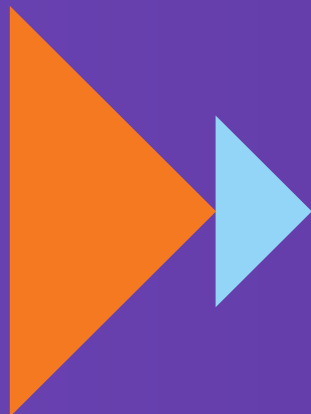
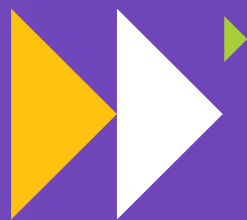




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Supporting you at Primary and Lower Secondary





Objectives of this session



By the end of this session you will understand:

- Identified key customer needs for Primary and Lower Secondary and how we address them
- the new curriculum and how we support it
- how each component of the new series works



Working together with Cambridge Assessment



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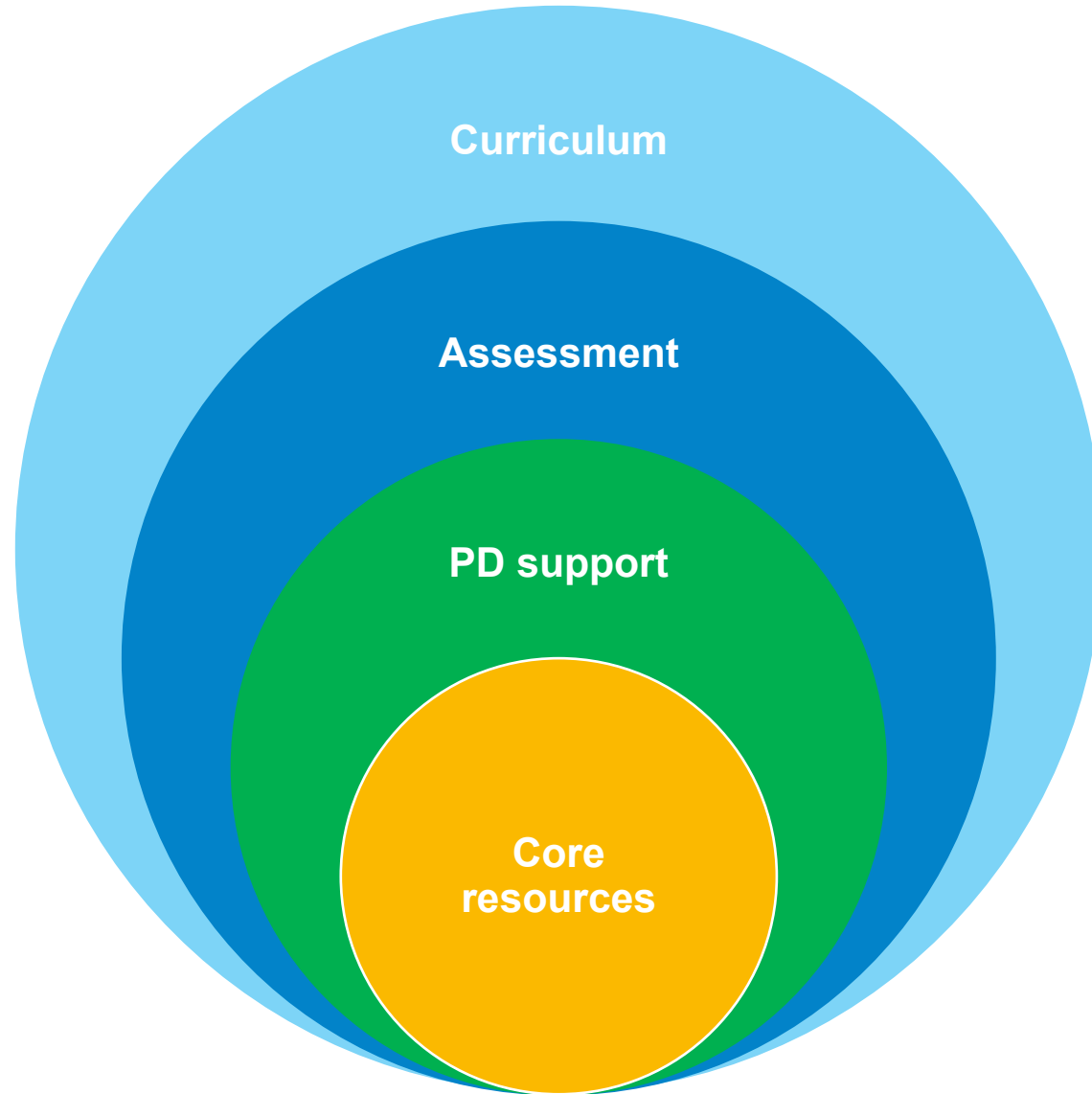


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The complete Cambridge offer

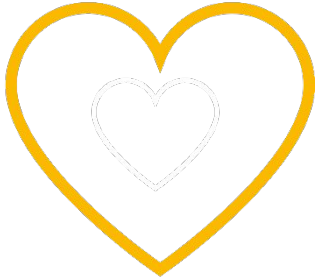




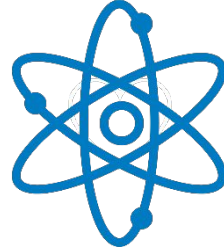
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The Cambridge approach

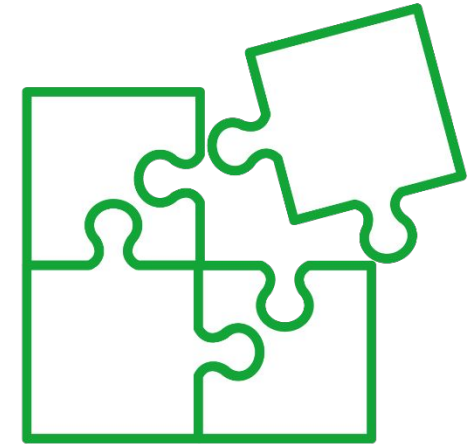
Teacher at the heart



Science of learning



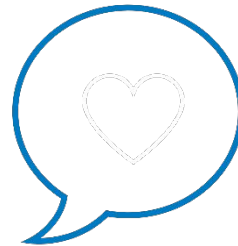
Skills for life



Brighter thinkers



Language of learning



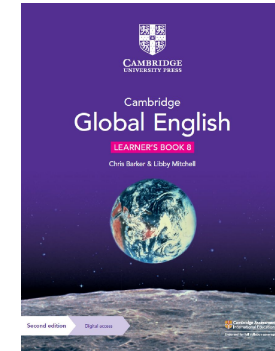
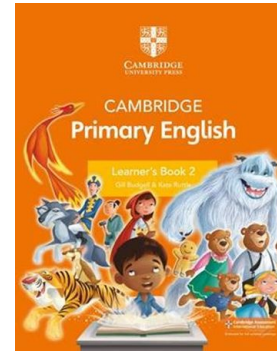
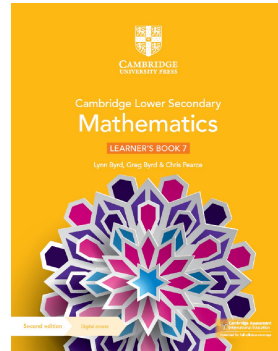
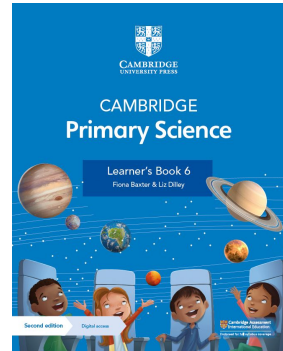
Tools for learning





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An introduction to the series



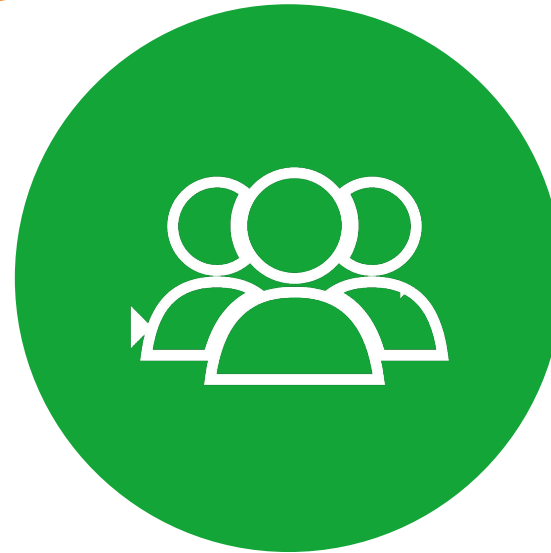
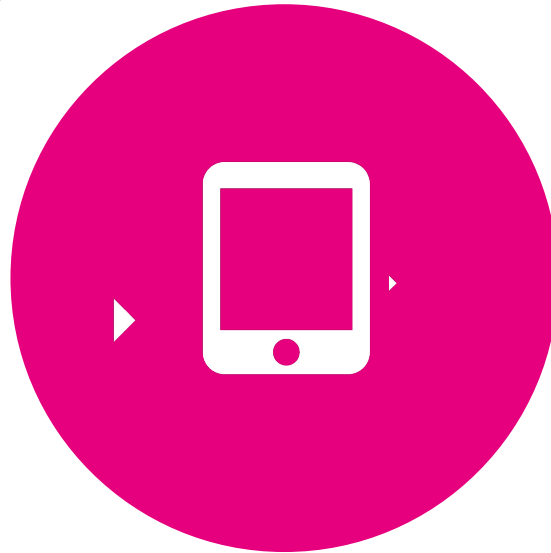
Print components	Teacher's Resource Books 1-9 Learner's Books 1-9 Workbooks 1-9	Teacher's Resource Books 1-9 Learner's Books 1-9 Workbooks 1-9	Teacher's Resource Books 1-9 Learner's Books 1-9 Workbooks 1-9	Teacher's Resource Books 1-9 Learner's Books 1-9 Workbooks 1-9
	English Language Skills Workbooks 7-9		Phonics Workbooks A and B	
Digital components	Digital Classroom 1-6 Digital versions of print components	Digital Classroom 1-6 Digital versions of print components	Digital versions of print components	Digital Classroom 1-9 Digital versions of print components
PD support	Preparing to Teach, Cambridge Teaching Skills Roadmap, Cambridge Teacher Support Service			
Assessment	BASE (4-5 years), InCAS (5-11 years), MidYIS (11-14 years)			





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Understanding school needs





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Differentiation



Differentiation – in the teacher’s resource

name the skull, jaw, rib cage, hip, spine, leg bones and arm bones. Get learners to hold up fingers to respond:

- 1 finger = I can't do it
- 2 fingers = I can do some of it
- 3 fingers = I can do it all

If a show of fingers is not culturally unacceptable, you could use small red (I can't do it), yellow (I can do some of it) and green (I can do it all) cards instead.

You can use Exercises 1–3 of Workbook 1.1 Bones and skeletons to assess learners' level of understanding of the main bones in the body.

3 Think like a scientist: Make a model skeleton (30 mins)

Learning intention: To follow instructions to make a model skeleton; say why a model is both the same as and different to the real object

Resources: Learner's Book 1.1 Bones and skeletons; examples of models, e.g. a model car or a globe of the Earth; plastic drinking straws and bottle tops, modelling clay or different shapes of pasta; scissors; black construction paper or stiff card, paper glue, white paper, a pen

Description: Show examples of models to the learners. Ask the learners what real-life things the models represent. Ask how the models are the same

as the real thing. How are they different to the real thing?

Show learners the picture of the skeleton in the Learner's Book. Tell them to take note of the position, size and shape of the different bones in the skeleton. Tell learners that they should cut the straws into different lengths to make 'bones' for their skeletons. Ask them how they think they will use the bottle tops (for the skull). If learners are using pasta shapes, tell them to look for pasta shapes that are similar shapes to the different bones.

Learners should arrange the lengths of plastic straws and bottle tops or pasta shapes to make the form of a human skeleton. It does not need to be accurate but should show the general body form with a skull, jaw, spine, ribs, arms, legs and hips.

Learners should then answer the questions in the 'Questions' section.

Practical assistance: This is a learner-led activity. Learners should work in groups of 4–5.

Differentiation ideas: You can support less confident learners by placing them in mixed-ability groups. Encourage group members to work co-operatively to make the model so that all learners have a role to play.

Assessment ideas: You can use the assessment checklist given here for both self-assessment and teacher assessment.

How well did I:	Very well		Quite well		I needed help	
	Me	Teacher	Me	Teacher	Me	Teacher
plan how to use the different materials to make the model?						
work with my partner to make the model?						
label the different parts of the model?						
think of ways to make our model better?						
explain how the model is the same as a real skeleton?						
explain how the model is different to a real skeleton?						

Plenary ideas

1 Tell your partner what you have learnt (5 mins)

Description: Learners work in pairs to tell each other three things they have learnt from the topic.

Reflection ideas: Ask learners to think about how the different activities in the topic have helped them learn about skeletons and models.

2 Flash cards (5 mins)

Resources: Sets of flash cards for learners with a new term learnt in this topic on one side of the card and the meanings on the other side.

Description: Use this activity as a vocabulary check for learners. Learners should use the flash cards to test one another. They should read out the meaning of a term to partner who must say the term.

Learners in the pair can take turns in reading and naming the term. If you only have one set of cards, you can use them for a whole class plenary activity in which you read out the meanings of the terms and ask learners to say the term. Or you can say the term and get learners to explain the meaning of the term.

Assessment ideas: Learners can note how many of the new words they know. They can look up the words they didn't know in the glossary.

Cross curricular links

Main teaching idea 1 links with sizes and shapes in Maths.

Main teaching idea 2 can be used to develop new vocabulary in English and to practise counting skills in Maths if learners count the numbers of the different bones.

Main teaching idea 3 can be linked with making collages in Arts and Crafts, and shapes and sizes in Maths.

Homework ideas

1 Learners could do the Workbook Focus, Practice and Challenge sections for Topic 1.1. Discuss the answers in class and allow the learners to check their own work and correct any errors.

2 Learners can complete Worksheet 1.1.

Topic worksheets

Worksheet 1.1: Label the skeleton

This worksheet is intended to give more practice in identifying and naming the different bones of the skeleton for learners who need it. There is a Help sheet for learners who need assistance.

More confident learners can complete the Stretch sheet, in which they colour code bones of different skeletons.

1.2 Why we need a skeleton

LEARNING OBJECTIVES

Curriculum reference	Learning intention	Success criteria
4Bs.03 Describe some of the important functions of skeletons (limited to protecting and supporting organs, enabling movement and giving shape to the body).	<ul style="list-style-type: none"> To be able to describe the main functions of the skeleton. 	<ul style="list-style-type: none"> Learners can describe the main functions of the skeleton as protecting organs, allowing movement, giving shape to the body and supporting organs during activity. Learners can understand that we grow because our skeleton grows.



Differentiation – in the learner’s book



1 Adventure

> 1.5 Danger!

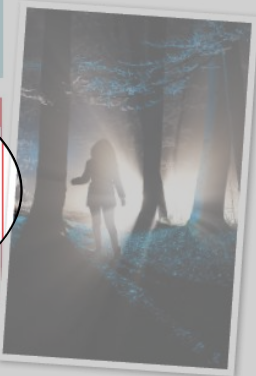
In this session, you will:

- investigate some features of suspense writing
- explore the effects of language and grammatical choices
- read aloud with expression.

Getting started

Adventure stories often contain moments of suspense. The main character is usually in a dangerous situation. The situation is tense and drawn-out, which makes the reader concerned about what will happen to the character.

Look at the picture of the child in the woods. If you wrote a story based on this picture, how would you create suspense? What would happen in your story?



Silverfin

Read the following extract from a novel by Charlie Higson. It’s about a young spy called James. At this point in the story, James is trying to sneak into a castle that hides a deadly secret. The only way to get in is to walk along a branch that hangs over a lake. Kelly is James’s friend.

He struggled on up through the tangle of small twigs and young limbs. After some careful searching, he found a suitable branch. In fact it was probably his only hope, because it was the last branch that looked as if it would be strong enough to support him. He lay down on it, gripping it with his legs, and slowly slid himself away from the trunk and out over the **loch**.

He looked down at the black waters, so still now, but he could picture the eels beneath the surface, lying in the stinking mud at the bottom, their wide snouts sticking out, waiting patiently. His one consolation was that if the fall didn’t kill him, it would at least knock him unconscious, and he would know nothing about sinking down through the dark waters towards their slimy mouths.

He suddenly felt very lonely. If he fell, Kelly wouldn’t come, and nobody else knew he was here. He was utterly alone.

loch: lake

1.5 Danger!

He forced his eyes away from the water towards the wall ahead of him. The branch was bending sharply now, and he found himself crawling downwards towards its tip, so that there was a very real danger of slipping forward and off the end. Best not to think about that.

Slowly he shuffled along. The castle was six feet away, five . . . four . . . The branch was swaying alarmingly. He felt like he could tip off at any moment.

He stopped.

The wall was still three feet away . . .

He didn’t move.

He knew it wasn’t going to work. The branch wasn’t long enough. It was too thin. If he went any further, he would be past the point of no return. He’d be stuck.

He glanced down, he was over the ground now, at the foot of the wall. That would be worse than hitting the water, eels or no eels. He closed his eyes and slowed his breathing, trying to calm the mounting panic.

And then he heard it.

First a creak. Like a loose tread on a staircase.

And then a crack.

He felt the branch shudder . . . It was splitting.


1 In your notebook:

- list the dangers and problems that the main character faces
- note down how you think James feels
- write down the six most exciting sentences in the story. Find a partner and compare your ideas. Do you agree?

2 Imagine you are making a film based on *Silverfin*. Create a **storyboard** of six images that show the most important parts of the story. Choose your images carefully – which ones would help to create a feeling of suspense?

Key word

storyboard: a series of drawings or images showing the planned order of images in frames (in films and television)



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Differentiation – in the learner’s book

1 Adventure

5 Discuss the sample answer in pairs.

- a What do you think is good about it?
 - b What ideas or techniques could you use in your own story?
 - c Look how punctuation devices such as the dash, ellipsis, colon and semi-colon have been used. How do they help with meaning?
- 6 Now discuss the voice of the text. What sort of personality does the narrator have? Make a list of phrases the writer uses to convey the narrator’s personality.

Writing tip

Redrafting your work can be time-consuming, but it is essential. When you redraft, start by considering structure. Is the order right or does it need rearranging? Do some parts need more explanation? Then turn your attention to the detail, such as word choices, ensuring you have used strategies you know to spell words correctly.

Peer assessment

- Ask a friend to read your story aloud. Listen carefully to how it sounds. Which bits do you both think are the best? Which bits need redrafting?
- Use a highlighter to identify paragraphs you want to improve. Help each other with ideas and phrases. Remember to spell-check your work.
- Look at the effectiveness and range of punctuation you have used. Can you use some of these when you redraft your work?

Once you have finished your story, read it back to yourself.

- How well do you think you planned your story?
- If you did this activity again, what would you change about the planning process?
- What advice would you give to someone who wants to write a suspense story?

Summary checklist

- I can plan a piece of narrative writing.
- I can identify what makes a successful opening to a story.
- I can write a narrative piece and edit my work to improve it.

Check your progress

Answer the following questions to check what you have learnt in this unit.

- 1 What are the key features of adventure stories? Give some examples of events that happen in adventure stories.
- 2 What type of characters do you find in adventure stories? What happens to them?
- 3 List three ways you can keep an audience interested when relating an anecdote.
- 4 Using examples, explain what alliteration and sibilance are.
- 5 List three ways of creating suspense in a story.
- 6 Explain what you have learnt about planning, writing and redrafting your writing. Write a list of tips for future students about improving writing.

Project

In groups, you are going to design and present some ideas for a specific type of adventure story: the superhero story. Superhero stories are about characters who have extraordinary powers. They are often normal people who secretly change into superheroes in order to help people in need. Using the information in this unit as well as extra research:

- devise a new superhero
- write a brief character profile
- decide details about the world they live in – is it recognisable as your own world, or is it a different type of place?
- describe a costume they might wear
- draw the bad characters that the superhero will encounter
- plan some storylines.

Present your ideas as a group. You could use pictures and artwork to explain your ideas.

Start by:

- noting down the names of any superhero books, comics and films you know
- discussing some initial ideas with your group
- working out who will do what in your group
- planning ways to present your work.





Differentiation – in the workbook

1 Integers

> 1.1 Adding and subtracting integers

In this section you will...

add and subtract with positive and negative integers.

Number line
Inverse
Positive integers
Negative integers
Integers

Worked example 1.1

Work out:

a $-5 + 9$ b $2 - -5$

Answer

- a Draw a number line if you need to.
Start at -5 . Move 9 places to the right.
You finish at 4. $-5 + 9 = 4$
- b To subtract -5 , add the inverse, 5.
 $2 - -5 = 2 + 5 = 7$

Exercise 1.1

Focus

- 1 Add these positive and negative integers.
a $-3 + -4$ b $6 + -5$ c $-7 + 2$ d $-5 + 10$
- 2 Subtract these positive and negative integers.
a $4 - 6$ b $-6 - 3$ c $1 - -8$ d $-5 - -6$

1 Integers

3 Copy and complete this addition table.

+	4	-5
2		
-6		

4 Work out:

a $20 + -5$ b $-10 + -15$ c $-2 + -13$ d $-3 + 20$

5 Work out:

a $20 - -5$ b $-10 - -15$ c $-2 - -13$ d $-3 - 20$

Practice

- 6 Fill in the missing numbers.
a $8 + \dots = 1$ b $-3 + \dots = 3$
c $-10 + \dots = -6$ d $5 + \dots = -5$
- 7 Fill in the missing numbers.
a $\dots - 3 = 6$ b $\dots - 3 = 2$
c $\dots - 3 = -1$ d $\dots - 3 = -6$
- 8 Two integers add up to 2. One of the integers is 8. What is the other integer?
- 9 When you subtract one integer from another integer, the answer is 3. One integer is 1. Find the other integer.

10 Here are six integers: $-5, -3, -2, 3, 4, 5$.

Use each integer once to complete these additions.

a $\dots + \dots = 1$ b $\dots + \dots = -2$ c $\dots + \dots = 3$

Challenge

11 Copy and complete this addition table.

+	3	
	5	-2
	1	-6

12 This subtraction table shows that $3 - 6 = -3$. Copy and complete the table.

-	-4	6	
3		-3	1
-3			



Formative assessment



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Building Brighter Futures Together

Brighter Thinking

Better Learning



Assessment for learning – in the teacher’s resource

Plenary idea

Review of progress (10 mins)

Resources: Learners work in pairs. Each pair needs two dice.

Description: Ask learners to work in pairs. Learners take it in turns to throw two dice twice, adding the scores each time. The learner throwing then finds the lowest common multiple of the two totals. The other learner in the pair decides whether the thrower is correct or not. The learners swap roles and repeat.

For reflection, ask ‘Can you identify an easy/difficult pair of numbers to answer?’.

> **Assessment ideas:** Watch learners as they play. Listen to their comments and be prepared to discuss disagreements.

Guidance on selected Thinking and working mathematically questions

Conjecturing and convincing

Learner’s Book Exercise 1.3, Questions 10 and 11

Questions 10 and 11 are examples of generating a question by reversing a simple question. There is another example of this earlier in this unit. A simple question would be ‘Find the LCM of 4 and 9.’ [36]. The question ‘The LCM of two numbers is 36, what are the numbers?’ is more challenging, as it has several answers. This type of question also develops understanding, as well as the skills of conjecturing and convincing.

Homework idea

Set suitable parts of Workbook Section 1.3 as homework. Marking should be done by learners at the start of the next lesson. Any help or discussions with any of the problems should take place immediately.

Assessment idea

Opportunities to check learner understanding will occur during discussion. Some activities include peer assessment.

1.4 Highest common factors

LEARNING OBJECTIVES

Curriculum reference	Learning intentions	Success criteria
7Ni.04	Understand highest common factor (numbers less than 100).	Learners have strategies to find the highest common factor of two numbers.

LANGUAGE SUPPORT

Common factor: a number that is a factor of two (or more) numbers

Factor: a factor of an integer will divide into that integer without a remainder; 6 and 8 are factors of 24

Highest common factor: the largest factor of two (or more) other numbers. You can abbreviate highest common factor to HCF.

$7 \times 8 = 56$, so 7 and 8 are factors of 56. 1 is a factor of any positive integer.

5 is a common factor of 15 and 40.

Common misconceptions

Misconception	How to elicit	How to overcome
Learners do not think of 1 and the number itself as factors of a given number.	Check when learners list the factors.	Remind learners of these two factors as much as possible.

Starter idea

Reminder of factors (10 mins)

Description: On the board write ‘20 is a multiple of 5.’ Then, under the first sentence, write ‘5 is a ____ of 20.’ Ask ‘What is the missing word?’. Learners should know the word *factor*.

Ask learners in turn to give more pairs of similar sentences. The first should be ‘20 is a multiple of ____.’ Ask ‘Have we got all the factors?’. Learners should be able to agree that there are six factors.

The factors of 20 are 1, 2, 4, 5, 10 and 20. Make sure learners do not forget 1 and 20.

Now, ask learners to work in pairs to find numbers with exactly: four factors, two factors, eight factors, three factors, and five factors.

Then collect their answers. Ask ‘Can you see any patterns?’.

Possible answers include:

- ‘It is not true that larger numbers always have more factors.’
- ‘Prime numbers have just two factors.’ (Learners might not know about prime numbers.)
- ‘Square numbers have an odd number of factors.’

If learners do not give the answers listed, then elicit them. The act of looking for factors and writing all the factors of a number is the focus here. Look at learners’ work as they are finding factors. Make sure they always include 1 and the number itself. Make sure learners use the words *factor* and *multiple* correctly.

