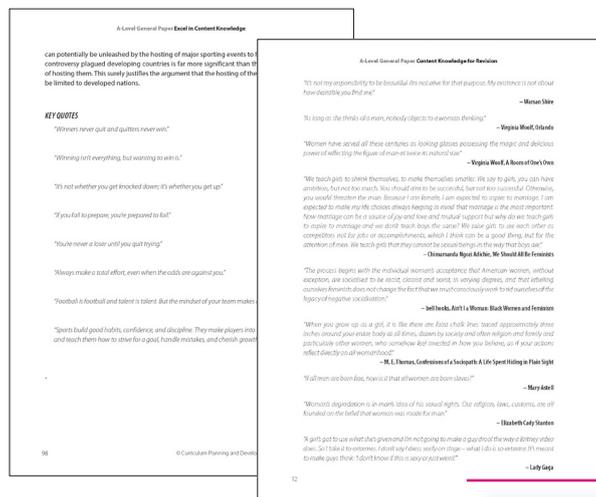
A-Level General Paper: Excel in Content Knowledge and A-Level General Paper: Content Knowledge for Revision are designed to provide students with a wealth of relevant knowledge. The books consist of a wide array of topics, covering all topics commonly tested at the A-levels. Each topic is specially crafted to enable students to gain a deeper understanding of each topic.

The books aim to prepare students for the A-Levels by providing content that is summarised without forgoing the details. The information is crafted into meaningful insights to allow students to effectively evaluate and argue their positions, giving them the confidence to do their General Paper examination.



Extensive Content

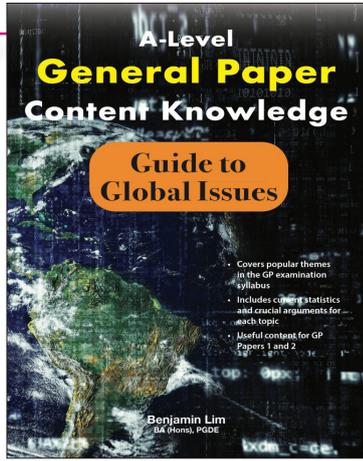
Insightful and thought-provoking content such as causes, repercussions, examples, arguments and benefits are covered for each topic.



Key Quotes

Each unit ends with meaningful quotes relevant to the topic which students can adapt for their essays.





A-Level General Paper Content Knowledge – Guide to Global Issues is written to provide students with a broad overview of the plethora of themes, ideas and examples that are explored in the General Paper. Understanding these various themes and issues will help students have a better grasp of the complexity of the world today. Students must carefully study the arguments in this book and add in their personal voice to ensure that they are given a competitive advantage in their A-Level examinations.

Guide to Global Issues
ISBN: 9789811410642

CONTENTS		
1	ARTS	1
2	CRISIS	9
3	ENVIRONMENT	19
4	HUMANITARIAN	33
5	LEADERSHIP	39
6	MEDIA	47
7	POLITICS	61
8	SOCIAL	83
9	SPORTS	101
10	TECHNOLOGY	107
11	TERRORISM	133
12	UNIQUELY SINGAPORE	141

Range of Themes

Covers popular themes in the General Paper examination syllabus.

1 - Arts

Great Leaders

- An Indian children's book, Great Leaders, that listed food dictator Adolf Hitler among history's amazing world leader was withdrawn by its publisher following widespread criticism.
- Pictured Hitler on its cover and also featured biographies of Barack Obama, Nelson Mandela and Gandhi.

Objective Documentary Award

- A new award by arts space Objective Documentary Award, will provide two Southeast Asian photographers with financial and professional support over six months.
- Encourage photographers to develop work that addresses social issues in their home country.

To Kill A Mockingbird

- A representation of Harper Lee's (the author of the classic novel, To Kill A Mockingbird) estate sued in 2018 claiming Oscar-winning writer Aaron Sorkin's script deviates too much from the beloved 1960 novel about race relations in the Depression-era US South.
- The producers of the Broadway adaptation sued the author's estate saying the premiere cannot go ahead as scheduled and the production may have to be suspended entirely unless a legal dispute is settled soon.

Fake Paintings

- An investigation into the collection at the Terno Museum, an art museum dedicated to the work of the painter Etienne Terno in Eke France, found 82 of its 140 paintings were fake.
- Elne's mystery said the discovery was a "catastrophe".

Shubigi Rao

- Singaporean artist Shubigi Rao is among 15 artists from the region and Central Asia who have been nominated for the triennial Signature Art Prize.
- Nominalist works range from sculptures to an interactive installation of drawings, videos and text.
- Her installation, titled: A Short Biography Of The Banished Book, Vol II Written In The Margin (2014-2016), is part of a 10-year project on the destruction of books and libraries which began in 2014.
- Includes video testimonials from people involved in saving or destroying books.
- Fighters who tried to save the burning national library of Sarajevo during civil unrest in the 1990s.

2 - Crisis

Cholera Outbreak

- Yemeni cholera outbreak is now the largest in history, having already surpassed one million confirmed cases, despite international assistance.
- In the last decade, African countries reported over three million suspected cholera cases to the World Health Organization and new cases are cropping up in 2018 in Africa's east-central and southern regions.

Cancer

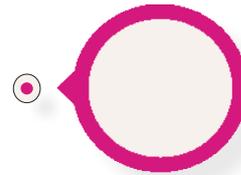
- Within the next five years, there could be more than one million cancer deaths annually in Africa, a surge in mortality that would make cancer one of the continent's top killers.
- Africa receives only 5 percent of global funding for cancer prevention and control.
- On average, African countries have fewer than one trained pathologist for every one million people, meaning most diagnoses come locally for treatment.
- According to University of Chicago ecologist Chikarenko Okpara, a diagnosis of cancer in Africa is "nearly always fatal".

Gun Violence

- At least 17 people were shot dead at a school in Florida.
- A 19-year-old suspect, Nikolas Cruz, who had been expelled, was arrested. He posted on YouTube his desire to be a "professional school shooter". This was America's worst shooting since the Sandy Hook massacre in 2012. In response, Donald Trump issued an order to ban bump-stocks, devices that convert some weapons into fully automatic rifles.
- Delta and other discontinued discounts for NFL members.
- Dick's Sporting Goods stopped selling assault rifles.
- Survivors of the mass shooting at Marjory Stoneman Douglas High School in Parkland said in June they will spend the summer registering voters across the country and advocating for gun reform. They travelled in two groups by bus to 20 states and every district of Florida.

Russia Building Up Arms

- In 2016, Putin said that Russia has launched the development and testing of state-of-the-art systems of strategic arms, such as the Sarmat heavy intercontinental ballistic missiles and the Kinzhal hypersonic complex.
- Russia has also created a small size super-powerful nuclear power plant that can be installed on a cruise missile, which will ensure an unlimited flight range and invulnerability to missiles and air defence systems. Russia has also developed an unmanned underwater vehicle capable of carrying nuclear warheads.



Statistics

Current statistics are included to support arguments.

A-Level General Paper Content Knowledge - Guide to Global Issues

- The lower house of Malaysia's parliament passed a bill that would impose prison sentences and fines on those who spread "fake news".
- A Danish national is expected to be the first person to be charged under the new anti-fake news legislation after he allegedly made false claims about the police's response time to the shooting of Palestinian lecturer Fadi al-Batati on 21st April 2018.
- India government enacted new rules that would have rescinded the credentials of journalists found to have published falsehoods.

Fake News - Whatsapp

- The authorities in north-eastern India have cut Internet access after crazed mobs beat three people to death in the latest cases of lynching sparked by false rumours spread on smartphone messaging service Whatsapp.
- Sparked by false rumours of gangs of child kidnappers.

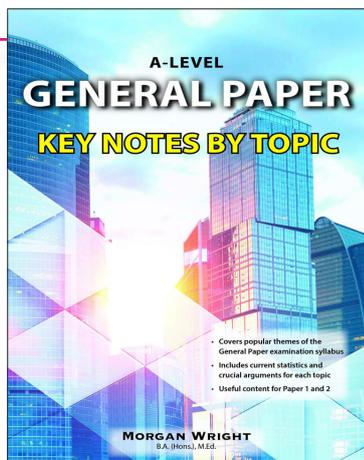
Fake News - Statistics

- Reuters Institute for the Study of Journalism's Digital News Report 2017 revealed, 84 percent news consumers say that established media organisations (eg The New York Times) accurately differentiate fact from fiction. For social media, this share is only 24 percent.
- This means that 60 percent of news consumers regard the legacy media as being careless with facts.
- The same report highlighted that 29 percent of respondents (70,000 Internet users in 36 countries) said that they were avoiding news altogether because the producers' preference for negative news put them in a bad mood and they view the reporting as politically slanted and therefore untrustworthy.

Tech-Journalism

- Preference for traditional journalism – Huffington Post scaled back its platform for unpaid bloggers and Facebook decided to ask users to rank news sources by trustworthiness.
- 2018 Edelman Trust Barometer shows rising confidence in traditional media.
 - In the 28 countries where the survey was conducted, 59 percent now trust journalists, up from 54 percent a year ago.
 - Trust in social media platforms has declined from 53 percent to 51 percent.

Key Notes by Topic



ISBN: 9789811176203

A-Level General Paper Key Notes by Topic is written for students preparing for the General Paper at the A-Levels. This book is a collection of up-to-date examples and crucial arguments needed to write a good General Paper essay. It covers a range of popular themes in the General Paper examination syllabus. This book will not only be of immense help for the essay paper but for the comprehension paper as well, especially the application question.

CONTENTS	
<p>TOPIC 1 THE ENVIRONMENT</p> <ol style="list-style-type: none"> China's national cap on coal usage Paris climate accords by the United Nations Framework Convention on Climate Change (UNFCCC) Water pollution effects E-waste in Singapore Plastic consumption Big corporations are culprits El Niño Health effects of diesel cost European taxpayers Population growth Sustainable BluePrint 2015 Singapore's EPA Urban spaces Too much effort? Ozone layer Pollution in Delhi Sunraya's Initiative Children under 5 in Yemen Male Is the US doing enough? Kyoto Protocol Extinction of animals Endangered animals Solar panel bills The world must triple effort Singapore's ranking Farming practices 	<p>TOPIC 2 EDUCATION</p> <ol style="list-style-type: none"> Integrated Programme (IG) New York Giving priority Primary 1 admissions Applied learning Aims of education Compulsory Education Act Global literacy rates Spending on education Education being too stressful Best education system Education in Yemen Pros and cons of an examination system Homeschooling Reasons to carry out character education Benefits of reading Schools being a place for peer pressure Lifelong Learning <p>TOPIC 3 SCIENCE AND TECHNOLOGY</p> <ol style="list-style-type: none"> How technology helps with education Big data and fashion China's advanced technology in an attempt Technology could redefine doctor-patient Improved quality of life Advancement may not always be good Can technology help poverty? Are corporations out to make profits with mining? Biotechnology Cybersecurity 2013 Singapore cyber attack Doing enough for cybersecurity? Importance of updating cybersecurity Pros and cons of space exploration
<p>TOPIC 4 THE ARTS</p> <ol style="list-style-type: none"> Korea's 'Hallyu' wave Banky Kampung Pelangi Art therapy in Singapore Art stage Using interactive theatre to develop empathy Literature Music BP's sponsorship of Tate Britain Museum Singapore's efforts To make a statement Advantages and disadvantages of banking in Singapore Foster identity and togetherness Love, Simon Singapore's spending on the Arts <p>TOPIC 5 THE MEDIA</p> <ol style="list-style-type: none"> Selling products The price to pay for an opinion Social media usage in Singapore Benefits of watching television and movies Benefits of music Political campaigns To raise awareness Mass media and the law Connectivity <p>TOPIC 6 POLITICS AND PREJUDICE</p> <ol style="list-style-type: none"> Florida's voting system Two Saudi sisters Ballet shoes US sanctions on Iran Israel's advertisement Merck System chef goes back Wildfires in the US 	<p>TOPIC 7 FAMILY, THE OLD AND YOUTH</p> <ol style="list-style-type: none"> Singaporeans' views on family The ageing population in Singapore Pioneer Generation and Merdeka Package Love of a parent Justin Ng Spending cost rising Divorce rates Youth's consumerist culture Large families in poor countries Youth in Singapore have higher affluence Anxiety and depression Umbrella movement Singapore's ageing population <p>TOPIC 8 SPORTS, HEALTH AND LEISURE</p> <ol style="list-style-type: none"> Fighting against doping Spending in Singapore Heat waves A drunken doctor performs Caesarean International Breast Cancer Paddler's Commission Dragonboat Festival Paralympics People engaging in dangerous sports Dangers of extreme sports Cristiano Ronaldo Xeno-transplant

Easy Revision

Information is arranged in easy-to-read points and each topic comes with a mind map for more efficient revision.

Comprehensive Topics

Extensive range of topics covered to expand students' content knowledge.

1 - The Environment

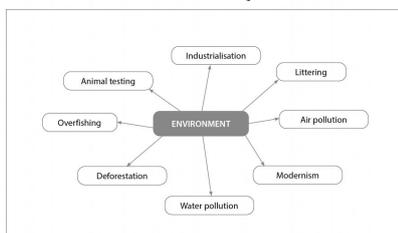
4. E-WASTE IN SINGAPORE

- As of February 2018, NEA reported that 60000 tonnes of e-waste were produced every year.
- A study by United Nations University estimates that about 109000 tonnes of e-waste were generated in Singapore in 2014, making Singapore the largest generator of e-waste in the region. This amounts to 19.5 kilograms of e-waste per person.
- A 2017 global report estimated that the world generated 44.7 million tonnes of e-waste in 2016, which is equal to more than 8 Great Pyramids of Giza.
- Washing machines made up 32% of this waste and refrigerators made up 22%. When donating these household appliances, freon gas is green out when taking the compressor out. Freon gas is a toxic gas that can cause asthma, skin allergies and mental disorders. This causes only 6% of all e-waste to be actually recycled.
- In Singapore, VEMAC is the only company that safely extracts gases from appliances. However, they only deal with commercial purposes, since it is expensive to properly dispose of the gas. Hence, they choose to deal with commercial businesses to make sufficient profits since household appliances would not produce enough gas to make any form of profits.
- Many may not be aware of such a thing as e-waste, however, it is increasingly relevant.
- There is also an increasing trend of consumerism and people tend to throw things away if it is functioning.
- This can increase the e-waste in countries especially since, in today's world, everyone tries to stay up-to-date and does not want to be left behind in terms of being trendy.
- Reduce the amount of e-waste is left to increase.
- With only one company specialising in the safe removal of gases, and only for corporate appliances, this poses a big problem since a lot of waste is also made up from household appliances and one company will be unable to cover all the e-waste and the parts that could actually be recycled would be unable to be recycled due to the lack of companies helping in demanding electronic devices.

5. PLASTIC CONSUMPTION

- As of July 1, 2018, Queensland and Western Australia will ban single-use, lightweight plastic bags from major retailers, with South Australia, Victoria and Tasmania set to follow leaving only New South Wales without a proposed ban.
- However, thicker and more durable plastic will be available for sale in most supermarkets.
- If consumers continue to use heavy-duty plastic bags of the same size as lightweight bags, it may be worse. Heavy duty plastic bags need to be reused at least 4 times to make up for the increase in greenhouse gas emissions caused by their production when compared to a single-use plastic bag.

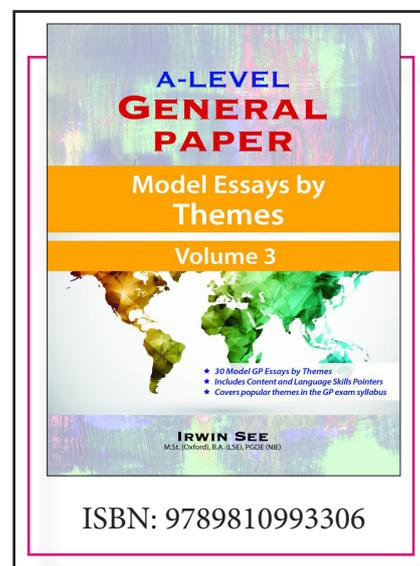
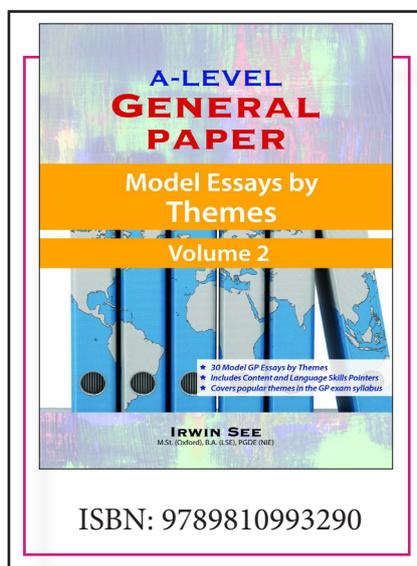
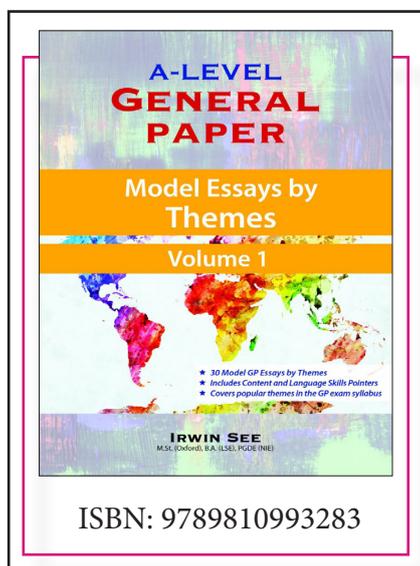
Mind map



Model Essays

Many students often feel lost as to how to analyse and learn from model essays effectively. This series of Model Essays by Themes strives to be different from other essays books: they aim to help students not merely to increase their exposure and understanding of various General Paper issues and themes, but also to learn how to improve their language skills through examining and analysing various essays in the books. At the end of each essay, there is a section titled 'How to Make Use of This Essay' where students can take time to extract useful content, writing techniques and language skills from the essay they have just read.

The exercises train students to build their own repository of useful GP resources from other future essays they may come across. In addition, due to the wide-ranging perspectives on various issues of the day, the essays in this book deliberately take on different (and sometimes opposing) stances on the same issue. This is so that students can be exposed to a diversity of viewpoints which would hopefully help them to think deeper and reflect on their own positions regarding different topics and themes in GP.

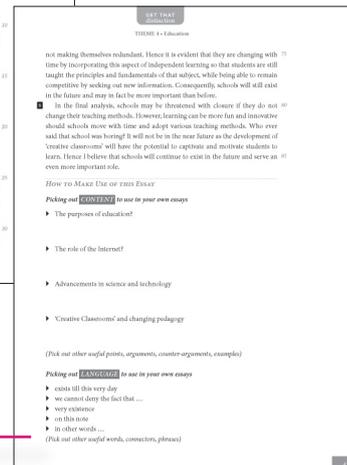


How to Make Use of Each Essay

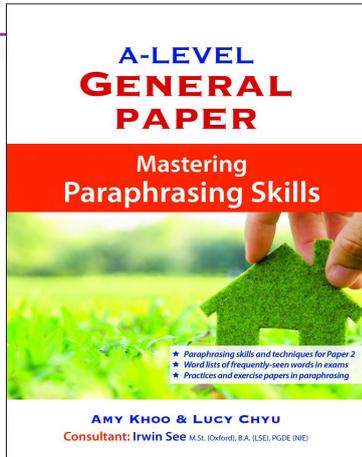
Students will be guided in preparing for the two key aspects that are assessed for General Paper Paper 1 (Essay).

Content: Picking out points, arguments, counter-arguments, examples, statistics, etc.

Language: Picking out useful words, phrases, connectors, transitional phrases, etc.



Mastering Paraphrasing Skills



ISBN: 9789811138904

Paraphrasing is a key skill for the General Paper as it allows students to express the same idea using a variety of different words and expressions. The Comprehension Paper (Paper 2) in the examination contains many questions that require students to be able to paraphrase accurately and concisely. Possessing a wide range of synonyms will also help students improve their language marks for the Essay Paper (Paper 1) as they are able to use different sentence forms to convey various ideas. This useful guide also includes word lists and paraphrasing practice questions (with answers) to help students improve their paraphrasing and writing skills.

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Key Skills and Techniques

This book focuses on five key paraphrasing skills, as well as other important paraphrasing techniques needed.

Tips and Examples

Tips and examples teach students how to arrive at the correct answers.

13.88 • Additional Techniques for the Summary Question in Paper 2

Tips for paraphrasing

A. Varying the sentence structure where possible

Normally, examiners give a provisional language mark (a total of 15 marks) based on the quality of the summary answer and give the final mark after considering the language in the Application Question (AQ2). Thus it is crucial to fully showcase your language proficiency in your summary answer so as to ensure that your language mark is in the high range. A good way to do so is to vary your sentence structure.

You can do this by changing the word form.

Original text	Thought process	Paraphrase
There are issues of personal safety.	Option 1 There are problems of individual security [without change in word form]	Individual security is problematic.
	Option 2 Individual security is problematic. [with change in word form]	

We can see that both options have same elements. They are both acceptable because all the key terms are paraphrased correctly. However, for the summary question, Option 2 is preferred because it alters the word form and thus the sentence structure, adding value to the language mark.

Practice 1

Write down two forms of paraphrase for each sentence (a) without a change in the word form, and (b) with a change in the word form.

- We all shared a common set of facts.
 - _____
 - _____

10 EXERCISE PAPERS

Exercise Paper 1

Section A

Select the best word(s) or phrase(s) to substitute the underlined words.

- Until about a century ago, the deep-ocean floor was completely inaccessible.
 - unreachable
 - unavailable
 - unavailable
 - unseen
- Deep-ocean sediments provide a climatic record stretching back hundreds of millions of years, because they are largely isolated from the mechanical erosion and the extreme chemical and biological activity that rapidly destroy much land-based evidence of past climates.
 - are well-protected
 - have land-based evidence
 - are in isolation
 - have a longer history
- To encourage more young people to join their camps, some groups have started offering active training programmes to give the growing number of disorganised young learners an avenue to release their frustration and work together against marginalisation.
 - organically
 - principally
 - eventually
 - ration

11 WORD LISTS

Word List 1 - Basic Words

Word	Synonyms
ability	capability / skill / talent
accept	receive / embrace
accessible	approachable / reachable / attainable
accurate	exact / correct
accounted	tributed / owed / credited / furnished
act	take measures / behave / perform
admit	confess / acknowledge
advantage	edge / upper hand / benefit
advocate	champion / recommend / uphold
agree	concur / consent / decide on
alone	by oneself / on one's own / independently
ambitious	aspirant / ambitious
angry	woed / furious / outraged
appreciate	value / treasure / cherish / prize
approach	move towards / speak to
argue	quarrel / disagree / claim
around the world	worldwide / global
ask	enquire / question / request / demand
attack	assault / criticise
attention	concentration / attention / notice / care
authority	governance / expert / pre-eminence / power
avoid	keep away from / avoid / prevent / refrain from
beneficial	advantageous / beneficial / profitable / helpful
begin	start / commence
believe	think / trust
benefit	be advantageous / helpful / useful to
biased	prejudiced / partial / one-sided / discriminatory

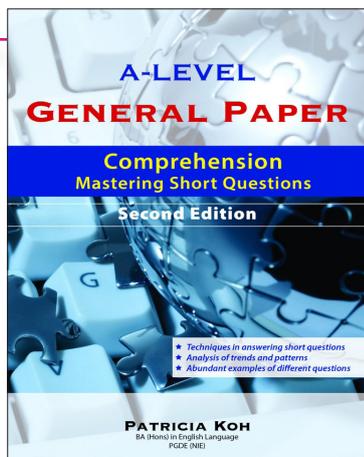
Practices and Exercises

Paraphrasing practices for each skill followed by exercises with suggested answers.

Word Lists

Equip students with necessary vocabulary to tackle paraphrasing questions.

Mastering Short Questions



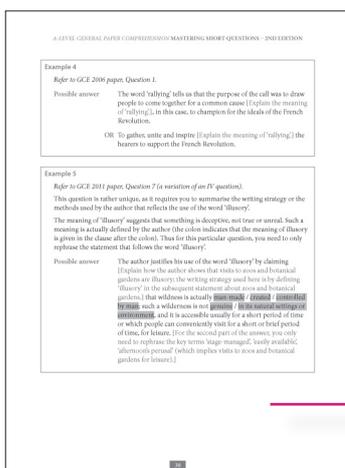
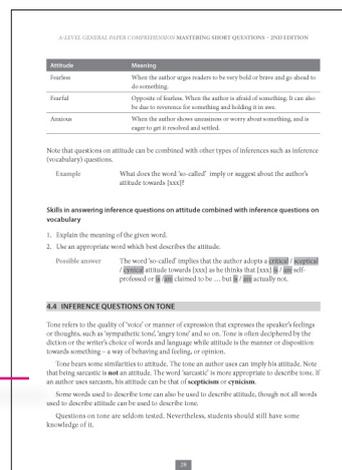
ISBN: 9789810977641

This book is written for students who need to understand what the General Paper Short Questions are about and require a comprehensive self-help guide to help them sort out and make sense of the different types of short questions. This book is written with the aim of helping students to conquer this section by providing comprehensive framework and skills in how to tackle the various types of short questions. The methods here have been tested and proven to work for many cohorts of students, helping them to do well for short questions, with a number scoring close to or even full marks for their school papers and examinations.



Detailed Explanations

Provide comprehensive framework and skills in how to tackle the various types of short questions.



Examples

Examples reference previous exam questions and guide students on how techniques can be applied.



Ten-Year Series Answer Book

GCE A-LEVEL
TEN-YEAR SERIES
ANSWER BOOK

GENERAL PAPER

Year 2008 to 2017

- Paper 1 Model Essays with Learning Points
- Paper 2 Complete Answers with Answering Techniques
- Sample Answers and Tips for Application Question (AQ)

IRWIN SEE
M.S.T. (EMFORD), B.A. (HSE), PGDE (NIE)

ISBN: 9789811165016

This Answer Book Includes 60 essays covering different General Paper topics and themes, with comments on style, structure and content to improve students' essay-writing and techniques for Paper 1. Students can refer to the essays as a guide to how they can tackle the questions.

Full Paper 2 answers (including Summary and Application Questions) are also given with useful answering skills and techniques to sharpen students' comprehension skills.

Answers 2015 Answers

Paper 1

QUESTIONS

- 1. This question requires an understanding of history and various situations between countries, although war may be the most common reason why a country would be engaged in conflict.
- 2. The additional 'forgive' should also be analysed, as what counts as forgiveness for one party may not be for another.

SAMPLE ESSAY

Countries are often interacting with each other, whether for greater cooperation or in times of conflict. In the latter case, nations are unacceptably often sometimes occur, leading to pain and hurt for certain countries, and this progress is often in their national consciousness. Compared with another nation in the past, however, more are choosing to base their policies on pragmatism, choosing to forgive instead. Therefore, I believe that gains usually affect those who couple the use of regional platforms, it is very possible for one country to forgive another for its past actions.

Some may claim that the possibility of forgiveness between two countries for past animosity depends largely on the severity of the past incidents. While some actions can be compensated, others still have and affect the present lives of many people today, making reconciliation an unworkable concept for many. While governments do have the power to forgive the other, they are often restricted as it does not always resonate well with their citizens, and hence efforts to make peace usually result in more hostility. For instance, in the Middle East, most of the Arab states still continue to impose economic sanctions towards Israel and follow the UNO (Resolution 242, Not Resolution No Peace, No Negotiation, No Recognition). As this action has gradually evolved with time, with original fundamentalists adding on a new layer to the conflict, it is unlikely that the Arab states can forgive Israel without compromising on the Palestinian issue and to a greater extent, they perceived difficult to blame, hence, whether countries can forgive each other is largely linked to the severity of the action, which when linked to ethnic and religious roots, can sometimes make it much harder to forgive and forget.

Moreover, the actions of the aggressor in post-aggression situations also play a part in determining whether one country can successfully forgive another country. If the country remains unrepentant or has acted against itself, it makes it harder for the other party to forgive. For one to forgive the other, sincere apologies must be forthcoming. As the spring goes, actions speak louder than words. If the aggressor nation only shows token gestures while engaging in actions that demonstrate otherwise, it becomes difficult for the aggrieved nation to forgive. For instance, despite Japanese officials having made official apologies, some government officials still visit the Yasukuni Shrine that pays tribute to those who died during the

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Sample Essays

Paper 1 sample essays along with question analysis and learning points make it a better learning experience.

Summary Question

The Summary Question section is presented in a table format to guide students through the process of picking out relevant points and paraphrasing them.

A-Level Answer Book General Paper

9. The author sees the previous result as people enjoying authentic relational bonds with artificial ones, leading to loneliness and isolation. He also points out the wide variety of choice which is readily given, and how real artists are under-appreciated due to the proliferation of media which is produced for anyone with average ability. Finally, the enticing and pervasive nature of the digital world makes us detached from reality.
- Answering technique: This is a paraphrase question that requires you to paraphrase all the details of the text of the revolution which the author lists in paragraph 8.

10. (No longer in current exam syllabus)

Summary Question	Relevant points
Play can be effective, is often relaxed and random ...	Games activities that are neither strenuous, or goal-oriented
... we do for no reward other than itself ...	And is intrinsically enjoyable
... it is not necessary to use cerebral ...	Not essential for life
... and is something we choose to do when we are not at work ...	They are voluntary activities done in our free time
... others use that leisure in the strenuous pursuit of goals ...	However, some people use play to attain challenging aspirations as well
... children play is a vital element in their growth to maturity ...	Playing for children is crucial for their development
... they learn the nature of the world they live in ...	as they become accustomed to rules within society
... and how to relate to their peers ...	and how to interact with others
A task order is soon established ...	Social stratification develops
Not unlike the necessity ... essential for their success in the free-for-all of our call society ...	which teaches them about thriving in the future
This organized social form of play continues to be a major feature in the pastimes of adults, either actively pursued ...	Sport is another form of play, either engaged in by individuals
... or enjoyed in a passive ...	or inhaled passively by people
Participants keep themselves fit ...	Sport boosts physical well-being
... enjoy the satisfactions of developing particular skills ...	nurtures certain aptitudes
... and achieving personal targets ...	accomplishes individual objectives
and experience the stimulus of competing ...	provides the thrill of outdoing one another
... sense of order and completion which is rules and time limits impose ... unlike the endless and arbitrary flow of events in our everyday lives ...	Sport is thus distinguished from the monotone, unexciting activities that fill our daily lives

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A-Level Answer Book General Paper

2014

12. Sample Answer for Application Question

Spigit generally welcomes the Internet for its potential as a tool for disseminating information, but also writes about possible effects on individuals and society. I agree with most of her observations, although I believe that they do not apply in large extent to my own society, Singapore.

Spigit believes that one potential benefit of the advent of the Internet is the possibility for 'active participation and collaboration with others' (line 21), which is highly applicable in the case of my society. In Singapore, the Internet is widely used, and is increasingly used as a platform for individuals from different walks of life to meet each other, discuss ideas and work together. For example, online Facebook groups and platforms such as ventpop.com and yaktr have become a powerful app for people with similar interests to meet each other first online, then in real life. People who join these groups often find themselves meeting people who they do not know or associate with. At the same time, online discussions have become the norm, as everyone who is behind a keyboard can comment and participate actively in civic discourse. Increased civic participation in discussion about important issues is definitely a positive development in Singapore, where equity used to be more prevalent.

However, Spigit also argues that the Internet is creating 'a generation who claim rather than do, who click from sources to source without real engagement' (line 42-43), which I believe is a handy generalisation. While it is true that people may read whatever pops up on their Facebook pages and prefer reading online articles to opposed to books, I believe that there has simply been a shift in how information is processed. There is a multitude of information on the Internet, which should be seen as an asset, rather than a distraction. The reading of short, concise articles also serves as a paragon for deeper engagement, rather than superficial skimming as deemed by Spigit.

In conclusion, other than the increased ego-centric behaviour showcased in my society, I believe that the Internet can potentially bring more benefits than harm to the ever-generation of Singaporeans for participation as well as information consumption.

LEARNING POINTS

There is a distinction between generalised and applicable to Singapore context.

Examine the evidence that has changed over time in Singapore.

Factor in evaluation of possible implications & date.

There can be agreement on the government's interest, but individual interest is in either or negative action post government engagement.

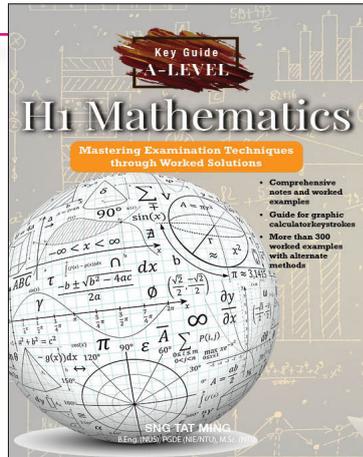
A case benefit analysis does not simply benefit as well as harm.

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Application Question

The Application Question answers are provided as a useful reference, but students should also feel free to consider other relevant issues not highlighted in the passages.

H1 Mathematics



ISBN: 9789811188763

This key guide book for H1 Mathematics provides a great way for students to engage in independent learning. With comprehensive notes and more than 350 worked examples, students will be able to get a better understanding of each concept and method. Examination-styled practice questions based on the latest syllabus prepares students for their upcoming examinations. Fully worked solutions and alternative methods are provided to gauge the progress of students' learning.

Syllabus Outcomes

Clearly defined outcomes for each unit to guide students' learning.

GRAPHING TECHNIQUES

SYLLABUS OUTCOMES

- To understand the concept of function as a rule or relationship where for every input there is only one output.
- To use the function notation such as $f(x) = x^2 + 5$.
- To use a graphic calculator to graph a given function.
- To understand the characteristics of graphs such as symmetry, intersections with the axes, turning points and asymptotes/vertical and horizontal.
- To select the appropriate 'window' of a GC that would display the critical features of the functions when sketching graphs.

1. Basic Functions and their Graphs

A function is a rule or relationship where for every input there is only one output. An example of a function is $f(x) = x^2 + 5$. Now let $y = f(x) = x^2 + 5$. We can see that for every value of x , there is only one value of y .

To graph a function, the calculator has to be in **FUNCTION** Graphing Mode.

Press **F2** to go to the Mode Menu.

Make sure that the **FUNCTION** is highlighted. If not, press **◀** to select **FUNCTION** and press **ENTER**.

To go back to the Home Screen, press **2ND** or **QUIT** to quit.

Linear Function: $f(x) = mx + c$
m: gradient, c: y-intercept

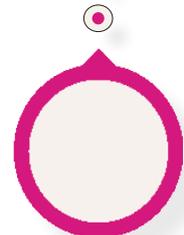
$$y = 3x + 2$$



Quadratic Function: $f(x) = ax^2 + bx + c, a \neq 0$

For $a > 0$, the curve has a minimum point; for $a < 0$ the curve has a maximum point.

Note that a quadratic function can also be written in the form:
1. $y = a(x - p)^2 + q$, where (p, q) is the turning point.
2. $y = a(x - r_1)(x - r_2)$, where $x = r_1$ and $x = r_2$ are the x-intercepts.



Worked Examples

More than 300 worked examples so that students can learn how to apply techniques.

Example 2
Sketch the graph of $y = x^2 + 3x^2 - x - 2$, marking the coordinates of the axes intercepts and the turning points. Find all the real roots of the equation $x^2 + 3x^2 - x - 2 = 5$.

Intersection: $(-1, 0)$, $(2, 0)$, $(0, -2)$

Vertex: $(-0.1667, -2.0833)$

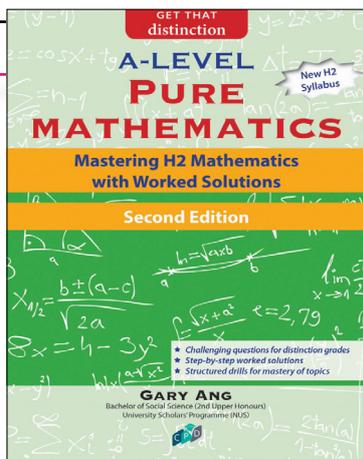
Substitute $x = 0$ into $y = x^2 + 3x^2 - x - 2$ to find the y-intercept.
When the line $y = 5$ is shown in the Diagram above.
Using GC, the coordinates of the point of intersection is $(0.607, 2.7)$. Since there is only one point of intersection, the equation $x^2 + 3x^2 - x - 2 = 5$ has only one real root $x = 0.607$ (1 d.p.).

Answer Key

Worked solutions to questions are provided for self-checking. Alternative methods are included as well.



H2 Mathematics



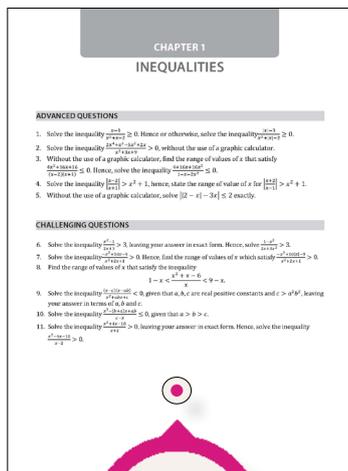
This book is specially designed for students who want to test their mathematical skills at a higher level. Though the Advanced Questions here are of a slightly higher standard than those in the A-Level examinations, students should be able to solve them. The Challenging Questions are designed to push the student's limits, though the skills needed to solve them are within the student's scope of knowledge. Detailed worked solutions enable students to learn from their mistakes and at the same time coach themselves on certain concepts.

A-Level Pure Mathematics Mastering H2 Mathematics with Worked Solutions (Second Edition)

ISBN: 9789811116902

This Second Edition addresses the new H2 Mathematics syllabus where more emphasis is placed on the application of mathematics in real-world contexts. Such questions can be found in this book in topics like Arithmetic Progression (AP) and Geometric Progression (GP), and applications of differentiation and differential equations.

Questions in this book also include solving real-world financial problems using AP/GP and carbon dating using differential equations. It is hoped that through exposure to these problems, students can have a better appreciation of the mathematics that they are learning.

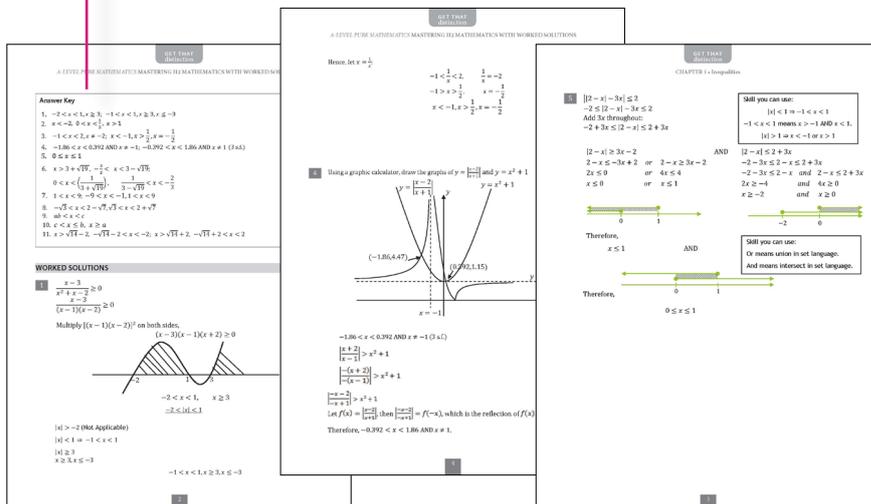
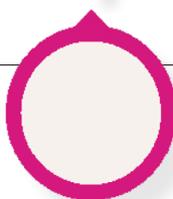


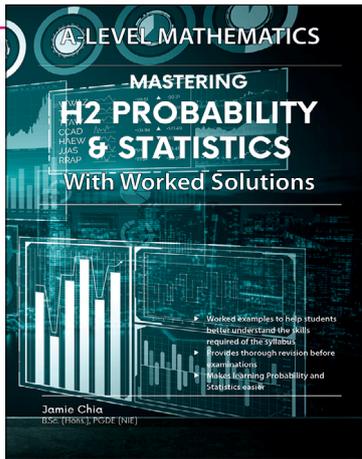
Advanced & Challenging Questions

Two levels of questions per chapter for students to challenge themselves.

Answers & Solutions

Answers and worked solutions are provided separately for students to have a quick check on the final answer before looking at the solutions. Additional notes and tips are also included in the solutions for greater understanding.





Following the Probability and Statistics topic of the GCE A-Level Mathematics Higher 2 syllabus, this book offers additional practices for students. The materials contain worked examples to help students better understand the skills required of the syllabus and provides thorough revision before examinations.

**A-Level Mathematics Mastering
Probability & Statistics with
Worked Solutions**
ISBN: 9789814996662

Permutations and Combinations

8. Lily has four identical star shaped ornaments and six identical heart shaped ornaments.

(a) Find the number of ways in which Amy can arrange the ten ornaments in a line. [1]
The star shaped ornaments are coloured Red, Green, Yellow and Purple, and the heart shaped ornaments are then coloured Red, Green, Yellow, Purple, Black and White.

(b) Find the number of ways in which Lily can arrange the ten ornaments in a line such that exactly five heart shaped ornaments are next to each other. [3]

(c) Lily then decides to arrange the ten ornaments in a circular manner. Find the number of ways in which all ornaments of the same colour are next to each other. [2]

9. A group of eight people consists of one pair of sisters, Amy and Betty, and six others. The group stands in a queue in random order.

(a) Find the number of ways of arranging if either Amy is first or Betty is last (or both). [2]

The group is then brought to a round table with seats numbered 1 to 12.

(b) Find the number of ways of arranging if the sisters are to sit together. [3]

(c) Find the number of ways of arranging if the sisters are directly opposite each other. [3]

10. Three families comprising of six adults and three children go on an outing to a theme park.

(a) There are a total of 15 amusement rides in the theme park. A child insists on trying out at least 2 of the 15 amusement rides. Calculate the number of ways in which this can be done. [2]

(b) One of the highlights in the theme park is the "Mummy Surprise" rollercoaster ride, where the passengers are seated in a passenger car with seats arranged in 3 rows and 3 columns in the diagram.

(i) Calculate the number of ways in which the three families can be seated if there are no restrictions. [1]

(ii) Tom, the youngest child in the group, is fearful of the ride and insists on sitting next to his mother before he agrees to get onto the passenger car. Calculate the number of ways in which this can be done. [2]

(c) The three families proceed to the restaurant for lunch. They are allocated a circular table with 9 seats. Calculate the number of possible seating arrangements for the group if none of the children sit together. [2]

(a) In the consonants (S, T) are not all together. [3]

(b) All the vowels (A, I) cannot be next to one another. [3]

(c) How many ways can 3 letters be selected from the letters of the word STATISTICS [1]

Mastering H2 Probability & Statistics with Worked Solutions

erent arrangements of the twelve letters of the word which the consonants and vowels alternates. [3]

surely password is to be designed using the above letters. [3]

ossible passwords that can be formed when more than 3 and repetition of letters is not allowed. [3]

f arranging the letters of the word [1]

ter are both A. [2]

nd the 2Ms are together but the 2Ts must be separated. [4]

o arrange six married couples if [3]

h at least one man not standing next to his wife. [3]

h exactly five men standing next to their wives. [3]

o arrange the twelve letters of the word PERSEVERANCE [1]

ch that the vowels are placed adjacent to one another. [2]

at random from the twelve letters of the word [2]

tern a code word. The code word can contain at most two [3]

number of possible code words. [3]

4 adults and 3 children goes for dinner at a Japanese restaurant. [1]

f adjacent seats in front of the Sushi Conveyor belt. [2]

ossible seating arrangements if all the 3 children will sit together. [2]

6 for dessert after dinner and they sit at a round table. [3]

ossible seating arrangements if at most two children can be seated [3]

h which the letters of the word STATISTICS can be arranged [1]

(a) In the consonants (S, T) are not all together. [3]

(b) All the vowels (A, I) cannot be next to one another. [3]

(c) How many ways can 3 letters be selected from the letters of the word STATISTICS [1]

Answers & Solutions

Answers and worked solutions are provided for students to check their answers and to learn from their mistakes.

Advanced & Challenging Questions

A variety of challenging questions for students to test their understanding of key concepts.

Permutations and Combinations

Worked Solutions

1. (a) No. of ways without restriction = $\frac{10!}{2! \times 2! \times 2!} = 453\,600$ ways
(b) No. of ways = $453\,600 - 7! = 448\,560$ ways
(c) No. of ways = $\frac{5! \times 6! \times 3!}{2! \times 2! \times 2!} = 10\,800$ ways
(d) Case #01 (Letter I is not between the 2 Ds) = $4C1 \times 2! \times \frac{8!}{2!} = 20\,160$ ways
Case #02 (One letter I is between the 2 Ds) = $2! \times 7! = 10\,800$ ways
No. of ways = $10\,800 + 20\,160 = 30\,960$ ways

2. (a) No. of ways = $12C9 \times 9! = 79\,833\,600$ ways
(b) No. of ways = $3! \times 4! \times 2! \times \frac{6!}{2!} = 34\,560$ ways
(c) No. of ways = $79\,833\,600 - 2! \times 11C8 \times 8! = 66\,528\,000$ ways
OR = $79\,833\,600 - 2! \times \frac{11!}{2!} = 66\,528\,000$ ways
(d) No. of ways = $3C1 \times 4C1 \times 2! \times \frac{10!}{3!} = 14\,515\,200$ ways

3. (a) No. of ways = $9! \times 10C3 \times 3! = 261\,273\,600$ ways
(b) (i) No. of ways = $(6-1)! \times (2!)^2 = 7680$ ways
(ii) No. of ways = $(2-1)! \times 6! \times 6! = 518\,400$ ways
(iii) No. of ways = $(6-1)! \times 6! = 86\,400$ ways
(iv) No. of ways = $86\,400 \times 12 = 1\,036\,800$ ways

4. Case #01 (4 same colour) = $2C1 = 2$
Case #02 (3 same colour) = $2C1 \times 3C1 = 6$
(b) Case #03 (2 same colour) = $2C1 \times 3C2 \times 1 = 7$
Case #04 (all different) = $4C4 = 1$
No. of ways = $2 + 6 + 7 + 1 = 16$
Case #01 (4 same colour) = $3C1 = 3$
Case #02 (3 same colour) = $3C1 = 3$
Case #03 (2 same colour, other 2 different colours) = $4C1 \times 3C2 = 6$
Case #04 (2 same colour + another 2 of another same colour) = $4C1 \times 3C2 = 6$
Case #05 (all different) = $4C4 = 1$
No. of ways = $3 + 3 + 12 + 6 + 1 = 25$

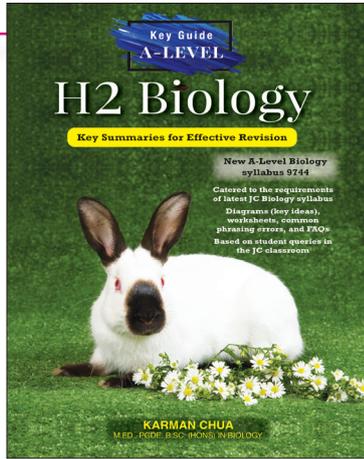
A-Level Mathematics: Mastering H2 Probability & Statistics with Worked Solutions

5. No. of possible adjacent paired lots = $(7-1) \times (5-1) = 10$ ways
(a) No. of ways = $12! - 10C1 \times 2! \times 10! = 466\,425\,600$ ways
(b) No. of ways = $12! - 4C2 \times 2! \times 10! = 454\,545\,600$ ways
(c) No. of ways = $10C2 \times 2! \times 2! \times 2! \times (12-4)! = 14\,515\,200$ ways
(d) No. of ways = $12C10 \times 10! = 239\,500\,800$
OR = $\frac{12!}{3!} = 239\,500\,800$

6. (a) No. of ways = $26! \times 10! = 676\,000$ ways
(b) No. of ways = $52! \times 5! = 338\,000$
(c) No. of ways = $52 \times 50 \times 10 \times 9 \times 8 = 1\,872\,000$ ways
(d) No. of ways = $26C1 \times 3 \times 2! \times 10C1 \times 9 \times \frac{3!}{2!} = 42\,120$ ways

7. (a) No. of ways = $\frac{9!}{4! \times 4!} = 60\,480$ ways
(b) No. of ways = $6! \times 3! = 4320$ ways
(c) No. of ways = $(3-1)! \times 6! = 1440$ ways
OR = $3! \times 6! \times 3 = 1440$ ways
(d) No. of ways = $(2C1)^2 \times (2!)^2 \times 3! \times 3! = 2304$ ways

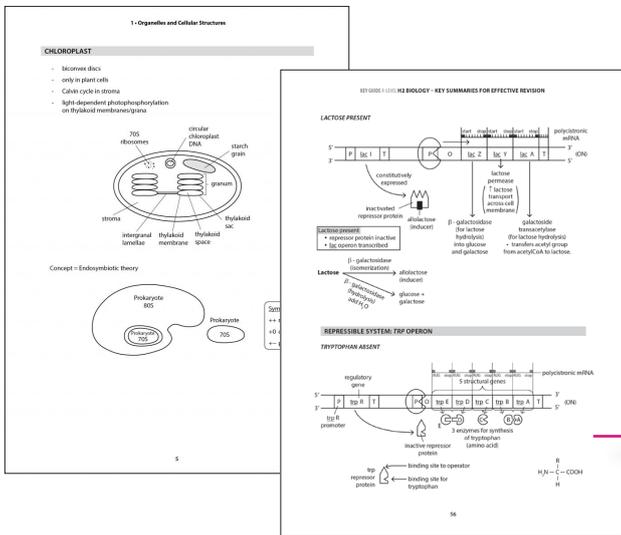
8. (a) No. of ways = $\frac{10!}{4! \times 4!} = 210$ ways
(b) In order to have exactly 5 heart shaped ornaments next to each other, the remaining single heart must be separated from the group of 5 hearts.
No. of ways to choose and arrange the 5 heart = $6C5 \times 5!$
No. of ways to arrange four stars = $4!$
No. of ways to slot the group of 5 hearts and the single heart into separate slots = $5C2 \times 2!$
Required number of ways = $4! \times 6C5 \times 5! \times 3C2 \times 2! = 345\,600$
(c) 2 Red, 2 Green, 2 Yellow, 2 Purple, 1 Black and 1 White
No. of ways = $(6-1)! \times 2! = 1920$



Key Summaries for Effective Revision

ISBN: 9789811180385

This book is the product of an accumulation of ten years' worth of on-the-ground teaching experience in JC H2 Biology classrooms. It caters to the requirements of the latest JC Biology syllabus 9744. The book features diagrams (as key ideas), worksheets, and common phrasing errors in answering questions. The FAQs enclosed are based on student queries and feedback in the JC classroom.