The screenshot shows the '1.4 Highest common factors' section of the teacher's resource. It includes a 'LEARNING OBJECTIVES' table, 'LANGUAGE SUPPORT' section, and 'Exercise 1.4' with several questions. A red circle highlights the Learning Objectives table. A red oval highlights the 'Assessment idea' text. A red box highlights the 'Common misconceptions' table. A red box highlights the 'Starter idea' text. A red box highlights the 'Assessment idea' text. A red box highlights the 'Language Support' text. A red box highlights the 'Exercise 1.4' questions.



Assessment for learning – in the teacher’s resource

> CAMBRIDGE LOWER SECONDARY MATHEMATICS: END OF UNIT 1 TEST

Name _____ Date _____

Stage 7 End of unit 1 test

Calculators are not allowed.

1 Work out:

a $8 + -12$

b $-6 - -9$

_____ [2]

2 Fill in the missing integer in each calculation.

a $_ \times 5 = -15$

b $_ \div 4 = -8$ [2]

3 Find the lowest common multiple of 6 and 10.

_____ [2]

4 Find the highest common factor of 24 and 40.

_____ [2]

5 Work out $\sqrt[3]{125} - \sqrt[3]{27}$.

_____ [1]

6 The cube root of a number is 4. Work out the square root of the number.

_____ [2]

7 The highest common factor of two numbers is 3. The lowest common multiple of the two numbers is 18.

Work out the two numbers.

_____ [2]

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Assessment for learning – in the learner’s book



1.3 Train trouble

The second sentence is longer and more detailed. The first **clause** introduces an image of the clutter of the station. The **subordinate clause** (*who was winding . . .*) contains more detail, using ‘and’ twice. The effect is to convey the huge number of things in the station. The length and detail of the sentence reflects the detail of the scene being described.

Copy and complete the following table in your notebook to identify examples of simple, compound and complex sentences in the extract from *Around India in 80 Trains*. In the last column, comment on their effect. Explain how the writer builds up detail and the impression this gives the reader.

Sentence type	Example	Effect
Simple		
Compound		
Complex		

5 In Activity 1, you told an anecdote about difficult journey. Now turn this into a written version. Before you write, think about how you will describe the scene. Remember how the extract uses lots of images, lists and interesting words to bring the scene to life. Use a range of **simple, compound and complex sentences** to add detail and variety to your writing.

Peer assessment

Share your finished account with another student. Discuss the following questions:

- Which bits of your writing do you think are most effective and why?
- Did you use a variety of sentences?
- If you were to redraft your work, what would you do differently?

Summary checklist

- I can use language to engage listeners in a spoken account.
- I can identify and understand implicit information in a text.
- I can use different sentence types to write an interesting account.

Key words

clause: a group of words that contain a verb

subordinate clause: in grammar, a clause that cannot form a sentence alone but adds information to the main clause

Writing tip

Remember that the language and style of written accounts is different to spoken accounts, so think carefully about the way you phrase your writing. For example, people often do not speak in full sentences, although you can hear where ideas start and end, but you must always write in full sentences.

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1 Adventure

> 1.4 A hard journey

In this session, you will:

- look for explicit and implicit meanings in poetry
- explore how poets use language features for effect
- learn how to write an analysis of a poem.

Getting started

Some people and some poems describe life as a journey. In pairs, discuss what life has in common with a journey. How could life be described as an adventure?

‘Hard is the Journey’

Read the following poem by Li Po, an 8th century Chinese poet.

Gold vessels [. . .]

Jade dishes of rare meats, costing more thousands,

I lay my chopsticks down, no more can **banquet**, I draw my sword and stare wildly about me:

Ice bars my way to cross the Yellow River, Snows from dark skies to climb the T’al-hang mountains!

At peace I drop a hook into a **brooklet**,

At once I’m in a boat but sailing sunward...

(Hard is the journey, Hard is the journey, So many turnings, And now where am I?)

So when a breeze breaks waves, bringing fair weather, I set a cloud for sails, cross the blue oceans!

vessels: hollow containers

jade: a hard, green stone

banquet: a feast

brooklet: a small stream

20 >





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Language





Language support – teacher’s resource

CONTINUED

Learners will learn that the inverse of squaring is finding a square root. The inverse of cubing is finding a cube root. Appropriate notation is

introduced. Examples are limited to square numbers and cube numbers.

TEACHING SKILLS FOCUS

Assessment for learning

When you ask questions to the whole class or to individual learners, it is better to ask open questions rather than closed questions.

For closed questions there is just one correct answer expected. The answer will be correct or incorrect. Examples of closed questions are 'What is 3×-6 ?' or 'How many factors does 18 have?'

Open questions can have a variety of answers. Examples of open questions are 'How do you work out 3×-6 ?' or 'Tell me why 4 is not a factor of 18.'

You can use open questions to assess the understanding of learners. The answers to open questions give you important information about the learner's progress. Open questions often also lead to further questions and create a dialogue.

If a learner gives an incorrect answer or an unclear explanation, don't immediately say it is incorrect. Ask for comments or suggestions from other learners. Ask other learners to explain and correct any errors. If the explanation is unclear, ask another learner to improve on it.

Learners need to understand that getting incorrect answers is an important part of the learning process. To complete investigations successfully, learners need to feel confident about trying out ideas and testing hypotheses. You can encourage these attitudes in the classroom with suitable questioning. Think about some questions you have asked recently. Were the questions closed or open? Could you rephrase any closed questions to make them open questions?

1.1 Adding and subtracting integers

LEARNING OBJECTIVES

Curriculum reference	Learning intentions	Success criteria
7Ni.01	Estimate, add and subtract integers, recognising generalisations.	<ul style="list-style-type: none"> Learners can successfully work out additions, e.g. $6 + -8$, $-5 + 3$ and $-5 + -3$. Learners can successfully work out subtractions by adding the inverse, e.g. $-2 - 4 = -2 + -4 = -6$ or $3 - -5 = 3 + 5 = 8$.

LANGUAGE SUPPORT

Integers: the whole numbers: ..., -3, -2, -1, 0, 1, 2, 3, ...

Inverse: the operation that has the opposite effect; the inverse of 'add 5' is 'subtract 5'

Inverse operation: the operation that reverses the effect of another operation

Negative integers: the whole numbers less than zero: -1, -2, -3, -4, ...

Number line: a line used to show numbers in their correct position

Positive integers: the whole numbers greater than zero: 1, 2, 3, 4, ...

An integer is a whole number that can be positive, negative or zero (e.g. 3, -5 and 0). You often show integers on a number line.

An inverse operation has the opposite effect of a given operation. The inverse of adding 2 is subtracting 2. The inverse of multiplying by 3 is dividing by 3. The inverse of squaring is finding the square root. The inverse of cubing is finding the cube root.

Common misconceptions

Misconception	How to elicit	How to overcome
Making mistakes with subtraction	Ask questions such as 'What is $3 - -4$?'. Possible incorrect answers are 1 or -1.	Encourage learners to always change a subtraction to an addition of the inverse. So $3 - -4 = 3 + 4 = 7$.

Starter idea

Checking understanding (10 mins)

Resources: Getting started exercise at the start of Unit 1 of the Learner's Book.

Description: Give learners 5 minutes to look at the questions. Then on the board write the statement '___ is a multiple of 3.'

Ask 'What numbers between 1 and 20 could you write in the space?'

Then on the board write '___ is a factor of 20.'

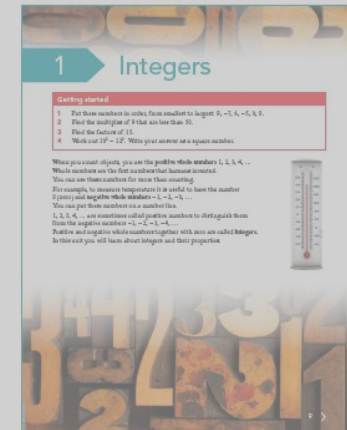
Ask 'What numbers between 1 and 20 could you write in the space?'

Then on the board write '___ is a square number.'

Ask 'What numbers between 1 and 20 could you write in the space?'

During this questioning, listen for uncertainties about the meaning of 'multiple', 'factor' or 'square number'.

Now ask learners to do the Getting started exercise at the start of Unit 1 of the Learner's Book.



Language support – teacher’s resource

> CAMBRIDGE LOWER SECONDARY MATHS STAGE 7 UNIT 1: VOCABULARY

Name _____ Date _____

EAL Worksheet: 1.1–1.3

Unit 1 Vocabulary worksheet 1 1.1–1.3

1 Find the word that matches each definition in the word grid. The first one has been done for you.

a	u	t	s	k	l	m	o	e	y
i	q	p	r	o	d	u	c	t	w
n	u	m	b	e	r	l	i	n	e
v	t	i	z	<u>m</u>	<u>a</u>	<u>t</u>	<u>h</u>	s	d
e	a	k	l	t	w	i	o	i	u
r	c	j	o	h	k	p	d	g	j
s	x	h	a	q	p	l	t	n	b
e	b	m	i	n	t	e	g	e	r

- a maths _____ The study of numbers, signs and symbols
- b _____ The number you get when you multiply two or more numbers
- c _____ Any whole number; it can be positive, negative or zero; e.g. 5, 18, -26, -109, 0.
- d _____ A line used to show numbers in the correct order
- e _____ The result you get when you multiply a number by a positive integer.
- f _____ The operation that has the opposite effect of another operation; e.g. dividing has the opposite effect to multiplying

> CAMBRIDGE LOWER SECONDARY MATHS STAGE 7 UNIT 1: VOCABULARY

Name _____ Date _____

- 2 Complete the maths vocabulary. The first letter of each missing term is given. The first one has been done for you.
- a maths problem A question that needs numbers, signs and/or symbols to solve.
- b p _____ integer Any whole number greater than zero; e.g. 3, 57, 149
- c n _____ integer Any whole number less than zero; e.g. -5, -48, -442
- d c _____ multiple A number that is a multiple of two (or more) different numbers
- 3 Mark each statement as either correct or incorrect. Correct any mistakes. The first one has been done for you.

5, $6\frac{1}{2}$ and 11 are integers.

a

Incorrect; $6\frac{1}{2}$ is a mixed number, not an integer.

b

$50 + 50 = 100$ and $100 - 50 = 50$ are inverse operations because they reverse each other.

c

The lowest common multiple is any small number that is a multiple of two numbers.

d

LCM stands for lowest common multiple.



Language support – learner’s books

1 Living Things

> 1.1 Bones and skeletons

We are going to...

- name some of the bones in our body
- point out where some of the main bones are found in our body
- make a model of a skeleton
- think about how a model is different to the real thing.

Getting started

The picture shows a **skeleton**.

- 1 What is a skeleton?
- 2 What is the skeleton made of?
- 3 What type of animal do you think the skeleton comes from?
- 4 Name the parts of the animal's body you can see in its skeleton.

bones
frame
hip
jaw
model

rib cage
skeleton
skull
spine



Glossary and index

absorb	to take in a substance. For example, if you spill a liquid you can pat it with a paper towel. The paper towel absorbs the liquid	105
anticlockwise	the opposite of clockwise which is the direction the hands of the clock move	113
apparent movement	the movement does not really happen but it looks like it happens	118
ash	burnt material. For example, the grey powdery material left when wood has burnt	75
asteroid	a rocky mass that orbits the sun. These are similar to planets but much smaller	110
axis	anything that spins or rotates has to turn around a central line. This line is the axis	113
battery	a source of energy, made up of more than one cell, which pushes electricity around a circuit	140
beak	the part of a bird used to catch and hold food	88
bones	hard, strong parts inside our body that give our body shape and keep us upright	3
brightly (adverb)	shines with a stronger light	142
brightness (noun)	how strong the light shines	142
cable	a rope of wires	133
carnivore	an animal that eats other animals	43
change of state	when materials and substances change from one form to another when they are heated or cooled	58
chemical reaction	when we mix together two substances and they both change to make a new substance	64



Language support – learner’s books

1 Story time

Key words

conjunction: a connective that links words, groups of words or sentences, e.g. *and, so, however, but, although*

preposition: a word or group of words used before a noun or pronoun to show place, direction, time and so on, e.g. *above, below, on, over, in*

definite article: the word *the*

indefinite article: the word *a*

1 Read the extract with a partner and scan for details.

- a Read the extract below telling you more about Pinmei.

"Do you wish I were different?" Pinmei asked.

"Different?" Amah asked, "How?"

Pinmei shrugged, embarrassed. "Maybe if I talked more or did things," Pinmei said. "Like Yishan."

"I never wish for you to be anyone except yourself," Amah said, looking into Pinmei's eyes. "I know that when it is time for you to do something, you will do it."



- b Make two lists, noting key words and phrases from the extracts that tell you about

Setting	Characters
<ul style="list-style-type: none"> the climate the village's location Amah's hut 	<ul style="list-style-type: none"> who Pinmei is what Pinmei is like/enjoys Amah and what she does

- c What figurative language is used to describe the snow?

1.9 Find out more about the story

- d Find another figurative description using *like* to compare two things.
- e What name would you give to Pinmei's village? Give reasons.
- f What does Amah believe about Pinmei?

Reading tip

Record interesting or important words you may want to use again in your word book.

2 Think about the setting.

- a Discuss how the setting is similar to or different from the area where you live. Include the weather conditions.
- b Draw your impression of Amah's hut up the mountain. Write a short paragraph explaining whether you would like to live there and why.

> 1.9 Find out more about the story

We are going to...

- answer questions using evidence from the text and visual clues.

Getting started

- In pairs, study three possible covers for *When the Sea Turned to Silver*.
 - a Describe what you see on each cover.
 - b What do the covers tell you about Pinmei and her surroundings?
 - c What do they tell you about the time and context of the story?
 - d Do they match what you know already? Do they add anything new?
 - e Think of some descriptive nouns and adjectives for each cover.
- Which cover best fits your impression of the story so far? Why?
- Which one makes you want to read the story?

Listening tip

In a discussion, listen carefully to what your partner says before you respond.



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Pedagogy



> Setting up for success

Our aim is to support better learning in the classroom with resources that allow for increased learner autonomy while supporting teachers to facilitate student learning.

Through an active learning approach of enquiry-led tasks, open-ended questions and opportunities to externalise thinking in a variety of ways, learners will develop analysis, evaluation and problem-solving skills.

Some ideas to consider to encourage an active learning environment are as follows:

- Set up seating to make group work easy.
- Create classroom routines to help learners to transition between different types of activity efficiently, e.g. move from pair work to listening to the teacher to independent work.
- Source mini-whiteboards, which allow you to get feedback from all learners rapidly.
- Start a portfolio for each learner, keeping key pieces of work to show progress at parent-teacher days.
- Have a display area with learner work and vocab flashcards.

Planning for active learning

- 1 **Planning learning intentions and success criteria:** these are the most important feature of the lesson. Teachers and learners need to know where they are going in order to plan a route to get there.
- 2 **Introducing the lesson:** include a 'hook' or starter to engage learners using imaginative strategies. This should be an activity where all learners are active from the start of the lesson.
- 3 **Managing activities:** ensure that learning and written support; coordinate logical and orderly transitions between activities; make sure that learning is active and all learners are engaged; create opportunities for discussion around key concepts.
- 4 **Assessment for Learning and differentiation:** use a wide range of Assessment for Learning techniques and adapt activities to a wide range of abilities. Address misconceptions at appropriate points and give meaningful oral and written feedback which learners can act on.
- 5 **Plenary and reflection:** at the end of each activity and at the end of each lesson, try to: ask learners to reflect on what they have learnt compared to the beginning of the lesson; build on and extend this learning.

For more guidance on successfully implementing active learning strategies in this course, please visit our website and explore our Setting up for Success Workshop Packs.

A blank Lesson Plan template is available to download to help planning using this approach.



Pedagogy

Lesson	Approximate number of learning hours	Outline of learning content	Learning objectives	Resources
8 Project challenge	1.30	Doing a project.	7Sc.04 7Sor.01 7Wca.02 7c.02	Learner's Book Lesson 2.8 Workbook Lesson 2.8
9 Two poems about festivals	2.10	Talking about two poems.	7So.01 7Rm.02	Learner's Book Lesson 2.9 Workbook Lesson 2.8 Photocopiable 8

BACKGROUND KNOWLEDGE

Swahili is a language spoken mainly in some countries of Africa: Tanzania, Uganda and Kenya, Burundi, Mozambique, Somalia, the Democratic Republic of the Congo, and South Africa by about 98 million people. It is the official language of Tanzania, Uganda and Kenya, and is used as a lingua franca throughout East Africa.

The Yoruba people are an African ethnic group that lives in western Africa. There are about 44 million Yoruba people, most of which are from Nigeria and Benin, where they make up 16% of the population. They are one of the largest ethnic groups in Africa. Judith Nicholls is one of England's best-known writers of children's poetry. She has published over 50 books. She was a teacher before becoming

a poet, and this has helped her develop a deep understanding of what children like. Some of her books are: *Earthways*, *Earthwise: Poems on Conservation*, *Otherworlds*, *Dragonsfire* and *Midnight Forest*.

John Foster is probably one England's best-loved children's poets. He was a teacher for over twenty years while writing poetry for children. Many of his poems use traditional forms and end rhymes, and his haikus and other short poems use strong, simple imagery. Some of his books are: *Dinosaur Poems*, *Fantastic Football Poems* and *Twinkle Twinkle Chocolate Bar*.

Additional resources: You may show the class videos about popular festivals around the world.

TEACHING SKILLS FOCUS

Assessment for Learning

Assessment for Learning is looking for and interpreting evidence of learning that you can then use to help learners learn better, or that learners themselves can use to improve their learning by means of a self-reflection process. This formative assessment helps you to identify where the learners are now in terms of the learning objectives, to diagnose what you need to do to help them overcome difficulties, to give feedback and to give students time to make the necessary changes. Strategies that constitute Assessment for Learning:

- Pre-assess students to determine their current level

- Share learning goals with learners
- Share or create learning criteria with the class
- Use higher-order questions
- Use challenging tasks that elicit learners' responses
- Identify the gaps between where learners are now and the desired goals
- Use peer and self-assessment
- Provide feedback that helps learners identify how to improve
- Praise learners for their progress.

CONTINUED

Your challenge

Look through Unit 2 and highlight opportunities for introducing strategies that are part of Assessment for Learning.

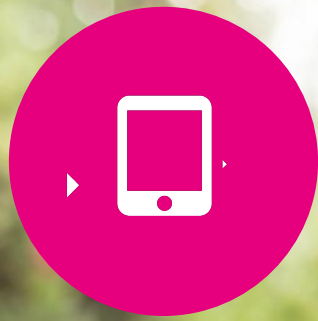
As you continue with the following units, tick off the relevant points where you might apply strategies that constitute assessment for learning. Some strategies or approaches are useful in certain contexts but not in others. What forms of assessment for learning can be used at during those lessons?

Reflection

- Parents and school authorities may not see a need for Assessment for Learning. How can you convey the importance of this form of assessment to them?
- What opportunities for correction and opportunities to try again can I introduce in my lessons as a result of Assessment for Learning?

Common misconceptions

Misconception	How to identify	How to overcome
Learners use the wrong preposition, e.g. The meeting is in 20th June. Are you open in lunchtimes? I'm afraid I can only make it on July.	Write examples on the board. Ask questions, e.g. what do we use with days and dates/months/times, etc.? Circle the preposition.	Draw a 3-column chart on the board or on a large sheet of paper. Write on top of each column: at for a precise time; in for months, years, centuries and long periods, on for days and dates. Ask learners to give examples for each and write them in the correct column.
Learners use the wrong participle to form the adjective, e.g. I'm really frightening of spiders.	Write the wrong sentences on the board. Ask: Are you afraid of spiders or do you frighten the spiders?	Explain the difference in the meaning of -ed and -ing adjectives. Try to make them funny enough so they're memorable, e.g. I'm bored/I'm boring. Learners circle or underline the adjectives and say what they mean.
Learners use the wrong punctuation in non-defining relative clauses.	Write an example of a defining and a non-defining relative clause. Ask: Which sentence gives essential information? Which gives extra information? What other difference is there? (Such as the use of the comma). In which sentence do we use a comma?	Write on the board a few defining and non-defining clauses without commas. Ask learners to underline the clauses and decide if they are giving essential or extra information. They put in the commas as necessary.



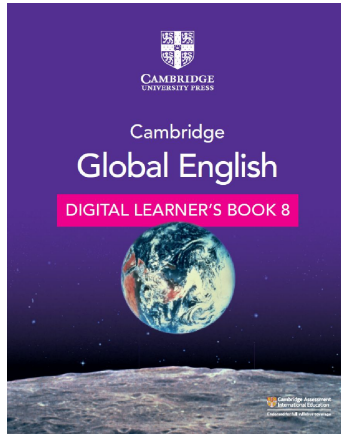
Digital





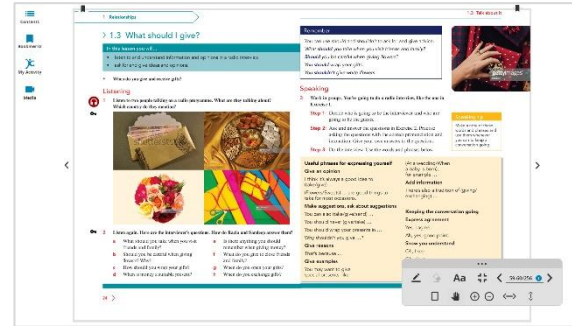
Supporting effective teaching and learning digitally

Digital versions of our books



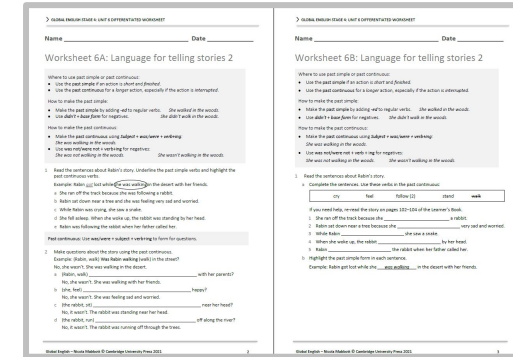
- Access to your resources wherever you need them
- Comes free with your print book
- Digital only versions of learner's books also available

Interactive, whole class teaching



- Page faithful versions of student books
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- Play audio and video from the page
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Additional teaching content



- Available with all our teacher's resources
- Differentiation worksheets
- Language worksheets
- Audio
- Tests
- Answers



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Cambridge GO – all your digital, all in one place

Cambridge **GO**

The screenshot displays the Cambridge GO platform interface. At the top, it shows the Cambridge GO logo and a user profile for 'Teacher'. The main navigation includes 'Resources' and 'Support'. The current page is for 'Cambridge Global English Stage 1', with a breadcrumb trail: 'Resources > Cambridge Global English Stage 1 > Cambridge Global English Stage 1'. A '+ Add new resources' button is visible in the top right.

The resources are organized into three main sections:

- Teacher's resources:**
 - Teacher's Resource:** Cambridge Global English Digital Teacher's resource 1. Valid until: 15/09/2021.
 - Downloadable resources:** Download all of the additional resources for your Teacher's Resource. Valid until: 15/09/2020.
 - Digital Classroom:** Cambridge Global English Digital Classroom 1. Valid until: 15/09/2020.
- Student resources:**
 - Learner's Book:** Cambridge Global English Learner's Book 1. Valid until: 15/09/2020.
 - Workbook:** Cambridge Global English Workbook 1. Valid until: 15/09/2020.
- Supporting resources:**
 - Audio and transcripts:** Download audio files and transcripts. Valid until: 15/09/2020.
 - Answers:** Learner's Book and Workbook answers. Valid until: 15/09/2020.