Diagrams

Key ideas of each topic are presented in a clear and summarised manner with diagrams for easy reading and quick referencing.

Common Student Queries

Answers to common student queries are provided for additional information and better understanding of key ideas taught.

KEY IDEAS | H2 BIOLOGY - KEY SUMMARIES FOR EFFECTIVE REVISION

DNA AND GENOMICS: COMMON STUDENT QUERIES / FAQ

Q1: What's a "nucleoside mono-phosphate"?
 Ans: A nucleoside mono-phosphate is a nucleotide with one phosphate group.

Q2: What's a "nucleoside tri-phosphate"?
 Ans: It's a nucleotide with 3 phosphate groups attached. Nucleotides usually exist as nucleoside tri-phosphates since they are more stable. When joined with a phosphate group, they form polynucleotide DNA, they become nucleoside mono-phosphate, losing 2 phosphate groups (hydrolysis of phosphoanhydride bonds).

Q3: What's "dNTP"?
 Ans: dNTP means deoxyribonucleoside tri-phosphate. It's a nucleoside tri-phosphate, containing a deoxyribose pentose sugar, 3 phosphate groups, and nitrogenous base adenine.

Q4: What's "dNTP"?
 Ans: dNTP is the abbreviation used by scientists, to represent any of the 4 possible deoxyribonucleoside tri-phosphates (dATP, dCTP, dGTP or dTTP).

Q5: Is there such a thing as "dNTP"?
 Ans: Yes, dNTP is an abbreviation used by scientists, to represent any of the 4 possible deoxyribonucleoside tri-phosphates (dATP, dCTP, dGTP or dTTP).

Q6: So that means ATP must be a nucleoside tri-phosphate containing nitrogenous base adenine. But I thought ATP is the energy molecule of the cell!
 Ans: Yes, they are the same thing. ATP is the energy currency of the cell, as you have learned in Sec. 4 Biology. But it is also one of the 4 basic building blocks (nucleotides) that the cell needs to form a DNA molecule.

Q7: I have difficulty trying to remember which bases are purines, and which bases are pyrimidines.
 Ans: You just have to remember the word "purge". Hence you will remember that Purines are Guanine and Adenine, hence cytosine, thymine and uracil must be pyrimidines.

Q8: I cannot remember whether purine is a one-ring structure, or a two-ring structure.
 Help!
 Ans: One ring (the structure goes "big fish, small fish")! You just have to remember that one purine is a short word, it is a large molecule, hence purine has a two-ring structure. Similarly, one pyrimidine is a long word, hence it is a small molecule, hence pyrimidine is a one-ring structure.

Q9: I cannot remember the sugar codes (DNA, UGA, UMG). Is there any way to remember them?
 Ans: Here's a mnemonic to remember them:
 UGA: U-Gee-Bees
 UAG: U-Gee-Bees
 UMG: U-Gee-Bees

KEY IDEAS | H2 BIOLOGY - KEY SUMMARIES FOR EFFECTIVE REVISION

EXERCISE: IDENTIFY THE MISTAKE!

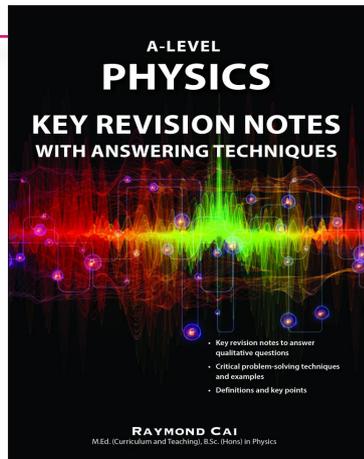
(COMMON PHRASING ERRORS BY STUDENTS)

- The rate of glycolysis is to phosphorylate glucose into 3 molecules of pyruvate for the pathway to aerobic respiration.
- Electron carrier proteins embedded in the cristae transfer electrons to one another, causing the electrons to drop in energy level.
- The electron transport chain allows for the regeneration of NAD⁺ from reduced NAD, in order for glycolysis to continue.
- In glycolysis, the C-C atom is phosphorylated twice, forming fructose-1,6-bisphosphate.
- Pyruvate is decarboxylated when its carboxyl group is removed as carbon dioxide.
- High energy electrons in its atoms present in reduced NAD are transferred to protons, complex of the ETC. The electron carrier is reduced, while NAD⁺ is regenerated for reuse in the link pathway and Krebs cycle.
- Pyruvate is oxidatively decarboxylated, and then combined with CoA to form acetyl CoA, CO₂, and NADH.
- When high energy electrons are passed through the ETC, energy released by the electrons is used to pump protons from the matrix into the cristae. This creates a proton gradient in the intermembrane space.
- Reduced NAD transfers H⁺ ions to the ETC for ATP synthesis.
- High energy phosphorylation of ADP molecules and TTP molecules are removed to form ATP which is used in the later processes of glycolysis and Krebs cycle in aerobic respiration.
- Carboxyl group is removed from pyruvate as CO₂ to enable pyruvate.
- Large, the carbonylated pyruvate combines with CoA to form acetyl CoA, which is important to proceed with Krebs cycle in aerobic respiration.
- A proton-motive force in the intermembrane space, so that the hydrogen protons can diffuse back into the matrix through the ATP synthase.
- ATP can be synthesized which is important for glycolysis and the Krebs cycle of aerobic respiration to continue.
- Pyruvate can be used in the link pathway, and ATP can be used in oxidative phosphorylation.
- Intermediate decarboxylation of pyruvate releases hydrogen atoms that reduce NAD⁺.
- The ETC is responsible for the production of energy used to pump protons across the cristae.
- In oxidative phosphorylation, oxygen is the final electron and hydrogen acceptor, forming water.
- Reduced NAD transfers its electrons to the first electron protein carrier of the ETC.
- Proton carriers of the ETC use energy released by the electrons to pump protons across the inner membrane of the cristae.

Exercises

Exercises such as identifying common phrasing errors are included to reinforce concepts learnt.

Physics



Key Revision Notes with Answering Techniques
ISBN: 9789811427299

This book is specially designed for students who want to grasp the essence of each topic in the A-Level H2 Physics syllabus as well as gain exposure to common qualitative questions, a component where many students stumble.

In the examination, students are required to recall and apply key definitions and formulas. This book serves as a quick reference guide in attempting practice questions as well as a handy revision prior to a test or a quiz. Critical problem-solving techniques are illustrated through worked examples to help students understand how the formulas can be applied, while sample qualitative questions are compiled to help students pick up the key words that examiners look out for.

CRITICAL PROBLEM-SOLVING TECHNIQUES

Key formulae

- Spring force, $F = kx$
- Upthrust, $U = \rho_{\text{fluid}} V_{\text{displaced}} g$
(vector, units N)
Upthrust is numerically equal to the weight of fluid displaced.
- Pressure of a column of fluid, $P = h\rho g$
(scalar, units Pa), where h is the depth below the fluid surface, ρ is the density of the fluid, and g is acceleration due to gravity.
- Torque of a couple, $T = F \times d$ (vector, units Nm), where F is the magnitude of 1 force of the couple, and d is the perpendicular distance between the lines of action of the forces.

Example 1
A 1.0 kg mass is attached to a spring balance of spring constant 100 N m^{-1} . The mass with spring balance is then hung inside an elevator. Find the extension of the spring when
(a) the lift is stationary
(b) the lift is accelerating upwards at 1 ms^{-2} .

Solve

- Since acceleration is 0, $kx - mg = 0$
 $100x - 10 \times 9.81 = 0 \Rightarrow x = 0.981 \text{ m}$
- Since acceleration is upwards, $kx - mg = ma$
 $100x - 10 \times 9.81 = 10 \times 1 \Rightarrow x = 0.108 \text{ m}$

Key Formulas

Key formulas of each topic are listed.

Examples

Carefully selected questions used as examples help students see beyond the formulas.

Expressing and finding derived uncertainty

- For addition and subtraction, e.g. $F = mA + nB$, where m and n are constants, derived **absolute uncertainty** $\Delta F = m\Delta A + n\Delta B$.
- For product and division, e.g. $F = k \frac{AB}{C}$, where k , n , m and p are constants, derived **fractional uncertainty** $\frac{\Delta F}{F} = \frac{\Delta A}{A} + m \frac{\Delta B}{B} + \frac{\Delta C}{C}$.
- Uncertainty** is expressed in the form of $A \pm \Delta A$, where ΔA is the uncertainty expressed to 1 s.f. and A is the measurement expressed to same number of d.p. as the uncertainty.

Example 2
The fall of a small metal sphere is timed. The following data are obtained for the time t taken for the sphere to fall a vertical distance s from rest.
 $s = 1.33 \pm 0.01 \text{ m}$
 $t = 0.520 \pm 0.005 \text{ s}$

- Using these data, determine
 - the acceleration of free fall, g , to three significant figures.
 - the actual uncertainty in the value of g .
- Hence give a statement of g , with its uncertainty, to an appropriate number of significant figures.
- Suggest two reasons why the value of t may not be accurate although it is precise.

Solve

- (a) (i) Making g the subject of the formula $s = \frac{1}{2}gt^2$:
 $g = \frac{2s}{t^2} = \frac{2 \times 1.33}{(0.520)^2} = 9.837 = 9.84 \text{ ms}^{-2}$ (3 s.f.)
Tip: Remember to make the quantity for which the uncertainty is to be derived the subject of the formula.
(ii) $\frac{\Delta g}{g} = \frac{\Delta s}{s} + 2 \frac{\Delta t}{t}$
 $\Delta g = 9.837 \left(\frac{0.01}{1.33} + 2 \frac{0.005}{0.520} \right) = 0.3 \text{ ms}^{-2}$ (1 s.f.)
Tip: For fractional uncertainty, there is no need to change to % units.
(b) $g = 9.8 \pm 0.3 \text{ ms}^{-2}$
Note: Uncertainty is to 1 s.f. and value of g is same d.p.
- (c) The time may be smaller than actual value due to air resistance.
Incorrect calibration of the timer can result in the timer running faster. So measured time is larger than actual time.
Note: For one-marked questions, accepted random errors are not accepted when the question does not ask to discuss them.

Qualitative Questions

Sample qualitative questions have key words intentionally left out so that students pay attention to the key words and ideas, which will come in handy during examinations.

Tips

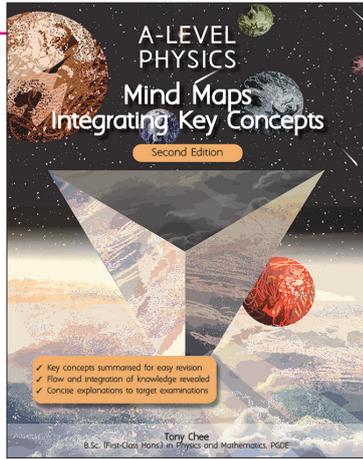
Learning points, notes and tips help ensure students remember the steps and formulas.

TACKLING QUALITATIVE QUESTIONS

Remember to look for key words in the box below. Not all key words need to be used. Some may be used more than once.

base	derived	physical quantities	physical units	random
systematic	scatter	deviation	near direction	both directions
true	mean			

- Explain why the unit of force is said to be a derived unit.
Suggest answer:
The unit of force, Newton (N), can be derived from the equation Force = mass \times acceleration, and can be expressed as the product and quotient of _____ units as kg m s^{-2} .
- Explain why it is technically incorrect to define power as work done per second.
Suggest answer:
The second is the unit for the physical quantity of time. Power is a physical quantity and should be defined in terms of other _____. In this case, power should be defined as work done per unit time.
- Give 2 reasons why, while a physically correct equation must be homogeneous, a homogeneous equation need not be physically correct.
There are two possible reasons:
(a) The value of the _____ may be incorrect.
(b) There may be missing or extra terms that have the same _____.
- A student uses vernier calipers to measure the inner diameter of a beaker. He fails to notice that, when the calipers are fully closed, the reading is not zero.
(a) Explain whether this will introduce a systematic or random error into the readings of the diameter.
Suggest answer:
(i) It will introduce a _____ error, as due to the zero error, there will be a _____ of the readings about the true value.
(ii) The readings are precise because vernier calipers give readings that have a small _____ about the _____ value.

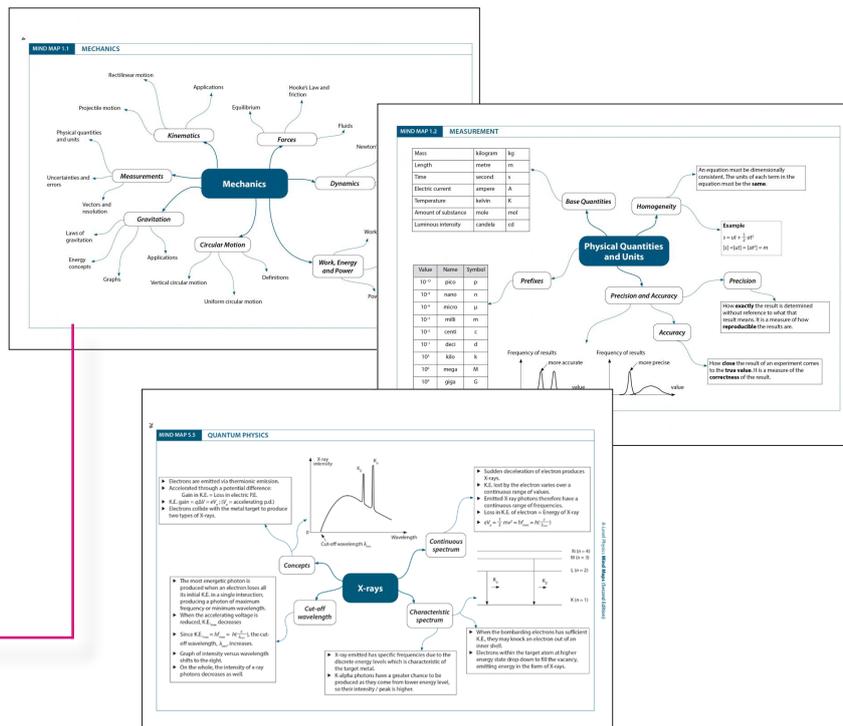
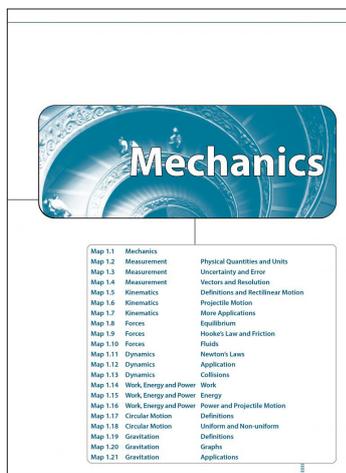


Mind Maps Integrating Key Concepts
 ISBN: 9789811447402

A-Level Physics Mind Maps is written for students who are taking the GCE A-Level Physics examinations. In this Second Edition, various changes according to the latest syllabus modifications as well as improvements to existing content have been made to ensure that the mind maps continue to enhance the learning of physics concepts.

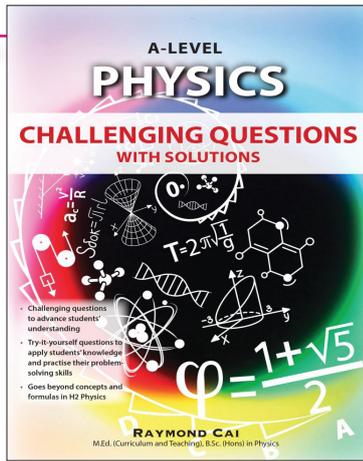
The contents are arranged in order of topic and laid out according to the Cambridge syllabus. The contents have been organised into concise notes to facilitate quick and easy revision for students. Each topic is then further divided into smaller sub-topics from which the main concepts are distilled. It is around these main concepts that the mind maps are built upon.

Students can use the contents of this book to systemise and compartmentalise their understanding of each topic. In each mind map, the flow of the thought processes from one concept to another is shown by arrow connectors. With these connectors, the links between concepts and how they integrate to form the larger ideas of each topic should become clearer.



Topical Mind Maps

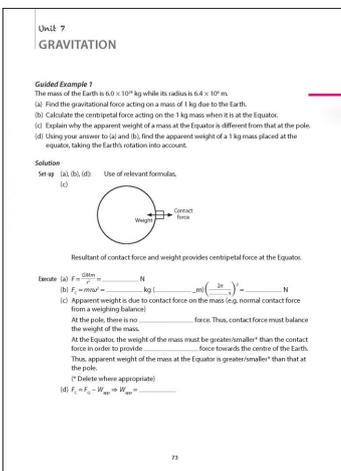
Mind maps are created and arranged by topic. Within each topic mind maps are further divided by key concepts.



Challenging Questions with Solutions
ISBN: 9789811427282

This book is specially designed for students who want to go beyond the concepts and formulas in each topic of the new 2017 A-Level H2 Physics syllabus. In examinations, students are required to show understanding of and apply key concepts to often novel and challenging scenarios.

This book serves as a compendium of selected challenging questions to advance students' understanding. Key concepts are illustrated through worked examples, while try-it-yourself questions give students the chance to apply their knowledge and practice problem solving skills. Each topic ends off with a spot-the-mistake exercise to help students identify common errors and misconceptions.



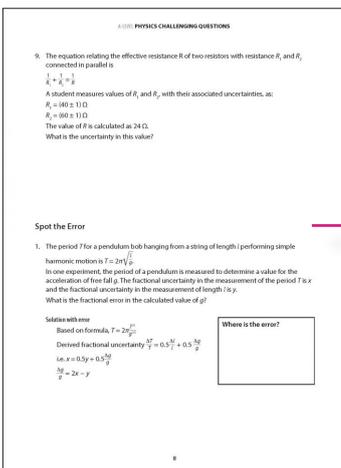
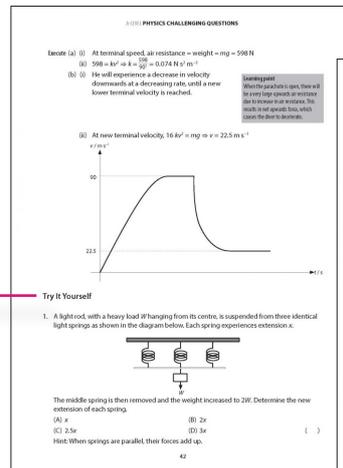
Guided Examples

Solutions in guided examples are interactive so students can be involved in the solving process and learn more efficiently.



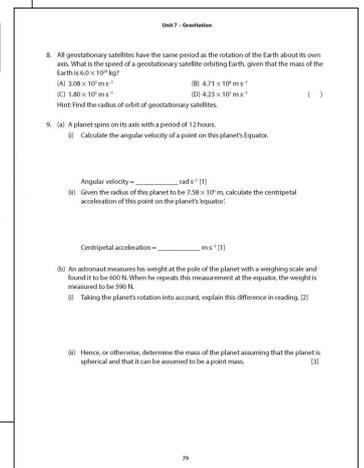
Try it Yourself

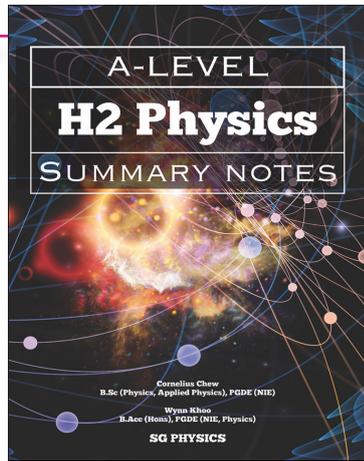
Selected challenging MCQs and structured questions are included, with hints provided.



Spot the Error

Spot the Error sections allow students to identify mistakes and be more aware of similar mistakes in their own answers.

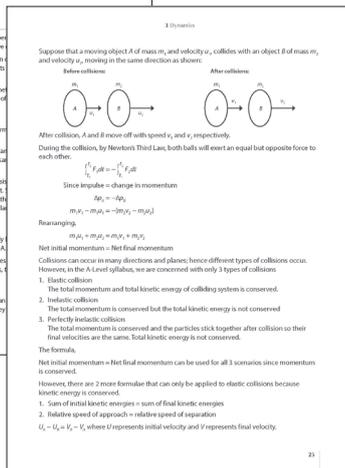
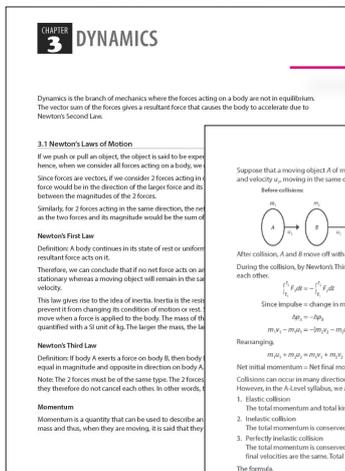




Summary Notes
ISBN: 9789811460548

This revision guidebook is written specially to help students comprehend the main concepts in the new A-Level H2 Physics syllabus better. The chapters are well organised in a systematic way to help students study independently and revise in an effective way.

The book begins with an introductory chapter on physical quantities and measurements and follows the sequence of the MOE-approved textbook closely. Each chapter consists of simple and easy to remember explanations of key Physics concepts using the appropriate technical jargon required to score full credit in the examinations.

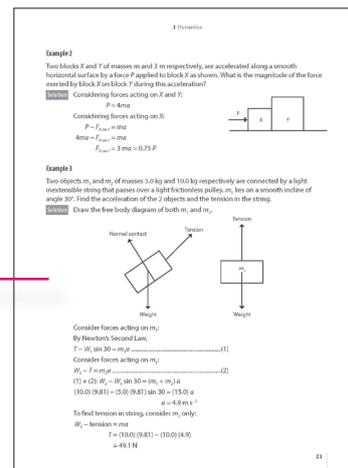


Key Concepts

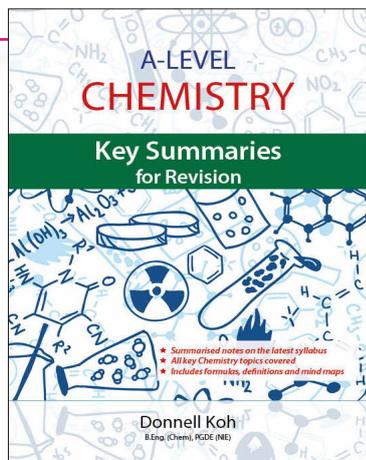
Detailed explanations of each key concept, with definitions, formulas and example scenarios.

Worked Examples

Each concept is further explained with worked examples to emphasise how to apply the concepts learnt.



Chemistry



Key Summaries for Revision
ISBN: 9789811102059

A-Level Chemistry is a content heavy subject. Students may feel overwhelmed with the vast amount of information that they need to process. This book aims to help students understand the key concepts of Chemistry easily by extracting the key concepts required for each topic.

Key features include:

- Summarised notes for all key Chemistry topics based on the latest revised syllabus.
- Complete list of definitions and key formulas in each Physical Chemistry topic for quick reference.
- Comprehensive Organic Chemistry mind maps and summaries for easy learning.
- Key summaries in Inorganic Chemistry presented in point form for easy memorisation.

Detailed Diagrams

This book contains numerous detailed diagrams to aid students in their revision.

SUMMARY 2: Atomic Structure

Behaviour of Protons, Neutrons and Electrons in Electric and Magnetic Fields

Electric Field
beams of protons, neutrons and electrons with the same velocity
Angle of deflection $(\theta) = \frac{q}{m}$

Shapes of Orbitals
An orbital represents a region in space where there is a high probability (>95%) of finding an electron.
s-orbitals
• spherical in shape
• as n increases, the orbitals become more diffuse
p-orbitals
• dumbbell in shape
• 3p orbitals are labelled p_x , p_y and p_z , as n increases, the orbitals become more diffuse
d-orbitals
Note: Must draw x , y and z axes!
The lobes are pointing between two of the axes - not along them.
The lobes point along the various axes.

SUMMARY 2: Atomic Structure

Electronic configurations involving more than 18 electrons

4s orbital is filled first before the 3d orbitals. 4s electrons are removed first before 3d electrons.

$4s^1$: $1s^2 2s^2 2p^6 3s^2 3p^4 4s^1$ Fe: $1s^2 2s^2 2p^6 3s^2 3p^4 3d^6 4s^1$
 $2d^{10}$: $1s^2 2s^2 2p^6 3s^2 3p^4 3d^{10}$ Fe $^{3+}$: $1s^2 2s^2 2p^6 3s^2 3p^4 3d^5$
 $2f^{14}$: $1s^2 2s^2 2p^6 3s^2 3p^4 3d^{14}$

Anomalous electronic configurations

The electronic configurations for chromium ($_{24}\text{Cr}$) and copper ($_{29}\text{Cu}$) are anomalous.

Expected configuration: $_{24}\text{Cr}$ [Ar] $4s^1 3d^5$
 Actual configuration: $_{24}\text{Cr}$ [Ar] $4s^1 3d^5$
 Expected configuration: $_{29}\text{Cu}$ [Ar] $4s^2 3d^9$
 Actual configuration: $_{29}\text{Cu}$ [Ar] $4s^1 3d^{10}$
 Electronic Configuration of Cr: [Ar] $4s^1 3d^5$ not [Ar] $4s^2 3d^4$
 Electronic Configuration of Cu: [Ar] $4s^1 3d^{10}$ not [Ar] $4s^2 3d^9$

Trends in 1st Ionisation Energy

5 main points:
 • In general, 1st ionisation energy increases across the period.
 • 1st ionisation energy decreases down the group.
 • 1st ionisation energy increases across the period between groups 1 and 2.
 • 1st ionisation energy decreases across the period between groups 5 and 6.
 • 1st ionisation energy increases across the period between groups 7 and 8.

SUMMARY 15: Alkanes and Alkenes

Alkanes: $\text{C}_n\text{H}_{2n+2}$
 Alkenes: C_nH_{2n}

SUMMARY 16: Hydroxyl Compounds

Phenol
 (no need to draw complex)
 Note: Phenol does not react with carbonic acid to form phenolate ester. Phenol is a weak nucleophile as the lone pair of electrons on O is delocalised into the benzene ring, making it less available for donation. NaOH is added to convert phenol to phenolate ion which is a stronger nucleophile.

Phenol reactions:
 • H_2 gas evolved if reacted with Na or NaOH (aq) add base.
 • NaOH (do form phenolate ion) followed by PCl_5 (not PCl_3)
 • Br_2 (aq), room temp.
 • Br_2 (aq), room temp.
 • Br_2 (aq), room temp.
 • Br_2 (aq), room temp.

Mind Maps

Mind maps are used to summarise key points, which provide a visual stimulus for quick referencing and more effective revision.

CHEMISTRY

Year 2012 to 2017

- Full answers to Paper 1 and Paper 2
- Complete answers supported by diagrams and graphs

EILEEN TAN
B.Sc (LIFE SCIENCES)

Ten-Year Series Answer Book

ISBN: 9789811171871

Practising using real A-Level questions also familiarises students with the way these papers are set. While this year's paper will no doubt be different from that of last year's, it does not hurt to see and feel the general standard of the A-Level paper.

This Answer Book is designed to show students effective answering techniques so they can use them to their benefit when they take their A-Level Chemistry examination.

Comprehensive Answers

Answers are supported by diagrams and graphs so that students can do self-revision.



2015

2. (a) The oxidisities of halogens decrease from Cl to I, from Cl to I electron shell size as the M_r of the molecule increases. Hence, it is more difficult and therefore displaces an even weaker oxidising agent. It is more difficult to overcome the strongest temporary dipole-dipole interaction (molecule with the least energy is required to sever interactions between Cl₂ molecules). Hence, an increasing amount of energy is required to overcome the strongest temporary dipole-dipole interaction between Cl₂ molecules. Hence, an increasing amount of energy is required to overcome the strongest temporary dipole-dipole interaction between Cl₂ molecules.

(b) $Cl_2(g) + 2NaOH(aq) \rightarrow NaCl(aq) + NaClO(aq) + H_2O(l)$
The oxidation state of Cl changes from 0 in Cl₂ to -1 in Cl⁻ and +1 in ClO⁻.

(c) (i)

Substance	Electron energy to break bond / kJ mol ⁻¹
H-F	442
H-Cl	431
H-Br	366
H-I	299

The bond energy of the H-X bond decreases from H-F to H-I. Hence, it is easier to break the H-X bond in HI than in HF. Hence, HI is a stronger acid than HF. HI cannot undergo complete ionisation. Hence, acid strength increases from HF to HI, with HI being the strongest acid.

(ii) pH of HI = -lg(0.500) = 0.301

For HF:
 $[H^+] = \sqrt{K_a \times C} = \sqrt{6.3 \times 10^{-4} \times 0.500} = 0.0177 \text{ mol dm}^{-3}$
 $pH = -\lg(0.0177) = 1.751$

(d) For the reaction between AgNO₃(aq) with Cl⁻ ions, a white precipitate is formed:
 $Ag^+(aq) + Cl^-(aq) \rightarrow AgCl(s)$... (1)
When NH₃(aq) is added in excess, the formation of complex ion of Ag⁺(aq) is favoured, causing the equilibrium position of (1) to displace and no precipitate is left when toxic products, Ag⁺(aq) and Cl⁻(aq) are present.
 $AgCl(s) + 2NH_3(aq) \rightarrow [Ag(NH_3)_2]^+(aq) + Cl^-(aq)$... (2)
For the reaction between AgNO₃(aq) and I⁻ ions, a yellow precipitate is formed:
 $Ag^+(aq) + I^-(aq) \rightarrow AgI(s)$... (3)
When NH₃(aq) is added in excess, the yellow precipitate does not dissolve. This is because AgI has a much smaller K_{sp} than AgCl. Hence, AgI is more stable than AgCl.
(e) (i) $pH = -\lg(0.001) = 3.00$
(ii) $[OH^-] = \frac{K_w}{[H^+]} = \frac{1.0 \times 10^{-14}}{0.001} = 1.0 \times 10^{-11} \text{ mol dm}^{-3}$
(iii) $pOH = -\lg(1.0 \times 10^{-11}) = 11.00$

2016

More energy is required to overcome the stronger hydrogen bonds in methanol molecules than the weaker temporary dipole-induced dipole interactions in ethane molecules. Hence, methanol has a higher boiling point than ethane.

(b) (i) A lot of energy is required to break the C-C and C-H bonds present in ethane. Hence, ethane has a high bond energy.

(ii) The non-polar C-C and C-H bonds cause ethane to be relatively inert towards electrophiles or nucleophiles.

(iii) Conditions: C₂H₆ burnt in excess O₂
Type of reaction: Combustion
Equation: $C_2H_6 + 3.5O_2 \rightarrow 2CO_2 + 3H_2O$
Conditions: Limited O₂; 500 °C light
Type of reaction: Free radical substitution
Equation: $CH_3CH_3 + Cl_2 \rightarrow CH_3CH_2Cl + HCl$

(c) (i) $E^{\ominus}_{red} = +1.23$; $E^{\ominus}_{ox} = -1.50V$

(ii) $E^{\ominus}_{cell} = E^{\ominus}_{red} - E^{\ominus}_{ox} = +1.23 - (-1.50) = +2.73V$

(iii) $E^{\ominus}_{cell} = E^{\ominus}_{red} - E^{\ominus}_{ox} = +1.23 - (-1.50) = +2.73V$

(d) (i) In the cell, Cu and Zn electrodes are immersed in their respective solutions. The cell is connected to an external circuit. The cell is a Daniell cell. The cell reaction is:
 $Zn(s) + Cu^{2+}(aq) \rightarrow Zn^{2+}(aq) + Cu(s)$
The cell potential is $E^{\ominus}_{cell} = +1.10V$. The cell potential is $E^{\ominus}_{cell} = +1.10V$. The cell potential is $E^{\ominus}_{cell} = +1.10V$.

(ii) $E^{\ominus}_{cell} = E^{\ominus}_{red} - E^{\ominus}_{ox} = +1.23 - (-1.50) = +2.73V$

(iii) $E^{\ominus}_{cell} = E^{\ominus}_{red} - E^{\ominus}_{ox} = +1.23 - (-1.50) = +2.73V$

(iv) $E^{\ominus}_{cell} = E^{\ominus}_{red} - E^{\ominus}_{ox} = +1.23 - (-1.50) = +2.73V$

(v) $E^{\ominus}_{cell} = E^{\ominus}_{red} - E^{\ominus}_{ox} = +1.23 - (-1.50) = +2.73V$

2012

Phenobarbital: C1=CC=C(C=C1)C(=O)Nc2cccnc2
Phenybutazone: C1=CC=C(C=C1)C(=O)Nc2cccnc2
Phenobarbital: C1=CC=C(C=C1)C(=O)Nc2cccnc2

(a) (i) $AgNO_3(aq) + Mg(s) \rightarrow 2Ag(s) + Mg^{2+}(aq)$
Down Group 2, the thermal stability of the Group 2 oxides will increase. Down the group, the lattice enthalpy will increase in size due to weaker ionic attraction and this will decrease the charge density and subsequently the polarising power of the cations. Hence, the lattice enthalpy will decrease as the ionic radius increases. Hence, more energy is needed to break the bond which leads to the decomposition of the oxides, which means that a higher temperature is needed and hence, it is more stable.

(ii) (i) $AgNO_3(aq) + Mg(s) \rightarrow 2Ag(s) + Mg^{2+}(aq)$
Step 1: homolytic fission of N_2O_5 that leads to the production of the radicals
Step 2: NO_2 radical attacks the benzene ring of phenobarbital to form a radical intermediate.
Step 3: The radical intermediate reacts with O_2 to form a peroxide intermediate.
Step 4: The peroxide intermediate reacts with H_2O to form the final product.

(iii) (i) The electron product is HNO_2 . The substance HNO_2 will be the one that will react with the H^+ and this will form the carbocation intermediate.

SPOT EXCEL PUBLISHERS

A-Level H2 CHEMISTRY Practical Guide

Eric Kua

- Comprehensive content notes on experimental and planning techniques
- Complete summary of organic qualitative analysis and distinguishing tests
- Includes large variety of possible questions
- Thorough description of possible experimental procedures

Practical Guide

ISBN: 9789811170980

Written according to the current A-Level syllabus, this book touches on the major chemistry topics including stoichiometry, kinetics, energetics, organic and inorganic synthesis, etc. Using as many question types as possible, these questions are meant to give students an insight to the variety and range of possible questions. Experimental procedures have also been written with great care and exposes students to as many different experimental approaches as possible. This will be a useful framework to scaffold students' learning for the planning component of chemistry practicals.

Comprehensive Questions

Questions cover a wide range of question types so that students are equipped to answer questions for any skills that may be thrown their way during examinations.



Titration

Question 1
Determination of concentration of unknown
Titration is a common experimental technique used to determine the concentration of an unknown solution. In a standard acid-base titration, if a solution of known concentration (a fixed volume of acid) is added to a solution of unknown concentration, until reaction is just complete. It is important that the volumes of solutions used are measured precisely apparatus such as pipettes and burettes.

In this experiment, you are required to carry out a titration and determine the exact concentration of the hydrochloric acid.

You are provided with:
FA 1 contains approximately 2.0 mol dm⁻³ hydrochloric acid
FA 2 contains 0.200 mol dm⁻³ aqueous sodium hydroxide, NaOH

Procedure

- Using a pipette, measure accurately 25.0 cm³ of FA 1 into a clean and dry 250 cm³ standard flask. Tap the bottom of the standard flask a few times to ensure transferred into the standard flask.
- Top up to the mark on the standard flask with distilled water to add the last few drops carefully.
- Stopper the standard flask and invert it several times to ensure a homogeneous solution.
- Using a clean pipette, transfer 25.0 cm³ of the diluted standard flask. Add 2 drops of thymol blue indicator.
- Fill a burette with FA 2. Record the initial burette reading.
- Titrate the diluted FA 1 against FA 2 until the colour of the standard flask turns from yellow to green. You do this step carefully as the change could occur within the final burette reading.

(d) Repeat the titration until 2 consistent titres within 0.10 cm³ are obtained.

Final burette reading / cm ³	26.40	26.4
Initial burette reading / cm ³	0.00	0.00
Titre volume / cm ³		

(e) Using the results obtained from your titration, calculate the concentration of FA 1. Show clearly how you have obtained this result.

Calculations
Show your working clearly, leaving all your answers to appropriate significant figures or decimal places.

- Calculate the amount of NaOH present in the mean titre.
- Calculate the amount of HCl present in the standard flask.

Question 8
Determination of K_c value
Ethyl ethanoate can be prepared in the laboratory by a condensation reaction between ethanoic acid and ethanol. The equilibrium reaction is presented in the equation below.

$$CH_3CO_2H(l) + C_2H_5OH(l) \rightleftharpoons CH_3CO_2C_2H_5(l) + H_2O(l)$$

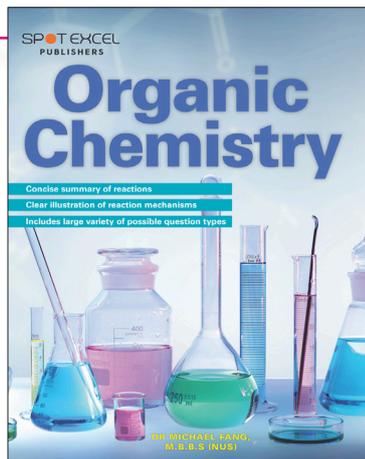
This reaction usually takes a long time for equilibrium to be reached. For equilibrium to be reached faster, an acid catalyst can be added. Most commonly, hydrochloric acid is used. A catalyst increases the rate of both the forward and backward reactions, allowing equilibrium to be reached in a much shorter time. However, using a catalyst does not affect K_c.

In this experiment, you are required to perform a titration of four pre-prepared samples that have been kept in a thermostatically controlled water bath at 30 °C for a week. You will then use your results to determine the equilibrium constant, K_c, for this reaction.

You are provided with:
FA 1 contains 0.100 mol dm⁻³ aqueous sodium hydroxide, NaOH (aq)
Thymol blue indicator

The four samples that have already been prepared beforehand contain varying volumes of each reagent. The make-up of these four samples are presented in the table below.

Sample	Volume / cm ³				
	HCl (1.0 mol dm ⁻³)	CH ₃ CO ₂ H	C ₂ H ₅ OH	CH ₃ CO ₂ C ₂ H ₅	H ₂ O
A	5.00	15.00	15.00	15.00	0.00
B	5.00	15.00	15.00	15.00	15.00
C	5.00	15.00	0.00	15.00	15.00
D	5.00	15.00	15.00	0.00	15.00



Organic Chemistry
ISBN: 9789811407987

Being a content heavy topic, studying organic chemistry becomes easier only when the content is concise and arranged neatly. This book gives a broad but in-depth overview of the important concepts, reactions and mechanisms that are crucial in mastering organic chemistry. Countless numbers of reactions have been organised neatly for easier studying. Questions have been crafted to expose students to as many question types as possible.

Cycloalkanes can also exhibit geometric isomerism.

Note
Cycloalkanes with more than 8 carbon atoms do not exhibit geometric isomerism. They only exist as cis isomers as the trans would result in severe angle strain.

Other geometric isomerism structures:

Chemical Properties

1. Acid reactions
Since hydroxy compounds are acidic, they exhibit acidic properties and are able to react with bases and metals like other acids.

Reagent: Na (s)
E.g. alcohol: $\text{CH}_3\text{CH}_2\text{OH} + \text{Na} \rightarrow \text{CH}_3\text{CH}_2\text{O}^- \text{Na}^+ + \frac{1}{2} \text{H}_2$
E.g. phenol: $\text{C}_6\text{H}_5\text{OH} + \text{Na} \rightarrow \text{C}_6\text{H}_5\text{O}^- \text{Na}^+ + \frac{1}{2} \text{H}_2$

Observations: slow effervescence of H_2 observed for alcohols / rapid effervescence observed for phenols

Reagent: NaOH (aq)
Alcohols however, are not strong enough acids to react with bases. They are only able to react with metals. Phenols, as stronger acids, are able to react with both metals and bases.
E.g. phenol: $\text{C}_6\text{H}_5\text{OH} + \text{NaOH} \rightarrow \text{C}_6\text{H}_5\text{O}^- \text{Na}^+ + \text{H}_2\text{O}$

Observations: cloudy mixture dissolves to form a colourless, homogenous solution

2. Reactions with hydroxy compounds

A. Elimination
• strong conc. H_2SO_4
• heat
• $\text{O}_2\text{Al}_2\text{O}_3$
• heat

B. Condensation / Nucleophilic Substitution (S_N2)
• conc. HCl
• heat
• $\text{O}_2\text{Al}_2\text{O}_3$
• heat
• Condensation reaction is reversible
• Phenols unable to undergo condensation as lone pair on O delocalises into benzene ring, lone pair is less available for nucleophilic attack.

C. Step down Oxidation (Sodium)
• Na (s), NaOH (aq)
• warmth
• yellow precipitate of CH_3 observed

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Concise Summaries

Key concepts, reactions and mechanisms are presented in neat and easy-to-read formats supported by illustrations.

1. Which of the following option best explains the difference in boiling points between the two compounds below?

compound A compound B

a) Compound A is spherical while compound B is linear.
b) Oxygen is more electronegative than nitrogen.
c) Compound A has 3 lone pairs of electrons while compound B has 4 lone pairs of electrons.
d) Hydrogen bonding is stronger than dipole-dipole interactions. ()

2. Which of the following compounds below, has the highest carbon to hydrogen ratio in its general formula?

a) haloalkanes
b) alkenes
c) alcohols
d) carboxylic acids ()

3. Leaf alcohol is a stereoisomer that is formed when insects such as caterpillars eat green leaves. The structure below is that of a leaf alcohol.

a) Draw the displayed formula of the other stereoisomer of the leaf alcohol.

b) The leaf alcohol reacts with HCl to form compound X.
i. Draw the structure of compound X.

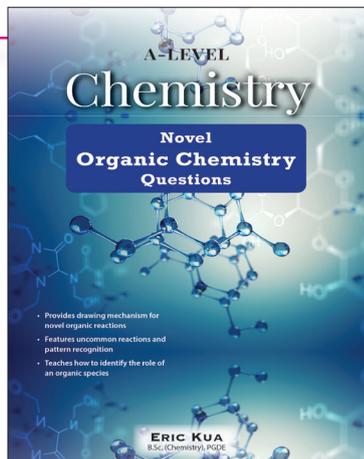
ii. Name the stereoisomerism exhibited by compound X and illustrate this form of isomerism using drawn structures.

c) Explain how stereoisomerism arises in
i. the leaf alcohol
ii. compound X

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Practice Questions

This book contains practice questions to test the students' knowledge. Answers are provided for self-evaluation.



Novel Organic Chemistry Questions

ISBN: 9789811410659

Novel Organic Chemistry Questions is written for H2 Chemistry students preparing for GCE A-Level examination. Its aim is to expose students who are competent in basic organic concepts to higher-order application questions.

The organic reactions featured in this guide are used to help students draw parallels and extrapolate from their existing knowledge. They are also expected to predict possible products from novel organic reactions.

In this guide, students will learn the following:

- Pattern recognition for novel organic reactions
- Novel mechanism drawing
- Synthesis based on novel reactions
- Broad classification of organic species
- Thought process in organic elucidation questions

CONTENTS	
Question 1	Aromatic Substitution
Question 2	Claisen Condensation
Question 3	Diels
Question 4	Structural Synthesis
Question 5	Functional Group Level
Question 6	DBAL
Question 7	Wittig Reaction
Question 8	1,2-methyl shift
Question 9	Carbene
Question 10	Gilman reagent
Question 11	Claisen Condensation
Question 12	Formose Reaction
Question 13	Robt-electrolysis
Question 14	Bayley-Villiger oxidation
Question 15	Oxidation reactions
Question 16	Bicyclic formation
Question 17	Decarboxylation
Question 18	Pinacol-pinacolone rearrangement
Question 19	Diels-Alder reaction
Question 20	Protecting group - Acetal
Question 21	Degree of Unsaturation
Question 22	Ozonolysis
Question 23	Acid catalyzed condensation
Question 24	Tiffeneau-Desmarest Rearrangement
Question 25	Resonance
Question 26	Cyclization
Question 27	Free Radical Substitution
Question 28	Homocyclic Formation
Question 29	Diastereotization
Question 30	Curtius rearrangement
Worked Solutions	

Questions

1. Fat yellow AB was a food dye that has been banned from usage as it has been shown to be harmful to human bodies. The structure of fat yellow AB is shown below.

(a) One of the precursor compounds used in the acid, produced from heating benzene with H_2SO_4 .

(b) In the first step of the mechanism, one mol of sulfuric acid and loses a molecule of water.

State the type of reaction between benzene and sulfuric acid. Show relevant lone pairs, curly arrows.

Questions

(i) What is the role of OH^- in step 1 of alkaline hydrolysis? [1]

(ii) What is the role of H^+ in acidic hydrolysis? [1]

(iii) What is the role of water in acidic hydrolysis? [1]

(iv) Give two advantages of alkaline hydrolysis. [2]

(v) Claisen condensation is a carbon-carbon bond forming reaction that can occur between two esters in the presence of a strong base, resulting in a β -keto ester. General equation is as shown below.

In the mixture of methyl ethanoate and ethyl methanoate, two different Claisen condensation products are formed.

Questions

The book contains 30 questions covering the full range of topics and question types for students to practice and apply concepts learnt.

Worked Solutions

Worked solutions include tips, explanations and common mistakes. Patterns in the novel reactions are also highlighted for clarity.

Worked Solutions

In the mixture of methyl ethanoate and ethyl methanoate, two different Claisen condensation products are formed.

Structure (D) is an isotope of hydrogen.

Pattern recognition

Predict the structures of β -keto esters formed when ethyl ethanoate is mixed with methyl propanoate under suitable reaction conditions.

Remove an $-\text{OR}$ group and a H atom from each ester.

It makes sense to be a structure.

Note: The esters can undergo self-condensation. So there are 4 possible products e.g. A, B, C, D.

Novel Organic Chemistry Questions

(b) Nitriles can also be reduced to give aldehyde by another reducing agent, di-isobutyl aluminium hydride, DBAL.

$\text{RCN} \rightarrow \text{RCHO}$

Novel Reducing Agent can reduce nitrile to aldehyde. You will need to use this reaction.

By considering the change in oxidation states of the reacting carbon, suggest why the conversion of $\text{R}_2\text{C}=\text{O}$ to RCH_2OH is a reduction reaction. The oxidation state of carbon changes from +2 to +1 in aldehyde. [1]

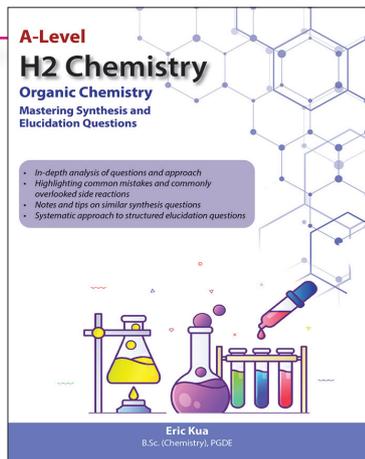
In organic molecules, you need to assign +1 and -1 charge based on electronegativity for every atom. If it is a double bond, assign +2 and -2. For C-H bond, it gets +1 and C gets -1.

Compound A can be synthesized in 4 steps from bromoethane as shown below, using DBAL as one of the steps.

Target molecule has 2 more C. It takes 2 step-up reactions.

Target molecule has COOH and OH on the same C, implies a carbonyl intermediate. Then use $\text{H}_2\text{NCH}_2\text{OH}$ to get the final molecule.

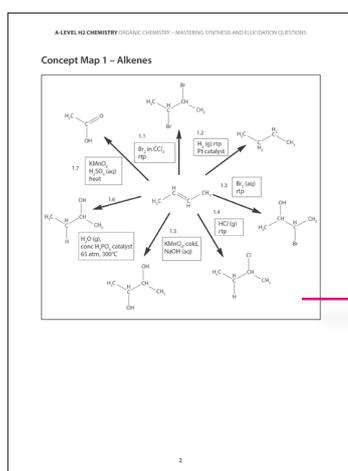
Suggest reagents and conditions for the 4 steps and draw the structures of all intermediates. [5]



H2 Organic Chemistry
Mastering Synthesis and
Elucidation Questions
 ISBN: 9789811497698

Written for students taking the GCE A-Level Higher 2 Chemistry examination, this guidebook covers two of the five major types of organic questions: Organic Synthesis and Structure Elucidation. Understanding the thought processes of how to approach synthesis and elucidation questions is the main goal of this book. Rather than just presenting answers matter-of-factly, there will be in-depth analysis coupled with highlighting of common mistakes made by students.