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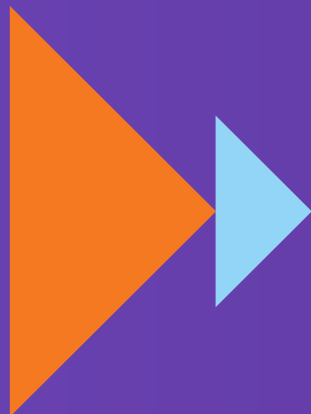
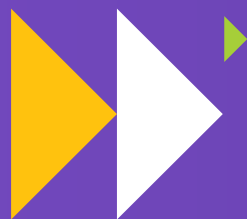
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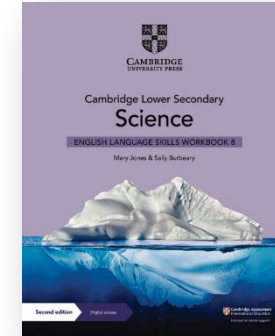
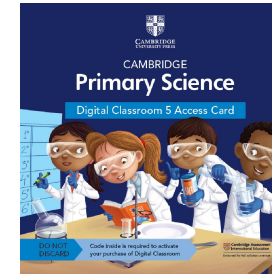
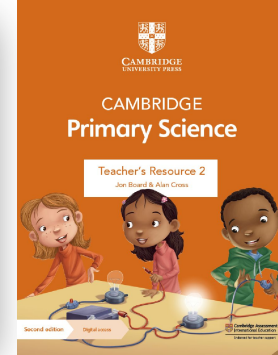
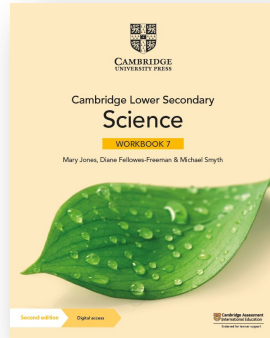
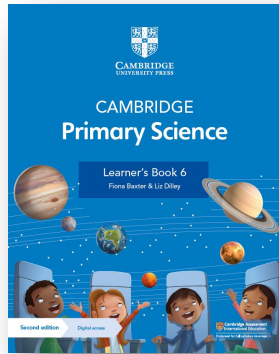
Cambridge Primary and Lower Secondary Science





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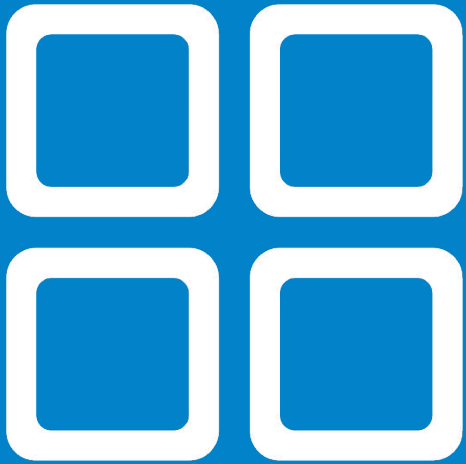
Series components



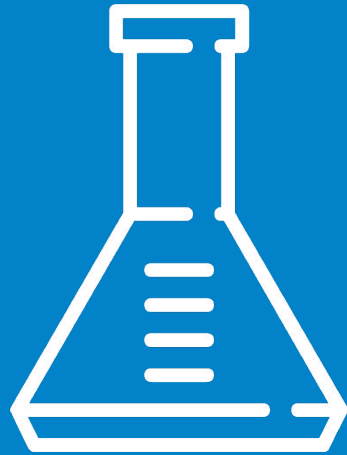
Learner's book with digital access stage 1 - 9	Digital learner's book stage 1-9	Workbook with digital access stage 1-9	Teacher's resource with digital access stage 1-9	Digital Classroom stage 1-6	English language skills workbook stage 7-9
Core learner activities	Digital only version of the learner's book	Additional, differentiated practice opportunities	Everything teachers need to plan and run the course	Onscreen version of the learner's book and workbook with interactive activities and video	Opportunities for learner's to develop their language skills and scientific vocabulary

Key curriculum changes for first teach in 2021

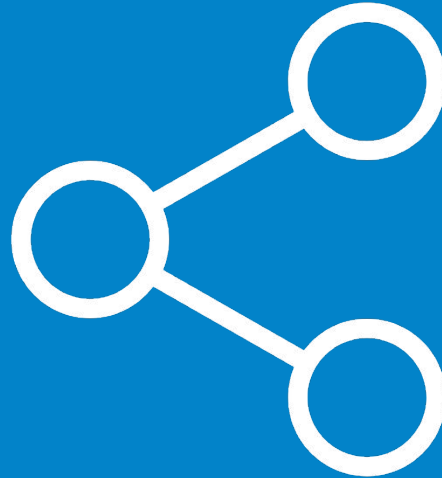
Cambridge Primary & Lower Secondary Science



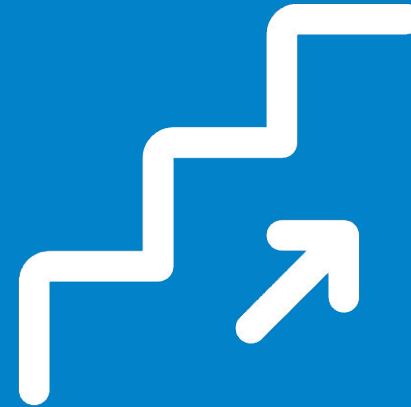
Now four content strands



Thinking and Working Scientifically



Science in context



Clear progression through stages



Earth and space

3 Forces and energy

> 3.2 Formation of the Solar System

In this topic you will:

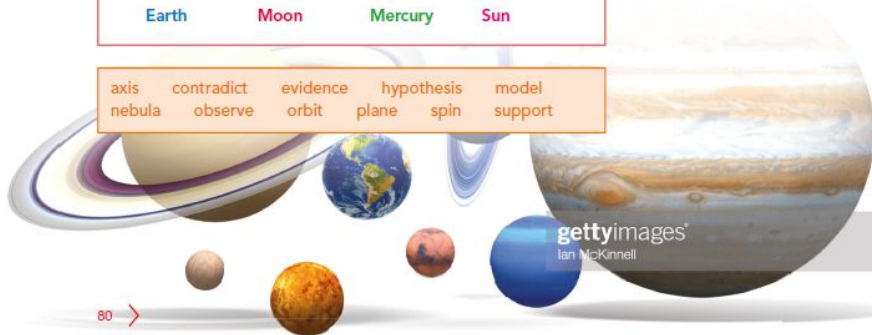
- learn about how scientists think the Solar System was formed
- think about objects in space growing larger and increasing in mass
- understand that as these objects increase in mass their gravity increases
- understand that as their gravity increases, they can attract even more mass.

Getting started

Choose one correct answer to each question.

- 1 An object causes a strong force of gravity. What must the object have?
 large size large mass small size small mass
- 2 Which of these objects has the largest mass in the Solar System?
 Earth Jupiter Sun Neptune
- 3 Which of these objects is at the centre of the Solar System?
 Earth Moon Mercury Sun

axis contradict evidence hypothesis model
 nebula observe orbit plane spin support



3 Rocks, the rock cycle and soil

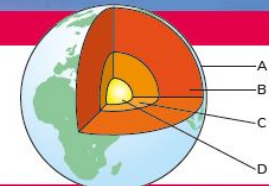
> 3.1 Igneous rocks

We are going to...

- find out that rocks can be classified into different types and describe the features of each
- use diagrams and photographs to describe igneous rocks
- describe the formation of igneous rocks in terms of magma and solidification
- make predictions, based on what we know about how igneous rocks form
- describe the accuracy of predictions, based on results
- make a conclusion from results using science understanding
- describe risks when planning practical work and carry out practical work safely
- sort and group rocks by observing differences
- complete a key to igneous rocks based on easily observed differences.

Getting started

- 1 Name the layers A, B, C and D.
- 2 What does layer B consist of?
- 3 What happens when the material in layer B is ejected through the Earth's surface?



crystal crystalline extrusive igneous rock geologist igneous rock
 intrusive igneous rock mineral naked eye sedimentary rock solidification



Earth and space

3 Rocks, the rock cycle and soil

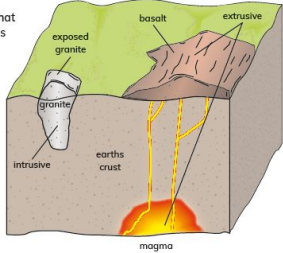
What are igneous rocks?

The word 'igneous' means fire. Igneous rocks come from magma that has cooled into solid rock. Magma is hot, like a fire.

Look at the diagram. Notice that magma is coming from the mantle, deep below the Earth's surface. When magma cools it turns into a solid. This process is called **solidification**.

Some of the magma comes out at the surface as lava. When the lava cools, it solidifies into an **extrusive igneous rock**. 'Extrusive' means outside the Earth's crust on the surface. The photograph on the opening page of this unit shows this happening. The rock is a black rock called basalt.

Some of the magma stays inside the Earth's crust. It cools down more slowly than the lava and solidifies into an **intrusive igneous rock**. 'Intrusive' means inside the Earth's crust. An example of an intrusive igneous rock is granite. On the diagram you can see that when the rocks above the intrusive igneous rock wear away, the granite appears at the surface.

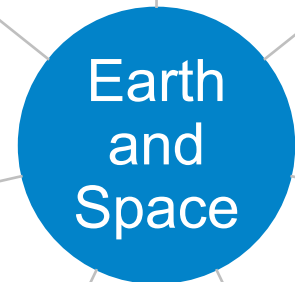
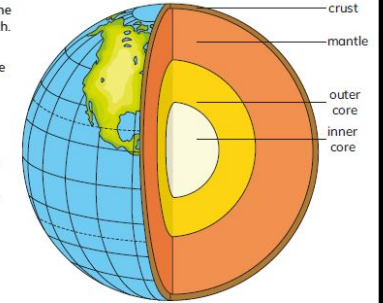


4 Earth and its habitats

Here is a diagram to show the internal structure of the Earth. The structure is made up of different layers: the **crust**, the **mantle** and the **core**.

Crust

The crust is the thin outer layer of the Earth where we live. The crust is formed of rocks. Under the oceans the crust is about 5 km thick. Under the land the crust is about 70 km thick. The temperature of the crust increases from 20°C at the surface to 400°C at its deepest part.



Some of the magma forces its way through cracks in the sides of the volcano. When this magma erupts it forms baby volcanoes called **secondary cones**.

Questions

Look at the photograph of flowing lava on the right.

- 1 Point to the lava that is still flowing.
- 2 Point to the lava that has cooled down and hardened into rocks.



Look at the diagram of a volcano and the photograph of a volcano. The diagram is a model of the real thing.

- 3 Talk about features of the volcano that you can see on the photograph and the diagram.

4 Earth and its habitats

> 4.1 The structure of the Earth

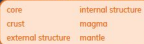
We are going to...

- describe a model of the structure of the Earth
- discuss how a model can never be a true copy of the real thing

Getting started

This photograph of Earth was taken from space.

- 1 What shape is the Earth?
- 2 What does the surface of the Earth consist of?
- 3 What do you think might be underneath the surface?
- 4 The solid white part at the bottom of the image is ice. Use the particle model to describe how the ice becomes water in the blue parts of the image. What do we call this change?
- 5 What provides the energy that makes the ice change into water?



What is inside the Earth?

You already know that the outside part of the Earth is made of sea water. We call this the Earth's **external structure**.

But how can scientists find out about the parts of the Earth that are underneath the surface? These parts make up the Earth's **internal structure**.

To look at the internal structure of the Earth, our model needs to show what the Earth would look like if we could cut it open, like we do with a peach. Here is a whole peach and a peach that has been cut open to see the inside.



Questions

- 1 Describe the external structure of a peach.
- 2 Does the second image show the external structure or the internal structure of a peach?
- 3 Name the two layers which make up the internal structure of a peach.



Thinking and working scientifically



Thinking and Working Scientifically provides learning objectives describing the approaches to scientific thinking and working that need be developed across the four content strands.

Think like a scientist 3.4.1

Investigate a soil sample

- 1 Collect some soil in a tin or a jar and bring it to the classroom.
- 2 Predict what you think the soil is made of.
- 3 Spread the soil on to a sheet of newspaper.
- 4 Observe the soil. Discuss these questions in your group to help you to decide what the soil is made of.

Questions

- 1 What colour is the soil?
- 2 Are there any stones in the soil?
- 3 Are the particles of soil the same size?
- 4 Rub some of the soil between your fingers. Describe how it feels. Choose from these words: rough, smooth, sticky, crumbly, damp, dry. These words describe the soil's texture.
- 5 What do you think the particles of soil are made from?
- 6 Is there any organic matter in the soil? Organic matter is living things or things which were alive such as dead leaves, bits of root and twigs.
- 7 Animals are also organic matter. Are there any animals such as ants or worms in your soil sample?
- 8 What do you think is between the particles of soil?
- 9 Does the soil contain any water?

Think like a scientist 6.2.1

Demonstrate how light travels when it refracts

You will need:

- a glass of water and a pencil

- 1 Predict what you will see when you put the pencil into the water. Put the pencil in the glass of water.
- 2 Observe the pencil in the glass from the side.
- 3 Observe the pencil in the glass from the top.
- 4 Take out the pencil. Is it changed in any way?

Questions

- 1 Did what you saw match your prediction?
- 2 Draw a picture of the pencil in the glass from the side.
- 3 Draw a picture of the pencil in the glass from the top.
- 4 Why is what you saw an optical illusion?
- 5 Which mediums does the light pass through between the pencil and your eye?
- 6 Describe what you saw. Complete these sentences.

Continued

- 5 Describe what you saw. Complete these sentences.
Light from the pencil travels through the _____ in the glass and then _____ when it passes through the glass to the _____.
- 6 Write a conclusion to explain why the pencil appeared to bend, using your scientific knowledge of refraction.
- 7 Think back to the paper with the arrows on it behind the glass of water. Repeat the demonstration. Try to explain what happened using what you know about refraction.

How are we doing?

How well have you and your group done the demonstrations?

How well can you explain what happened using your scientific knowledge of refraction?

Choose from:

'We can explain refraction well' or 'We are learning how to explain refraction' or 'We need some help'



Thinking and working scientifically

Think like a scientist

Measuring heat and temperature

In this investigation, you will make measurements of both heat and temperature. Work in groups of three or four.

You need

- See diagram

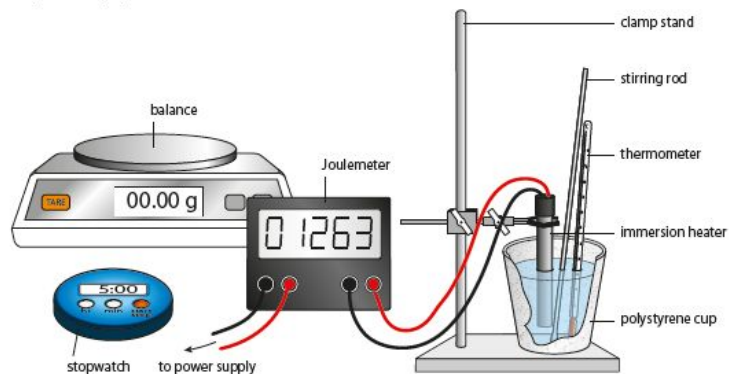
Safety

Do not touch the immersion heater while it is switched on.

Clamp the immersion heater so that it does not contact the bottom of the cup.

Method

Set up the equipment as shown in the diagram.



- 1 Put a known mass of water into the polystyrene cup.
- 2 Measure and record the temperature of the water at the start of the experiment.
- 3 Set the joule meter to zero or record the reading at the start.
- 4 Switch on the immersion heater and start the timer.
- 5 Use the stirrer to mix the water just before every minute and measure the water temperature every minute.
- 6 Record the reading on the joule meter every minute.

Continued

7 Continue with the temperature measurements until the temperature of the water has increased by 10 °C.

8 Switch off the immersion heater and allow it to cool.

Questions

- 1 Record your results in a table.
- 2 Plot a line graph with temperature on the vertical axis and energy on the horizontal axis.
- 3 Describe the trend in the results.
- 4 If you were to repeat this experiment, list three variables that should be the same.
- 5 Most of the thermal energy from the immersion heater is transferred to increase the temperature of the water. List three other ways that thermal energy can be transferred in this investigation.
- 6 Suggest **two** ways to ensure that more thermal energy from the immersion heater is transferred to the water.

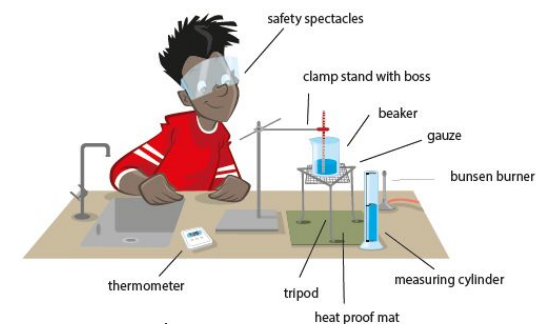
Self-assessment

Decide how well you did each of these things:

- making measurements at the correct time
- recording results in a table
- drawing the graph of the results

Choose one thing that you could do better next time.

How will you do this better next time? What will you change?





Science in context - Projects

- Science in Context provides a framework for how context can be incorporated into the teaching of science.


Project: Frozen foods

Have you ever eaten ice cream? Ice cream is a frozen food. We can buy many different foods that are frozen.

Part 1

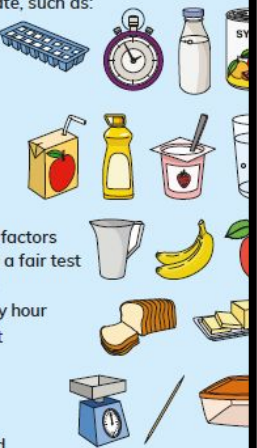
Speak to people in your community who use frozen foods, or do some research in shops to find out:

- why people freeze foods
- which foods are often frozen
- how people prepare the frozen foods for eating.



Part 2

- 1 Plan an investigation to find out how much time it takes for different foods to freeze. Choose a question to investigate, such as:
 - Which liquids freeze quickest?
 - Do solid foods freeze faster than liquids?
 You can think of your own question to investigate, if you wish.
- 2 Choose the materials and equipment you will need. Here are some ideas:
You should test five or six different foods.
- 3 Think about:
 - the factors you will keep the same and the factors you will change to make your investigation a fair test
 - how often you need to check if the foods are frozen, for example every 30 minutes or every hour
 - how you will test if the food is frozen or not
 - how you will record your results.
- 4 Carry out your investigation.
- 5 Draw a graph of your results.
- 6 Make a conclusion for your investigation based on your results and the question you investigated.



Part 3

Prepare a presentation to tell your class about your findings from Part 1 and Part 2 of this project. Your presentation should include pictures, graphs or drawings.

Project: Where is the evidence?

When manufacturers want to sell you their products, they make claims about them, or offer you deals to make you think this is the best brand to buy. Sometimes a deal seems very good, such as "50% extra for free" or "buy one get one free". To know if it is a good deal there are some questions you need to ask, such as:

- 50% more than what?
- Is it cheaper than buying the regular size?
- Have they increased the price?
- Does buying two give me a better deal than just buying a larger size?

To find out, you would need to do some research into the sizes and prices of the packs and work out how much they each cost per 100 g or 100 cm³.

Some manufacturers make claims for their products, such as: "80% of women said that after using this shampoo their hair was stronger" What does this mean?


Here are some points you need to consider:

- Stronger than what?
- How do the women know this?
- How could you find out?
- How many women did they ask?
- Which type of hair: long, short, curly or straight?

Project: How people use science

In this unit you have found out about the structure of the Earth and volcanoes. You know that it gets hotter as you go deeper into the crust. We see evidence of this when lava erupts at the surface in a volcano. We also see this when water from deep in the crust reaches the surface as a hot spring. People make use of these things. They can use the hot water in their homes or make the hot springs into a tourist attraction. Volcanoes are also tourist attractions. Many people choose to live on the sides of a volcano because the soil is rich and crops grow well.

- Find out how people make use of a hot spring or a volcano in your country. If there isn't one in your country choose one in another country.
- Name the volcano or hot spring and describe where it is. You can draw a map to show this. Describe how it used by people.
- Present your project as a poster. Illustrate with photographs or drawings or pictures cut out of magazines.
- Use colours and pictures to make your poster eye-catching.
- Remember to give your poster a heading.





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▶▶ Resource walkthrough





Learner's book

Learners are clear on the lesson focus

'Getting started' feature helps students think and talk about what they already know

5 Light

> 5.1 How we see things

We are going to...

- investigate how we see things that are not sources of light
- make predictions and see if results support our predictions
- make a conclusion from our results.

Getting started

- 1 Identify the **sources** of light in the pictures – where does the light come from?
- 2 What is the source of light in your classroom?
- 3 How do you think you are able to see your teacher?

Unit specific vocabulary is pulled out

5.1 How we see things

How do we see things that are not sources of light?
Let's investigate this question in the next activity.

Think like a scientist

Investigate how we see an object

You will need:
a large cardboard box with lid, a flashlight with batteries, a small object such as a coin, a pen knife or craft knife

Be careful when you use the knife.

- Cut two holes in the lid of the box as shown in the picture. One hole must be big enough for your flashlight to fit through and the other hole must be big enough for you to see through. Place the coin on the bottom of the box. Replace the lid on the box.
- Cover the flashlight hole with your hand. Predict whether you will be able to see the coin when you look through the other hole.
- Test your prediction.
- Shine your flashlight through the flashlight hole. Predict whether you will be able to see the coin now when you look through the other hole.
- Test your prediction.



Learner's Book

5 Light

Continued

Questions

- Can you see the coin without shining the flashlight?
- Can you see the coin when you shine the flashlight?
- What conclusion do you reach about the question: How do we see things that are not sources of light? Copy and complete these sentences to help you write your conclusion:
Light travels from the ____ source (the flashlight) to the object (the ____). The light bounces or reflects off the ____ into our _____. This is how I can see the object.

How am I doing?

How well can I make a prediction? 😊 or 😐 or 😞

How well can I test a prediction? 😊 or 😐 or 😞

How well can I make a conclusion? 😊 or 😐 or 😞

Activity

How can the person see the car?

Look at the picture.

Questions

- Identify the source of light.
- Identify the object.
- Write a sentence to explain how the person can see the car.
- Discuss in class how the person could see the car at night.

Look what I can do!

- I can understand that I see an object because light reflects off the object into my eyes.
- I can make a prediction and see if results support my predictions.
- I can make a conclusion based on an investigation.



Project feature helps with assessment for learning and promotes cross-curricular links


5 Light

Project: Research the life and discoveries of an astronomer

For thousands of years scientists have studied space. Six of these scientists are mentioned in the information below. Choose one of the scientists mentioned below or a different scientist. Use library books or the internet to find out more about the scientist's life and discoveries. Find out how the scientist you chose discovered new information about the solar system.

Use these headings to organise your information:

- Name of scientist
- Date of birth and death
- Nationality
- What did they discover?
- What equipment did they use?
- How did they change ideas about the solar system?



Work with a partner to make a short presentation to the rest of the class.

How scientists discovered the solar system

Scientists who study space are called astronomers. Two thousand years ago people believed that the Earth was flat and that the Earth was at the centre of the solar system. An Egyptian astronomer called Ptolemy described how the moon, sun, planets and stars revolved around Earth.

The Indian astronomers Varahamihira and Bramagupta suggested that the Earth and the planets were round and not flat.

About 1500 years ago, the astronomer Aryabhata agreed that the Earth was round. He stated that the apparent rotation of the planets was a result of the actual rotation of the Earth.

Five hundred years ago a Polish astronomer, Copernicus, observed the movements of the planets and decided that the previous astronomers were wrong. He wrote a book saying that the Earth and all other planets moved around the sun. For a long time nobody believed him!

Four hundred years ago the Italian astronomer Galileo studied the sky. He used the newly invented telescope to do this. He noticed that the planet Venus had different sides lit up by the sun at different times. This means that Venus must move around the sun. Galileo agreed with Copernicus.



Check your progress feature provides exam-style questions that can be used as an end of unit test

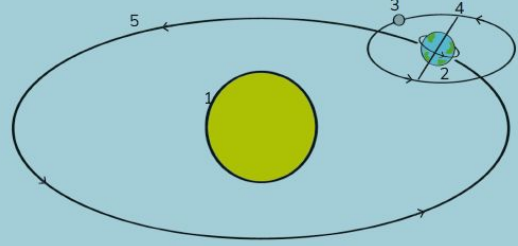
Check your progress

1 Match up words A–H in Column A with their meanings 1–8 in Column B.

Column A	Column B
A Reflect	1 A line that light travels in
B Rate	2 A lump of ice and dirt that travels in a large orbit around the sun
C Ray	3 Scientific evidence that something is true
D Asteroid	4 Go round and round very fast
E Proof	5 The action of light bouncing off a surface
F Spin	6 In the opposite direction to a clock's hands
G Comet	7 To put in order, for example from biggest to smallest
H Anticlockwise	8 Rocky masses that orbit the sun

2 Which surfaces from the list below reflect light and which surfaces absorb light?
muddy water mirror clear water wood

3 a Write the labels for the features numbered 1–5 on the diagram.



b What does the Earth do to cause day and night?
c List the planets besides Earth that orbit the sun.

Activities and 'Think like a scientist' features help students use their scientific enquiry skills

Opportunities for students to self assess their learning help them develop reflection skills





Workbook

1.4 Cells, tissues and organs

> 1.4 Cells, tissues and organs

Exercise 1.4A Identifying cells, tissues, organs and organ systems

Focus

This exercise will help you to remember the meanings of the words 'cell', 'tissue', 'organ' and 'organ system'.

Draw a line from each word to the correct diagram.

Words

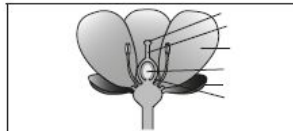
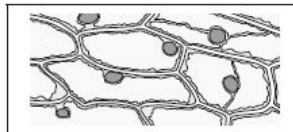
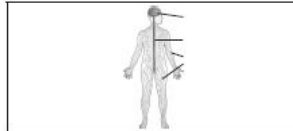
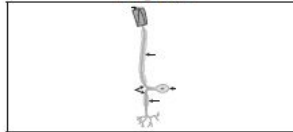
cell

tissue

organ

organ system

Diagrams



Focus exercises build and consolidate learners' foundation skills within a topic. More scaffolding may be provided.

1 Cells

Exercise 1.4B Human organ systems

Practice

If you studied Cambridge Science before Stage 7, you will have learnt about some of the organ systems in the human body. This will help you to complete the table. If you cannot fill in the third column from memory, look up the organ systems on the internet or in the library.

The table below is about four organ systems in the human body. These are:

respiratory system nervous system
circulatory system digestive system

Complete the table by:

- writing the name of the organ system in the second column
- writing at least **two** organs in the third column.

Function	Organ system	Some organs in the system
transporting substances around the body		
breaking down food and absorbing it into the blood		
taking oxygen into the body and getting rid of carbon dioxide		
helping different parts of the body to communicate with one another		

Practice exercises provide more opportunities for practice, pushing skills further.



Workbook



Challenge exercises stretch and challenge learners even further. Less scaffolding may be required here. In particular, these exercises can target higher order thinking skills and longer writing challenges

1.4 Cells, tissues and organs

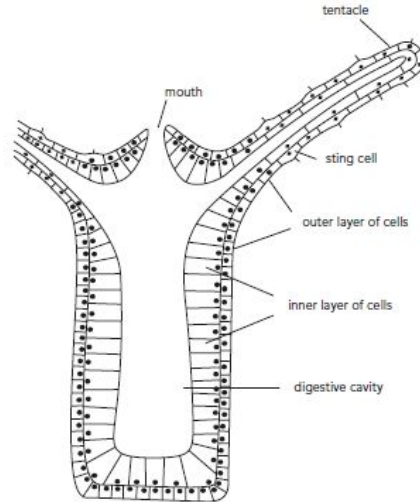
Exercise 1.4C Sting cells in *Hydra*

Challenge

In this challenging task, you will practise finding relevant information in text and diagrams. You will then apply this information, and your knowledge of cells, tissues and organs, to answer questions.

Hydra is a tiny animal that lives in freshwater ponds. It has tentacles that it uses to catch even smaller animals, which it pushes into its mouth. The mouth opens into a cavity where digestion takes place.

The body of *Hydra* is made up of two layers of cells. The diagram shows what *Hydra* would look like if you cut one in two, from top to bottom, and looked at it through a microscope.