The questions are arranged in order of difficulty to help students gradually get comfortable with the analysis method. For synthesis questions, the number of steps required to achieve the target organic molecule are stated at the start of the questions to avoid ambiguity. Students should note that they need to select the shortest synthesis route whenever possible.

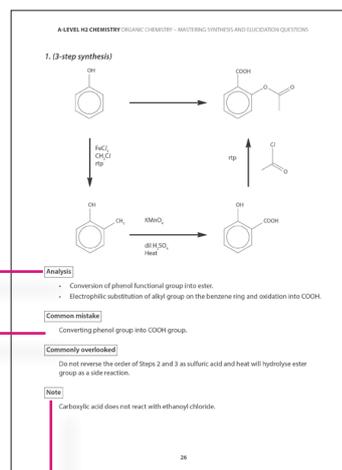


Concept Maps

Concept maps are provided for quick reference and revision.

Analysis

In-depth analysis of question and approach.

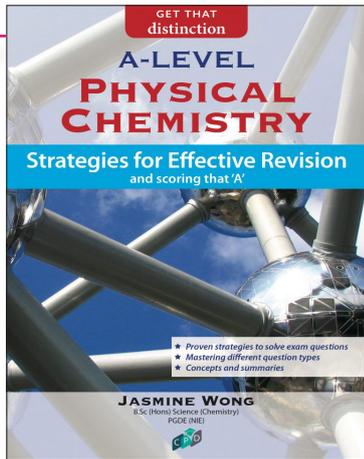


Common Mistake & Commonly Overlooked

Common mistakes and commonly overlooked side reactions are highlighted.

Note

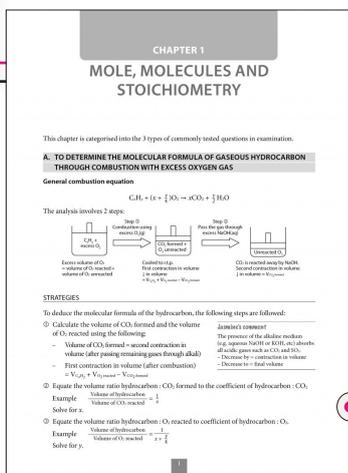
Notes and tips on similar synthesis questions.



Physical Chemistry
ISBN: 9789810977658

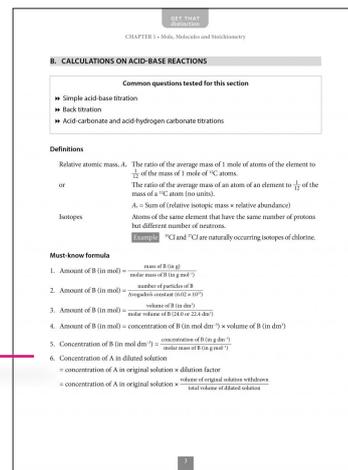
Exposure to different question types is a far more effective strategy for studying than merely practising as many question as there are available. This book illustrates and delivers the power of condensing the required questions and information for students and shows them the types of questions that are likely be tested in the A-Level Chemistry examination, and in doing so prepares their mindset for scoring well in their examinations.

This book is the students' recipe to scoring an 'A' in Chemistry, the secret of which lies in the organisation of relevant information from the Chemistry syllabus. In this way, the student masters Chemistry by breaking each topic into the different types of questions that he or she will possibly encounter in the examination.



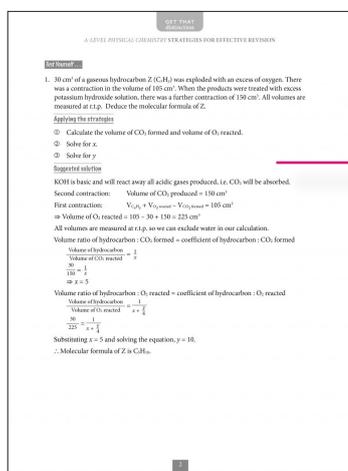
Easy-to-follow Strategies

Strategies are provided in a step-by-step manner.



Practices

Test Yourself sections allow students to check their understanding of strategies and concepts.

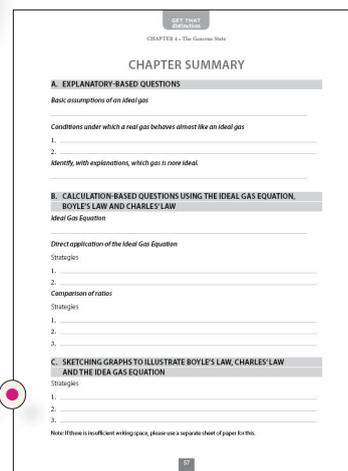
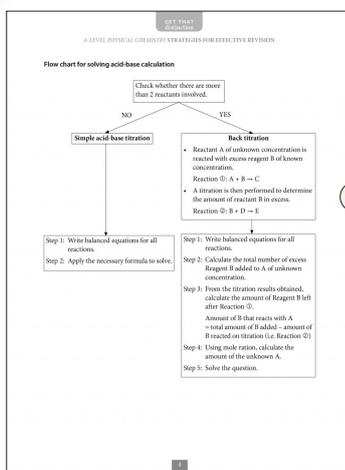


Definitions and Formulas

Important definitions and formulas are presented together to improve efficiency in learning.

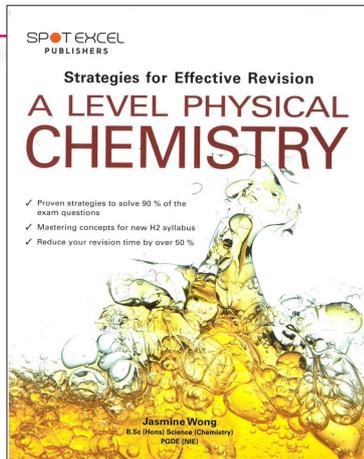
Flow Charts

Flow charts provided for easy revision.



Chapter Summaries

Summaries at the end of each chapter for students to consolidate their learning which makes for better revision and quicker referencing.



Physical Chemistry
ISBN: 9789811415234

The secret to scoring an 'A' in Chemistry lies in the organisation of relevant information. This book helps students to master Physical Chemistry by breaking each topic into the different types of examination questions.

It uses proven strategies that allow students to solve at least 90% of all Physical Chemistry questions in the examination. It is also about understanding failure, where strategies to understand and be aware of the mistakes made by students from the examiner's perspectives are included.

Chapter 1 Mole, Molecules and Stoichiometry

This chapter is categorised into the 3 types of commonly tested questions in examination.

1. Determine the Molecular Formula of Gaseous Hydrocarbon through Combustion with Excess Oxygen Gas

General combustion equation: $C_xH_y + O_2 \rightarrow xCO_2 + \frac{y}{2}H_2O$

The analysis involves 2 steps:

Step 1: Combustion using excess O_2 . CO_2 formed + O_2 unreacted.

Step 2: Pass the gas through excess $NaOH(aq)$. CO_2 is reacted away by $NaOH$. CO_2 formed + O_2 unreacted.

Excess volume of O_2 = volume of O_2 reacted + volume of O_2 unreacted

Contracted V.P. = contraction in the volume = $V_{CO_2} + V_{O_2, unreacted} - V_{O_2, excess}$

Contracted V.P. = contraction in the volume = V_{CO_2}

Strategies

To deduce the molecular formula of the hydrocarbon, follow these steps:

- Calculate the volume of CO_2 formed and the volume of O_2 reacted using the following:
 - Volume of CO_2 formed = contraction in volume (after passing remaining gases through alkali)
 - Total contraction in volume (after combustion) = $V_{CO_2} + V_{O_2, unreacted} - V_{O_2, excess}$
- Equate volume ratio of hydrocarbon : CO_2 formed to the coefficient of hydrocarbon : CO_2 .
Example: Volume of hydrocarbon = 1, Volume of CO_2 reacted = 1
Solve for x.
- Equate volume ratio of hydrocarbon : O_2 reacted to coefficient of hydrocarbon : O_2 .
Example: Volume of hydrocarbon = 1, Volume of O_2 reacted = 1.5
Solve for y.

Easy-to-follow Strategies

Strategies are provided in a step-by-step manner.

Test Yourself

28 cm³ of a gaseous hydrocarbon Z (C_xH_y) was exploded with an excess of oxygen. There was a contraction in the volume of 105 cm³. When the products were treated with excess potassium hydroxide solution, there was a further contraction of 150 cm³. All volumes are measured at r.t.p.

Deduce the molecular formula of Z.

Solving the strategy

- Calculate the volume of CO_2 formed and volume of O_2 reacted.
- Solve for x.
- Solve for y.

Suggested solution

28 cm³ of Z and an excess of O_2 were exploded. In CO_2 will be absorbed.

Second contraction: Volume of CO_2 produced = 150 cm³

First contraction: $V_{CO_2} + V_{O_2, unreacted} = 105$ cm³

→ Volume of O_2 reacted = 105 - 150 = -225 cm³

All volumes are measured at r.t.p. so we can equate ratios in mole calculation.

Volume ratio of hydrocarbon : CO_2 formed = coefficient of hydrocarbon : CO_2 formed

Example: Volume of hydrocarbon = 1, Volume of CO_2 reacted = 1

$$\frac{28}{105} = \frac{1}{1}$$

$$\rightarrow x = 1$$

Volume ratio hydrocarbon : O_2 reacted = coefficient of hydrocarbon : O_2 reacted

Example: Volume of hydrocarbon = 1, Volume of O_2 reacted = 1.5

$$\frac{28}{225} = \frac{1}{1.5}$$

$$\rightarrow y = 4$$

∴ Molecular formula of Z is C₁H₄.

Test Yourself

This book includes Test Yourself sections to ensure that students master each concept in every chapter. Suggested answers are provided as well.

Strategies for Effective Revision

B. Calculations on Acid-Base Reactions

Common questions tested for this section:

- Simple acid-base titration
- Back titration
- Acid-carbonate and Acid-hydrogen carbonate titrations

Definitions

Relative atomic mass, A_r: The ratio of the average mass of 1 mole of atoms of the element to $\frac{1}{12}$ of the mass of 1 mole of ¹²C atoms.

A_r: The ratio of the average mass of an atom of an element to $\frac{1}{12}$ of the mass of a ¹²C atom (no units).

A = Sum of relative isotopic mass × relative abundance

Isotopes: Atoms of the same element that have the same number of protons but different number of neutrons.

Example: ¹²C and ¹³C are naturally occurring isotopes of carbon.

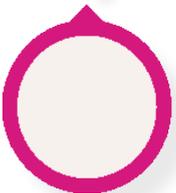
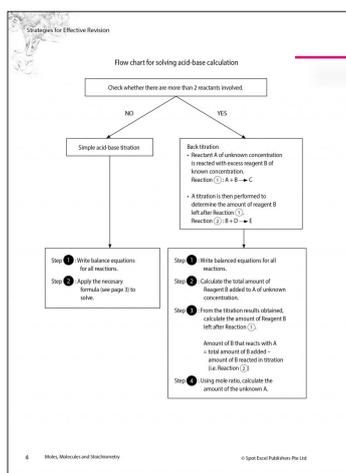
Must know formula

- Amount of B (in mol) = $\frac{\text{mass of solid B (in g)}}{\text{molar mass of B (in g mol}^{-1}\text{)}}$
- Amount of B (in mol) = $\frac{\text{number of particles in B}}{\text{Avogadro constant (6.02} \times 10^{23}\text{)}}$
Use as do not forget for step.
- Amount of B (in mol) = $\frac{\text{volume of gas B (in dm}^3\text{)}}{\text{molar mass of B (in g mol}^{-1}\text{)}}$
- Amount of B (in mol) = concentration of B (in mol dm⁻³) × volume of solution B (in dm³)
- Concentration of B (in mol dm⁻³) = $\frac{\text{concentration of B (in g dm}^{-3}\text{)}}{\text{molar mass of B (in g mol}^{-1}\text{)}}$
- Concentration of A in diluted solution = concentration of A in original solution × dilution factor
= concentration of A in original solution × $\frac{\text{volume of original solution (with solute)}}{\text{total volume of diluted solution}}$



Flow Charts

Flow charts provided for easy revision.



Must-know Formula

Important formulas are highlighted for easy reference.



Chapter Summaries

Each chapter ends with a chapter summary for the students to fill in. This acts to test the students' knowledge before they move on to new material.

CHAPTER SUMMARY

A. PREDICTING THE PRODUCTS FORMED AT THE RESPECTIVE ELECTRODES AND WRITING THE HALF-EQUATIONS

Strategies

- _____
- _____

B. CALCULATIONS ON QUANTITATIVE ELECTROLYSIS

Application of $Q = It$ and $Q = n_e \times F$

Must-know formula

Determination of the Oxidation Number of a metal, M

Must-know formula

C. INDUSTRIAL APPLICATIONS OF ELECTROLYTIC CELL

Strategies

- _____
- _____
- _____

Anodising of aluminium

Purification of copper

Electrolysis of brine

Electroplating

Note: If there is insufficient writing space, please use a separate sheet of paper for this.

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EXPLAIN THAT!



GCE A-LEVEL H2 CHEMISTRY

MUST-KNOW EXPLANATION QUESTIONS TO REINFORCE LEARNING
PRECISE ANSWER PHRASINGS THAT EXAMINERS GIVE MARKS FOR
INTEGRATE ANSWERING TECHNIQUES WITH CONTENT KNOWLEDGE

DR AKHILA JAYARAMAN PhD (NUS)

H2 Chemistry

ISBN: 9789814761994

Explain That! H2 Chemistry is a comprehensive guide designed to help students master the skill of answering qualitative questions. It comprises a well-curated selection of questions which covers a variety of key ideas and concepts. The questions have been summarised, distilled and refined from over hundreds of exam papers, spanning different schools, national and international examination papers.

This book trains students to construct their explanations using examiner-style phrasing, giving them greater confidence before and during examinations.

104 Explain why alkanes are unreactive.

Since C and H have similar electronegativities, the C-H bond is non-polar. Since alkanes do not have electron-rich or electron-deficient sites and are non-polar, they are unreactive to attack by nucleophiles or electrophiles. Also, C-C and C-H are strong covalent bonds that are difficult to break under normal conditions.

105 Explain why most free radical reactions are considered as chain reactions.

A free radical reacts in one or more chain propagation steps to form another free radical, which allows the reaction to continue.

106 Explain why the reaction of ethane with bromine is a free radical substitution.

Homolytic fission of the Br-Br bond produces free radicals. Since the Br· free radicals replace atoms in ethane, the reaction is a free radical substitution.

107 Explain why only a flash of ultraviolet light initiates the reaction of alkanes with halogens.

The chain reaction is self-sustaining as the free radical is regenerated in the propagation step. Only a flash of ultraviolet light is needed to produce some free radicals to initiate the reaction. Prolonged radiation would cause an explosion as too many reactive radicals are produced.

109 Calcium oxalate (CaC_2O_4) found in certain foods is often considered as the cause of kidney stones. Using relevant data from the data booklet, explain whether magnesium oxalate or calcium oxalate decomposes at a lower temperature.

The Mg^{2+} ion (0.065 nm) has a smaller ionic radius than the Ca^{2+} ion (0.099 nm). The Mg^{2+} ion has a higher charge density, and hence a greater polarisation power than the Ca^{2+} ion. Therefore, the Mg^{2+} ion polarises the electron cloud of the $\text{C}_2\text{O}_4^{2-}$ ion to a greater extent compared to the Ca^{2+} ion. The C-O bonds are weakened to a greater extent, i.e. magnesium oxalate is less thermally stable and decomposes at a lower temperature compared to calcium oxalate.

110 Explain why lithium carbonate decomposes but other group 1 carbonates do not decompose.

Lithium shares a diagonal relationship with magnesium. The charge density of the Li^+ ion is high enough to polarise the electron cloud of the CO_3^{2-} ion and weaken the C-O bonds.

For other group 1 carbonates, the cation has a lower charge density due to a larger ionic radius and is unable to distort the electron cloud of the CO_3^{2-} ion, hence decomposition does not occur.

Reference Answers

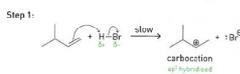
A collection of common must-know qualitative questions accompanied by concise reference answers with examiner-style phrasing.

Diagrams

Clear diagrams for better visualisation and understanding.

111 When 3-methylbut-1-ene undergoes an electrophilic addition reaction with HBr(g) at room temperature, the product formed does not show any optical activity. Explain why this is so using a mechanism.

The mechanism for the reaction is as follows:



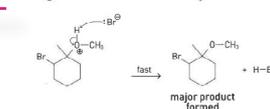
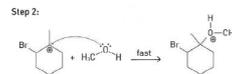
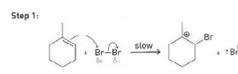
In the carbocation intermediate formed in step 1, the carbon atom is sp^2 hybridised and the geometry of the carbon atom is trigonal planar. In the fast step, the nucleophile attacks the carbocation from both above and below the plane with equal probability, giving rise to an equimolar (1 : 1) mixture of two enantiomers, i.e. a racemic mixture is obtained and no optical activity is observed.

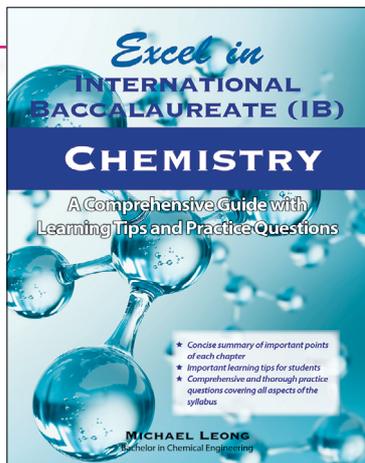
119 Predict the major product formed when compound A is reacted with a solution of bromine in methanol.



Using the curly arrow notation, show the mechanism for the reaction.

The mechanism for the reaction is as follows:





Excel in International Baccalaureate (IB) Chemistry
A Comprehensive Guide with Learning Tips and Practice Questions
 ISBN: 9789814996679

Excel in IB Chemistry is a revision guide and an assessment book that caters to the latest IB syllabus. All important points are short and concise to assist students to remember key points. The most important feature of this book is the "Learning Tips", where common mistakes and important notes are highlighted for students. This book contains 11 chapters of the core topics in IB, comprising SL and HL materials, which includes relevant and application-based IB Chemistry practice questions. This is definitely a useful volume to make up for the lack of practice questions from past-year IB Papers.

Learning Tip

- The first thing to do is to write out the balanced chemical equation to determine the mole ratio of the substances present. If the equation is not already given.
- If information regarding 2 or more reactants (mass, concentration, volume (HL)) are given in the question, it is mandatory to determine which is the limiting reactant.
- When the calculation involves gases only, at the same temperature and pressure, the volume ratio of the gases involved is the same as their mole ratio.

To Determine the Percentage by Mass of an Element in a Compound when not given the masses

Assuming presence of 1 mole of substance,

$$\% \text{ by Mass of X in Compound} = \frac{\text{Total no. of Element X in Compound} \times \text{Molar Mass of Element X}}{\text{Molar Mass of Compound}} \times 100$$

To Determine the Empirical Formula of an Unknown Compound

Element	Mass or % by mass — (1)
A of element — (2)	
% of moles — (3) = (2) / (1)	
Mole ratio (to be smallest)	

Learning Tip

Note that when the mole ratio contains decimals > 0.20 and < 0.80, students should round down or round up the values respectively. Instead, a common mistake is to allow the ratios to be closer to whole numbers should be determined.

To Determine the Limiting Reagent in a Given Question

Method 1 (applicable for MCQ questions, not for structured questions)

- Write out a balanced chemical equation of the reaction if it is not given.
- Then use the information provided by the question to calculate the respective moles of reactants.
- Divide the number of moles of reactants calculated above by the respective balanced chemical equation. The reactant that gives the smallest value reagent.

Learning Tip

To effectively understand and explain the various trends, and exceptions in ionization energies (I.E.) of selected elements, it is necessary to write out the electronic configuration of the elements involved, so as to compare the differences in energy level, sub-shell and/or orbital in which the electrons are removed. In this way, the correct explanation can be determined.

E.g. Who is asked to compare the first ionization energies of Be and Na, as both the elements are not in the same group nor the same period, students may not be able to apply the trends learnt directly. However, by writing out their electronic configuration:

Be: $1s^2 2s^2$ Na: $1s^2 2s^2 2p^6 3s^1$

It is observed that the electron removed in Na is in the third energy level while the electron removed in Be is in the second energy level, thus the electron to be removed in Na experiences higher shielding effect and hence lower effective nuclear charge. Hence Na has a lower first ionization energy than Be.

Practice Questions

Multiple Choice Questions (5L)

- What is the difference between the particles ^{24}X and ^{23}Y ?
 - X has more neutrons than Y.
 - X has more protons than Y.
 - X has more protons and electrons than Y.
 - X has more protons and electrons than Y.
- Which of the following shows the correct number of sub-atomic particles present in ^{10}B ?

Protons	Neutrons	Electrons
A. 5	4	5
B. 6	3	6
C. 5	5	5
D. 6	4	6
- Which of the following shows the correct number of sub-atomic particles present in $^{12}\text{C}^{2+}$?

Protons	Neutrons	Electrons
A. 24	29	24
B. 53	24	53
C. 24	29	21
D. 53	24	50

Learning Tips

Common mistakes and important tips are highlighted so that students will know what to take note of during revision.

Comprehensive Questions

Practice and structured questions included for ample revision.

Practice Questions

Multiple Choice Questions

- What is the total amount, in moles, of hydrogen atoms present in 0.5 moles of benzamide, $\text{C}_6\text{H}_7\text{ONH}_2$?
 - 1.5×10^2
 - 2.1×10^2
 - 25
 - 3.5
- Determine the number of moles of carbon atoms present in 0.5 moles of propyl benzoate, $\text{C}_9\text{H}_{10}\text{O}_2$.
 - 4.5
 - 5.0
 - 2.7×10^2
 - 3.0×10^2
- Determine the total number of ions present in 0.2 moles of NiCl_2 .
 - 1.2×10^2
 - 6.0×10^2
 - 6.2
 - 1.6
- 8.7 g of K_2SO_4 (M_r = 174) is dissolved in water to form a 250 cm³ solution. What is the concentration of the resulting solution in mol dm⁻³?
 - 0.05
 - 0.10
 - 0.20
 - 0.50
- Determine the mass of MgCl_2 (M_r = 95) required to prepare a 500 cm³ solution with concentration of 0.80 mol dm⁻³.
 - 39.2 g
 - 38.3 g
 - 46.9 g
 - 55.8 g
- What is the mass, in g, of CO_2 gas formed when 0.5 moles of NiCO_3 reacts with 0.8 moles of HNO_3 according to the following equation?

$$\text{NiCO}_3 + 2\text{HNO}_3 \rightarrow \text{Ni(NO}_3)_2 + \text{H}_2\text{O} + \text{CO}_2$$
 - 17.6
 - 22.0
 - 36.4
 - 35.2
- What is the volume of hydrogen gas, in cm³, formed when 1.2 g of magnesium metal reacts with 200 cm³ of 1.0 mol dm⁻³ HNO_3 at room temperature and pressure?

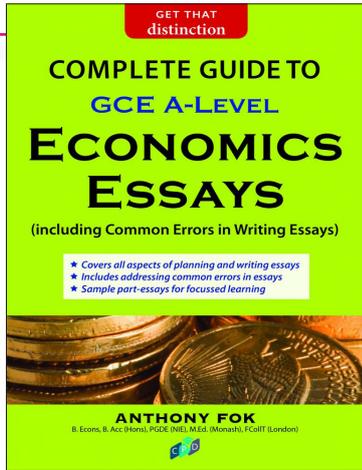
$$\text{Mg} + 2\text{HNO}_3(\text{aq}) \rightarrow \text{Mg(NO}_3)_2 + \text{H}_2$$
 - 1200
 - 1500
 - 1800
 - 2400

Structured Questions

- Y is an organic compound containing only C, H and O. When 0.084 g of sample of Y was subjected to complete combustion, 2.28 g of CO_2 and 0.87 g of H_2O were formed. What is the empirical formula of Y?
- The formula of a complex salt Q is $[\text{Cu}(\text{NH}_4)_2(\text{OH})_2(\text{SO}_4)]_x$ and further analysis produced the following composition by mass at 24.74% N, 4.1% C, 26.8% S. Calculate the value of x and hence determine the percentage by mass of S in the salt.
- A 6.50 dm³ sample of argon at a pressure of 400 kPa and 2.50 dm³ sample of neon at a pressure of 600 kPa are introduced into a 5.00 dm³ vessel under constant temperature. What is the final pressure in the vessel?
- A large portion of the copper produced in the world is obtained by the smelting of chalcopyrite, which is an iron-containing mineral with the molecular formula of CuFeS_2 . The smelting of chalcopyrite can be represented by the following equation:

$$2\text{CuFeS}_2(\text{s}) + \text{O}_2(\text{g}) \rightarrow \text{Cu}_2\text{S}(\text{s}) + \text{FeS}(\text{s}) + \text{SO}_2(\text{g})$$
 - Calculate the volume of sulphur dioxide gas, in dm³, released into the atmosphere at r.t.p. if 1 tonne of the rock sample is smelted. It is found that the rock contains 80.0% by mass of chalcopyrite. (1 tonne = 1000 kg)
 - Hence, determine the volume of air, in dm³, required to carry out this smelting process to completion, assuming the air contains 21% by volume of oxygen at r.t.p.