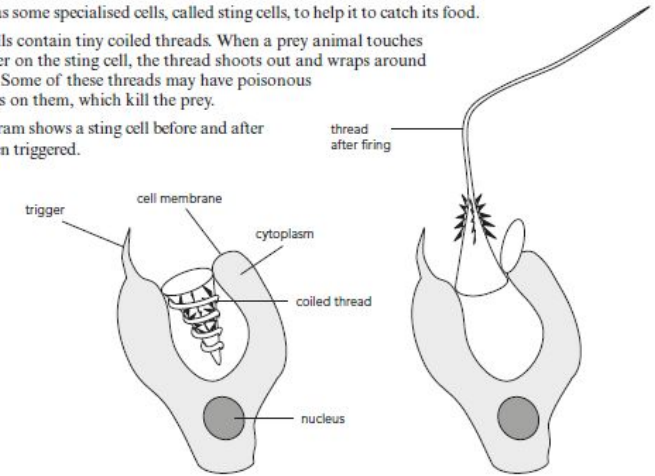


1 Cells

Hydra has some specialised cells, called sting cells, to help it to catch its food.

These cells contain tiny coiled threads. When a prey animal touches the trigger on the sting cell, the thread shoots out and wraps around the prey. Some of these threads may have poisonous chemicals on them, which kill the prey.

The diagram shows a sting cell before and after it has been triggered.



1 For each of these parts of *Hydra*, decide whether it is a cell, a tissue or an organ.

- a inner layer of cells
- b outer layer of cells
- c sting cell
- d tentacle

2 In humans, there are several different organs that make up the digestive system.

Does *Hydra* have a digestive system? Explain your answer.

.....
.....
.....





English Language Skills Workbook



English Skills and Support

> English Skills and Support

This book is to help you with English skills when you are studying science. The *English Skills and Support* section gives you information about important topics in English that you will use in science. You can use this section at any time you need help with English while studying science.

In this English reference section, there is information about English grammar and vocabulary to help you with science.

You will see many different grammatical words in the English language reference section explained.

Connecting words

Connecting words help you to join two pieces of information together in different ways.

In science, we often need to talk about more than one thing. We can join two ideas together with connecting words, for example: *and*, *but*, *because*, *so*. These are called connectives. Connectives are like glue – they stick two ideas together.

There are many connecting words in English and they do different things in sentences.

Connective	What it is used for
and	Connects two positives together
but	Connects a positive and a negative together
because	Gives a reason why
so	Gives the result of a situation

English Skills and Support

Here are some examples.

and	positive	+	positive
	Roots are usually underground		and anchor the plant in the ground.
but	positive	+	negative
	The roots underground continue to live		but the plant above ground might die in harsh conditions.
because	fact or situation	+	why
	Plants can absorb minerals from soil		because they have roots.
so	fact or situation	+	result
	Plants have roots		so they can absorb minerals from the soil.

Command words

Science questions often start with 'name', 'state', 'describe' or 'explain'. You need to know how to answer these questions correctly.

Command words	Answer
Name	Give the name of the person, object or animal.
State	Give brief information.
Describe	Say what happens.
Explain	Say why something happens.

English Skills and Support

can

This modal verb shows:

- an **ability** to do something
- that something is **possible**.

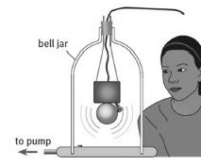


Sound **can** travel through air. (Sound has the **ability** to travel through air.)
Water **can** be a solid, liquid or a gas. (It is **possible** for water to be a solid, liquid or a gas.)

cannot (can't)

This means the opposite. It means:

- you are **not able** to do something
- that something is **not possible**.

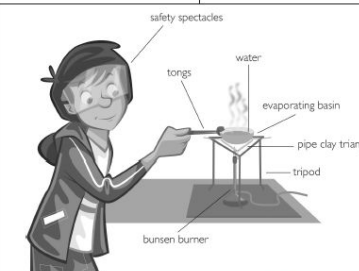


Sound **can't** travel through a vacuum. (Sound does **not** have the **ability** to travel through a vacuum.)
When a solution is saturated, the solvent **can't** dissolve any more solute. (It is **not possible** to dissolve any more solute.)

English Skills and Support

might

This means it is possible.



When I do this experiment, there **might** be a chemical reaction. (It is possible that there will be a chemical reaction.)

might not

This means the opposite. It means that perhaps it is not possible.

You **might not** get the result you predicted. (It is possible that the result will be different to what you expected.)

English skills and support: background and explanation of English themes

- Overview of theme
- Relevance of theme to study in science





English Language Skills Workbook

English Skills and Support

Command words

Science questions often start with *name*, *explain* or *describe*. You need to know how to answer questions of this type correctly.

Command words	Answer
Name	Give the name of the person, object or animal.
Explain	Say why something happens.
Describe	Say what happens.

For example:

Question: **Name** the planet.

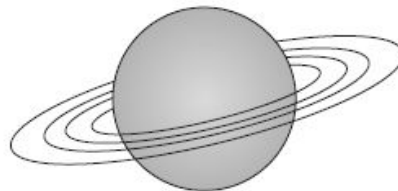
Answer: Saturn

Question: **Describe** how particles are arranged in a solid.

Answer: In solids the particles are arranged in a fixed pattern. The particles are held together strongly and are tightly packed together. This is why solids have a fixed shape.

Question: **Explain** why liquids cannot change volume.

Answer: Matter can only change volume if the particles in it can spread out or move closer together. In a liquid, the particles are very close together and cannot be squashed. The particles touch each other but they can move past each other.



Active and passive

You will see sentences using **active verbs** and **passive verbs** in science. Sometimes you need to use passive verbs, but active sentences are easier to understand.

Command words in the English support section are often referred to throughout the book



English Language Skills Workbook



5 Materials and their structure

> 5.1 The structure of the atom

Exercise 1 Connecting words

In this exercise, you use suitable connecting words to complete descriptions of the structure of an atom.

Look at *Connecting words* in the English Skills and Support section for information about connecting words.

Choose the best words to complete the sentences.

and because but but not

- a We cannot see atoms they are so small.
- b The nucleus of an atom contains neutrons electrons.
- c A proton a neutron have the same mass.
- d Electrons, neutrons protons are subatomic particles.
- e Electrons have a negative charge protons have a positive charge.

Exercise 2 Answering questions

It is important to do what the command word in a question asks you to do. In this exercise, you practise responding to three different command words.

5 Materials and their structure

Look at *Command words* in the English Skills and Support section for information about command words.

- a **Name** the negatively-charged particles in an atom.

.....

- b **Describe** the three types of subatomic particle in an atom.

.....

.....

.....

- c **Explain** why an atom has no overall charge.

.....

.....

.....

.....

.....

> 5.2 Purity

Exercise 1 Singular and plural verbs

This exercise is about choosing the correct form of a verb to complete a sentence about purity.

Look at *Singular and plural verbs* in the English Skills and Support section for information about singular and plural verbs.

The English language support section can be used to support learners with working through questions in each unit in a language context





Teacher's Resource

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- Introduction to key approaches to learning and teaching
- Overview of components in the series
- Overview of the curriculum framework
- Curriculum framework correlation chart
- Lesson plan template
- Scheme of work





Teacher's Resource

> 1 Respiration

Unit plan

Topic	Learning hours	Learning content	Resources
1.1 The human respiratory system	2	Structure of the respiratory system	Learner's Book: Questions 1–2 Think like a scientist: Looking at lungs Activity 1.1.1: What does the larynx do? Workbook: Exercise 1.1 Structure and function in the respiratory system Other components: Worksheet 1.1 Journey into the lungs
1.2 Gas exchange	2	Structure of air sacs; movement of oxygen and carbon dioxide between air sacs and blood; comparing the composition of inspired and expired air	Learner's Book: Activity 1.2.1: Gases in and out Think like a scientist: Why are air sacs so small?, including questions 1–3 Think like a scientist: Comparing the carbon dioxide content of inspired air and expired air, including questions 4–8 Workbook: Exercise 1.2 Lung surface area and body mass
1.3 Breathing	2	How air is moved into and out of the lungs	Think like a scientist: Measuring the volume of air you can push out of your lungs, including Questions 1–2 Think like a scientist: Using a model to represent breathing movements, including Questions 3–6 Learner's Book: Questions 1–2 Workbook: Exercise 1.3A Measuring lung volumes Exercise 1.3B Looking at data on lung volumes Exercise 1.3C Lung volume at different ages Other components: Worksheet 1.3 Respiratory system leaflet

Topics that appear in each unit along with suggested number of teaching hours, relevant components that are appropriate

Topic	Learning hours	Learning content	Resources
1.4 Respiration	2	How useful energy is released from glucose inside mitochondria	Learner's Book: Questions 1–3 Think like a scientist: Investigating respiration in peas, including Questions 1–6 Activity 1.4.1: Thinking about a thermogram Activity 1.4.2: Explaining the difference between breathing and respiration Workbook: Exercise 1.4 Respiration by yeast Other components: Worksheets 1.4A B and C An investigation using hydrogen carbonate indicator
1.5 Blood	2	Structure of blood and functions of its components; how blood transports oxygen and glucose for respiration	Learner's Book: Questions 1–4 Activity 1.5.1: Making a picture of blood Workbook: Exercise 1.5A The components of blood Exercise 1.5B Functions of blood components Exercise 1.5C Rats at altitude Other components: Worksheets 1.5A, B and C Adapting to high altitude
Topic	Check your progress	Project for SiC	Language development worksheets
End of unit	Questions 1.1–1.4	Helping white blood cells to protect us from pathogens	1.1 Completing sentences about respiration 1.2 Explaining the meanings of words

BACKGROUND KNOWLEDGE

Learners will know that respiration is one of the characteristics of living organisms. Some may also know that it involves the release of energy from glucose. They learnt about the structure of cells in Stage 7, and so should be aware of mitochondria. Learners who followed the Cambridge programme at Stage 6 will have learnt the basic structure of the human respiratory system, and they should know that oxygen moves from air into the blood in the lungs. However, they are unlikely to know about air sacs, or about the movement of carbon dioxide from the blood to the air inside the lungs. At Stage 5, they will have used the particle model to describe solids, liquids and gases, which will help them to understand how particles of oxygen and carbon dioxide can move between air sacs and the blood. They are unlikely to know about

diffusion, which is covered later in this book in Topic 3.7, Particles on the move. The movement of air into and out of the lungs by breathing movements is a difficult topic at this level, and needs to be approached with care, giving learners time to absorb the various concepts involved. The relationship between pressure and volume will be covered in more detail in Topic 3.6, Pressure in liquids and gases. At Stage 6, learners will have dealt with the human circulatory system, including its function in transporting oxygen. Note that this topic covers only the structure and functions of blood; there is no need to consider the heart or blood vessels in any detail. Learners will have learnt about the structure and function of red blood cells at Stage 7, Topic 1.3.

Background subject content for teachers to familiarise themselves with the scientific content



Teacher's Resource

1 RESPIRATION

TEACHING SKILLS FOCUS

Organising practical work

Hands-on practical activities are an extremely important component of any modern science course. Learners experience for themselves how a variety of scientific apparatus and procedures are used. For many learners, doing an experiment themselves makes it much easier for them to understand the topic they are studying.

Thinking carefully about how you organise practical work with your class can make the experience for both you and your class much more enjoyable and successful. Here are some ideas you might like to consider.

- Before attempting to do any practical work, it is essential that learners understand the rules for behaviour in a laboratory. Schools should have their own set of rules, which are the same in every laboratory, and display them prominently on the wall. They must be fully enforced by every science teacher.
- You may like to have a supply of safety glasses and laboratory coats for learners to use when they are doing practical work. Putting on a lab coat can help them to feel responsible as they work.
- It is very unlikely that you will have an emergency, but you should have in place a procedure with which you and the learners are familiar. You should be able to tell learners to stop what they are doing immediately, and know that they will respond appropriately. This may require practice. It is important, however, not to scare learners and make them nervous of doing practical work. Laboratories can often be among the safest places in the school, because learners know how to behave sensibly there.
- Some basic apparatus (such as test tubes, retort stands) can be stored so that learners can find and collect it for themselves when asked to do so. Label each cupboard with the name of the apparatus that is kept inside; you can include a drawing or photograph of the apparatus on the cupboard door as well, to help learners who are not sure of the names.
- It is a good idea to keep the apparatus on trays inside the cupboards. You can then take

a tray of, for example, small beakers out of the cupboard when needed and place it on the bench, to make it easier for learners to collect one. Make sure that you place the trays at different places around the room, to avoid learners all standing in the same place as they collect their apparatus.

- When working in groups, one person can take responsibility for collecting the apparatus, to avoid everyone crowding around at the same time. If there is a lot to collect, then arrange for one person from each group to collect some of it, and another to collect the rest. You can also ask one group at a time to collect their apparatus, rather than everyone at once. Make sure that different groups do this in different sequences each time.
- If you have a large class, or a class where learners are unused to being able to move around in the room, or are unfamiliar with laboratory rules, problems may arise if they are asked to collect their own materials. Instead, you can take a tray of the required apparatus to each group or each bench. Later, as learners get more used to working in a laboratory, you can move towards expecting them to collect their own apparatus.

As a challenge, in this unit you could try the *Think like a Scientist* tasks in Topic 1.2, *Think like a scientist: Why are air sacs so small?* and *Think like a scientist: Comparing the carbon dioxide content of inspired air and expired air.* Settle the groups at their places, then take the prepared apparatus in trays to each group. Then, in Topic 1.4, *Think like a scientist: Investigating respiration in peas*, set out the apparatus at the front of the laboratory, and ask one person from each group to come and collect it.

Plan how you will clear up when the practical session is over. Will learners do their own washing up, or will you or a laboratory technician do this? Where will learners place dirty or washed apparatus? Have a method in place to trap any solids that might be thrown away, to stop them going down the sink – you can tie a sieve (the type that you use in a kitchen) to each tap, for convenience.

CAMBRIDGE LOWER SECONDARY SCIENCE 8: TEACHER'S RESOURCE

CROSS-CURRICULAR LINKS

English language: Learners will use English language skills to construct their story for Worksheet 1.1.

Topic 1.1: The human respiratory system

LEARNING OBJECTIVES

Curriculum reference	Learning intentions	Success criteria
8Bs.03 Describe how the structure of the human respiratory system is related to its function (in terms of lung structure).	<ul style="list-style-type: none"> • Learn about the structure of the human respiratory system. [LB, WB] 	<ul style="list-style-type: none"> • Name the parts of the respiratory system on a diagram.
8TWS.c.07 Collect and record sufficient observations in an appropriate form.	<ul style="list-style-type: none"> • Use a range of senses to observe the structure of lungs. [LB] 	<ul style="list-style-type: none"> • List, in order, the parts of the respiratory system that air passes through.

LANGUAGE SUPPORT

Helping learners to learn the names of the parts of the respiratory system and to outline their functions; encouraging use of these names and giving confidence in pronouncing and using these words.

Learners will use the following words:

respiration: a chemical reaction that takes place in all living cells, in which energy is released from glucose

aerobic respiration: a form of respiration in which oxygen is combined with glucose; it takes place inside mitochondria

respiratory system: the system involved with providing oxygen to the blood and removing carbon dioxide, so that respiration can take place in cells

trachea: a tube leading from the back of the throat, through which air travels into the lungs; it has C-shaped rings of cartilage in it to support it

windpipe: another name for the trachea

cartilage: a tough but bendy material that provides support to the trachea

bronchus: one of two tubes that convey air from the trachea into the lungs

bronchiole: one of many small tubes that carry air through the lungs, from the bronchi

air sac: a tiny blind-ending sac in the lungs, in which gas exchange takes place between the air and the blood; also known as an alveolus

larynx: the organ at the top of the trachea that contains the vocal cords

voicebox: another name for the larynx

vocal cords: bands of muscle that stretch across inside the larynx, which we vibrate to make sounds

Cross-curricular links point out where teachers can make links with other subjects

Learning objectives are based on curriculum references, learning intentions and success criteria

Teaching skills focus is aimed at teachers wanting to develop their skills and challenge themselves.

Language support feature includes definitions for quick reference for teachers, advice for teachers on challenges that students may face with language



Teacher's Resource

Common misconceptions feature highlights what learners might misinterpret and how to address them

Starter ideas to grab attention and generate interest in a particular topic

Plenary ideas include opportunities for consolidation and self/peer assessment against success criteria

1 RESPIRATION

Common misconceptions

Misconception	How to elicit	How to overcome
Learners may think that the lungs are where respiration takes place; it is very common for there to be confusion between gas exchange and respiration.	Ask learners to do the <i>Getting started</i> activity. You can ask questions as you demonstrate the structure of sheep or goat lungs.	Constant reinforcement is likely to be required, to emphasise the difference between gas exchange and respiration and also (later) breathing.

Starter ideas

- Getting started (10 minutes, including sharing ideas)**

Description: Ask learners to work with a partner to decide which statements are correct. There is no need to write down answers. Then ask some of the pairs to give their suggested answers, orally. Use their ideas to discover any wrong preconceptions about respiration, which you can address later in the lesson. Any wrong decisions about which statement of a pair is correct, or even slight uncertainty about this, will reveal misconceptions.
- Lungs (5–10 minutes)**

Resources: Lungs from a sheep or a goat, to be used later in the demonstration, *Think like a scientist: Looking at lungs*

Description: Before learners enter the room, place the lungs on dissecting board or in a large container, and cover.

Bring learners to the front of the class. Ask them to guess what is under the cover. They can ask questions, but you can only answer 'yes' or 'no'. You can give clues if they do not get close.

Uncover the lungs. Ask learners what they think they are, and what they do. There may be incorrect ideas about respiration happening only in the lungs.

You could now go straight into the *Think like a scientist* demonstration, or put the lungs on one side and start the main lesson using the diagram of the respiratory system in the Learner's Book.

Main teaching ideas

- The parts of the human respiratory system (20–25 minutes)**

Learning intention: To be able to identify and name the different parts of the human respiratory system, and to outline their functions
- Think like a scientist: Looking at lungs (15–20 minutes)**

Learning intention: To consolidate understanding of the structure of the respiratory system

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CAMBRIDGE LOWER SECONDARY SCIENCE 8: TEACHER'S RESOURCE

Resources: A fresh set of lungs obtained from a butcher – these are often readily available; sheep or goat lungs are ideal (if you have to obtain these the day before the lesson, make sure that they are kept in a fridge so that learners are not put off by strong smells); a dissecting board or large bowl in which to place the lungs; access to warm water, soap and towels, for washing hands; clipboards for learners to make notes or drawings, if appropriate

Description: Bring learners to the front. If any learners say that they do not want to watch, do not attempt to persuade them, but simply allow them to sit quietly at the back of the class, where they cannot see the lungs. These learners may decide to watch the demonstration once it has begun.

Demonstrate the structure of the lungs and the tubes leading into them. Allow learners to touch the lungs – they should feel how soft and spongy they are. They can also feel the cartilage rings in the trachea.

Talk through the questions and encourage learners to suggest their answers.

When the demonstration has finished, make sure that everyone washes their hands thoroughly.

They can then return to their places and write the answers to the questions.

If no set of lungs is available, a series of images showing the different parts of the lung, or a video clip showing the different structures of the lung or a video clip of a lung dissection can be used.

> **Differentiation Ideas:** This task works well with learners of all abilities. Differentiation is by outcome, where there will be a range of answers to the questions.

> **Assessment Ideas:** Listen to any questions as you demonstrate the lungs. Listen to answers from learners, and mark their written answers to the questions.

- What does the larynx do? (5–10 minutes)**

Learning intention: To practise observing carefully through touch and hearing

What the idea is good for: Helping learners to appreciate that observations can be made with all of our senses, not just sight.

Linking what they have learnt about the respiratory system to their own body.

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Description: Ask each learner to follow the instructions in the Learner's Book for this activity. They can do this individually, while seated at their desks.

> **Differentiation Ideas:** Some learners may need help in finding their larynx and in being able to feel differences in its position when they make different sounds. Some learners may be able to relate the higher frequency of vibration to the higher pitch of a sound.

Plenary ideas

- Naming the parts of the respiratory system (5 minutes)**

Description: Draw or project an unlabelled image of the respiratory system on the board. Ask a learner to name a part of the system. Ask another learner to come and label this part on the board. Repeat with each part.

> **Assessment Ideas:** Use answers to check learners' ability to recognise and name the parts of the respiratory system.

Check that learners can pronounce and spell the names correctly.
- Mastermind (5 minutes)**

Resources: A card for each learner, with a tick (✓) on one side and a cross (✗) on the other side

Description: Choose a learner (or ask for a volunteer) to be 'Mastermind'.

Ask this learner a question about the respiratory system, based on the work done in this lesson.

The Mastermind gives an answer – they can choose to give a wrong answer if they wish to.

The other members of the class hold up their cards, with the tick or cross showing, to show whether the answer is correct or incorrect.

You can then interrogate the rest of the class to find the correct answer if necessary, or to find out why a learner has identified a correct answer as a wrong one.

Repeat with more questions to the same Mastermind.

> **Assessment Ideas:** Use responses of the class to identify any misunderstandings.



Teacher's Resource Worksheets

Name _____ Date _____

> CAMBRIDGE LOWER SECONDARY SCIENCE STAGE 7 UNIT 1: WORKSHEET PACKS

Worksheet: 1.1A

Plant cell structure and function

The **function** of something is the job that it does.
Use a ruler to draw a line from each part of a plant cell to its function.

part of plant cell	function
cell wall	where the plant makes its food
cell membrane	controls the activities of the cell
cytoplasm	a clear jelly where chemical reactions happen
chloroplast	a space containing a solution of sugars in water
nucleus	a thin layer around the outside of the cell that controls what goes into and out of the cell
mitochondrion	a strong layer of cellulose that helps to hold the cell in shape
sap vacuole	where energy is released from food

Name _____ Date _____

> CAMBRIDGE LOWER SECONDARY SCIENCE STAGE 7 UNIT 2: STATES OF MATTER

2.1 Vocabulary - words about changes of state

Match these words about changes of state to their meanings.

melting	equipment used to measure temperature
thermometer	the curved surface of a liquid, best seen in a narrow tube.
meniscus	the process when a solid changes state and becomes a liquid
condensing	equipment for measuring the volume of a liquid
measuring cylinder	the space something takes up
volume	the process when a gas changes state and becomes a liquid

- Worksheet and language worksheet packs to accompany the Teacher's Resource
- End of unit, diagnostic, mid-point and end of year tests also provided



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▶▶ Beyond the textbook





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Beyond the textbook

Strategy

Develop global and customised school proposition that goes 'beyond the textbook', surrounding the curriculum product with professional development, expert and community created teacher resources, and assessment data

eBooks

Teacher Resources

Digital Classroom

PD
Resources

CEM: Baseline
Assessment

PD
Community

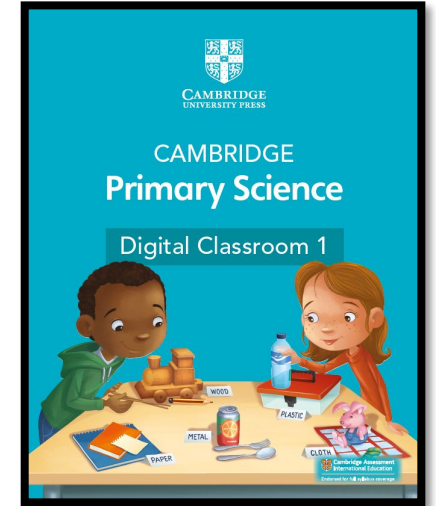


Going beyond the textbook

Digital



- Cambridge GO resources: digital editions of LB, WB, ELSWB and TRs for all stages
- Digital Classroom for stages 1-6: practical demonstrations, animations and songs



fruit

product of a tree or plant



flower

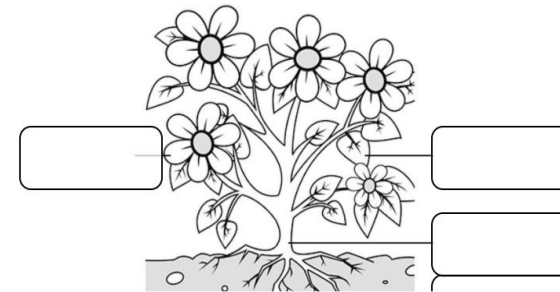
part of the plant that produces seeds



leaf

part of the plant joined to the stem where food is produced

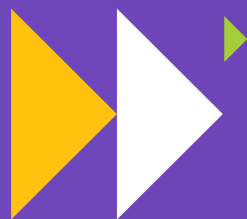
Drag the words to label the picture.





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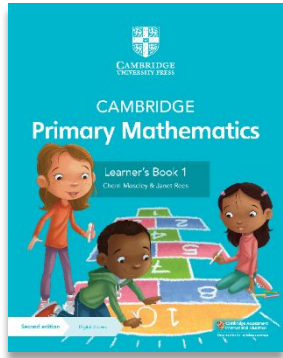
Cambridge Primary and Lower Secondary Mathematics



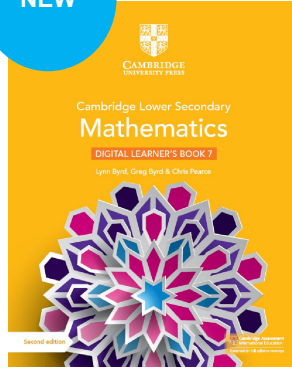


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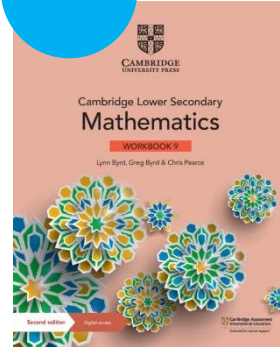
Series components



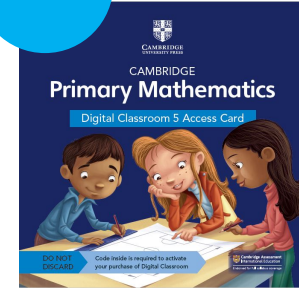
NEW



NEW



NEW



Learner's book with digital access stage 1 - 9	Digital learner's book stage 1-9	Workbook with digital access stage 1-9	Teacher's resource with digital access stage 1-9	Digital Classroom stage 1-6
Core learner activities	Digital only version of the learner's book	Additional, differentiated practice opportunities	Everything teachers need to plan and run the course	Onscreen version of the learner's book and workbook with interactive activities and video





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New characters



Key curriculum changes for first teach in 2021

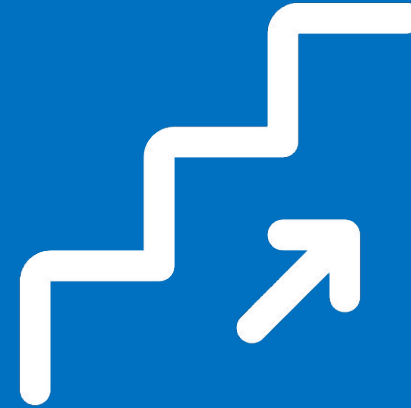
Cambridge Primary & Lower Secondary Mathematics



**Thinking and
Working
Mathematically**

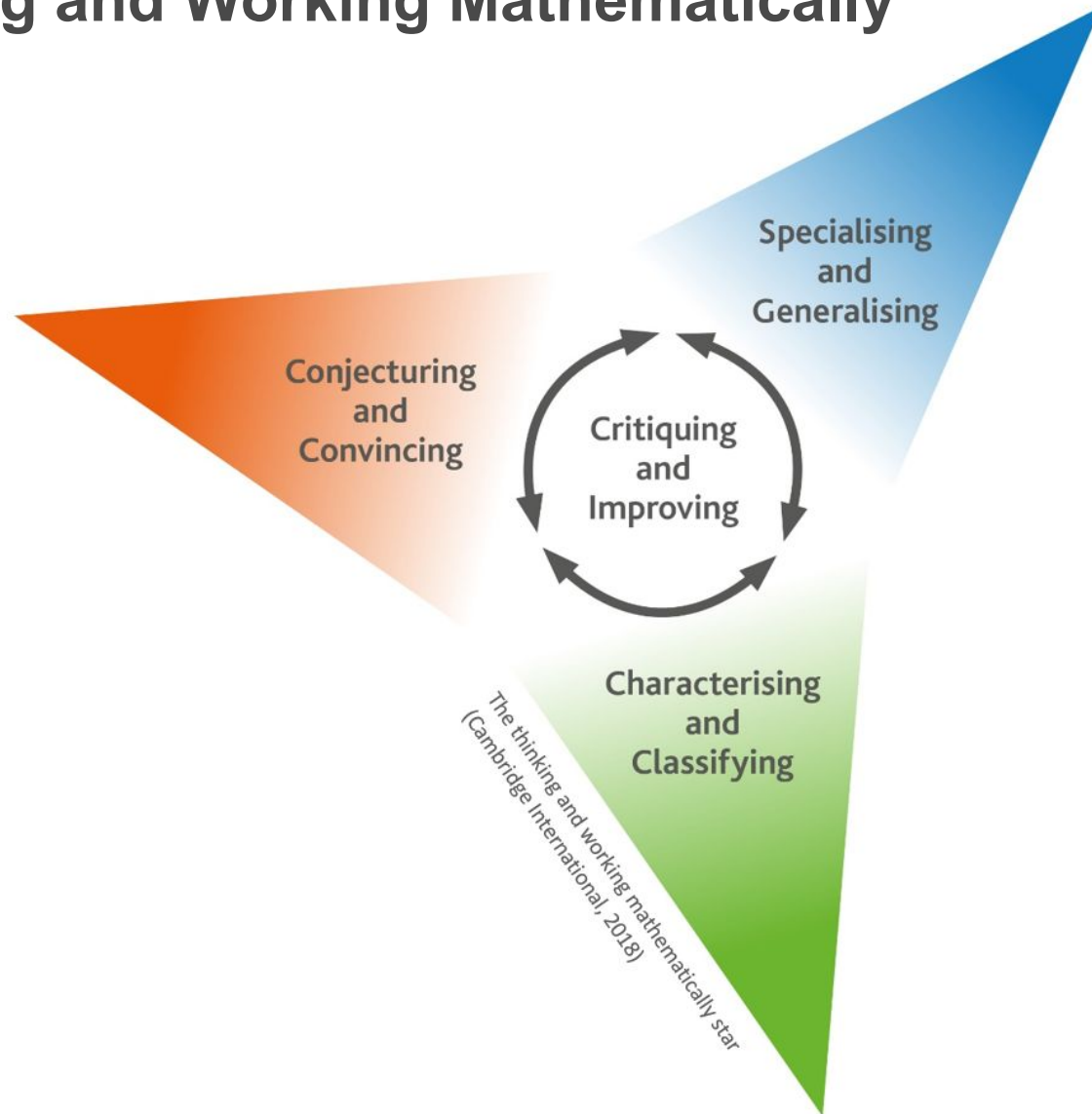


**Reduction in
learning
objectives**



**Clear
progression
through stages**

Thinking and Working Mathematically



NRICH projects

> Project 3

Fraction averages

Here is a set of five fractions:

$$\frac{1}{5} \quad \frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2} \quad \frac{4}{5}$$

The mode of this set of fractions is $\frac{1}{2}$

The median is $\frac{1}{2}$

The mean is $\frac{1}{2}$

Can you find some other sets of five fractions between 0 and 1 for which the mean, median and mode are all $\frac{1}{2}$?

In the set of fractions shown above, the fraction $\frac{1}{2}$ appears three times.

Can you find examples that include $\frac{1}{2}$ only twice?

In the set of fractions shown above, the range of the fractions is $\frac{3}{5}$, which is just a little bit more than $\frac{1}{2}$

Can you find other examples for which the range is more than $\frac{1}{2}$?

Can you find examples for which the range is less than $\frac{1}{2}$?

Can you find examples for which the range is exactly $\frac{1}{2}$?



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Stage 7 Project example, and associated teacher guidance

PROJECT GUIDANCE: FRACTION AVERAGES

Why do this problem?

This problem encourages learners to be playful with fractions while consolidating their understanding of averages. This activity helps develop the skill of classifying by inviting learners to find groups of examples that satisfy the given criteria.

Possible approach

Write this set of fractions on the board, and ask learners to find the mean, median and mode:

$$\frac{1}{5} \quad \frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2} \quad \frac{4}{5}$$

If necessary, deal with any misconceptions that arise.

Challenge learners to find some other sets of five fractions between 0 and 1 for which mean, median and mode are all $\frac{1}{2}$, including examples in which $\frac{1}{2}$ appears only twice.

Once learners have found some examples, invite them to work out the range for each set of

fractions. Can they find examples for which the range is more than, less than, and exactly $\frac{1}{2}$?

Finish off by discussing learners' insights and discoveries.

Key questions

If the mean is $\frac{1}{2}$, what can you say about the total of the five fractions?

If you have a set of five fractions that satisfies the criteria, how could you tweak it to give a new set?

Possible support

Learners could start by finding sets of five whole numbers whose mean, median and mode are the same.

Possible extension

Challenge learners to come up with an explanation of why there are infinitely many sets of five fractions that satisfy the criteria.



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Mental mathematics skills





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Resource walkthrough



Teacher's Resource

Easy-to-view breakdown of sections, estimated timings, content and resources

> 1 The number system

Unit plan

Topic	Approximate number of learning hours	Outline of learning content	Resources
1.1 Understanding place value	4 hours	Explain the value of a digit in a decimal (tenths and hundredths). Multiply and divide whole numbers by 1000. Multiply and divide decimals by 10 and 100. Compose, decompose and regroup numbers, including decimals (tenths and hundredths).	Learner's Book Section 1.1 Workbook Section 1.1 Additional teaching ideas for Section 1.1 Resource sheet 1A Resource sheet 1B Resource sheet 1C Resource sheet 1D
1.2 Rounding decimal numbers	3 hours	Round numbers with 1 decimal place to the nearest whole number.	Learner's Book Section 1.2 Workbook Section 1.2 Additional teaching ideas for Section 1.2 Resource sheet 1E Resource sheet 1F

Cross-unit resources

Diagnostic check and mark scheme
Digital Classroom: Unit 1 multimedia enhancement
Digital Classroom: Unit 1 activity
 Worksheet 1A
 Worksheet 1B
 Language worksheet 1A
 Language worksheet 1B
 Learner's Book Check your progress
 Unit 1 test and answers

Thinking and Working Mathematically questions in Unit 1

Questions	TWM characteristics covered
Learner's Book	
Exercise 1.1 question 8	TWM.07
Exercise 1.1 question 9	TWM.06
Exercise 1.2 question 5	TWM.04
Exercise 1.2 question 6	TWM.01
Check your progress question 8	TWM.01
Workbook	
Exercise 1.1 question 11	TWM.01
Exercise 1.1 question 13	TWM.01
Exercise 1.1 question 17	TWM.07
Exercise 1.2 question 2	TWM.02
Exercise 1.2 question 4	TWM.02
Exercise 1.2 question 10	TWM.02
Exercise 1.2 question 11	TWM.06

BACKGROUND KNOWLEDGE

We are surrounded by numbers in our everyday life. Some of these are whole numbers and some are decimals. Having a display of pictures in the classroom can help learners to see how numbers affect their lives.



In earlier stages, learners used place value charts to help them understand place value. In Stage 4, learners worked with whole numbers, reading and writing them correctly. Learners understood and explained how the value of each digit was determined by its position in a number.

List of questions that can be used to encourage specific Thinking and Working Mathematically skills

Clear list of additional resources that can be downloaded from digital access

Background knowledge on skills students should already have encountered and second section on teaching skills



Teacher's Resource



Learning plan connects the learning intentions of the unit to the curriculum framework references



Language support explains the critical vocabulary needed for the unit



Common misconceptions about specific skills, how to identify them and how to overcome them are highlighted for each unit

Quick starter ideas to begin a lesson



CAMBRIDGE PRIMARY MATHEMATICS 5: TEACHER'S RESOURCE

1.1 Understanding place value

Learning objectives	Learning intentions	Success criteria
5Np.01	Understand and explain the value of each digit in decimals (tenths and hundredths).	Learners explain the value of a digit in a decimal (tenths and hundredths).
5Np.02	Use knowledge of place value to multiply and divide numbers by 10, 100 and 1000.	Learners multiply and divide whole numbers by 1000.
5Np.03	Use knowledge of place value to multiply and divide decimals by 10 and 100.	Learners multiply and divide decimals by 10 and 100.
5Np.04	Compose, decompose and regroup numbers including decimals (tenths and hundredths).	Learners compose, decompose and regroup numbers.

LANGUAGE SUPPORT

The vocabulary related to decimals will be new for learners, so practise using it wherever possible. Insist that decimals are read correctly and learners understand their values, for example:

- 6.4 (read as six point four) means 6 ones and 4 tenths
- 6.40 (read as six point four zero) means 6 ones and 4 tenths and 0 hundredths
- 6.04 (read as six point zero four) means 6 ones and 0 tenths and 4 hundredths.

Sometimes there are differences in the vocabulary used internationally. Some key words have alternative versions, for example:

Used in this book	Alternative
ones	units
decompose	partition or write in expanded form
regroup	recombine

Compose: put together, for example, $600 + 30 + 2$ is 632
 Decimal: a number written in decimal notation, for example 34.5
 Decimal place: the position of a digit to the right of the decimal point in a decimal number. The number 45.67 has two decimal places
 Decimal point: the decimal point separates whole numbers from decimal places. You read 57.08 as 'fifty-seven point zero eight'.

T	O	t	h
5	7	0	8

Decompose: break down a number into parts, for example 456 is $400 + 50 + 6$
 Hundredth: one part in one hundred equal parts; as a decimal it is written as 0.01

1 THE NUMBER SYSTEM

CONTINUED

Place value: the value of a digit determined by its position. For example, in 830 the 3 has a value of 3 tens (30)

H	T	O
8	3	0

Regroup: to change the way a number is written. For example, $456 = 400 + 50 + 6$, but you can change this to $400 + 40 + 10 + 6$
Tenth: one part in ten equal parts. As a decimal it is written as 0.1

Common misconceptions

Misconception	How to identify	How to overcome
Learners may consider hundredths to be greater than tenths.	Through discussion and in written work.	Ensure that place value charts are used as visual prompts.
Learners may misunderstand the concept that multiplying or dividing by 10, 100 or 1000 moves the digits of a number 1, 2 or 3 places to the left or the right.	Through discussion and in written work.	Make sure learners understand that when a digit is moved to the left its value increases (ones become tens and so on) and when it is moved to the right its value decreases. When working with whole numbers, do not condone the use of a 'rule' involving 'add a zero' as this causes difficulties when working with decimal numbers and fractions. Calculators are a useful teaching resource to demonstrate patterns when multiplying and dividing by 10 and 100, as shown in the Multiplying and dividing whole numbers by 10, 100 and 1000 main teaching idea (in the Additional teaching ideas for this section).

Starter idea
Getting started (20 minutes)
Resources: Unit 1 Getting started exercise in the Learner's Book.
Description: Give learners 10 minutes to answer the Getting started questions in their exercise books. After 10 minutes, ask learners to swap their books with a partner and check their partner's answers as you discuss the questions as a class. After the class have marked their work, walk round and check if there are any questions that learners struggled with. You may want to recap particular concepts as a class. Refer to the Background knowledge section to review this area or suggestions of how to address gaps in learners' prior knowledge.

Main teaching idea
Place value (20–30 minutes)
Learning intention: Understand and explain the value of each digit in decimals (tenths and hundredths).
Resources: Resource sheet 1B.



Teacher's Resource

Teaching ideas specifically end by directing teacher to the exercise or specific questions



Detailed main lesson activity ideas are presented. There is one main lesson activity in print and two alternative or supplementary ideas that teach the same skill in a different way in the bundled digital access

CAMBRIDGE PRIMARY MATHEMATICS 5: TEACHER'S RESOURCE

Description: Show a place-value chart. Tell the learners that it is like the one they used in Stage 4 but it has been extended to include decimal numbers.

100	200	300	400	500
10	20	30	40	50
1	2	3	4	5
0.1	0.2	0.3	0.4	0.5
0.01	0.02	0.03	0.04	0.05

Place numbers (up to 2 d.p.) on the grid and ask learners to say the numbers. Then reverse the process: say numbers (up to 2 d.p.) and ask learners to place the numbers on the grid.

Shade cells in the displayed chart to make numbers with 2 decimal places, for example shade 6, 0.5 and 0.01 to make 6.51.

H	T	O	t	h
		6	5	1

Ask:

- How do you say this number?
- How do you decompose this number?
- Can you regroup this number in a different way?
- How do you say the number equivalent to 6 ones + 5 tenths + 1 hundredth? Remind learners that when they combine numbers in this way, they are composing a number.

Repeat for other numbers and also ask questions about specific place values:

- What is the value of the digit 4 in the number 6.48?
- What is the value of the digit 6 in the number 4.06?

Ask learners to work in pairs on the activity in Resource sheet 1B. Make sure they say the numbers as instructed.

1 THE NUMBER SYSTEM

Now ask learners to complete questions 1 to 4 of Exercise 1.1 in the Learner's Book.

Differentiation ideas: Support less confident learners by pairing them with a more confident learner who is willing to help them. Ask more confident learners to make sets of three cards offering different ways of decomposing and regrouping decimals, for example:

5.39 $5 + 0.3 + 0.09$ $4 + 1.3 + 0.09$

Plenary idea
Target board (10 minutes)
Resources: Copy of target board.

Description: Display the target board and ask questions related to it, for example:

- Which number is the result of dividing 409 by 100?
- What is 18 divided by 10?

Homework ideas

- Learners design a poster that shows how to multiply and divide by 10, 100 and 1000. They can illustrate it with examples, including drawings, pictures or photographs. For example:
 - 1 metre is 100 times as long as 1 centimetre
 - 1 cent is 100 times smaller than 1 dollar.
- Learners write questions and answers based on the target board used in the Target board plenary idea.

CROSS-CURRICULAR LINKS

Work on the history of measurement will include reference to the metric system. The metric system is an internationally recognised decimalised system of measurement, for example lengths can be measured in millimetres (mm) and centimetres (cm). There are 10mm in a cm so $1.4\text{cm} = 14\text{mm}$. Learners will use metric measurements in science, for example when working on evaporation they may measure air temperatures in Celsius and the depth of water in a pond in millimetres or centimetres, and understand that $10\text{mm} = 1\text{cm}$.

Guidance on selected Thinking and Working Mathematically questions

Learner's Book Exercise 1.1, question 9

Learners are given four statements, each with a missing number, and have to work out which is the odd one out. You may need to remind learners that they need to calculate and then compare the missing numbers in order to identify the odd one out.

3.06	2.13	5	3.45	5.18
3.34	3.24	3.3	2.5	4
3	3.1	1.69	3.29	4.79
4.09	3.5	4.9	2	1.8

Insist that learners say the decimals correctly (e.g. 3.06 is 'three point zero six').

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Clear homework ideas



Guidance on one Thinking and Working Mathematically question in each exercise is given





Teacher's Resource additional content

Digital access

- ✓ LB and WB answers
- ✓ End of unit tests (from Stage 3 upwards)
- ✓ Diagnostic test for formative assessment use at the start of academic year (all stages)
- ✓ Mid-year and end-of-year tests (from Stage 3 upwards)
- ✓ English as a second language support worksheets
- ✓ Additional differentiated worksheets
- ✓ Activity resource sheets (where required by teaching idea)

Learner's Book Stage 1

Simple worked examples 

Group or pair activity, with TWM icon – teacher can facilitate TWM characteristics 

1.2 Say, read and write numbers to 10

> 1.2 Say, read and write numbers to 10

We are going to...

- say, read and write numbers and number words to 10.

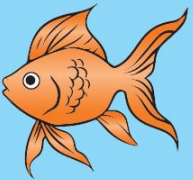
Saying the numbers in a number rhyme is a good way to learn the order of the numbers.

Exercise 1.2

- Say this number rhyme together.

numbers order
point track next
before after between

1, 2, 3, 4, 5,
Once I caught a fish alive!
6, 7, 8, 9, 10,
Then I let it go again!
Why did you let it go?
Because it bite my finger so.
Which finger did it bite?
This little finger on the right.



- Say your favourite number rhyme to a partner.
- Count to 10. Point to each number as you say it.

17 >

1 Numbers to 10

Worked example 3

Which number is missing?

1, 2, 3, 4, 5, Once I caught a fish alive! 6, 7, ... I said 6 then 7, so 7 is the missing number.

Answer:

4 Count to 10. Which numbers are missing?


5 Which numbers have been swapped in this number track? Write the numbers in the box.

18 >

2 Working with numbers to 10

Let's investigate

Work with a partner. Choose a number from 1 to 10. Make a poster showing all the number bonds for that number.




A number bond is two numbers that add together to make a total. 5 and 1 is a number bond for 6.

How will you show each number bond?
How will you know that you have included all the number bonds for your number?

Look what I can do!

- I can add quantities together by combining two sets.
- I am beginning to remember some number bonds.




44 >

2.2 Subtraction as take away


> 2.2 Subtraction as take away

We are going to...

- subtract by taking away a part from the whole.



If there are too many, you might need to take some away. Write your subtraction in a number sentence.

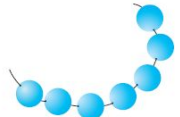


How many apples altogether?

subtract take away


Exercise 2.2

- Cross out 1 counter, cube or bead. Count how many there are now.



7 take away 1 equals


7 - 1 =





6 take away 1 equals

6 - 1 =

45 >

Instruction on the page, but guided by teacher 

Colourful pages that can be used to write-in 

Self-assessment checklist 



Thinking and Working Mathematically

- Integrated into exercises and projects
- Guidance in TR
- Developing a series of classroom posters to help prompt students

3 Numbers and sequences

2 Copy and complete the Carroll diagram by writing a number greater than 50 but less than 100 in each space.

	Square number	Not a square number
Even number		
Not an even number		

Discuss your answer with your partner. There are lots of possible answers.

Question from Stage 4 LB



All TWM questions marked with star icon

Guidance on selected Thinking and Working Mathematically questions

Learner's Book Exercise 3.2, question 2

In this question, learners are presented with a Carroll diagram. They need to find four numbers to fit into the four cells:

- a square number that is even
- a square number that is not even (odd)
- an even number that is not square
- a number that is not even (odd) that is not square.

All the numbers must be greater than 50 and less than 100, so using 100 as an example of a square number that is even is not acceptable. Learners will show they are **specialising (TWM.01)** when they choose an example and check to see that it meets the criteria of the cell that it is placed in.

Learners will show they are **classifying (TWM.06)** when they place their chosen numbers in the correct position on the grid according to their properties.

Teacher guidance in Stage 4 TR

The posters are arranged in a 2x2 grid on a blue background. Each poster features a cartoon character and a specific mathematical skill:

- Top Left:** A girl character. Skill: **Specialise:** I can give an example: "14 is an even number". Prompt: "Illustrate with 14 cubes in twos." Skill: **Generalise:** I can give an example which explains the mathematics: "even numbers have 2, 4, 6, 8 or 0 ones." Prompt: "Illustrate with a Carroll diagram like the CUP Stage 1 example. Label the whole thing Numbers to 20. First label even and 1, 4, 6, 8, 10, 12, 14, 16, 18, 20 in box, second label not even and 1, 3, 5, 7, 9, 11, 13, 15, 17, 19 in box. For stage 2, could change to Stage 2 type. Labelled Numbers to 100."
- Top Right:** A boy character. Skill: **Characterise:** I can explain how a group of numbers, shapes or other things are the same: "triangles, squares and hexagons are 2D shapes". Prompt: "2D shapes. Triangles, squares and hexagons are coloured, while 3D cubes, square based pyramids, cylinders are not coloured." Skill: **Classify:** I can put numbers, shapes or other things into groups "triangle, square, hexagon." Prompt: "Illustrate with two piles sorted by a child, triangles, squares, hexagons of different sizes and colours in one pile with post-it note '2D', cubes, cuboids, cylinders and pyramids of different sizes and colours in another pile with post-it note '3D'."
- Bottom Left:** A boy character. Skill: **Critique:** I can say what is good and what could be better in my own or someone else's work. Prompt: "Illustrate with q7 Stage 2 Unit 2.2 Which calculation does not have the same answer as the others? 39 - 6 23 + 10 43 - 20 37 - 4". Skill: **Improve:** I can think about how I answered. Can I do it in a different way? Calculation: $43 + 36 = 40 + 3 + 30 + 6 = 40 + 30 + 3 + 6 = 70 + 9 = 79$
- Bottom Right:** A girl character. Skill: **Conjecture:** A conjecture is a question about the mathematics, to encourage me to explore. "Sometimes I make my own conjectures." Prompt: "Illustrate with: Sofia made a conjecture in the Stage 2 Workbook, Unit 1.1 question 13. Sofia says that when you have two different digit cards, you can make two different 2-digit numbers. So when you have three different digit cards, you must be able to make three different 2-digit numbers." Question: "Is Sofia correct? How do you know?" Skill: **Convince:** I can explain my thinking to someone else, to help them understand. "I convince someone when I explain why." "I will be convincing myself when I explore Sofia's conjecture, to find out if she is correct."

At the bottom of the posters are the Cambridge University Press logo and the slogan "Brighter Thinking Better Learning. Making Brighter Futures Together."

Learner's Book Stage 4

Identification of section aims for learner



Investigative activities to encourage joining up of ideas




3 Addition and subtraction of whole numbers

3.1 Using a symbol to represent a missing number or operation

We are going to...

- use a symbol to represent a missing number or operation sign in an addition or subtraction calculation.

Many people, both young and old, enjoy solving number puzzles. Very young children start with simple jigsaws, and adults enjoy harder puzzles.



In this unit you will solve missing number puzzles. You can use a **symbol** to show a missing number. For example, $30 - \bigcirc = 27$ or $30 - \square = 27$.

symbol

38 >

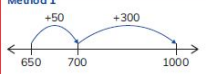
3.1 Using a symbol to represent a missing number or operation

Worked example 1

Write the missing number.
 $650 + \square = 1000$

You can read $650 + \square = 1000$ as 'I have 650. How many more do I need to make 1000?'

Method 1



Use a number line to count on from 650. Remember, the larger the jump the more efficient the method.

Method 2

$1000 - 650 = 350$

You can rewrite $650 + \square = 1000$ using subtraction.

Method 3

$650 + 350 = 1000$

You can work it out mentally using known facts.

Answer: 350

Exercise 3.1

- Write the missing numbers.

a $15 + 29 = \square$	b $35 - 19 = \square$	c $\square - 14 = 8$
d $\square + 6 = 30$	e $12 + \square = 25$	f $30 - \square = 16$
- Copy and complete the number sentence.
 $\square + \square = 100$

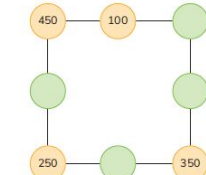
39 >

Increasing number of practice questions



3 Addition and subtraction of whole numbers

- Write the missing numbers.
 - $1 + 10 + \square = 100$
 - $57 + \square = 120$
 - $50 - \square = 31 + 10$
- In this diagram, the numbers on three circles in a straight line add up to 1000. Copy and complete the diagram.



Check your answer with your partner.

In this question, you can choose different starting points. How did you decide which number to find first? Did your partner do the same? Think about your method. Was it the best method? Did you remember to check your answer?

- Find the missing operation signs.
 - $28 \bigcirc 72 = 100$
 - $55 = 70 \bigcirc 15$

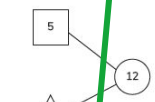
40 >

Reflection questions to encourage learners to think about how they approached their learning

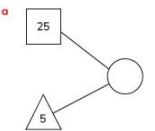
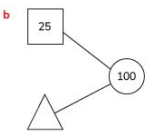


3.1 Using a symbol to represent a missing number or operation

- In this diagram the rule is: 'Double the number in the square and add the number in the triangle to make the number in the circle'.

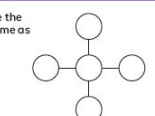


Use the same rule to find these missing numbers.