Essay Questions



Complete Guide to Economics Essays
ISBN: 9789811130830

This Complete Guide to Economics Essays book is specially written to cater to the needs of students sitting for the Higher 1 and Higher 2 GCE A-Level Economics examination. This book will teach students how to write a good introduction, the topic sentences in each paragraph, draw quality Economics diagrams and write evaluative comments in the conclusions. Numerous examples have been written to better help students grasp the skills required to score a distinction in Economics essay writing. A section on common errors in writing essays is also included to help students avoid such errors.

Sample Essay Questions & Answers

Teach students how to write good essay answers.

UNIT 2 - The Market

Sample Diagrams and Worded Explanations

Figure 2.1 Market for Cars

With reference to Figure 2.1, a decrease in income levels due to the recession will shift the demand (DD) curve for cars leftwards from DD₁ to DD₂. This is because cars are viewed as a normal good. At the original price level P₁, there is now a surplus. This exerts a downward pressure on the price, and hence price of cars falls. When a new equilibrium is reached at P₂, the equilibrium price has fallen from P₁ to P₂ and the equilibrium quantity has fallen from Q₁ to Q₂. Hence, there would be lower sales and a decrease in price of cars.

Figure 2.2 Oligopoly-Kinked Demand Curve

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Sample Diagrams & Worded Explanations

Diagrams with explanations are provided to guide students on how to draw quality diagrams and how to present them in answers.

UNIT 3 - Sample Essay Questions (By Topic)

For example, prices of input ingredients such as vegetables and meat, fluctuate frequently for hawker stalls. The MPC model suggests that when marginal cost changes, prices should change accordingly. However, hawker food prices have been fairly stable despite frequent fluctuations in cost of input ingredients. The food sellers prefer to absorb the costs, rather than raise the prices, and would only do otherwise if given no other choice. This rigidity in price is better explained using the Kinked Demand Curve Theory as explained for oligopolistic firms, which assumes hawkers do consider the possible reactions of nearby stalls when deciding whether to adjust their prices.

INTRODUCTION

In conclusion, the market structure models are, to a large extent, useful in explaining the different behaviours of F&B sellers in Singapore. However, due to real world conditions such as government intervention and other non-economic considerations, it is not possible to completely categorise any industry as belonging to a particular market structure. Due to the slight differences in their products and consumers' constantly changing tastes and preferences, every firm in the same industry will have different degrees of market power. As such, firms would seldom follow exactly their theoretical behaviours, should they be classified according to a market structure.

MARKET FAILURE

SAMPLES

Discuss whether it is possible to achieve efficiency in resource allocation in a free market without government intervention.

INTRODUCTION

The need to allocate resources arises from the problem of scarcity. A free market uses the price mechanism to allocate resources to their various uses (i.e. to decide what and how much to produce, how to produce) and as a rationing device (i.e. to decide for whom to produce). The price mechanism will only allow efficiency in resource allocation if the conditions of a perfect market are met, or other words, if there is no source of market failure. Otherwise, some form of government intervention is necessary to achieve efficiency in resource allocation.

CONCLUSION

Efficiency is meant by efficiency in resource allocation – allocative efficiency and productive efficiency of society itself.

Allocative efficiency is a situation in which the limited resources of a country are allocated in accordance with the wishes of consumers. This means that an "optimal mix" of goods and services is produced such that no reallocation of resources will be able to make someone better off without making someone else worse off. Using the marginalist principle, this

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UNIT 3 - Sample Essay Questions (By Topic)

Figure 2 Revenue and cost structure of a firm

In this imperfect knowledge environment, resources may be wasted on advertisements, which may in turn distort demand, with consumers purchasing goods and services that they may not necessarily require. Therefore, under imperfect markets, firms are able to distort prices, and if left entirely to the price mechanism, it may lead to a misallocation of resources.

Hence, the government will need to intervene in the form of competition laws, such as prohibiting agreements or practices that restrict free trade and competition between business entities, banning abusive behaviour by a firm dominating a market, or anti-competitive practices that tend to lead to such a dominant position. The government can supervise the mergers and acquisitions of large corporations, including some joint ventures. Alternatively, the government can force firms to adopt MC pricing or AC pricing, or to increase output levels closer to the allocatively efficient level. However, such laws are difficult to enforce and large funds are needed to employ adequate manpower to implement such regulations. If the government is suffering from a fiscal budget deficit, these policies may not be feasible.

CONCLUSION

In conclusion, the price mechanism can, to a large extent, help to allocate resources for most types of goods. However, in any economy it is common that there will be some markets in which allocative efficiency is not attained, such as in the above cases of public goods, goods that generate externalities and imperfect markets. In these markets, there is a need for government intervention to correct the market failures and address the limitations of the price mechanism in order to achieve a more efficient allocation of resources. In government failure may occur due to imperfectness and it is up to the market failures may not be completely eliminated. Nevertheless, it will still be achieved and a more efficient outcome will be attained.

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Errors & Corrections

Common errors are identified so students can avoid them.

COMPLETE GUIDE TO A-LEVEL ECONOMICS ESSAYS

ERR Create market power allows for a firm to enjoy supernormal profits in the long run as it can restrict its output and charge high prices for its goods and services.

CONCOR The presence of significant barriers to entry allows for a firm to reap supernormal profits in the long run as the entry of new firms into the industry is hindered, preventing the erosion of the existing firm's supernormal profits.

ERR Marginal cost pricing will result in subnormal profits.

CONCOR Losses will be incurred only in natural monopolies. However, in other monopolies, the average cost curve determines whether marginal cost pricing does indeed result in subnormal profits or not.

ERR A firm should shut down once it yields subnormal profits (when total cost exceeds total revenue).

CONCOR When a firm faces subnormal profits in the short run, its decision to shut down should be based on its ability to cover the total variable costs with its total revenue. (Note that this is the same regarding its ability to cover the average variable cost with its average revenue.) Should the firm earn revenue exceeding the total variable cost, it can be used to cover a portion of the total fixed cost.

CONCOR Nevertheless, a firm may decide to shut down if it continues to make subnormal profits in the long run. This is because in the long run, all production costs are variable. Hence, resources could instead be directed to other more profitable industries.

ERR All firms would always want to maximise the prices of their goods and services in order to maximise their profits.

CONCOR In some cases, a firm might want to lower their prices to undercut its competitors, its engagement in price wars could potentially help it gain a market share. Nonetheless, once a larger market share is gained in the future, the firm would likely raise prices to maximise its profits.

EXPLANATION Firms have many aims, although we often assume that they prioritise profits.

ERR The reduction of a inefficiency helps to lower only average costs, helping to improve profits.

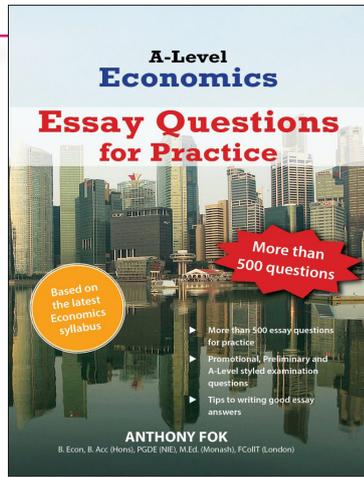
CONCOR The reduction of a inefficiency also helps to lower marginal costs apart from average costs.

ERR When a firm faces an increase in rent or other overheads, total cost, average cost and marginal cost increase.

CONCOR When a firm faces an increase in rent or other overheads, only total cost and average cost increase.

ERR Rent and other overheads are considered fixed costs. They do not increase as the firm increases its output level. Hence, there is no change in marginal cost as such fixed costs increase. Marginal cost only increases when variable costs increase such as in the case of increased factor prices and such.

14



Essay Questions for Practice
ISBN: 9789811191978

Economics essay writing requires a strong grasp of economic concepts and more practice in writing points in a clear manner so that students can get their points across to the marker.

This book aims to expose students to different types of questions in Economics essay writing.



Tips for Scoring

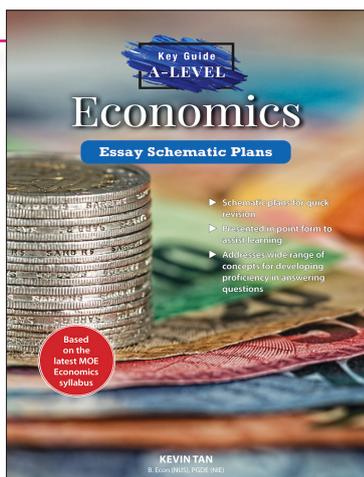
Summary tips on how to score in Economics for effective answering.

Summary Tips on How to Score in Economics

- Students must have knowledge of:
 - specialised economic terminology and expressions;
 - specific facts relating to economics and institutions;
 - ways of presenting economic information and data;
 - definitions of main concepts; formulae and economic theories.
- Students must be able to:
 - analyse and dissect the question correctly;
 - know the meaning of the cue words such as 'suggest', 'explain', 'discuss', etc.;
 - select and apply the economics theories to problems or context;
 - bring in evaluative element into essays by weighing the relative significance/importance of the factors, recognise alternative explanations or identify unstated assumptions, etc.;
 - write neatly, draw accurate and properly labelled diagrams, which should also be explained in words.
- A well-written economics essay shows:
 - excellent understanding of the requirements of the question;
 - rigour in economic analysis and development;
 - outstanding attempts at contextualisation with a variety of relevant examples.

Comprehensive Topics

More than 500 essay questions that cover all key Economics topics needed for the A-Level exams.



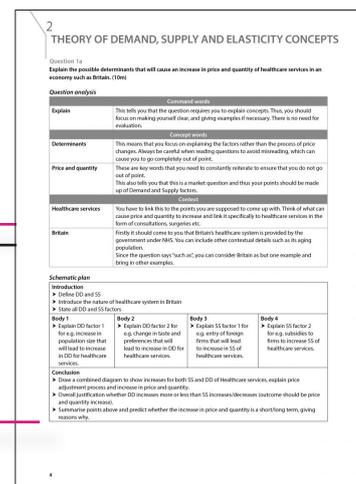
Essay Schematic Plans
ISBN: 9789811176197

This book is for students who need a quick revision for essay questions. Based on the latest MOE Economics syllabus, the schematic plans provide answers in point form and short sentences to assist in learning by focusing on main points and helping students in essay planning. A variety of question types address the wide range of concepts needed and answer requirements that questions may seek.

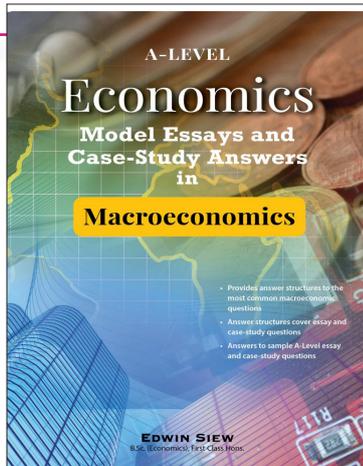
Ultimately, this book aims to help students prepare and develop the proficiency in tackling examination questions.

Question Analysis

Questions are broken down and analysed for students to learn how to tackle similar questions.



Case Study Questions



Model Essays and Case-Study Answers in Macroeconomics
ISBN: 9789811408427

This book seeks to impart exam skills and structures for answering essay and case study questions. From students' feedback, these exam skills and structures are most useful. The examples given are of questions commonly tested in the A-Level and prelim examinations. For essay questions, this book teaches students how to interpret questions and come up with a structure to score L3 marks, specifically, the thesis, anti-thesis and a solid evaluation with relevant examples. The book also addresses common answer structures to the high-level questions which make up most of the marks in both the 30-mark case studies (for H2 students) and 45-mark case studies (for H1 students).

Unit 3 - Macroeconomic Policies and Goals

Exclusion:

- Which policy works best in achieving low rate of inflation depends on the nature and state of the economy.
- If it's a small country like Singapore, better to use depreciating exchange rates to achieve low inflation. This is because Singapore depends a lot on the X - M component for growth compared to C & I. Singapore also does not control its interest rate due to the policy preference of giving up interest rates control over free capital mobility and exchange rates.
- If big country like China, India or US, better to use contractionary fiscal policy or monetary policy in the form of interest rates. Since they depend a lot more on C & I for growth.
- Overall, demand-side policies must be complemented by supply-side policies so as to ease the constraint on resources. Reduce demand-pull inflation by expanding the capacity of the economy. i.e. technological investments, skills re-training efforts must be done.

Question 4

Discuss the alternate policies which the Singapore government might use to achieve a healthy Balance of Payments (BOP) balance. (15)

Starter: The question above is essentially the same. The word 'alternate' can mean 'various'. Students have to think as to which the transmission mechanism and limitations of each of the four policies to achieve a healthy BOP balance. Then, evaluate which is the best policy for Singapore. Since the question specifically states Singapore, answers and examples must be specific to the country.

Body:

- Expansionary fiscal policy - Reduce taxes, increase government expenditure
 - Lowering corporate taxes would attract foreign MNCs to invest and set up base here. More foreign capital flow into Singapore and capital account increases. Low personal income taxes attract skilled expats to want to work in Singapore. Since they need to rent apartments for their stay here, this would fuel the demand for foreign investments into real estate in Singapore. As 1% of Singapore's corporate taxes is one of the most competitive in the world and it has successfully attracted foreign MNCs to set up bases here in the 1970s and 80s. Our personal income taxes are also very low as expats don't have to pay social security tax. The increased flow of expats renting apartments here have fuelled large investments by rich Chinese nationals into the private condominiums in Singapore for 2007 to 2012.

Sample Essay Questions

Sample essays are dissected for easier understanding and to improve writing skills.

Sample Case Studies

Multiple comprehensive case studies with suggested answers are provided for each topic.

A-LEVEL ECONOMICS MODEL ESSAYS AND CASE-STUDY ANSWERS IN MACROECONOMICS

Case Study 1
Economic growth in Singapore and other countries

Excerpt 1
Countries with high living standards

When the United Nations released the 2015 rankings of countries based on Human Development Index (HDI), Finland headed the rankings for the 12th below shows the top 15 countries in rank order. (Some countries are not in the list also show the latest World Bank GDP per capita figure for the same or figure for the Gini coefficient.

Rank order according to HDI index	GDP per capita (US\$)	Gini coefficient
1. Finland	61,473	0.267
2. Australia	45,414	0.304
3. Switzerland	60,514	0.287
4. Denmark	46,656	0.289
5. Netherlands	48,458	0.251
6. Germany	47,267	0.271
7. Iceland	54,623	0.340
8. United States (US)	53,836	0.431
9. Canada	44,310	0.320
10. New Zealand	36,981	0.362
11. Singapore	63,210	0.464
12. Hong Kong	56,270	0.538
13. Liechtenstein	89,400	0.361
14. Sweden	49,420	0.250
15. United Kingdom (UK)	41,226	0.325
World Average	15,467	0.394 (estimate)

Excerpt 2
Contrasting growth performance in New Zealand and Singapore

New Zealand's commodity-rich economy expanded at an annual rate of second quarter of 2016, its fastest rate since 2012. This caps a remarkable year of no recession for the country. Rising exports have more than offset its firm investments, particularly in the mining industry. In the second quarter there was also a pre-election increase in government spending. Nonetheless

Unit 3 - Macroeconomic Policies and Goals

Excerpt 3
Ensuring that growth is more inclusive

As Singapore positions herself for the next phase of economic development, policymakers must make sure that no one is left behind. Both living standards and the distribution of income have been put in place, such as encouraging workers to improve their skills throughout their careers. Older, lower-paid workers in particular, whilst not other things, the Singapore government needs to ensure financial sustainability.

Suggested answer

(a) (i) The Gini coefficient is used to measure inequality in a population. It is calculated by taking the difference in income between the top 10% and bottom 10% of a population. (ii) GDP per capita: \$55

Question 1(a)

- With reference to Table 1, (i) Explain how the Gini coefficient is calculated. (ii) Compare the two measures shown for A. Both living standards and the distribution of income have been put in place, such as encouraging workers to improve their skills throughout their careers. Older, lower-paid workers in particular, whilst not other things, the Singapore government needs to ensure financial sustainability.
- With reference to Excerpt 2 and using AD/AS, (i) Using exports to have more than offset weakly impacted the New Zealand economy in 2016. (ii) Describe the view that increased labour productivity and training is the best way to achieve faster growth for the Singapore dollar. (iii) Discuss the case for government policy to at least partially offset the adverse consequences of (i) and (ii).

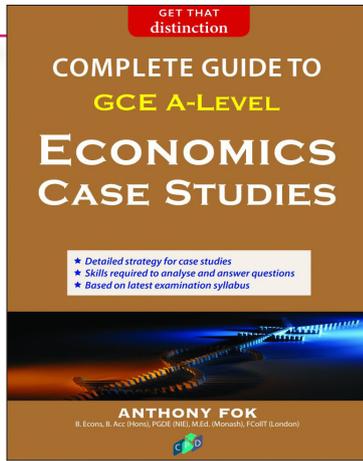
Excerpt 4
Increase in exports will offset weakness in firm investments in increasing economic growth and real GDP

Rise in exports from 'boomier export sector' complemented by a 'pre-election rise in government spending during the quarter'

- Interest rates cut going to increase household consumption further
- Long-run
 - Lack of firm investments into R&D will keep supply stagnant
 - AS remain stagnant → max economic capacity which New Zealand can reach
 - Resulting in demand-pull inflation
 - New Zealand Bank is to set full-employment levels as early as it has not had a recession in 25 years
 - Confirmed by statement that central bank will increase inflation from 0.24% per annum to a 'medium-term inflation target of 2.5% per annum'

(c) In New Zealand, firm investments 'weakness in investment, in particular in the mining industry' and household consumption levels 'consumer demand that grows relatively slowly, by only 1.3% during the past year' are very low.

Further reducing interest rates from a record low of 1.4% will help to kickstart increase in household consumption and firm investments.



Complete Guide to Case Studies
ISBN: 9789811133978

subject, the author has designed this book to be easy to follow and to facilitate understanding of the case studies.

A list of key words is also included to help students analyse questions in case studies.

In the case studies section of the GCE A-Level Economics examination today, the challenge is in how they demand a variety of skills from the students, and within a short period of time. Students need to process a whole mass of information from the case studies, read and comprehend the questions, and respond to them accurately and adequately. Students thus have to develop all these skills, and be comfortable with deploying them during a timed trial – the examination.

This guide is thus designed to help students develop the necessary skills and practise them. Knowing what to do is most important, so that students do not practise mindlessly, which may not only be unhelpful but counter-productive. Based on his many years of experience teaching students the

Tips & Examples

Help students understand what different types of questions are looking for, and guide them to answer questions more effectively.

Structure for Answers

Recommended structures are included for students to use as a template when answering questions.

Tip Start each separate point on a NEW paragraph. This will make it easier for the marker to identify your points. You are also helping yourself to make sure that you are not repeating your points.

For explanation questions that require you to draw a diagram, diagrams are usually awarded 2 marks. You should always state your points first before drawing a diagram. After drawing a diagram, you should ALWAYS explain your diagram because a diagram without an explanation will not be awarded any marks.

Structure for explanation questions + diagram

- Point 1 will be _____
My explanation for Point 1: _____
- Point 2 will be _____
My explanation for Point 2: _____
(Draw diagram here)

DIAGRAM

- My explanation for the diagram I have drawn: _____
- Evaluation points: _____ [only if the question demands it]

Tip Your first paragraph should follow the thesis/anti-thesis stated in the question.

UNIT 2
THE DIFFERENCE BETWEEN HIGHER-ORDER AND LOWER-ORDER THINKING SKILL SETS

2.1 RESPONDING TO KEY WORDS AND KEY CONCEPTS

Why are key words and key concepts important?

- Key words and concepts guide you in providing an accurate scope of your answer.
- Key words and concepts are often marking points (where you should not be losing marks).
- Key words and concepts allow a strong response to stand out from a weak one.
 - A weak response is one that fails to address key words and concepts, often lacking elaboration at the same time.
 - A strong response, on the other hand, answers the question with relevance, provides a good insight by considering multiple perspectives while simultaneously explaining in detail the various economic concepts.

Look at the question below as an example to elaborate further.

Question Explain the causes of market failure due to positive externalities.

<p>A weak response consists of:</p> <ul style="list-style-type: none"> Only an explanation on both positive and negative externalities. Merely describing what are positive externalities. Explaining how they have positive externalities lead to market failure. A lack of in-depth economic analysis. Failure to draw a diagram. 	<p>A strong response consists of:</p> <ul style="list-style-type: none"> A brief introduction on how the market can fail due to presence of positive and negative externalities and public goods. Pointing out that positive externalities is just one source of market failure. Providing unique examples of the goods that have positive externalities. A diagram drawn with detailed explanation on the diagram and how it leads to market failure.
---	---

From the above, we can clearly see the difference between the qualities of both the responses. This explains why the latter response will receive a higher mark than the former one.

Tip Key words and concepts in the question should always be addressed clearly in your response. Do not neglect them. It is also recommended that you plan your response according to the demand of the key words, highlight or box them up so that you will keep them in mind when writing out your response.

Tip 'State' means to just point out; there is no need for explanation. However, if the phrase 'Explain the relationship' is used, you will need to state the relationship as well as provide logical reasoning as to why the relationship occurred.

Tip of relationship

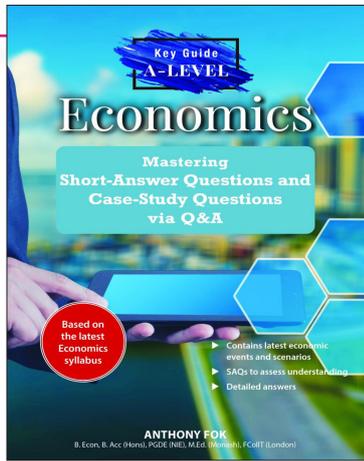
Direct: Meaning: When both trends increase/decrease
Inverse: Meaning: When one trend increases, the other decreases or vice versa

Checklists

Checklists are provided as reminders of key things to note when answering a question.

CHECKLIST

- Labeling of diagram
 - Price of _____ (must be filled up)
 - Quantity of _____ (must be filled up)
 - Both of PED/PES curves must be labelled, i.e. whether they are elastic/inelastic.
 - Draw arrows to indicate shifts in demand, supply curve, price, quantity
- Determine whether DEDS curve shifts first and using PED/PES to explain magnitude of price changes.
- Make sure you explain the diagram using words such as "more than proportionally" or "less than proportionally" when explaining PED/PES values.
- When the word "inverse" or "responsive" is mentioned, always ensure that you fully explain the effects on price and quantity.
- When the word "possible reason" is used, you are to use your own knowledge, apart from case study evidence to explain.



Mastering Short-Answer Questions and Case-Study Questions via Q&A
 ISBN: 9789811176210

Mastering Short-Answer Questions and Case-Study Questions aims to aid students in the application of content knowledge. The latest economic events and real-life scenarios used in this book help students better understand the key concepts in Economics. The Short-Answer Questions assess students' progress on their knowledge of the topics. Detailed answers with evaluation points and relevant examples help to facilitate students' learning in developing answering skills.

A-Level Economics: Mastering SAQ and Case-Study Questions via Q&A

5. How does the production possibility curve (PPC) illustrate concepts of scarcity, choice and opportunity cost? [1]

Suggested Answer

- Scarcity is illustrated by the unattainable points beyond the PPC.
- Choice is illustrated by the different points inside and on the PPC and movement along the PPC represents a change in choice.
- Opportunity cost is illustrated by the downward negative slope of the PPC.

6. Explain the concept of increasing opportunity cost. [3]

Suggested Answer

- The PPC is concave to the origin, implying that as more of a good is produced, larger and larger quantities of the alternative good must be sacrificed. There is increasing opportunity cost due to resources being imperfect substitutes for each other.
- As the economy concentrates on the production of one good, it has to start using resources that are less and less suitable – resources that would have been better at producing other goods.
- To produce an additional unit of a good would entail sacrifice of a greater amount of the alternative goods as increasingly greater amount of resources would have to be moved from the production of the alternative good.

7. Distinguish between free goods and economic goods. [2]

Suggested Answer

- Free goods are goods available in large amounts relative to popular demand, are not produced using scarce resources and consumption of such goods does not involve any opportunity cost while economic goods are goods limited in quantity relative to popular demand, are produced using scarce resources and consumption of such goods involves an opportunity cost.

8. Explain two ways in which an economy might move from a point within its production possibility curve (PPC) to a point on it. [2]

Suggested Answer

- A point within the PPC represents inefficient allocation of resources where there is unemployment or underemployment of resources.
- The government can adopt demand-side policies to increase aggregate demand which can induce producers to increase output by engaging more of the unemployed resources or to boost the productivity of existing employed resources.