- 
- 

Think like a mathematician

Use each of the numbers 3, 4, 5, 6 and 7 to complete the cross pattern. The total going across must be the same as the total going down.



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Brighter Thinking
Better Learning



Workbooks



2 Working with numbers to 100

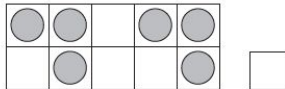
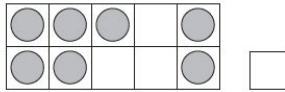
> 2.1 Addition

Exercise 2.1

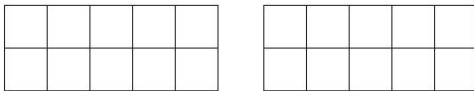
column addition complement (to 10, 20 or 100)
digit place holder place value grid

Focus

1 How many counters are there?



2 Draw two different arrangements for 5 on the ten frames.



Stage 1 WB – FOCUS section

1 Numbers and the number system

Practice

6 Tick the largest number that can be made using these four digit cards.



- Nine thousand nine hundred and three
- Nine thousand and thirty-nine
- Nine thousand nine hundred and thirty
- Nine thousand and ninety-three

7 Write in digits the number that is equivalent to 130 thousand + 3 tens

8 Here are four number cards.

- A eight hundred and fifty
- B five hundred and eight
- C five hundred and eighty
- D fifty eight

Write the letter of the card that is the answer to:

- a 85×10 _____
- b $5800 \div 10$ _____
- c $5800 \div 100$ _____
- d 58×10 _____
- e $580 \div 10$ _____
- f $50800 \div 100$ _____

9 Four students decompose the number 29 292. Here are the results. One answer is incorrect.

- A $9000 + 90 + 20\ 000 + 200 + 2$
- B $20\ 000 + 9000 + 200 + 90 + 2$
- C $2 + 200 + 20\ 000 + 90 + 9000$
- D $2 + 200 + 20\ 000 + 90 + 900$

Which answer is incorrect? _____

Stage 4 WB – PRACTICE section

4 Decimals

Challenge

12 An equilateral triangle has a side length of 4.7 m.

The formula to work out the perimeter of an equilateral triangle is:

$$P = 3l, \text{ where: } P \text{ is the perimeter} \\ l \text{ is the side length.}$$



Use the formula to work out the perimeter of the equilateral triangle.

13 Copy and complete the workings to make these divisions easier. Then work out the answer.

$$\begin{array}{r} 38.16 \div 600 = \frac{38.16}{600} \\ = \frac{38.16 - 100}{600 - 100} \\ = \frac{0.3816}{1} \end{array}$$

$$\begin{array}{r} 676.5 \div 500 = \frac{676.5}{500} \\ = \frac{676.5 - 100}{500 - 100} \\ = \frac{576.5}{400} \end{array}$$

14 Forty members of a tennis club go to a restaurant for a meal. The total cost of the meal is \$742.84. They share the total cost of the meal equally between them.

- a How much do they each pay? Round your answer to the nearest:
 - i cent
 - ii dollar
- b Is your answer from part a i or from part a ii the most suitable amount for each member to pay? Explain your answer.



Tip

$$\text{Mean weight} = \frac{\text{total weight}}{\text{number of gymnasts}}$$

Summary checklist

- I can use different methods to make decimal calculations easier.

Stage 7 WB – CHALLENGE section





CAIE Review

“The demand of using TWM is higher than in some syllabuses at this age but learners are given guidance & much more in the TR.”

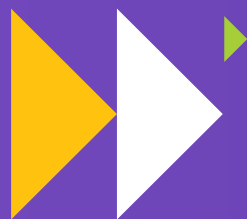
“... an excellent book for learners & the rest of the series adds even more support. There are good links with prior work, introduction of new content & questions that increase the difficulty level throughout each unit. Questions are in context & ask learners to explain, critique & improve their work providing a deeper understanding of maths. If I was teaching this course, I would want my school to buy all the Stage 7 material.” Stage 7 review

“... a good model to the pedagogy underpinning much good teaching and learning. The work book supports teachers to deliver the curriculum and has avoided repetitive examples, refraining from offering a single method for solving problems. Teachers who are unfamiliar with this teaching style but who are teaching this curriculum will be guided to use some ‘good practice’.” Stage 4 review



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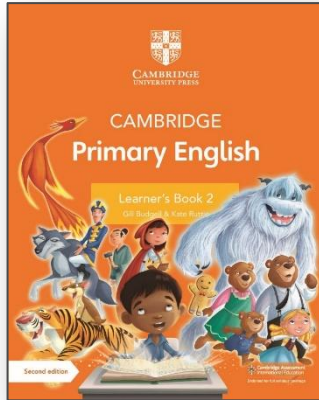




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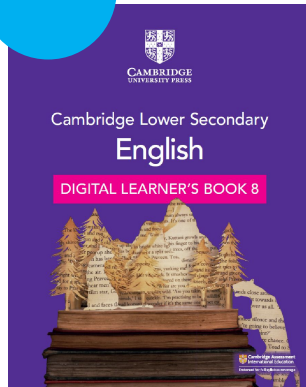
Series components

NEW



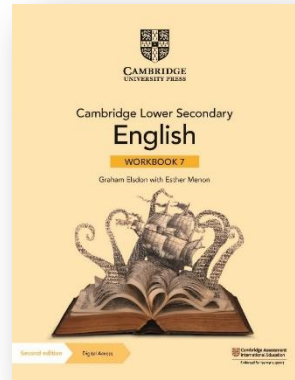
Learner's book with digital access stage 1 - 9

Core learner activities



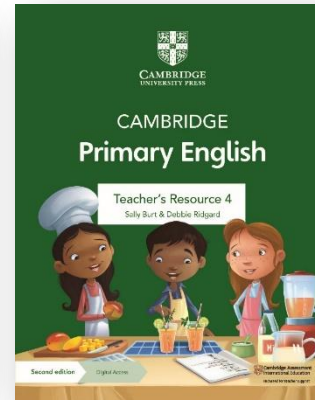
Digital learner's book stage 1-9

Digital only version of the learner's book



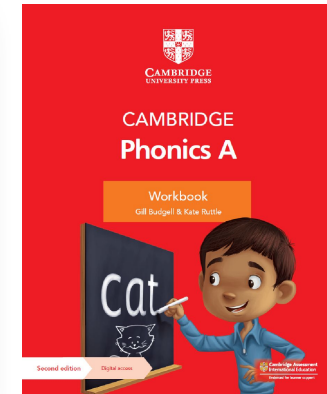
Workbook with digital access stage 1-9

Additional, differentiated practice opportunities



Teacher's resource with digital access stage 1-9

Everything teachers need to plan and run the course

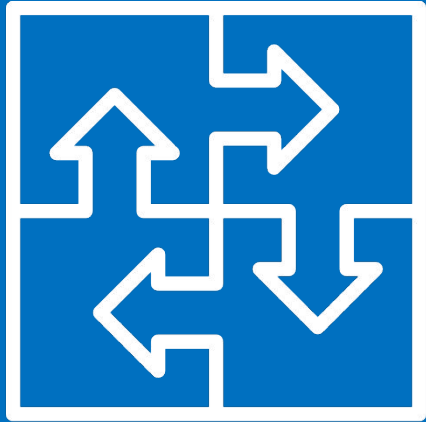


Phonics workbook

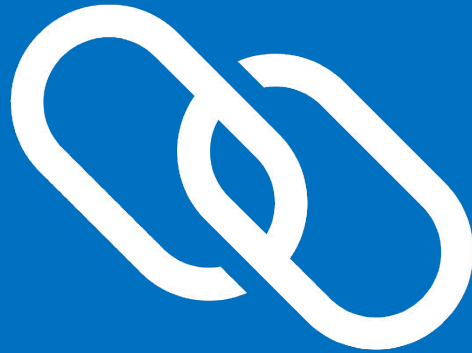
Onscreen version of the learner's book and workbook with interactive activities and video

Key curriculum changes for first teach in 2021

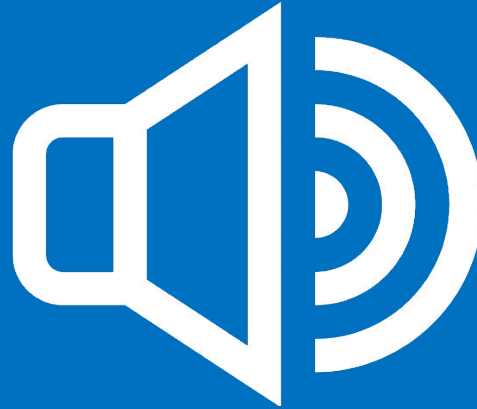
Cambridge Primary & Lower Secondary English



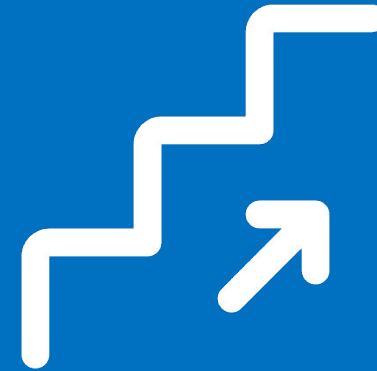
**More
integration of
the four skills**



**Paired reading
and writing
strands**



**New speaking
and listening
sub-strands**

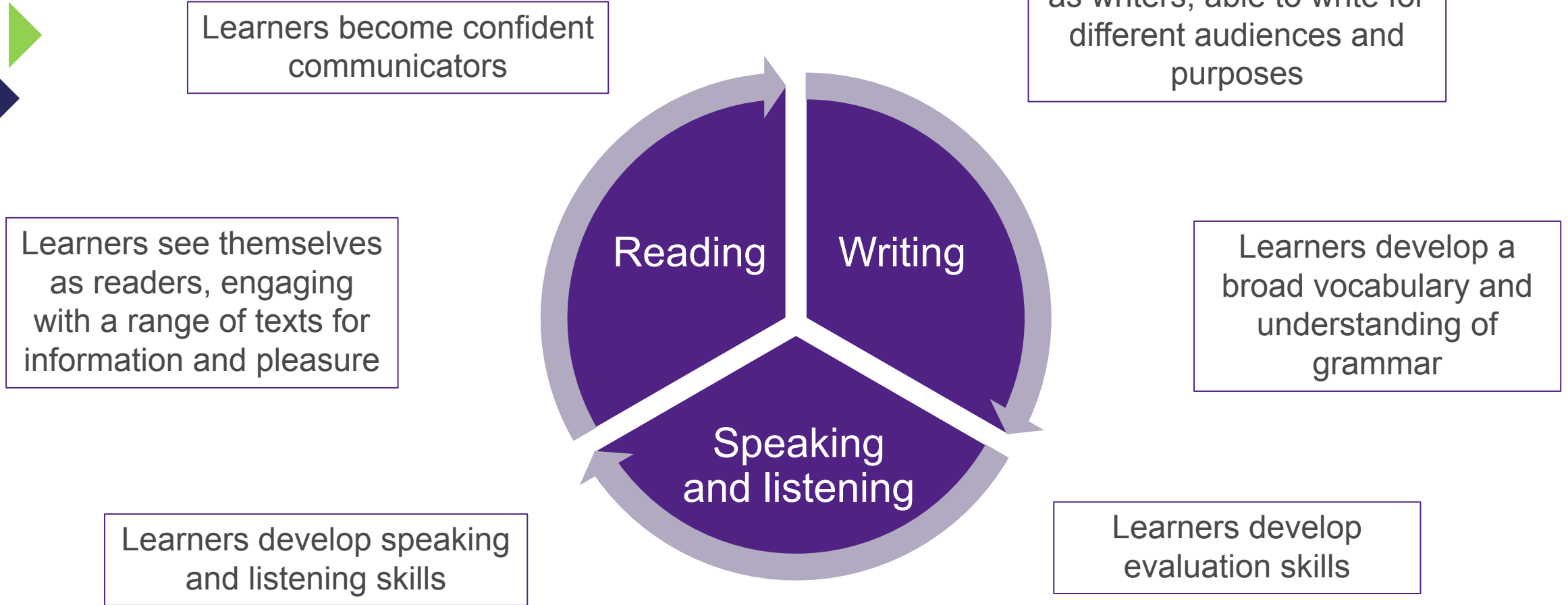


**Clear
progression
through LOs**



Overview of the curriculum framework

Cambridge Primary & Lower Secondary English





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▶▶ Resources walkthrough





Learner's Book

> Contents

Page	Unit	Text type	Reading
8	1 Adventure	Contemporary fiction (adventure); non-fiction (travel writing); thematic poetry; novel (spy story)	'Beware Low-Flying Girls'; <i>Around India in 80 Trains</i> ; 'Hard is the Journey'; <i>Silverfin</i> Tips: Using context to understand words; recognising the effect of sentence types
32	2 'Hey, You Down There'	Short story	'Hey, You Down There' Tips: Story openings; scanning; story endings
57	3 Film and fame	Contemporary fiction; non-fiction (informative article); non-fiction (film review)	<i>Film Boy</i> ; 'Hrithik Roshan says he practices every day to overcome stammering' in the <i>Hindustan Times</i> ; <i>The Incredibles</i> film review; 'Thai cave rescue boys meet hero' in the <i>Guardian</i> Tips: Selecting quotations; fact-checking; working out words from context and word families
82	4 Small but perfect	Flash fiction; haiku poetry; imagist poetry; non-fiction (informative article); non-fiction (explanatory text); non-fiction (magazine article and interview)	'One in Twenty-Three'; haiku poems; imagist poems; 'The tiny world of Willard Wigan' in the <i>Telegraph</i> ; explanation of shabbits; 'Micro-artist Willard Wigan reveals his tiny world' in <i>WatsonTV</i> Tips: Selecting precise quotations; checking syllables in haiku; scanning and close reading
108	5 Unusual education	Non-fiction (descriptive accounts); non-fiction (blogs); non-fiction (discussion article and account); contemporary fiction; contemporary drama	Two accounts of different schools; blogs about school uniform; homeschooling article and account; <i>Wonder</i> ; <i>The Last Class</i> Tips: Comparing two texts; reading ahead
136	6 Life stories	Thematic poetry; non-fiction to narrate (autobiographies); non-fiction to narrate (diary); persuasive speech	'Lullaby'; 'The Song of the Old Mother'; biography of Malala Yousafzai; <i>As I Walked Out One Midsummer Morning</i> ; Letter to Daniel; Captain Robert Scott's diary; speech by Nelson Mandela Tips: Voice and language; tracking an argument
163	7 'The Travel Agency'	Short story (fantasy)	'The Travel Agency' Tips: Understanding genre conventions; labelling sentences
189	8 In the city	Contemporary fiction; classic fiction; thematic poetry; non-fiction (argument articles)	<i>The White Tiger</i> ; <i>Neverwhere</i> ; <i>A Christmas Carol</i> ; <i>The Sign of Four</i> ; 'City Jungle'; 'Last Night, I Saw the City Breathing'; 'Urban Threats' in <i>National Geographic</i> ; 'What would the ultimate child-friendly city look like?' in the <i>Guardian</i> Tips: Understanding settings; tackling unfamiliar words; locating information
215	9 Dangers of the sea	Contemporary fiction; non-fiction (informative article); classic fiction; classic poetry	<i>Jaws</i> ; 'Why Are We Afraid of Sharks?' in <i>National Geographic</i> ; <i>Moby-Dick</i> ; <i>And The Ocean Was Our Sky</i> ; 'The Rime of the Ancient Mariner' Tips: Article structure; choosing text support

	Writing	Speaking/Listening	Language focus	21st century skills
	Summarise genre features; write a monologue; analyse a poem's meaning; write a story Tips: Using full sentences; redrafting writing	Pair discussion and prediction; present group views; recount an anecdote Tips: Interpreting tone; using voice in a monologue; using non-verbal communication; formal debating; emphasising words	Sentence types; alliteration and sibilance; powerful verbs	Creativity; collaboration
	Write a spoken drama; write informally; write about theme; write a story with an unusual ending Tips: Showing character through voice; summarising themes; sequencing a story	Pair and group discussion Tips: Listening to opinions; acting as chairperson	Sentence openings; compound-complex sentences; formal/informal language	Critical thinking; communication
	Write a section of a story; write an article; write a film review; speech writing Tips: Using contractions in dialogue; recreating spoken English; taking notes; tense choice	Pair discussion; individual speaking Tips: Conveying mood; listening to facts and opinions; conveying positive opinions	Direct speech; types of noun/adjective-noun combinations	Collaboration; creativity
	Write flash fiction; analyse a poem; write poems; write an interview Tips: maintaining tense; sensory description; commenting on poetic method	Pair and group discussion	Time connectives; prefixes	Creativity; critical thinking
	Write an account about school; write a script Tips: Speech openings; choosing levels of formality; script writing	Pair and group discussion Tips: Using research and facts; thinking critically	Connectives; colons	Social responsibility; collaboration
	Justify poetry choices; write an account of family life; write a monologue; analyse a letter; analyse language; write a poem; write a speech Tips: Sequencing a monologue; focusing on effect	Pair and group discussion Tips: Using punctuation when reading aloud; judging views; timing and delivery; structure of spoken texts	Rhythm and rhyme; voice; embedded clauses	Social responsibility; creativity
	Explain character; write a narrative piece; write a brochure introduction; analyse character; write a diary entry; write about theme Tips: Addressing the reader; making notes; responding to tasks	Pair and group discussion Tips: Tone and intention; preparing to perform a character; listening to advice; choosing precise words	Word choice and order; voice and excitement	Critical thinking; learning to learn
	Travel article; Continue a story; write a poem about a city Tips: Summarising; planning an article; using direct language	Pair, group and individual discussion Tips: Delivering a speech; focusing on key points; making notes on opinions	Using punctuation; personification; related word forms; perspective	Learning to learn; communication
	Describe a sea snake; continue a story; analyse poetic language Tips: Focusing on questions	Pair, group and individual discussion Tips: Using media; using vocal range	Choosing words and phrases; poetic language	Creativity; collaboration



The contents page makes our pedagogical approach and curriculum coverage clear



Learner's Book

Learning objectives help learners know where they are going

Getting started activities help teachers assess what learners know already

Recordings of texts available in digital editions

1 Adventure

> 1.4 A hard journey

In this session, you will:

- look for explicit and implicit meanings in poetry
- explore how poets use language features for effect
- learn how to write an analysis of a poem.

Getting started

Some people and some poems describe life as a journey. In pairs, discuss what life has in common with a journey. How could life be described as an adventure?

'Hard is the Journey'

Read the following poem by Li Po, an 8th century Chinese poet.

Gold vessels [. . .]	At peace I drop a hook into a brooklet ,
Jade dishes of rare meats, costing more thousands,	At once I'm in a boat but sailing sunward...
I lay my chopsticks down, no more can banquet ,	(Hard is the journey, Hard is the journey, So many turnings, And now where am I?)
I draw my sword and stare wildly about me:	
Ice bars my way to cross the Yellow River, Snows from dark skies to climb	So when a breeze breaks waves, bringing fair weather, I set a cloud for sails, cross the blue oceans!
the T'ai-hang mountains!	

20 >

Difficult words from the text are defined alongside

vessels: hollow containers
jade: a hard, green stone
banquet: a feast
brooklet: a small stream

International texts

1.4 A hard journey

1 Copy and complete this table to list the events of each **stanza**. The first one has been done as an example.

Stanza	What happens
1	The narrator describes expensive meats.
2	
3	
4	
5	
6	

Key word

stanza: a group of lines of poetry, forming a unit

Language focus

Poets often use different types of sound effects, such as **alliteration** and **sibilance**. These sound patterns are effective when the poem is read aloud. They are used sometimes for very specific effects.

Alliteration is when consonant sounds are repeated at the start of words (e.g. 'the rifle's rapid rattle' – the repeated 'r' sound brings to mind the stuttering sound of a gun being fired).

Sibilance is the repetition of soft consonant sounds, usually the 's' sound (e.g. 'the ship moved slowly through the sea' – the repeated 's' sound brings to mind the sound of a ship moving through water, or the sound of the wind making the ship move).

Key words

alliteration: use of the same sound, especially consonants, at the beginning of several close-together words

sibilance: use of repeated soft consonant sounds for emphasis

2 Read the poem again carefully. Identify examples of alliteration and sibilance. What effect do these language features create?

3 In pairs, discuss the following:

- In stanza 2, the narrator decides to stop feasting and picks up his sword. Why do you think he does this?
- In stanza 3, the narrator is unable to cross the river. How does the narrator seem to feel about this in stanza 4?

21 >

Key vocabulary is defined

Examples help less confident students

Language focus boxes explain grammar and language points



Learner's Book

Critical thinking and analysis

Integration of all four skills with opportunities for speaking and listening

Examples help less confident students

1 Adventure

4 At the end of a poem, the poet usually states their conclusion and reveals the main point of the text. Reread stanzas 5 and 6 and makes notes on:


- a how the narrator feels in stanza 5 (why does he find the journey hard?)
- b what happens in stanza 6 to make the narrator set sail.

5 People read poems in different ways and have different responses to them. Some readers might think that 'Hard is the Journey' ends happily, because the narrator travels on. Others might think that the ending of the poem shows that the narrator's difficult journey is never-ending. In groups, discuss what you think the ending of the poem means.


6 What is the overall **mood** of the poem – is it optimistic or pessimistic? Here are two possible interpretations of the poem. Discuss them in small groups. Do you agree with either of them? Why/why not?

Key word

mood: the feeling created by the words, sounds and images in a poem



This is a poem about how difficult life can be. The narrator faces many problems. The poem shows how you can't control your life.



This is a poem about how humans succeed in the end. The poem shows that if you believe in yourself, then things work out well in the end.

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1.4 A hard journey

7 Present your thoughts from Activity 6 to another group and listen to their ideas. Then debate your ideas. You should:

- clearly explain and justify your views
- discuss your ideas, making sure you take turns
- come to an agreement about which view is the most convincing.

Self-assessment

How well did you contribute to your group discussion and debate?

- Did you give a clear opinion and justify it?
- Did you listen respectfully to other people's views?
- What advice would you give to others in your group about improving their skills?

Speaking tip

When debating ideas, listen carefully to others' opinions and their reasoning. When challenging their views, be polite and friendly. You could organise your debate in a formal way, with a teacher or student taking on the role of chairperson to keep order and make sure that everybody gets a chance to speak.

8 Using ideas from the table you created in Activity 1 and from your discussion and debate, write a response to the following question. Write about 200 words.

What does 'Hard is the Journey' show about attitudes to adventures? You should write about:

- details of the journey in the poem
- what you think the writer is saying about journeys and adventures
- the language choices made by the poet.

Summary checklist

- I can identify and explain explicit and implicit meanings in poetry.
- I can analyse how poets use language features for effect.
- I can write an analysis of a poem.

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Tips for all four language skills

Opportunities for self and peer assessment throughout

Summary checklists help learners reflect on what they have achieved

Learner's Book

End-of-unit quizzes to help teachers check their learners progress

Check your progress

Answer the following questions to check what you have learnt in this unit.

- 1 What are the key features of adventure stories? Give some examples of events that happen in adventure stories.
- 2 What type of characters do you find in adventure stories? What happens to them?
- 3 List three ways you can keep an audience interested when relating an anecdote.
- 4 Using examples, explain what alliteration and sibilance are.
- 5 List three ways of creating suspense in a story.
- 6 Explain what you have learnt about planning, writing and redrafting your writing. Write a list of tips for future students about improving writing.

A more formal end-of-unit test is available to download in the Teacher's Resource

Projects offer an alternative to pen and paper tests

Project

In groups, you are going to design and present some ideas for a specific type of adventure story: the superhero story. Superhero stories are about characters who have extraordinary powers. They are often normal people who secretly change into superheroes in order to help people in need. Using the information in this unit as well as extra research:

- devise a new superhero
- write a brief character profile
- decide details about the world they live in – is it recognisable as your own world, or is it a different type of place?
- describe a costume they might wear
- draw the bad characters that the superhero will encounter
- plan some storylines.

Present your ideas as a group. You could use pictures and artwork to explain your ideas.

Start by:

- noting down the names of any superhero books, comics and films you know
- discussing some initial ideas with your group
- working out who will do what in your group
- planning ways to present your work.



Projects provide opportunities for speaking and listening

Projects provide an opportunity for all learners to participate and achieve



Workbook



Links to the Language focus box in the Learner's Book provide extra grammar practice

> 2.2 Down the hole

Language focus

Writers use a range of grammatical structures to build information in a story. Sometimes, they use adjectives and adverbs to add detail. Compound-complex sentences can help organise these details. For example:

As the rope slackened in her hands indicating that the bucket had reached the bottom [1], a scream of sheer terror came up from the hole [2], and [3] the rope ladder jerked violently [2].

Here, the compound sentence comes second, with the coordinating conjunction joining the two clauses. The subordinate clause comes first and ends with a comma. The sentence is organised this way so the reader pictures the events in the order in which they happen. It shows how one action causes another.

[1] subordinate clause

[2] compound sentence

[3] coordinating conjunction

Focus

1 Put a tick to indicate which of these sentences are compound-complex.

- a I ran hurriedly into school and then made my way to the classroom, never once pausing for breath.
- b Tomorrow I am going to buy a new toothbrush and a hairbrush from the pharmacy.
- c I would like you to come to my birthday party which starts at 6 p.m. on Sunday.
- d Although I had very little time, I cooked dinner for my family and washed all of the dishes.

Practice

2 Write some of your own compound-complex sentences to express the following ideas:

- a Two people are in a car. They are late for work.

.....
.....
.....

- b You are jogging. A dog is chasing you.

.....
.....
.....

- c A man watches an old building collapse.

.....
.....
.....

Challenge

Using a range of simple, compound, complex and compound-complex sentences will shape your writing and make it interesting.

- 3 Write a paragraph about a family celebration. Vary your sentences to create detail and drama. Include at least one compound-complex sentence. Use commas and other punctuation to make sure your meaning is clear.

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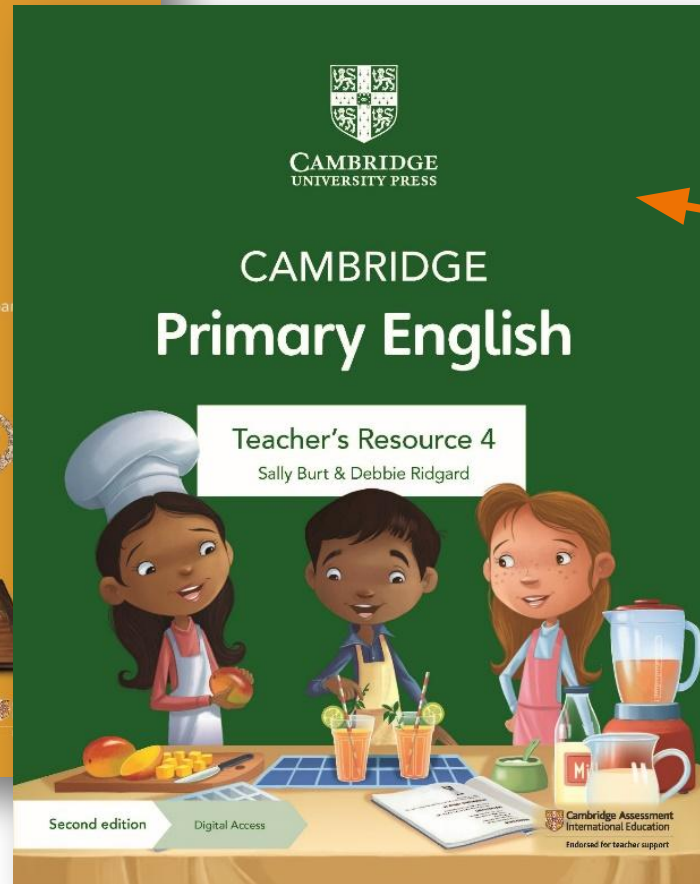
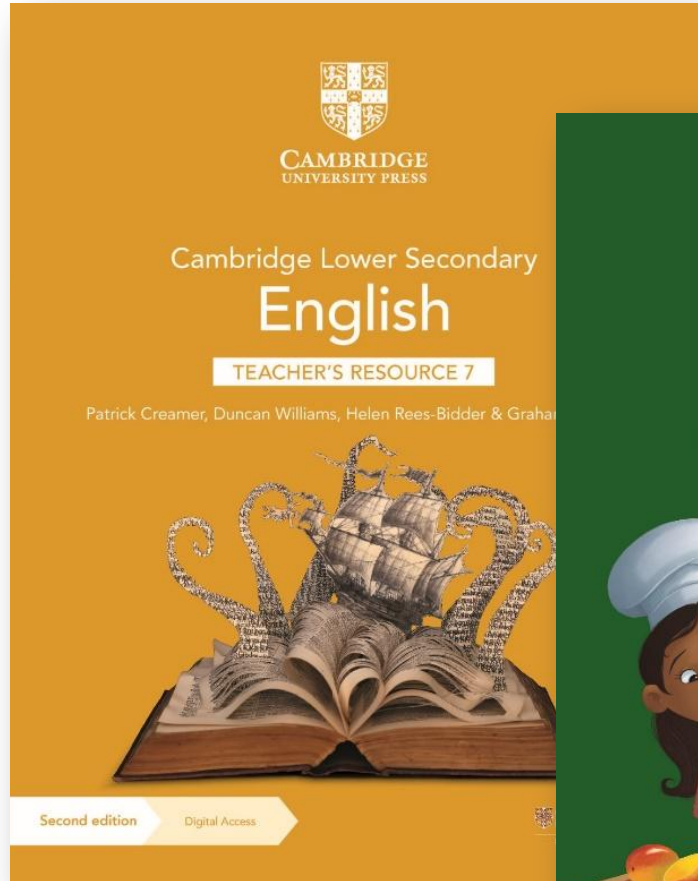


Focus, Practice and Challenge sections provide scaffolded extra practice for all learners



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Teacher's Resource



Introduction to key approaches to learning and teaching

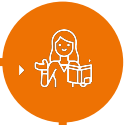
Overview of components in the series

Overview of the curriculum framework

Curriculum framework correlation chart

Lesson plan template

Scheme of work





Teacher's Resource

1 ADVENTURE

> 1 Adventure

Unit plan

Session	Approximate number of learning hours	Outline of learning content	Resources
1.1 The start of an adventure	3 hours, 30 minutes	Learners find out about the characters, settings and structure of adventure stories.	Learner's Book Session 1.1 Workbook Session 1.1 Digital Classroom: XX
1.2 Quest!	3 hours	Learners explore how a story might develop and discover how to write and perform a monologue.	Learner's Book Session 1.2 Workbook Session 1.2
1.3 Train trouble	3 hours, 30 minutes	Learners explore how to make a spoken anecdote and a written account more interesting.	Learner's Book Session 1.3 Workbook Session 1.3 Language Worksheets 1.1 and 1.2 Differentiation Worksheets 1A, 1B, 1C
1.4 A hard journey	2 hours, 45 minutes	Learners identify the main events in a poem, explore the use of sound effects created by the poet's choices of language and discuss alternative views of the meanings of a poem.	Learner's Book Session 1.4 Workbook Session 1.4
1.5 Danger!	2 hours, 45 minutes	Learners identify ways in which a writer creates excitement and suspense, and explore the effects of using powerful verbs, ellipses and short sentences.	Learner's Book Session 1.5 Workbook Session 1.5
1.6 Creating suspense	3 hours, 15 minutes	Learners find out how to write an opening for a story which is exciting right from the start and practise using another reader's response to help evaluate and improve their writing.	Learner's Book Session 1.6 Workbook Session 1.6

BACKGROUND KNOWLEDGE

For the teacher
It is useful to have a good understanding of a range of different literary genres (historical fiction, traditional folk and fairy tales and myths, science fiction, mystery stories, fantasy fiction, adventure stories, etc.). Examples of these genres can be taken from your local culture and from other/international cultures. Be aware that features of a particular genre are like 'ingredients', and the way writers combine them are like 'recipes'. Make sure you know how writers use the narrative structure in an adventure story:

- an opening that establishes setting and introduces characters
- complicating and resulting events

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CONTINUED

- a resolution/ending
- variations in chronology, e.g. flashbacks and time-shifts

You can also prepare for the work on sentence types and structure in Session 1.3 by having some extra examples of simple, compound and complex sentences based on learners' everyday experience – for example, their journeys to and from school every day.

For the student
It will be useful for learners to have some familiarity with adventure stories, perhaps ones they have heard or read, or films based on adventure stories. They could also benefit from knowing some folk/fairy tales from their own culture and other/international cultures. They should understand some simple terminology: plot, narrative, character, setting.

TEACHING SKILLS FOCUS

Active learning
A powerful idea behind active learning is that learners create knowledge for themselves rather than it being given to them. Learners gain knowledge by doing activities, solving problems, and making new connections in their own thinking. The learner is active in the process of creating their new knowledge and learning. They have not just been told a new fact or concept but rather have understood something well enough to write a text, solve a problem, perform a task well, or discuss a subject in an informed way. The challenge with active learning is to stop yourself telling learners things that they could discover for themselves. An active learning approach may mean that you have to give learners more time, but it will help them to take ownership of their learning instead of just accepting it as a new piece of knowledge that is handed to them.

Learners at this stage already have plenty of experience of adventure stories. Most of the time they have been consumers – being read to, reading stories themselves or watching films. But some of them will have been producers, acting out stories as part of their imaginative play and writing stories as part of English lessons. However, they may not have been thinking consciously about how the story was constructed – or, in more literary terms, how the narrative was constructed. This kind of thinking will need some metalanguage. The notes on this unit include suggestions for active learning approaches. These will help you encourage learners to ask themselves questions about how adventure stories are constructed and identify details in narratives that will allow them to make inferences.

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The unit plan acts as a scheme of work, making it clear what will be covered

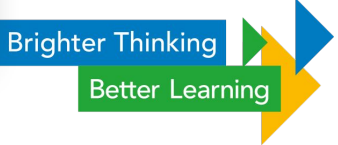
Background knowledge helps teachers to prepare for teaching the unit



Background knowledge helps teachers understand what learners need to know before starting the unit



The Teaching skills focus helps teachers build confidence in key approaches to teaching and learning





Teacher's Resource

The learning plan makes links to the curriculum clear and shows the learning intentions and success criteria for the session

Language support suggestions for every session

The TR provides a clear route through the session, starting with starter ideas

1 ADVENTURE

1.2 Quest!

LEARNING PLAN		
Learning objectives	Learning intentions	Success criteria
7Rs.01, 7Ri.01, 7Ri.08, 7Ri.12, 7Ws.01, 7Wc.05, 7Wc.06, 7SLs.01, 7SLp.01, 7SLr.01	Learners will: <ul style="list-style-type: none"> discuss how stories develop explore the features of a monologue write and perform a monologue. 	Learners can: <ul style="list-style-type: none"> predict how stories will develop identify the key features of a monologue write and perform an interesting monologue.

LANGUAGE SUPPORT

The Speaking tip in this session highlights emphasis and sentence stress. Ensure that learners understand that English is a stress timed language, putting equal emphasis on content words in a sentence, such as nouns and verbs, and less emphasis on other grammatical words, such as articles, prepositions and auxiliary verbs. If learners' first language is syllable timed (such as Spanish or Cantonese), they may find it difficult to recognise and produce features of English such as contractions, main and secondary stress, and elision. Learners can practise this by focusing on a sentence and identifying the content words that should be stressed and the grammatical words that should have less stress. This will raise awareness of speech patterns in English and will help learners with both speaking and listening.

Common misconceptions

Misconception	How to identify	How to overcome
Some learners might believe that every element of a good adventure story has to be unusual. This might lead them to ignore simple elements such as family and friendship, which allow the average reader to identify and sympathise with the character(s).	Ask learners to think back to Session 1.1. Recap (by asking questions) what was unusual about the setting and situation at the start of the story about Odile.	Ask learners to suggest one unusual feature followed by one normal/everyday feature of Odile's situation. Make a two-column list on the board to record what learners suggest. Keep going with this until learners understand how there is a balance between the ordinary and the extraordinary.

Starter idea

What is a quest? (15 minutes)

Resources: Learner's Book, Session 1.2, Getting started activity

Description: Write on the board some of the elements of adventure stories considered in Session 1.1, and the characters involved in them: often involve journeys; characters may have special skills or powers (although not necessarily aware of them at the start); characters

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CAMBRIDGE LOWER SECONDARY ENGLISH 7: TEACHER'S RESOURCE

face challenges; often develop friendships to overcome challenges and reach a happy ending.

Ask learners what they understand by a 'quest' and note down some of their interpretations on the board in addition to the elements of adventure stories considered in Session 1.1, which are already marked up on the board. Give them five minutes to complete the Getting started activity.

Afterwards, have a class discussion to ensure they have understood how the word 'quest' is connected to 'question'. Guide them towards understanding that a search of some kind is involved. Ask them what you are searching for when you ask a question. Explain that for centuries the quest has been a common feature of adventure stories.

Ask learners to share ideas from their lists with the class. Write on the board the ones you think are most suitable to help less confident learners to grasp the idea of the quest.

Main teaching ideas

1 **What happens to Odile next? (30 minutes)**

Learning intention: Describe how stories develop.

Resources: Learner's Book, Session 1.2, 'Beware Low-Flying Girls' extract, Activities 1 and 2

Description: Direct learners to Activity 1 in the Learner's Book and give them ten minutes to work in pairs to discuss the two ideas about how the story might develop and then compare it to their own predictions. Come together as a class and invite learners to comment on any elements of either version. Use a four-column list on the board to record their ideas – elements they approved of ('pros') and elements they disapproved of ('cons') for each version.

Encourage learners to explain their reasons for preferring one version over the other – or for thinking that some parts of either version were better than others. Guide them to think back to the 'ingredients' of adventure stories, and the typical 'recipe' for a quest story.

Direct learners to the introduction to the next part of the story. Point out that there are five sentences in this introduction, and that each one contains a new piece of information about what has happened since we left Odile at the end of Session 1.1.

Give them one minute to read the introductory paragraph, then ask them to close their books and to tell you one piece of information at a time. As learners do this, write each item on the board in bullet-point form.

- Ask the class to tell you when they think the list is complete.
- Invite them to comment on any/all of these developments in the plot.
- Put learners in pairs and give them 15 minutes to read the next extract and complete Activity 2.

Then ask the class for their thoughts about how the story could develop. Encourage them to respond to each other's ideas by commenting on how well they matched with the bullet points in Activity 2.

Differentiation Ideas:

- Support:** While they are working in pairs, guide less confident learners to notice that there are details relating to Odile's senses: she feels (when she kisses his cheek) that her grandfather's skin was colder than usual; the writer compares the smell she notices with a series of very unpleasant things
- Challenge:** Encourage more confident learners to look for details which remind them of other tales of lone girls in a hostile environment. For example, the question the Kraik's voice asks her is like the wolf in the story of Little Red Riding Hood: 'Where are you going, little girl?'

Assessment Ideas: Set a simple exercise to check learners' understanding of the point the story has reached. Give them five minutes to write just one more sentence to add to the extract – it should be the next thing said by the thin and quiet voice. It might be another question, an invitation or a warning, but it must match the rest of the text.

2 **A voice for Odile (30 minutes)**

Learning intention: Explore the features of a monologue.

Resources: Workbook, Session 1.2, Focus and Practice sections

Description: Prepare by writing the words: Person, Voice, Dialogue and Monologue on the board as headings. Ask learners to look back at the single sentence they wrote at the end of the last activity – and ask them whose voice is speaking in that sentence. Then ask them if we have heard Odile's voice yet in the story.

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Most main teaching ideas suggest differentiation ideas

Most main teaching ideas suggest assessment ideas



Teacher's Resource

4 Using sentence structure and punctuation for dramatic effect (30 minutes)

Learning intention: Explore the effects of language and grammatical choices.

Resources: Learner's Book, Session 1.5, Activities 4–6

Description: Direct learners to Activity 4 and read the first sentence aloud. Explain that Activities 4, 5 and 6 are about different language techniques writers use to create suspense and tension.

Give learners 20 minutes to work through Activities 4 and 5, and to complete planning for Activity 6, in pairs.

After they have done the planning for Activity 6, by picking out examples from the extract, give them more time to work individually on writing the paragraph.

> Differentiation ideas:

Support: Observe and listen to pairs as they work on Activities 4 and 5. You can intervene with help and guidance if you think learners need help to find examples or misunderstand the effect of the examples they have found.

Challenge: Remind more confident learners about the last point in the Reading tip. The use of short sentences will not always have the same effect.

> Assessment ideas: Use whole-class discussion to gather the answers to this sequence of activities. Work through each in turn, inviting learners to offer their ideas and encouraging other learners to challenge or question or add to the points raised. Explore some examples in detail – for instance, the sequence of (mostly) short sentences near the end of the extract, running from 'He didn't move.' to 'He'd be stuck.' Going into detail and insisting on explanations will help you to assess whether learners are improving their ability to evaluate effects or just getting better at identifying features. (Being able to *identify features* is a necessary basic skill, but being able to go on to *evaluate the effects* is an important higher-order reading and language skill.)

Plenary idea

Reading and performing a story aloud (30 minutes)

Resources: Learner's Book, Session 1.5, *Silverfish* extract, Activity 7

Description: Direct learners to Activity 7. Tell them they will have 15 minutes, working in pairs, to do the following:

- take it in turns to read the extract once aloud to each other
- look at the Activity 7 prompts and the Speaking tip
- work out how to do a joint reading of the extract, and make some notes as a reminder of what to focus on.

After 15 minutes, combine pairs of learners into groups of four and give them an additional ten minutes in which each pair of learners will perform their joint/paired reading.

Peer assessment: Ask learners to give each other feedback on each other's paired reading based on the prompts in Activity 7 and the points in the Speaking tip as a checklist. End by asking the class: 'What do you understand better in the extract now that you have performed and listened to an effective reading?'

CROSS-CURRICULAR LINKS

Biology: Learners could explore ideas about how our brains process the stories that we read, the images that we see or films that we watch. They could research what happens to our minds and emotions when we read about people in dangerous situations.

Homework idea

Learners should complete Workbook Session 1.5 for homework.



Downloadable teaching resources:

- Language worksheets
- Differentiation worksheets
- Extract sheets (Stage 7-9)
- Audio recordings and transcripts
- Answers



Assessment opportunities



Downloadable assessment resources:

- Diagnostic check
- Mid-point test
- End of year test
- End of unit tests

ENGLISH STAGE 7: DIAGNOSTIC CHECK

Name _____ Date _____

Stage 7 Diagnostic check

Part 1: Non-fiction

Section A: Reading

Spend around 20 minutes on this section.

Read the below text (an extract from *The World*) questions 1–7.

Tiger
Endangered – Around 3900 Remain!
The beautiful, awe-inspiring tiger is one of our But here's the shocking truth. Wild tiger numbers are down 95% from the beginning of the 20th century. In conservation history, their numbers are on the decline.

5 We aim to help double the number of wild tigers in the next Chinese year of the tiger. In recent years, conservation work and the governments has halted the decline in global tiger numbers. A lot more work to do.

10 We're working closely with governments and conservationists in Asia – and your support is crucial, as always. We need to protect this amazing wild cat? Becci May: *Tigers & Asian species regional*

15 *'I am proud to be engaged in supporting our work in the area of unprecedented and exciting time in history which is starting to increase globally. In my lifetime, tigers are now on the up. That's quite incredible. We need to remain, and we need to do all we can to help double the goal of doubling the number of tigers in the world was set in 2010 when the wild tiger population was around 3,200.'*

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LOWER SECONDARY ENGLISH STAGE 7: MID-YEAR TEST

Name _____ Date _____

STAGE 7 MID-YEAR TEST

Part 1: Non-fiction

Section A: Reading

Spend 20 minutes on this section.

Read the following text (an extract from a travel guide) questions 1–7.

Escape to an undiscovered island paradise
Lofoten Islands, Norway
An idyllic island escape doesn't have to be found, particularly in the case of Norway's Lofoten Islands. Rearing up from the North Sea like jagged teeth, the landmasses off the northwest coast of the fjords are a sight to behold. From June to August, when the sun barely sets, the islands are a sight to behold. But visit during winter to experience the true beauty of the archipelago. Base yourself in Svolvær and reach the islands connected by bridges and tunnels. The islands are a sight to behold. Beaches where water is clear as glass and coral reefs are a sight to behold.

10 As polar nights draw in, days are bookended by darkness. The possibility of witnessing the Northern Lights is a sight to behold. For hundreds of years, cod fishing has provided the main industry. Every February, fish are still draped over the roofs of the houses.

15 **Getting there:** There are daily flights from Oslo. If you're looking for a more leisurely travel experience, take a train to Oslo (22 hours) or a coastal steamer from Bergen. Tailing your visit with a night in the Norwegian fjords is a sight to behold. Located Thon Hotel 15 Rosenkrantz is an ideal base for your stay.

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ENGLISH STAGE 7: END-OF-YEAR TEST

Name _____ Date _____

Stage 7 End-of-year test

Part 1: Non-fiction

Section A: Reading

Spend 30 minutes on this section.

Read Text A (*The Ancient Olympic Games*), then answer questions 1–9.

Text A: The Ancient Olympic Games
About three thousand years ago, the first Olympic Games took place in Olympia in Greece. Originally, the games were part of a religious festival to honour Zeus, the god of the sky and the leader of the Greek gods who lived on Mount Olympus, the highest mountain in Greece.

What events and awards were part of the ancient Olympics?

5 At the beginning, the games were just running races; the path was about 700 feet long and as straight as an arrow. It was also wide enough for twenty men to run side by side. Gradually, other events were added but there were no team sports like in the modern Olympics. Also, there were no medals like the gold, silver, and bronze medals we have today. There was only one winner and he was given a wreath of olive leaves as a prize.

10 They were taken from a sacred tree that was located at Olympia behind the temple dedicated to Zeus. To reward his mastery of the events, a statue was built in the winner's honour.

The games were held once every four years in August. Over time, the events expanded to include horse races, chariot races, boxing, and wrestling. There was also a special event that consisted of five different sports activities: wrestling, running, the long jump, disc throwing, and spear throwing.

Were women allowed to participate?

15 Married women were not allowed to attend the Olympics and women were forbidden from competing in any of the events. There was a separate women's festival that was dedicated to the honour of Hera, the wife of Zeus.

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ENGLISH STAGE 7: END-OF-UNIT TEST, UNIT 1

Name _____ Date _____

Stage 7: End-of-unit test 1

Adventure

Section A: Reading

*Read the extract from: **Around India on 80 Trains** by Monisha Rajesh, then answer questions 1–8.*

Chennai Egmore station could be heard before it was seen. A cacophony erupted as we made our way under the arches, running after Subbu who had been instructed to come with us to the platform. Indian stations are not designed for running. An assault course lay between us and Subbu, who was winding deeper and deeper into the sea of boxes and briefcases and body parts. We ducked and wove around the slalom of wooden carts wheeled by men with no sense of urgency, strings of hand-holding children, hobbling dogs, stacked hessian sacks, nose-pickers, watersellers, booksellers and red-shirted porters. Subbu now stood by our train, under a digital sign reading B2, his face powder dry, as we bent double, sweat running down our bodies.

5 Engines hissed and thudded as they began to move, high-pitched announcements singing out in breakneck-speed Tamil, while the smell of dried fish crept up my nostrils. Passapartout kept about, clicking away, and I smiled weakly for the camera before boarding the Anantapuri Express to Nagercoil. Subbu had already found our seats and placed our bags on each by the time we squeezed through.

10 Thanking him, we dug out bottles of water, notebooks, pens, toilet paper, flannels and flip-flops, much to the amusement of our companions who had already chained up bags, hidden shoes, plugged in phones and sat down cross-legged, watching us. At 7.20pm the train jerked. Subbu bowed and slunk off as the train glided out of the station. Through the tinted window he was soon no more than a saluting silhouette.

20 We were on the move.

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Review comments from Cambridge Assessment

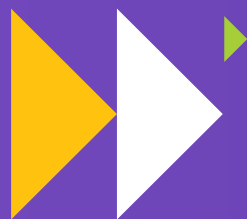
Cambridge Primary & Lower Secondary English

- **Primary:** “CUP have listened very carefully to what teachers around the world struggle with and what support they need to deliver the curriculum successfully and CUP have produced the perfect materials to do this.”
- **Lower Secondary:** “Commendations to the Press team, as well as to the new author team on this massive improvement on the current edition! The team has done a superb job of giving this course book a true international feel.”

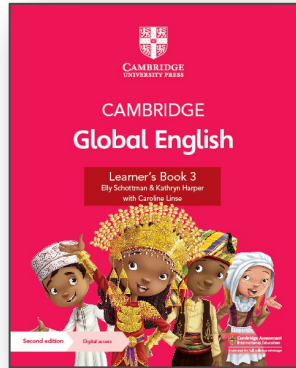


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Cambridge Primary and Lower Secondary English as a Second Language

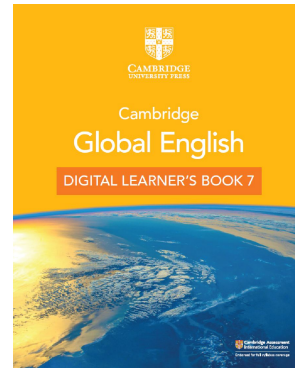


Series components



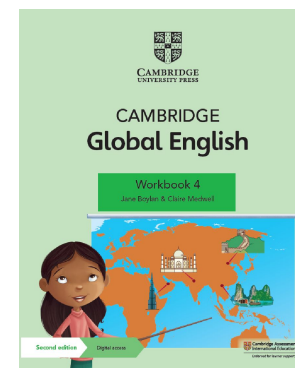
Learner's book with
digital access
stage 1 - 9

Core learner activities



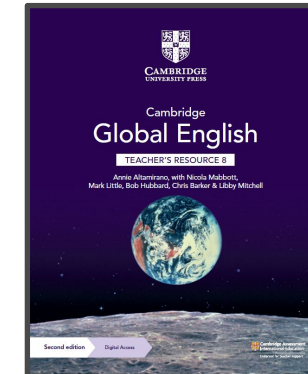
Digital learner's book
stage 1-9

Digital only version of the
learner's book



Workbook with digital
access stage 1-9

Additional, differentiated
practice opportunities



Teacher's resource with
digital access stage 1-9

Everything teachers need
to plan and run the
course

Key curriculum changes for first teach in 2021

Cambridge Primary & Lower Secondary English as a Second Language



**New speaking
sub strands**



**Clearer CEFR
alignment**



**Clear path way
to IGCSE**

Differences between First Language English and English as a Second Language

	English	English as a Second Language
Learners	Learners who speak English at home or at pre-school and already have spoken English skills	Learners who speak a language other than English at home.
Aims	<ul style="list-style-type: none"> • Communication for a range of different purposes and audiences • Evaluation and analysis of written and spoken language • Critical reading of literary texts from different periods and cultures 	<ul style="list-style-type: none"> • Practical communication • Awareness of the nature of language and language-learning skills • Ability to study using English as the medium of instruction.
Curriculum	Three strands: Reading, Writing, Speaking and listening	Five strands: Reading, Writing, Speaking, Listening and Use of English
Assessment	Paper 1 Reading and Writing (non-fiction), Paper 2 Reading and Writing (fiction)	Paper 1 Reading and Usage, Paper 2 Writing, Paper 3 Listening



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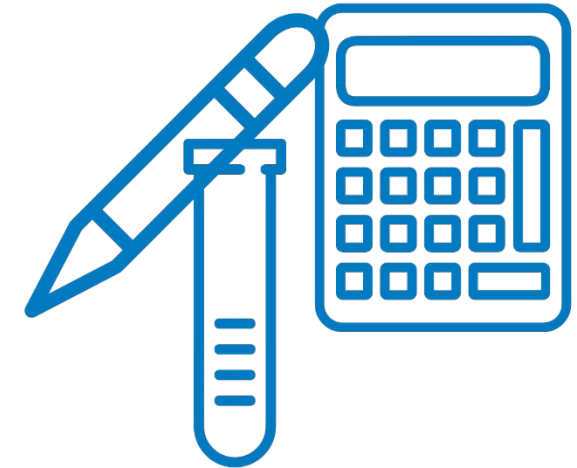
Global English – key features



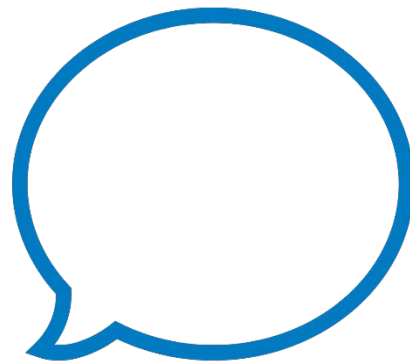
International themes



21st century skills



Cross-curricular



Language support



Pedagogical approach: 21st Century Skills

Skills for Life

1 My world

4 C's

Collaboration
Working together to reach a goal - putting talent, expertise, and smarts to work.