Short-Answer Questions

Sample questions are shown together with suggested answers presented in point form for clearer understanding.



Case-Study Questions

Sample questions are presented with suggested answers and include relevant diagrams.



Section B: Case-Study Questions

QUESTION 2 Singapore and the Global Recession

Extract 1

Singapore adopted a managed float exchange rate policy, is allowed to fluctuate within an undervalued band, and a strong Monetary Authority of Singapore (MAS) steps in.

The SGD was at one of its weakest points during this response, the MAS adopted a series of expansionary policies at the very least, slow down the rate of depreciation.

In recent years, as the economy starts to recover a step hold on the exchange rate, allowing the SGD to resume a 2014, the SGD has strengthened considerably against the dollar.

Extract 2

In lieu of the worsening economic conditions, caused government monetary granted a 20% 2015, further enhance the cash flow and competitiveness of firms, not long-term qualitative.

The largest share of the package went to the stimulus bank loans were enhanced and a new risk-sharing instrument for investors to inject that capital inflow into the economy.

The most targeted component was the Job for Singapore employment rates, several employment schemes were the Skills Programme for Upgrading and Resilience (SPUR) (SPUR) aimed to assist workers to qualify for the economy underwent major reforms. The WLS, on the wages and retirement savings of older low-wage workers.

The enactment of the Resilience Package has also measures for the first time ever. This shows where the economic changes.

Extract 3

As a small, open economy, Singapore has always been in trade with Malaysia, Singapore's largest trading partner, only a mere 1.8% of its total trade. However, it is essential

A-Level Economics: Mastering SAQ and Case-Study Questions via Q&A

economy contracted globally following a plummeting external demand after the 2008 financial crisis. As external demand falls, firms scramble to cut losses, retrenching workers and reducing production processes. Some firms shut down altogether. Foreign investors withdraw funds, and local businesses entrepreneurs are hesitant to venture forth.

In the face of uncertainty, the Singapore government has to step up and face by such a small and open economy.

Most importantly, the government has to face the problems left by the only has to encourage trade, but also ensure that the exports are price-competitive to the global consumer. This has to be done in the face of a 2009 food prices at the end of January 2008 had risen by 55% globally and oil prices prices in general have risen by 27%.

When aggregate measures are taken to reduce the inflation rate, that be looking at a long and bumpy journey ahead towards recovery.

Questions

(a) Justify the Monetary Authority of Singapore's use of exchange rate (a) Discuss the effectiveness of the Singapore government's measures of the 2008 financial crisis. [10]

Suggested Answer

(a) The Monetary Authority of Singapore uses a floating exchange rate by strength of the Singapore Dollar (SGD) is allowed to fluctuate within of when the economy becomes too weak or too strong, the Monetary and steps in to regulate the strength of the SGD (Extract 1).

What the Singapore economy is doing well, MAS ensures a stable. This causes quantity of imports to increase. This includes less material and resource costs. Not only will this increase our purchasing power, goods which Singapore relies on other countries to order to operate, and resource costs. Not only will this increase our purchasing power, will allow producers to be able to increase their profit margins and keep push inflation low. Even though Singapore's exports are price elastic in of competitors such as Hong Kong (HK) and Taiwan which allows flexibility, fulfilled, and an appreciation in currency will cause a worsening trade of production will be able to find our own self-sufficient industries to grow that are far more price competitive, which makes up for the loss of cost of competing currency.

Another benefit of an appreciating currency is that it keeps demand

A-Level Economics: Mastering SAQ and Case-Study Questions via Q&A

Stimulation bank lending will not only increase the amount of entrepreneurship in the economy, but also increase the amount of investments in the economy. Stimulation bank lending allows greater risk bearing between private investors and the government, as an initiative to lower the economic uncertainty caused by the recession, which could be deterring potential investors from investing in Singapore. Since investment is a component of aggregate demand, an injection of investment expenditure will cause the aggregate demand of the economy to increase. Investments due to stimulation bank lending will also cause a capital inflow into the economy, which increases the productive capacity of the economy, and cause an increase in long-run aggregate supply of the economy.

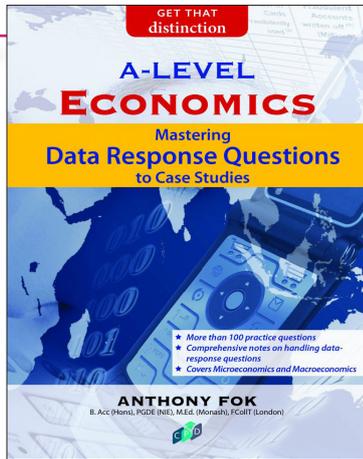
Another benefit of stimulation bank lending is that besides attracting foreign direct investments, lower risks created with our entrepreneurs as there will be greater support and development of Small-Medium Enterprises in Singapore. It will be made cheaper and easier to loan money and carry out transactions for these enterprises, making entrepreneurship more viable in the long run. With better use of existing resources, it will increase the productive capacity of the economy.

Schemes such as the Skills Programme for Upgrading and Resilience (SPUR) as well as the Workforce Income Supplement (WIS) aim to equip workers with new skills that will be more relevant to the economy, as well as enable them to take up high-wage jobs that offer higher pay. By upgrading the quality of the human capital in the economy, the productive capacity of the economy is expanded as more output can be produced given the same amount of input resources.

Here, aggregate demand will increase from AD₁ to AD₂, due to an increase in investment, while long-run aggregate supply will increase from LRAS₁ to LRAS₂, due to an increase in productive capacity due to investment and entrepreneurship in Figure 1.

Figure 1

From the diagram, when there is an increase in aggregate demand, there is an unplanned fall in inventories, hence production is increased. National income increases via the multiplier process which is built on the proposition that expenditure creates income, income creates expenditure. This causes actual growth from Y_1 to Y_2 , which pulls Singapore out of recession.



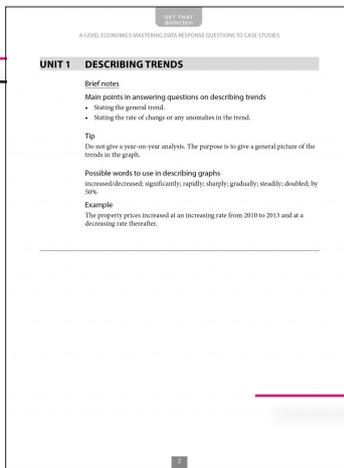
Mastering Data Response Questions to Case Studies
ISBN: 9789810936105

This guidebook in Economics Data Response Questions for Case Studies is written specially to prepare students in analysing and interpreting data in the form of tables, charts and graphs in the GCE A-Level Economics examination.

The case study paper in the Economics examination usually consists of tables, graphs and charts that students need to learn how to read, analyse and interpret. The questions and suggested solutions in this book are specially developed to help students improve their skills in tackling such data response questions, which is an essential case study component of the GCE A-Level Economics examination.

What's inside:

- More than 100 practice questions covering key Economics concepts in the A-Level Economics syllabus
- Answers to all practice questions
- Questions cover concepts in Microeconomics and Macroeconomics

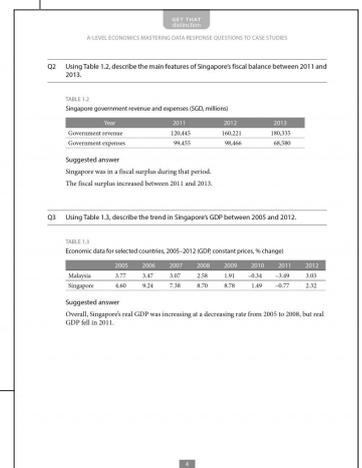
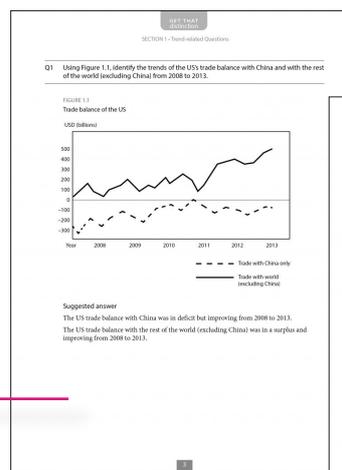


Brief Notes

Each chapter starts with brief notes to focus the students' attention on certain points when answering questions, creating a more efficient way of learning.

Suggested Answers

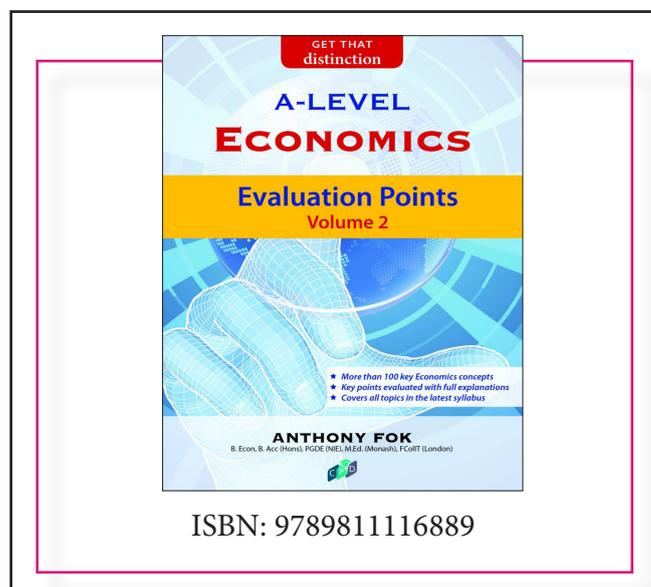
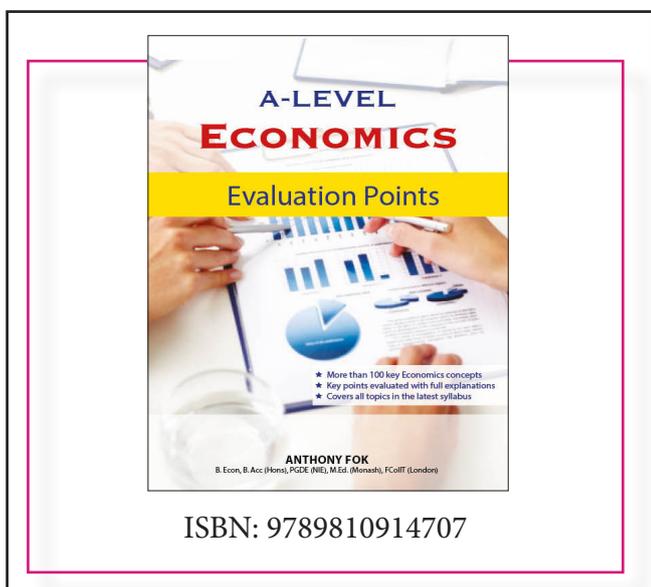
Suggested answers are provided along with the question so that students can refer to them easily when doing self-evaluation.



Evaluation Points

In recent GCE A-Level Economics examinations, there has been less emphasis on testing lower-order thinking skills of knowledge and comprehension. In order to do well in examinations now, students have to display higher-order thinking skills, such as application, analysis, synthesis and evaluation. Unknown to many, regurgitation of lecture notes will only hamper a student's ability to achieve high marks. If a student wants to score a distinction in the Economics examination, it is important to write evaluative comments in the essays. However, many students find it challenging to evaluate alternative theoretical explanations and perspectives of economic problems, issues and policy decisions.

The Evaluation Points series will help students generate possible evaluation points for the theoretical content that they have learnt in class, thereby helping them to achieve their desired distinction grade in the A-Level Economics examination.



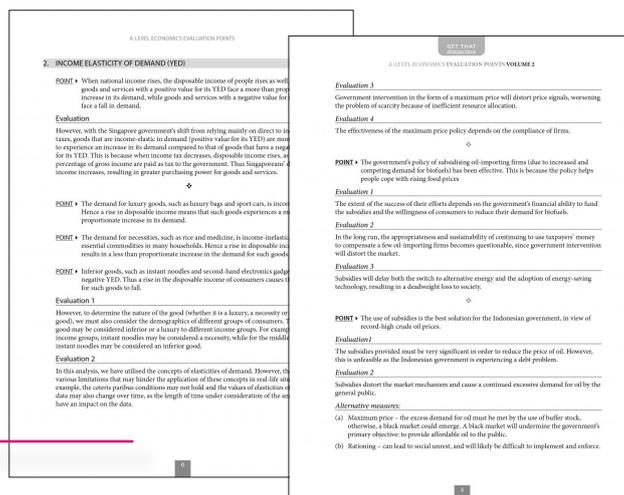
CONTENTS	
PART 1: MICROECONOMICS	
UNIT 1 DEMAND, SUPPLY AND ELASTICITIES	2
UNIT 2 MARKET STRUCTURE	14
UNIT 3 MARKET POLICIES IN THE SINGAPORE CONTEXT	25
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UNIT 4 MACROECONOMIC GOALS AND STANDARD OF LIVING	48
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Comprehensive Topics

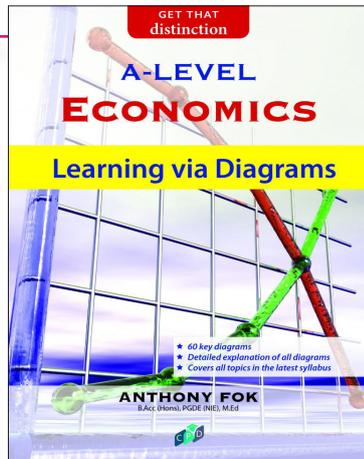
More than 100 key Economics concepts are covered, encompassing all topics required for the A-Level Economics examination.

Points and Evaluation

Points and their evaluations are presented in an easy-to-read manner for more effective studying.



Learning via Diagrams



ISBN: 9789810912109

Many candidates sitting for the GCE A-Level Economics examination find it challenging to reproduce the detailed diagrams required and apply them appropriately. It is essential that candidates are aware that no marks are awarded if key diagrams are simply drawn without explanations or the correct labelling. Marks are awarded for correct explanations of diagrams as well. Having well-drawn and labelled diagrams with their respective explanations enable students to get closer to getting a full mark for their answer.

In this guidebook, key diagrams in the A-Level Economics syllabus are collated together with the topics to which they belong. The diagrams are presented under their respective topics and explanations are clearly given for each diagram. The detailed explanations are included to help students link the topics to the diagrams for a more holistic understanding of each topic. Definitions for key terms are also provided to give a clearer understanding of their relationship with the diagrams.

Detailed Diagrams & Explanations

This book is used to illustrate important concepts. Explanations provided along with the diagrams are informative and help with revision.

UNIT 1 THE PRODUCTION POSSIBILITY CURVE (PPC)

DEFINITION The PPC or the production possibility frontier shows all the different maximum attainable combinations of goods and services that can be produced in an economy within a specified time period, with a given state of technology and a fixed amount of resources, and with all of its resources fully and efficiently employed, as shown in Figure 1.

Figure 1:

- Point A shows the maximum amount of consumer goods produced when all resources are used in the production of consumer goods. It is measured in the quantity of consumer goods figure.
- Point E shows the maximum amount of capital goods produced when all resources are used in the production of capital goods. It is measured in the quantity of consumer goods figure.
- Points B, C and D show different combinations of consumer goods produced when the economy's resources are allocated efficiently.
- Points on the PPC represent full employment of all available when the economy is producing at points that lie on the PPC, production efficiency.

UNIT 2 THE DEMAND CURVE

DEFINITION Demand refers to the different quantities of goods or services that consumers are willing and able to buy at each possible price during a given period of time, ceteris paribus.

Figure 2:

The Law of Demand states that there is an inverse relationship between the price of a good and the quantity demanded, ceteris paribus. The lower the price of a good, the greater the quantity demanded, ceteris paribus. Hence this gives rise to a negative slope of the demand curve. A downward-sloping demand curve represents a change in the quantity demanded in price.

In Figure 2, when the price of a good falls from P_1 to P_2 , the quantity demanded increases from Q_1 to Q_2 . This can be illustrated by a movement along the demand curve, from point A to point B. This is a downward movement along the demand curve. The reverse is also true.

UNIT 3 SUPPLY CURVES

DEFINITION Supply refers to the various quantities of a good a producer is willing and able to offer for sale over a given period of time, at various prices, in a given market, ceteris paribus.

The Supply Curve

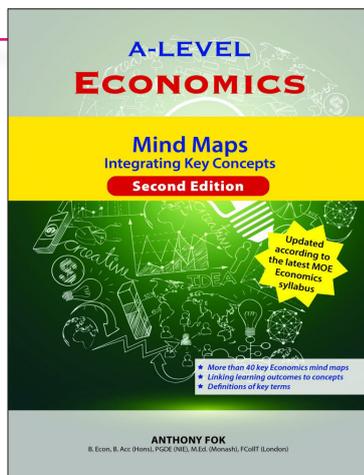
Figure 3:

The Law of Supply states that a direct relationship exists between the price of a good and the quantity supplied of a good, ceteris paribus. Therefore, the higher the price of the good, the greater the quantity supplied, and vice versa, ceteris paribus. An upward-sloping supply curve refers to a change in the quantity supplied, which occurs when there is a change in the price of the good.

In Figure 3, an increase in the quantity supplied involves an upward movement along the supply curve when the price of a good rises. Hence if there is a rise in the price of the good in question, from P_1 to P_2 , there will be an increase in the quantity supplied of the good, ceteris paribus. This is reflected in an upward movement along the supply curve, from point A to point B. The reverse is true as well.



Mind Maps



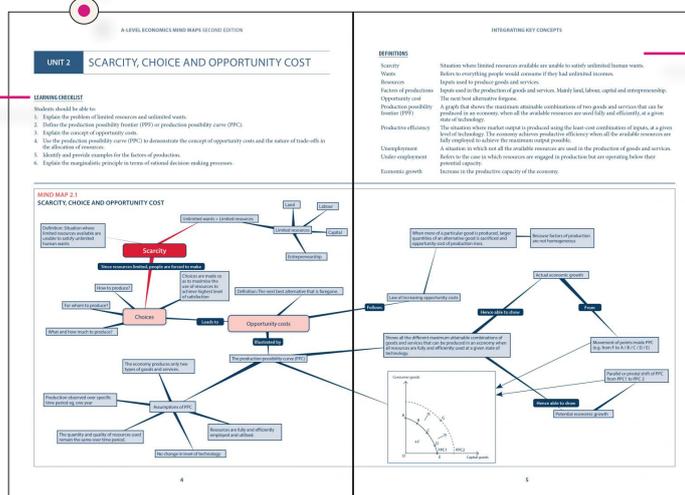
ISBN: 9789811192012

It is a known fact that working with mind maps helps learners understand concepts and organise their ideas better. Mind mapping also improves our retention rate and enhances thinking and learning skills.

Therefore, this book on GCE A-Level Economics Mind Maps has been specially written to help students quickly master the key points in Economics through the use of mind maps. This book also consists of a compilation of important definitions and learning objectives that will help students in their self-study and reference in their preparations for the A-Level Economics examination.

Informative Mind Maps

More than 40 mind maps covering 100 key concepts in the A-Level Economics syllabus.



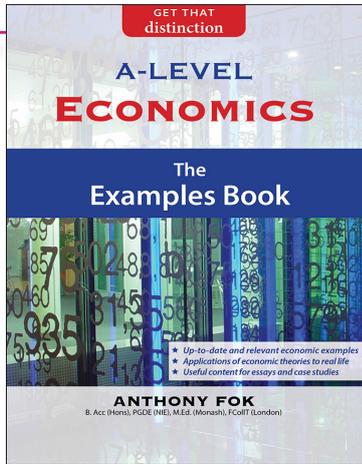
Learning Checklist

Checklist of learning outcomes to link content to concepts required for the examination.

Definitions

Definition list of key Economics terms for revision.

The Examples Book



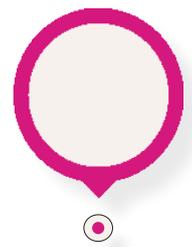
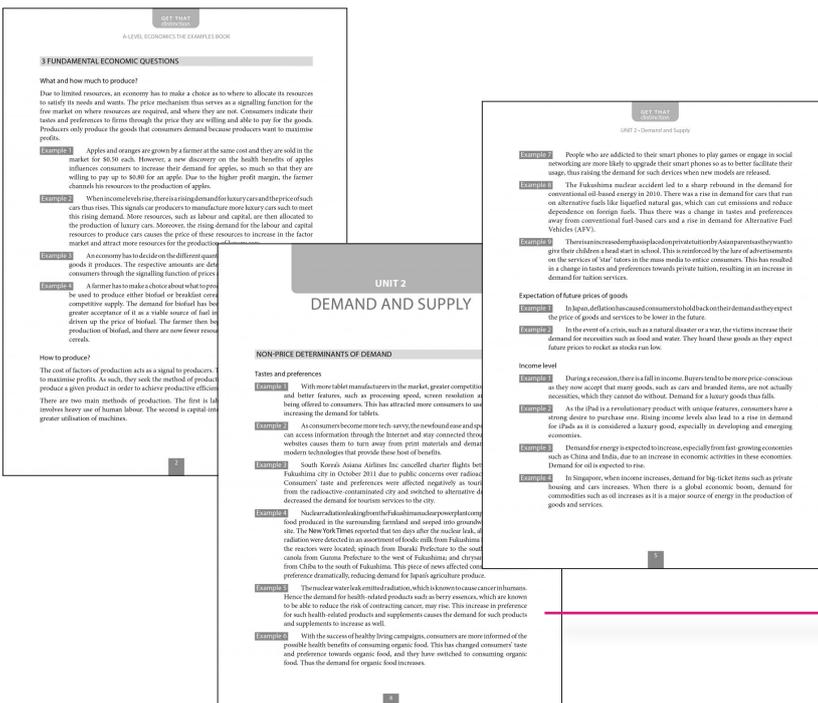
ISBN: 9789810990091

If there is one thing Economics students tend to lack, it is examples. Students spend their time memorising and digesting Economics concepts, which is a prerequisite for doing well. But to help answers shine, students need to use relevant examples. This is because every student will have the same access to the theories and concepts, but not everyone will spend the effort and time to accumulate examples and use them appropriately when crafting their answers.

The other reason why students should read examples is that they help them to understand abstract concepts better. When students struggle to comprehend how a particular theory works, an example will come in handy.

Lastly, examples also help students bridge the gap between concept and reality. When students appreciate how concepts work in the real world after they have read the examples, they become more adept at case studies and essays, where application is essential to doing well.

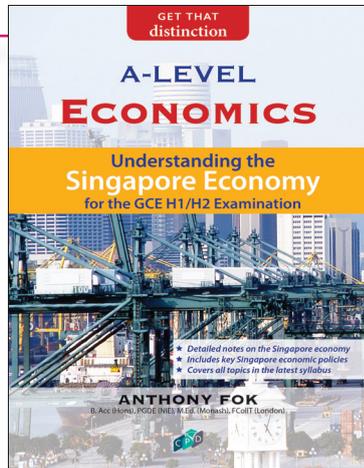
This book, which contains examples neatly categorised by topic and concept, serves as a good start for students to grow their own store of examples.



Comprehensive Examples

Examples are explained well and linked to concepts learnt for easier application in answers.

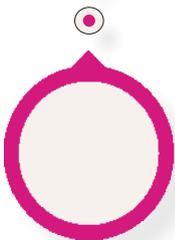
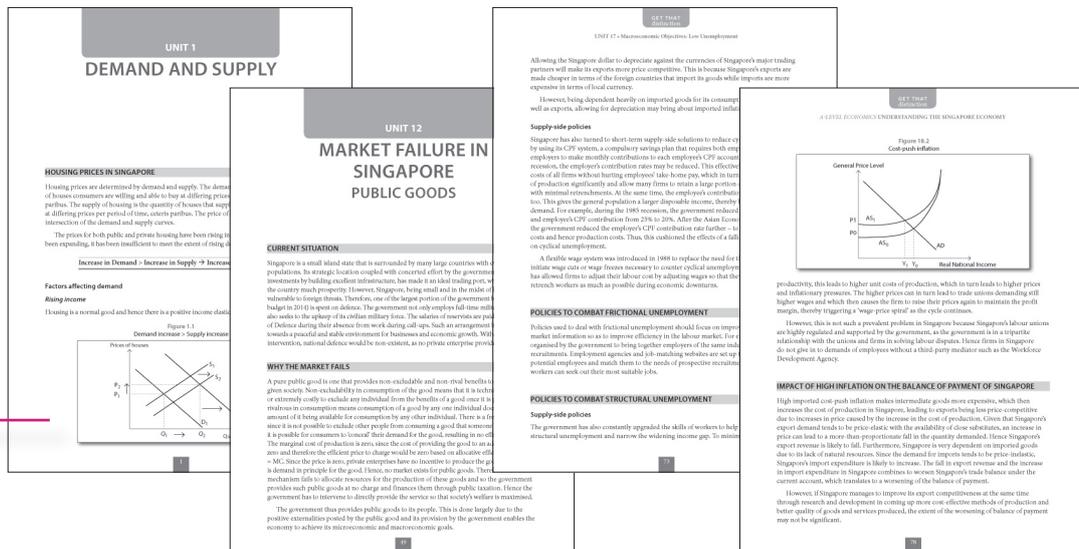
Understanding the Singapore Economy



ISBN: 9789810918941

Many candidates sitting for the GCE A-Level Economics examination find it difficult to apply Economics concepts and principles learnt in school at the national level, that is, applying them in the Singapore context. It is essential that students are able to contextualise their essays based on the requirements of each essay question.

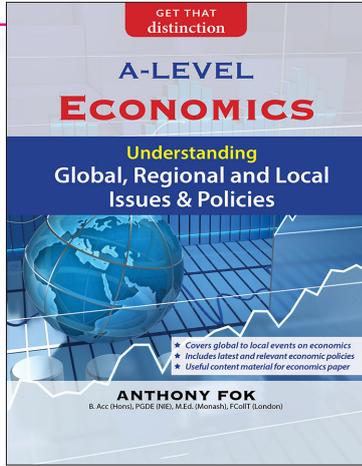
Therefore, this book of examples and policies in the context of the Singapore economy was compiled for students to cut short their learning curve and apply these examples directly into the examination questions.



Detailed Notes

Detailed notes on Singapore's economy with examples and diagrams to facilitate understanding and equip students with knowledge necessary to answer questions with more depth.

Understanding Global, Regional and Local Issues & Policies

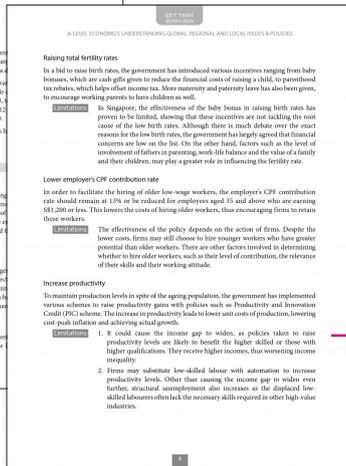
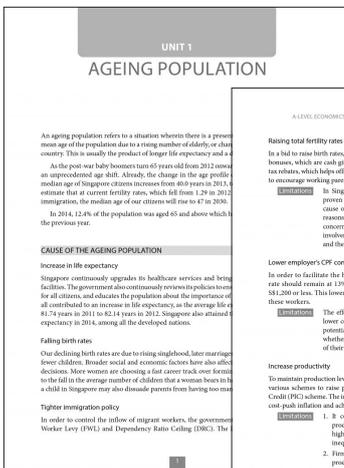


ISBN: 9789810990084

Economic issues and policies can be fascinating to study but trying to understand their complex natures can be difficult and daunting.

Many of the issues and policies discussed in this book – at the global, regional and local level – should not sound foreign to students, including issues like the haze problem in the region or the Fukushima nuclear disaster, presented from the perspective of Economics.

This book will help students become more attuned to how Economics plays out in the real world through pertinent issues and policies. This book also helps students understand global, regional and local issues and policies to better appreciate these economic concepts. These issues and policies are also likely to appear in case studies or even essays in Economics examinations and tests.



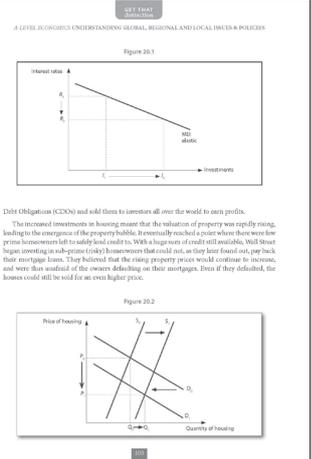
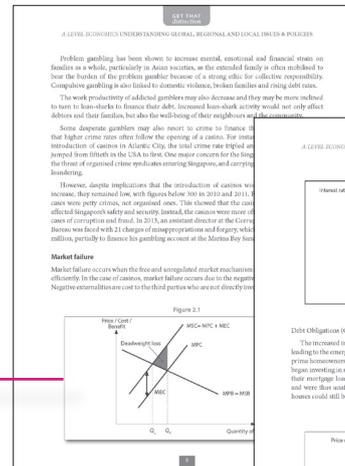
Diagrams

Relevant diagrams are provided when needed to enhance the answers to ensure better scores.

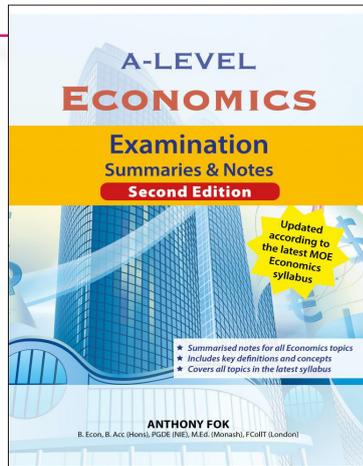


Comprehensive Content

Content is covered very thoroughly and is organised in such a way that it analyses the different content and prepares students for the evaluation section of the Economics exam.



Examination Summaries & Notes



ISBN: 9789811192005

This book serves as a quick guide for students to revise for their GCE A-Level Economics examinations. The notes are prepared in accordance with the latest syllabus and are designed to help students understand quickly what is required in the syllabus and learn how to apply them in the examination. Summarised notes of all key Economics topics in the latest syllabus for examination revision help students to revise systematically. Key definitions and concepts are highlighted for concise and quick revision. The notes are presented in point form for easy memorisation.

101 Scarcity, Opportunity Cost and PPC

How to produce? The decision on the method of production depends on the objectives of producers and resources available when choosing the most efficient method to utilise scarce resources, e.g. labour, intensive or capital intensive.

For whom to produce? The decision on the distribution of goods and services in order to avoid wastage is to produce for those who need the goods and services most.

Types of economy

Command All decisions are made by the government (e.g. North Korea).
Free market Consumers and producers are motivated by self-interests and profit maximisation \rightarrow equilibrium price and output are determined by price mechanism (e.g. United States).
Mixed A balance of free market forces and government intervention (e.g. Singapore).

OPPORTUNITY COST

Definition **Opportunity cost** is the cost of making a choice based on the next best forgone alternative.
The Law of Increasing Opportunity Cost states that as more an item is produced, more of another item has to be sacrificed production.

PRODUCTION POSSIBILITY CURVE (PPC)

Definition The **production possibility curve (PPC)** shows all the different maximum attainable combinations of goods or services that can be produced in an economy, when all the available resources are used fully and efficiently, at a given state of technology.

Assumptions

1. Economy only produces two goods or services.
2. Production is observed over a specific time period.
3. Quantity and quality of resources remain the same throughout the production period observed.
4. Level of technology remains the same throughout the production period observed.
5. Resources are fully employed and utilised.

A-Level Economics Examination Summaries & Notes

Graphical Illustrations
(Please refer to Figure 1 for this section.)

Scarcity It is any point outside the PPC (Point A).

Choice Choose points along the PPC (Point B and Point C).

What to produce? Allocative efficiency is achieved when the current combination of goods and services allows society's welfare to be maximised only one point on the PPC.

How to produce? Productive efficiency is achieved when firms in an economy producing a given output with the least cost combination of inputs. All points on the PPC are efficient but points inside the PPC are inefficient.

For whom to produce? Distributive efficiency is achieved when goods and services produced for those who need them but not others.

Opportunity cost Downward-sloping PPC
Concave vs. straight-line PPC
Straight line \rightarrow constant opportunity cost
Outward shift illustrates economic growth.

Shift in the PPC

1. There is increase in the quantity of resources.
2. There is improvement in the quality of resources.
3. There is improvement in the level of technology.

FIGURE 1
Outward shift of PPC Curve

A-Level Economics Examination Summaries & Notes

DEMAND

Definition **Demand** is the quantity that consumers are willing and able to purchase at different price levels during a given time period, ceteris paribus.
The Law of Demand states that an inverse relationship exists between the price of a good and the quantity demanded, ceteris paribus.

Factors

Expectation of future prices

1. Consumers expect prices to rise in the future, they increase demand now.
2. Consumers expect prices to fall in the future, they decrease demand now.

Government policy (tax/subsidies/campaigns)

1. Tax \rightarrow government discourages consumption of goods so as to decrease demand.
2. Subsidies \rightarrow government encourages consumption of goods so as to increase demand.
3. Campaigns

Income The higher the income level, the greater is the demand for normal goods.

Price of related goods (joint/complementary/substitutes)

1. Joint demand \rightarrow goods that are complementary (e.g. cars and petrol). \rightarrow increase in demand for cars leads to an increase in demand for petrol.
2. Competitive demand \rightarrow goods that are substitutes (e.g. Coca-Cola and Pepsi). \rightarrow increase in demand for Coca-Cola leads to a decrease in demand for Pepsi.
3. Derived demand refers to the demand of a good produced for an item (e.g. gold for production of jewellery leads to an increase in demand for gold).

These will change from time to time due to infomercials/campaigns.

Tastes and preferences

Population

1. Size \rightarrow increase in size of population increases consumers and demand increases.
2. Composition (e.g. Children/Elderly/Males) \rightarrow increase in composition of elderly in the population leads to an increase in demand for healthcare services.

102 Demand, Supply and Elasticity

Seasonal factors Based on weather, climate, season or festivals, e.g. Valentine's Day sees a greater demand for roses and chocolates.

SUPPLY

Definition **Supply** is the quantity that producers are willing and able to produce and sell at different price levels during a given time period, ceteris paribus.
The Law of Supply states that a direct relationship exists between the price of a good and the quantity supplied of that good, ceteris paribus.

Factors

Cost of production The greater the cost of production, the lower is the supply.

Government policy (tax/subsidies/regulations)

1. Tax (direct/indirect) increases the cost of production and decreases supply.
2. Subsidies decrease cost of production and increase supply.
3. Regulations

Expectation of future prices If producers expect prices to rise in the future, they decrease (hold back) supply now. If producers expect prices to fall in the future, they increase (release) supply now.

Technology Better technology enhances production and increases supply.

Price of related goods (joint/complementary/substitutes)

1. Joint supply, i.e. goods produced together (e.g. beef and leather) increase in the supply of beef leads to an increase in the supply of leather.
2. Competitive supply (i.e. goods produced at the expense of each other (e.g. food and beef)) increases the supply of food, leading to a decrease in the supply of beef.

Number of sellers The greater the number of sellers, the greater is the supply.

Wartime/natural disasters When there are wars or natural disasters in the producing country, the supply decreases.

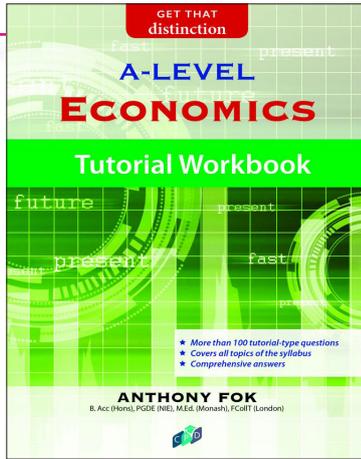
Seasonal goods Goods are only in supply when they are in season, especially for



Key Concepts and Definitions

Definitions and key concepts are highlighted so students can revise more efficiently.

Tutorial Workbook



ISBN: 9789810944940

This GCE A-Level Economics Tutorial Workbook is written specially to help students develop their understanding of Economics and to build up skills to enable them to assess their own progress. There are structured questions, multiple-choice questions and fill-in-the-blanks questions to help students track their understanding of the subject. Although such questions are not in the examination format of the GCE A-Level Economics paper, it is through such practices that students can gain better content mastery and ferret out existing gaps in their knowledge. Full solutions are provided to guide students so that they will have a better understanding of the underlying Economics theories and principles involved.

UNIT 1
SCARCITY, CHOICE AND OPPORTUNITY COST

- Define each of the following terms: (a) scarcity, (b) choice, and (c) opportunity cost.
 - _____
 - _____
 - _____
- Explain the concept of opportunity cost and scarcity using a Production Possibility Curve (PPC).
- State and describe the 4 main sources of potential economic growth.
 - _____
 - _____
 - _____
 - _____

GET THAT DISTINCTION

A LEVEL ECONOMY: THE TUTORIAL WORKBOOK

- Distinguish between productive efficiency and allocative efficiency.

- What is the opportunity cost of an increase in fixed capital formation in an economy producing at full employment level? Select from the 4 options (A, B, C or D) given.
 - The rise in capital consumption
 - The rise in interest rates
 - The rise in prices of goods and services
 - The fall in current consumption
- Which of the following are macroeconomic issues and which are microeconomic ones? Circle correct choice.

(a) The level of government expenditure	Microeconomic / Macroeconomic
(b) Subsidies for education	Microeconomic / Macroeconomic
(c) The level of Singapore exports	Microeconomic / Macroeconomic
(d) The price of inflation	Microeconomic / Macroeconomic
(e) The average wage rate paid to cleaners	Microeconomic / Macroeconomic
(f) Campaign to discourage gambling at world cup	Microeconomic / Macroeconomic
(g) The entrance levy for Singaporeans at casino	Microeconomic / Macroeconomic
- Which of the following are positive economics (P) and which are normative economics (N)? Write 'P' or 'N' in the blank.
 - If price of cars goes up, people will buy less.
 - The battery lifespan of ABC phones last longer than XYZ phones.
 - Singapore should have more subsidies to help the poor.
 - Schools ought to plan more supplementary lessons for students to improve their grades.
 - Mt. Everest is the tallest mountain on Earth.
 - Increased tax levies on cigarettes will discourage smoking.

UNIT 2
DEMAND, SUPPLY, ELASTICITY CONCEPTS

- State the definition of 'demand'.

- Distinguish between 'want' and 'demand'.

- 'Final demand' is the demand for goods by consumers while 'derived demand' is the demand that is dependent on the demand for another good. Fill in the table below with the corresponding derived demand to the final demand given.

Final demand	Derived demand
(a) Bread	_____
(b) Cars	_____
(c) Clothes	_____
(d) Crayons	_____
(e) Coal	_____
- State whether each of the following pairs of goods are complements or substitutes of each other.

Goods	Complements (C) / Substitutes (S)
(a) iPhone vs. charger	_____
(b) Nike shoes vs. Adidas shoes	_____
(c) Printer vs. ink cartridge	_____
(d) Car vs. petrol	_____
(e) Rice vs. noodles	_____

Tutorial Questions

Test students' understanding of different concepts covered in the syllabus.



Detailed Answers

Answers provided are detailed for self-checking.

ANSWERS

UNIT 1 SCARCITY, CHOICE AND OPPORTUNITY COST

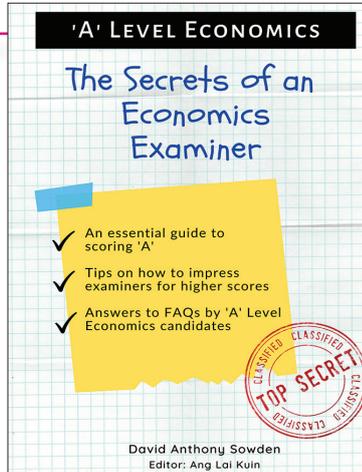
- (a) Scarcity: It is a situation where limited resources available are unable to satisfy unlimited human wants.
(b) Choice: A choice is a decision made to decide the allocation of scarce resources on what to buy and for whom to produce.
(c) Opportunity cost: It measures the cost of making a choice, in terms of the next best alternative foregone.
- There is scarcity as combinations outside the PPC cannot be attained, given present amount resources (for example, labour and the level of technology). The downward-sloping nature of PPC illustrates opportunity cost. Opportunity cost refers to the next best alternative foregone: more of Good X produced, more units of Good Y has to give up.
- (a) Labour: An increase in population results in a larger workforce. Greater participation in various and better jobs in the workforce also increases the size of the labour force.
(b) Land: The discovery of oil, natural gas and coal is an important factor of production to increase the output of an economy.
(c) Capital: Man-made tools that help increase production, such as factory line machines, reduce current output in order to increase future output for consumption.
(d) Entrepreneurship: This is the human resource that organises labour, land and capital to ensure economic efficiency.
- Productive efficiency is attained when firms produce the maximum output with the minimum amount of input.
Allocative efficiency is attained when the current combination of goods produced for consumption gives maximum satisfaction to consumers such that no one can be made better without someone being made worse off.
- Answer: D
Explanation: An increase in capital consumption results in an increase in investment, which then increases the demand for funds. For investment, producing 2% interest rate. This induces an increase in savings, which contributes to a fall in consumption.

GET THAT DISTINCTION

A LEVEL ECONOMY: THE TUTORIAL WORKBOOK

- (a) Microeconomic (P)
(b) Microeconomic (S)
(c) Microeconomic (P)
(d) Microeconomic (S)
(e) Microeconomic (S)
- (a) P
(b) N
(c) P
(d) P
(e) N
(f) P
- | Command economy | Market economy |
|---|---|
| <ul style="list-style-type: none"> Factors of production are owned by the government. The allocation of resources is decided by central allocation committee. Competition incentives economic efficiency. Price mechanism is used to allocate scarce resources. | <ul style="list-style-type: none"> Factors of production are owned privately. Individuals are given freedom of choice. Individual, firms and business owners act in self-interest. Competition incentives economic efficiency. Price mechanism is used to allocate scarce resources. |
- In a free-market economy, the pursuit of self-interest encourages maximising the use of limited resources. Producers aim to maximise profits while consumers aim to maximise satisfaction. This induces savings of resources. However, while a free market economy is efficient in the allocation of scarce resources, it fails due to the existence of market failures. Thus there is a need for some form of government intervention to regulate the market to produce public goods such as education.
- Answer: A
Explanation: Opportunity cost (defined as the next best alternative foregone) John feels that staying at home is the best choice and his choice that he has to forgo is the enjoyment he would have had from a vacation.

The Secrets of an Economics Examiner



ISBN: 9789811801518

This book was written by a former Cambridge (Singapore) examiner, Mr. David Anthony Sowden. He has taught Economics since 1975.

In this book, students will gain insights on marking, tips on answering A-Level Economics examination questions as well as answers to Frequently Asked Questions (FAQs) that Economics candidates are likely to ask. It includes sections that give advice on diagrams, the case-study paper and past examination questions. This book will help students find out how to impress examiners for higher scores in Economics.

Contents

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Insightful Tips

Understand the Economics examination from an examiner's point of view through various tips and advice.



Characteristics of Successful Students

To be honest, I was not entirely sure to include this section! However, if you are already fully aware of my recommendations, then at least you can be sure you are on the right track!

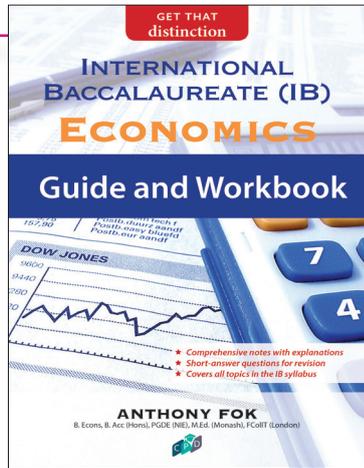
There are many such lists; should you encounter something similar that seems to be important, please feel free to add it to your own collection!

1. Be goal-driven
2. Be intellectually curious
3. Be self-motivated
4. Be creative and original
5. Develop effective communication skills
6. Think broadly; in other words, see the big, or bigger, picture
7. Develop your ability to perform under pressure
8. Develop competent writing, reading and analytical skills
9. Develop efficient time management
10. Be disciplined, responsible and self-reliant
11. Be optimistic
12. Avoid procrastination

Big Ideas in Economics

1. Choice
2. Comparative Advantage
3. Competition
4. Diminishing Returns
5. Division of Labour
6. Economies of Scale
7. Efficiency
8. Externalities
9. Incentives
10. Invisible Hand
11. Market Failure
12. Markets
13. Maximisation
14. Opportunity Cost
15. Optimisation
16. Price
17. Rationality
18. Rationing
19. Resources
20. Scarcity
21. Stocks and Flows
22. Utility
23. Value
24. Welfare

International Baccalaureate Guide and Workbook



ISBN: 9789811107139

Key features:

- Comprehensive notes with detailed explanations using diagrams.
- Short-answer questions to test students' understanding of key economic concepts, principles and theories.
- Full solutions provided for self-check and discussion with teacher.
- Covers all topics in the IB syllabus.

While the IB syllabus is not entirely different from the A-Level syllabus for Economics, the two are also not interchangeable. Thus, there is still a need for a resource that comprehensively guides IB students taking the subject.

This book is meant to be a point of reference for students whenever they are unsure about a particular concept, and thus it is clearly structured and easy to navigate. It is also useful as a summary of all the necessary concepts, and can be used before a test for revision.

Detailed Diagrams

Notes are accompanied by detailed diagrams which aid in the understanding of concepts.



INTERNATIONAL BACCALAUREATE ECONOMICS GUIDE & WORKBOOK

Exercises

- Define a market.
- A market is in _____ when quantity demanded equals quantity supplied.
- In the diagram shown, identify and write in the space the points on the demand-supply diagram where:

 - the market is in equilibrium.
 - demand exceeds supply.
 - supply exceeds demand.
- Define demand.
- The demand curve is _____ sloping because the law of demand states that an _____ relationship exists between the _____ of a good and the _____ of the good, ceteris paribus.

UNIT 1 - Demand and Supply

4. From the three options in the box, identify and write in the space the option that demonstrates each of the following.

Fabric and clothing Tennis racket and tennis ball Nike and Adidas running shoes

- Derived demand for a final good.
- Complements.
- Substitutes.

7. List the non-price determinants of demand.

8. Define supply.

9. The supply curve is _____ sloping because the law of supply states that a _____ relationship exists between the _____ of a good and the _____ of the good, ceteris paribus.

10. From two options in the box, identify and write in the space the option that demonstrates each of the following.

Beef and leather Beef and rice

- Joint supply.
- Competitive supply.

UNIT 1 - Demand and Supply

FIGURE 1.11

As seen from Figure 1.11, any rise in price beyond \$10 will cause the quantity demanded to fall to zero.

5. Perfectly inelastic demand

The demand for a good is perfectly inelastic when an increase in the price of the good leads to no change in quantity demanded.

FIGURE 1.12

As seen from Figure 1.12, when price increases from \$4 to \$10, the quantity remains constant at 10 units.

Determinants of PED

- Availability of substitutes**
The availability of substitutes can be affected by the number and closeness of substitutes. A greater number of substitutes will result in the demand for the good to be more price elastic. Closer substitutes will also result in a higher price elasticity of demand.
- Degree of necessity**
Basic goods have a higher degree of necessity. Despite price changes, the quantity demanded for the good will remain relatively unchanged. The demand for the good will therefore be price inelastic. Basic goods include shoes, water and staple food like rice.
People with habits or addictions, like smokers, will still continue to purchase cigarettes despite price increases as they are strongly addicted to the need to smoke. These goods are habit forming.
- Proportion of income**
The greater the proportion of income spent on a good, the higher the price elasticity of demand for the good. For example, purchasing television sets is a significant proportion of a consumer's income. Any price increase will thus result in a more than proportionate decrease in the quantity demanded for television sets. This is because consumers will have difficulty securing extra disposable income to purchase the television sets. This is because consumers will have difficulty securing extra disposable income to purchase the television sets. This is because consumers will have difficulty securing extra disposable income to purchase the television sets. This is because consumers will have difficulty securing extra disposable income to purchase the television sets.

UNIT 1 - Demand and Supply

FIGURE 1.14

Since the gain in TR (area BCQ_2Q_1) is more than loss in TR (GAP PA_1P_2), the total revenue has increased as a result of decrease in price. Therefore, a firm selling goods that are demand price elastic should lower prices to raise total revenue.

Demand is price inelastic.

Let $Q_1 = 100$, $Q_2 = 80$

FIGURE 1.15

When demand is price inelastic, an increase in price will cause a less than proportionate decrease in quantity demanded. When price increases from \$0.20 to \$0.40, quantity demanded decreases from 100 units to 80 units.

At the original price of \$0.20, total revenue is $100 \times 0.20 = \$20$. When the price increases to \$0.40, total revenue is $80 \times 0.40 = \$32$. This is an increase from \$20.

Since the gain in TR (area BCQ_2Q_1) is more than loss in TR (GAP PA_1P_2), the total revenue has increased as a result of an increase in price.

Therefore, a firm selling goods with price inelastic demand should raise prices to raise total revenue.

2. Use of PED by the government

Government spending is largely funded by tax revenue. Hence, if the government were to increase tax revenue, indirect taxes should be implemented on goods with relatively price inelastic demand. If quantity demanded will change less than proportionally, this means that total revenue will not be greatly affected.



Short Answer Questions

Short answer questions are provided for students' revision and to cement concepts learnt.



Contact Us

Address:

63 Hillview Avenue, #03-08, Lam Soon Industrial Building,
Singapore 669569

Website:

www.cpd singapore.com

Email:

contact@cpd singapore.com



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