Communication
Sharing thoughts, questions, ideas, and solutions.

Creativity
Trying new approaches to get things done equals innovation & invention.

Critical Thinking
Looking at problems in a new way, linking learning across subjects & disciplines.

Project challenge

Project A: A presentation about something or someone special to you



Prepare a presentation about one of these topics. Work individually or find a classmate with a similar idea. Use your presentation on page 17 to help you.

An interesting or special experience you've had.
Your favourite free-time activity.

Decide which topic to present and make notes. Use the internet or library resources to help you.

- Plan your presentation using these guidelines.
 - Give the purpose of the presentation and something to attract the audience's attention at the beginning.
 - Explain the background to the subject.
 - Explain what is special or interesting about the subject.
 - Give a short summary to finish the presentation.
- Add photos, music, videos or any other props.
- Deliver your presentation. If you are working with a classmate, divide the tasks of the presentation equally. Who is going to introduce the presentation? Who is going to organise the props?

1.6 Project challenge

Project B: Design an 'Our names' poster for your classroom

- Work in a group of four. Choose one of these options.
 - Use the internet or library resources to research the history of your first name. Find out how old your name is and if it has a special meaning.

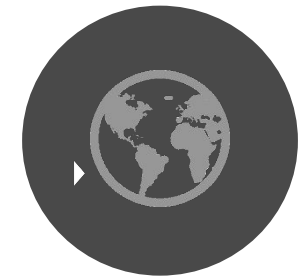
Ying Yue
My name means 'reflection of the moon'...

OR

- Find out the top five most popular names for boys or girls in your country. Research the history of those names.
- Write a paragraph about the names you have chosen. If you chose Option A, add information about why your parents chose your name for you.
 - Create a large group poster:
 - Make a large colourful heading for each first name or the top five names.
 - Add the information you have found out about your name(s).
 - Decorate the poster with images connected to your name(s).
 - Present your poster to your class.
 - Deliver your presentation as a group with each classmate taking a turn to present their name or the top five names.
 - Explain the information on the poster and why you have chosen the visual images for each name.
 - Display your posters on the wall of your classroom.

What did you enjoy most about doing your project?

Cross-curricular content



2 Sport

2.2 Eat for strength and energy!

We are going to...

- find out how food helps us to do sport.

1 Talk What do you know about food and exercise? What kind of food helps you with sports and physical activity?

2 Improve your energy! Find out how with a quick quiz! Are the statements true or false?

1 Yoghurt and milk help to build strong bones. true / false

2 If you eat sugary food, you'll have energy for a long time. true / false

3 Make sure you have lots to eat before doing exercise. true / false

4 If you drink plenty of water, it'll stop you from feeling thirsty. true / false

3 Read and listen to the text and check your answers to the quiz in Activity 2.

Tips for health and energy!

Did you know that top athletes pay as much attention to what they eat as how they train? Your eating habits can really help your body when you do sports and exercise. Here's how to keep your body in tip-top condition.

Eat healthy carbohydrates like wholemeal bread, pasta, brown rice, vegetables and beans. You will give your body energy for exercise and feel fuller for longer.

Don't eat too much white bread and sugary food. If you eat these foods, you'll get a quick energy lift, but later you'll feel tired more quickly.

Eat protein to help your body get stronger. Protein repairs your muscles after exercise and helps your blood cells carry nutrients and oxygen to your muscles. Good protein foods are chicken, beef, fish, eggs, milk, green vegetables and lentils.

Drink plenty of milk or yoghurt. These foods contain calcium to give you strength.

Feel hungry before doing sport? Have a banana or some fruit! This food is easy to digest. If you have a lot of food before exercise, you'll probably get a stomach ache!

Drink lots of water. Your body needs water to stay healthy. If you drink plenty of water, you'll stay cool and hydrated when you do sport.

2.2 Health education

4 Talk Which tips in the text do you follow already? What other tips do you know? Talk to your partner!


Key words: nutrition

carbohydrate: a substance in food that provides the body with energy

nutrients: substances you need to live and grow

oxygen: a chemical you need to live and breathe

digest: to change food so your body can use it



5 Use of English Read the Use of English box and match the sentence halves.

1 If you eat less sugary food,

2 Unless you eat enough carbohydrates,

3 You'll feel thirsty and tired

4 If you eat foods with calcium,

5 Your stomach won't feel good

6 If you eat plenty of fruit and vegetables,

a your bones will grow strong.

b if you don't drink enough water.

c you'll have more energy.

d if you eat a lot before doing sport.

e your body will get the vitamins it needs.

f you won't have enough energy.

6 Find more examples of the 1st conditional in Activity 2 and the text.

7 Write Make an energy tips poster, using 1st conditional sentences. Use the information in the text and your own ideas.

Try to eat two fruit and three vegetables a day.
If you eat enough fruit and vegetables, you'll...

Use of English – 1st conditional with if / unless

Cross-curricular links

Geography:

- Where am I in the world?

Health education:

- Eat for strength and energy

Contents

Page	Unit	Words and expressions	Use of English	Reading/Writing	Listening/Speaking	Study	Critical thinking/Values
11-26	1 Our community	Adjectives Families, sports and hobbies P.E. verbs Jobs	both and too Adverbs of frequency Verb + infinitive/-ing	Communities Table completion An inspirational sports player Sentence correction Write a leaflet Writing tip: Imperatives Gist Make connections Literature: 'The Treasure'	Talk about why families are special School helpers describe their jobs Interview and find out about school helpers Listen to: 'The Treasure'		Values: Helping people in our community Venn diagrams Comparing and contrasting lives of children
27-42	2 Earth and beyond	Adjectives to describe landscapes The solar system Scientific words Natural events	Comparatives Superlatives	Our solar system Do a quiz Write a fact file about a spacecraft Writing tip: Present simple to describe	Prediction Table completion Listen to: 'The Seekers' Comprehension questions	Science: Planets and orbits Contractions Rhyming words	Values: Including people around us Identifying natural landscapes Identifying planets in solar system Expressing opinions about poetry



Language support: Improved grammar coverage



2 Earth and beyond

> 2.2 Comparative adjectives

Language detective

We use comparative adjectives to compare things.

- Short adjectives: adjective + -er + than

The Thar Desert is **smaller than** the Sahara Desert.

- Adjectives ending in -e add -r:

The Mekong River is **wider than** the River Thames.

- Adjectives ending in -y add -ier:

The weather in Spain is **drier than** the weather in the UK.

Adjectives with consonant – vowel – consonant spelling (not thin):

The weather in Argentina is **warmer than** the weather in the UK.

- Adjectives ending in -ly add -er + than:

The Nile is **longer than** the Amazon River.

Regular, e.g. good – better; bad – worse;

The weather in Spain is often **worse** in January **than** December.

There are **more** rainforests in South America **than** in Europe.

Focus

- 1 Circle the correct words in the sentences.

- a The Eiffel Tower in Paris is **more old / older** than the Leaning Tower of Pisa.
- b My brother is **more noisy / noisier** than me!
- c Southern Europe is **hotter / hoter** than Northern Europe.
- d I think very hot weather is **more dangerous / more danger**.
- e Today, the roads are **icier / icyer** than yesterday.
- f In East Asia **more humid / humider** than in the Amazon rainforest.
- g The weather in Spain is **better / more good** than in the UK.
- h The Amazon River is **more short / shorter** than the Nile.

Language detective – Adverbs of frequency

never hardly ever sometimes usually always

0% 50% 100%

I sometimes work on Sunday mornings.

I always get up early.

I usually ride my bike to school.

Language focus – Imperatives

Use imperatives to encourage people to do things.

Buy your ticket now!

Come and join us!

Enjoy a day out!

Practice

- 2 Complete the sentences about the two mountains.



Mount Everest

Kilimanjaro

Get it right!

Don't forget that adjectives ending in -y change to -ier.

It's **teyer icier** today than yesterday.

- a Mount Everest is higher than Kilimanjaro. (high)
- b Mount Everest is _____ than Kilimanjaro. (cold)
- c It's _____ to get to the very top of Kilimanjaro than to get to the top of Mount Everest.
- d Mount Everest is _____ to climb than Kilimanjaro.
- e Kilimanjaro is _____ to climb than Mount Everest.
- f Which mountain do you think is _____? (be careful)

Challenge

- 3 How are these landscapes different? Write sentences using comparative adjectives.

Use the adjectives in the box to help you.

wide humid cold dangerous

- a Sahara Desert / The Arctic _____ The Amazon River.
- b Tropical rainforest / Mountains _____
- c The Arctic / Tropical rainforest _____
- d Volcanoes / Mountains _____
- e Rivers / Lakes _____
- f The Amazon River / The Great Barrier Reef _____

Use adjectives and comparatives to compare two landscapes. Use the sentences in Activity 2 to help you.

2.2 Use of English

Photocopiable 13: Past simple time expression cards

Card A Nature
Find someone who...
... went for a walk in a forest last weekend.
(Did you go for a walk in a forest last weekend?)
... saw a wild animal last weekend.
... swam in a lake or pool last month.
... walked in the mountains last weekend.

Card B Holidays
Find someone who...
... stayed at a campsite last year.
(Did you stay at a campsite last year?)
... travelled to a special place on their last holiday.
... stayed in the mountains on their last holiday.
... stayed away from the city on their last holiday.

Card C Reading
Find someone who...
... read a book about a secret place last year.
(Did you read a book about a secret place last year?)
... read a book about a secret place last month.
... found something out on a website last week.
... read about a superhero in a comic yesterday.
... read a story about a black bear a few days ago.

Card D Films
Find someone who...
... saw a film about a superhero last week.
(Did you see a film about a superhero last week?)
... saw a film about children hunting for treasure last month.
... watched a film with a wicked enemy last year.
... saw a film about children hunting for treasure last month.
... saw a funny film yesterday.





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Resource walkthrough



Learner's Book Navigation

How to use this book

The **Think about it** session introduces the topic through topic vocabulary activities

The opening session includes Listening.

In this session you'll find Language Detective and Key Words boxes.

There will be opportunities to think critically about the information in the text.

Pronunciation is supported through paired activities

How to use this book

The **Write about it** section supports learners to write effective texts.

Model texts with callouts support the writing process.

The **Read and Respond** session includes literature. This might be a fictional story, a poem or a play.

The audio can be played the first time you meet the story, before learners read the text.

The **Global Challenge** session includes choice of projects.

Engage with the topic of the unit and generate discussion using the image, the video and the big question.

The **cross-curricular** session prepares learners to learn in English across the curriculum.

A non-fiction text exposes learners to cross-curricular language.

The **Talk about it** session develops learners' speaking skills.

Listening models and speaking tips help provide scaffolding for speaking.

Step by step tasks supports learners in their planning, writing and editing.

Clear assessment criteria are provided.

Self-evaluation checklists and sample answers can be found in the Teacher's Resource.

The literature is used as a platform for work on values.

Projects encourage 21st century skills such as research, collaboration, and creativity.

Self and peer-evaluation checklists for projects are available in the Teacher's Resource.

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9 >



Learner's Book

Supporting transitions

Starter unit

> 1 Hello!

We are going to...

- say hello and make new friends
- name parts of the body.

Getting started

Talk about the things you know.
Look at the picture for more ideas.

1 Learn a 'hello' poem.

Hi! Hello! How are you?
How are you today?
I'm fine, thank you. How are you?
Do you want to play?
Yes! Let's play!

2 Listen, point and say. Listen to the boys talking. Practise the conversation.




3 Listen, point and say. Listen to the girls talking. Practise the conversation.



10 >

1 Hello!

4 Head, shoulders, knees and toes

Listen to the song. Do the actions. Sing along! 



5 Play 'Simon Says!'

Listen carefully! If you hear 'Simon says, "Hop!"', do what Simon says.
If you hear 'Hop!', don't do it! Wait to hear 'Simon says, "Hop!"'



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Starter units in
Stages 1 & 7 aid
transition between
schools

Learner's Book

Unit Opener & Think About It



Unit learning objectives



3 Homes

We are going to...

- talk about homes around the world
- learn about eco-houses and the material we need to build them
- use modal verbs and yes/no questions to talk about strange buildings
- write a magazine article about a famous place
- read and enjoy an extract from The Hobbit.

Getting started

How are buildings important to us?

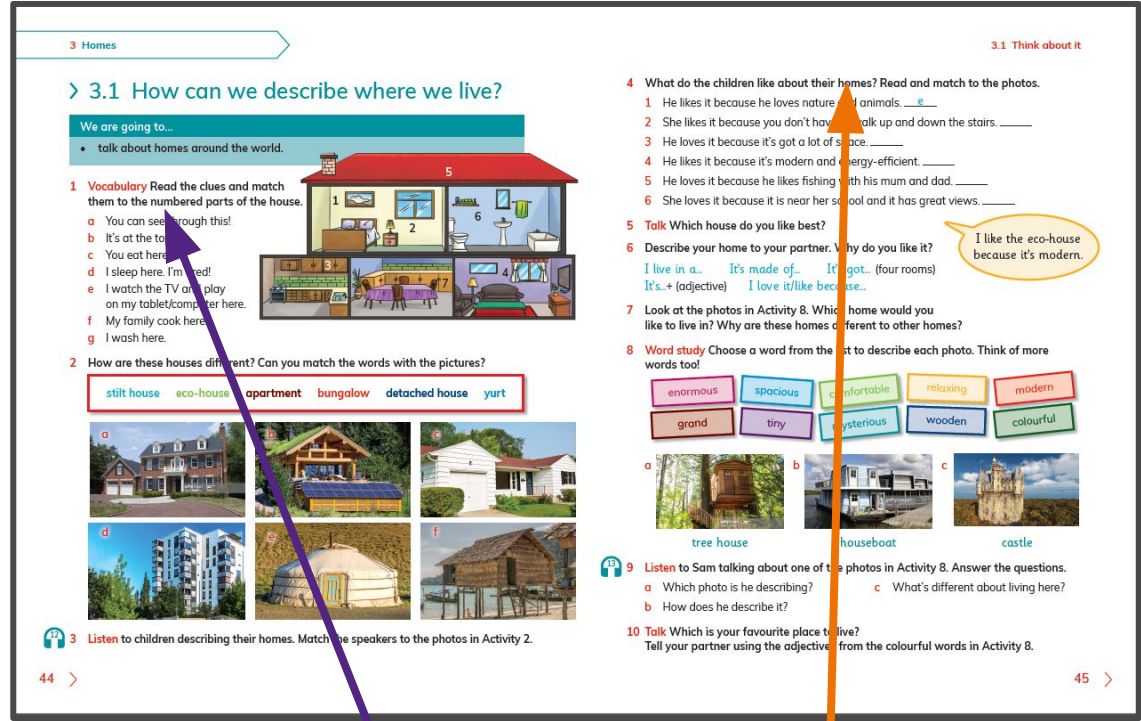
- Which buildings can you see in the picture?
- Which buildings do you have in your town or city? What are they used for?
- Think of a famous building or place in your town or city. Why is it special?

Watch this!

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Engage with the topic using the image, the video and the big question

Prior learning



3 Homes

3.1 How can we describe where we live?

We are going to...

- talk about homes around the world.

1 Vocabulary Read the clues and match them to the numbered parts of the house.

- You can see through this!
- It's at the top.
- You eat here.
- I sleep here. I'm tired!
- I watch the TV and play on my tablet/computer here.
- My family cook here.
- I wash here.

2 How are these houses different? Can you match the words with the pictures?

stilt house eco-house apartment bungalow detached house yurt

3 Listen to children describing their homes. Match the speakers to the photos in Activity 2.

3.1 Think about it

4 What do the children like about their homes? Read and match to the photos.

- He likes it because he loves nature and animals. e
- She likes it because you don't have to walk up and down the stairs. g
- He loves it because it's got a lot of space. h
- He likes it because it's modern and energy-efficient. f
- He loves it because he likes fishing with his mum and dad. d
- She loves it because it is near her school and it has great views. a

5 Talk Which house do you like best?

6 Describe your home to your partner. Why do you like it?

I live in a... It's made of... It's got... (four rooms)
It's... (adjective) I love it/like because...

7 Look at the photos in Activity 8. Which home would you like to live in? Why are these homes different to other homes?

8 Word study Choose a word from the list to describe each photo. Think of more words too!

enormous	spacious	comfortable	relaxing	modern
grand	tiny	mysterious	wooden	colourful

9 Listen to Sam talking about one of the photos in Activity 8. Answer the questions.

- Which photo is he describing?
- How does he describe it?
- What's different about living here?

10 Talk Which is your favourite place to live? Tell your partner using the adjectives from the colourful words in Activity 8.

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The Think about it session introduces topic Vocabulary and Listening

Rubrics support better classroom interaction

Brighter Thinking
Better Learning

Learner's Book

Cross-curricular spread

The cross-curricular session prepares learners to learn in English across the curriculum.

Lesson learning objectives




3 Homes



> 3.2 The eco-house

We are going to...

- learn about eco-houses and the material we need to build them.

1 What does eco- or ecological mean to you? What is an eco-house? Tick the pictures that belong to an eco-house.

a  b  c 

d  e 

2 Read and listen to the text. What's good about an eco-house?

An eco-house

This 'earth shelter' house is built into the ground. It is **made from** recycled materials that the owners found in the rubbish tip. They used local materials like stone, metal, wood and mud too! The walls are **made of** stone and mud and they used wood to make the roof.

This eco-house uses natural resources like water and energy efficiently. It has a wood burner to heat the house and big windows to let in natural light. It also has solar panels to provide energy for heating and lighting, and earth and grass on top of the roof to keep the house warm. Outside, there is a large tub to collect water when it rains, and for watering the vegetable garden in the summer.

3.2 Ecology

Key words: made from/made of

- We use **made from** when one thing is made from another. It is made from recycled materials.
- We use **made of** to describe a material that hasn't been changed. This roof is made of wood.

Language detective - Infinitive of purpose

They used wood **to make** the roof.
They have solar panels **to provide** energy.









3 Use of English Cover up the reading text in Activity 2. Complete the sentences using the correct infinitive of purpose from the box.

to heat to collect to keep to build

a There are solar panels on the roof _____ the house.
b They also have grass on the roof _____ the house warm.
c They used mud and stone _____ the walls.
d They have a large water tub _____ rainwater.

4 Now read the text again to check your answers.

5 Vocabulary Match the phrases to the correct pictures.

1 turn off lights	2 turn off appliances	3 put on a jumper	4 unplug charger
a 	a 	a 	a 
b 	b 	b 	b 

6 Which actions do you do most to save energy in your home?

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The **key words** feature presents cross-curricular vocabulary, Academic English terms and command words.

Language detective boxes present the main grammar

Language Focus boxes offer a brief revision of other grammar points

Learner's Book

Talk about it

3 Homes
3.3 Talk about it


> 3.3 Strange buildings

We are going to...


- use modal verbs and yes/no questions to talk about strange buildings.

1 Talk Look at these photos of buildings. What's strange about them? Talk with a partner.


a




b




c



d




e




It's made from books!

f



It looks like a shoe.



2 Listen to the children playing a guessing game. Which building do they describe?

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Listening models

3 Pronunciation Listen and repeat the yes/no questions below. Use the arrows to help you. Practise with a partner.

- a Is it made from books?
- b Is it colourful?
- c Is it a bag shape?
- d Does it look like an upside-down house?
- e Does it have a shoe outside?

Language focus

We form yes/no questions with an **auxiliary verb** (be, do or have). Circle the auxiliary verbs in the questions in Activity 3.

Is it colourful? No, it isn't.

4 Talk Play the guessing game with your partner. Take turns asking questions about the photos in Activity 1. Ask yes/no questions.

5 Use of English Look and talk about what the buildings in Activity 1 might be.

Language detective – Modal verbs of possibility

It **can't** be a house. It **might** be a museum.
 It **could** be a library. It **must** be a school.

6 Check your ideas. Listen to the children talking about what the buildings are used for.

0%

Not possible

100%

Very possible

7 Listen to the dialogues again and circle the correct modal verb.

- a It **could** / **can't** be a museum.
- b I think photo 2 **could** / **must** be a factory.
- c I think it **might** / **must** be a hotel because it's very big!
- d It **could** / **can't** be a cool apartment building!
- e It **can't** / **must** be a real house!
- f It **must** / **might** be a library with all those books!

8 Find some photos of unusual buildings and find out what they are used for. Ask your partner their opinion. Use modal verbs.

What do you think it **could** be?

It **might** be a school because I can see a playground.

The **Talk about it** session develops oracy.

New: pronunciation

Learner's Book

Write about it

3 Homes

3.4 Famous places

We are going to...

- write a magazine article about a famous place

- Talk. There are famous buildings and landmarks all over the world. How many famous places are there where you live?
- Read the magazine article and find the answers.
 - Where is Machu Picchu?
 - What was it?
 - Who discovered it?
 - How many ways can you travel to Machu Picchu?
 - How would you like to travel there? Why?

My Famous Places: Peru: Machu Picchu

- Machu Picchu, also known as 'The Lost Inca City', is in the **Cusco region of Peru in South America**. It is high up in the mountains above the Urubamba River. Location
- 'Machu' means old or ancient and 'Picchu' means peak or mountain. It was built by the Inca emperor Pachacuti and historians think it was a spiritual and ceremonial Inca site. It was hidden from the world for centuries until an American explorer, **Hiram Bingham, discovered it in 1911**. Historical fact
- There are different ways to travel to Machu Picchu – some are easier than others! **You can take the train from _____, you can fly in by helicopter or you can trek**. The Inca Trail is the most difficult way to get to the **mysterious** lost city of the Incas. It is the most famous trek in South America. It is 43 kilometres long and the trek goes through **beautiful** mountain scenery and **lush** forests until you arrive at the **spectacular** Inca site. You can choose an easy, moderate or difficult route, depending on how fit you are. **I think I'd choose the easy one**... What about you? Use interesting adjectives Opinion Travel information

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3.4 Write about it

3 Write Choose one of these famous landmarks and write a magazine article about it. Follow the steps and use the model in Activity 2 to help you.

Step 1: Research (collaboration)	Use the internet, books and magazines to find out information on location, historical facts, travel information and things to see and do.
Step 2: Planning	Use paragraphs: 1 Location 2 Historical facts 3 Travel information
Step 3: Writing	Remember to use interesting adjectives: The trek goes through nice beautiful scenery.
Step 4: Read and check	Swap with a partner. Check for spelling mistakes!

The Prophet's Mosque, Saudi Arabia

The Taj Mahal, India

Writing tip

Paragraphs

Organise your writing into paragraphs, with clear information in each one.

The Colosseum, Italy

The Great Wall of China

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The Write about it lesson supports learners to write effective texts.

Model texts with callouts support the writing process.

Process Writing approach supports learners in their planning, writing and editing.

Strategy training

Self-assessment criteria and sample answers are provided in the Teacher's Resource

Learner's Book

Read & respond

3 Homes

> 3.5 The Hobbit

We are going to...


- read an extract from *The Hobbit*.

1 **Talk** *The Hobbit* is a book by J.R.R. Tolkien. It is also a famous series of films. In this extract, we learn about the hobbit and his unusual home. Look at the pictures and answer the questions.

- Who do you think the hobbit is?
- What is his home like?

2 **Read** the extract from *The Hobbit*. Check your ideas from Activity 1 and match the headings to the correct paragraphs, 1, 2 and 3.

- What is a hobbit like?
- Description of a hobbit-hole
- The hobbit's house




The Hobbit
by J.R.R. Tolkien.

In a **hole** in the ground there lived a hobbit. Not a nasty, dirty, wet hole, filled with the ends of worms and an oozy smell, nor yet a dry, bare, sandy hole with nothing in it to sit down or to eat: it was a hobbit-hole, and that means **comfort**.

3 **Read** the story again. Are the sentences after each part **true** or **false**?

- The hobbit lives under the ground. true / false
- His home is not nice to live in. true / false

3.5 Read and respond



5 It had a perfectly round door like a porthole, painted green, with a shiny yellow brass knob in the exact middle. The door opened on to a tube-shaped hall like a **tunnel**: a very comfortable tunnel without smoke, with panelled walls, and floors tiled and carpeted, provided with polished chairs, and lots and lots of pegs for hats and coats – the hobbit was **fond of** visitors. The tunnel wound on and on, going fairly but not quite straight into the side of the hill – The Hill, as all the people for many miles around called it – and many little round doors opened out of it, first on the one side and then on another. No going upstairs for the hobbit: bedrooms, bathrooms, cellars, pantries (lots of these), wardrobes (he had whole rooms devoted to clothes), kitchens, dining-rooms, all were on the same floor, and indeed on the same passage. The best rooms were all on the left-hand side (going in), for these were the only ones to have windows, deep-set round windows looking over his garden, and **meadows** beyond, sloping down to the river.

- The door looks like a window in a ship. true / false
- The hobbit's hall is very long and narrow. true / false
- His house has more than one floor. true / false
- You can't see outside from the hobbit's house. true / false

The Read and Respond session includes international literature

The audio can be played the first time you meet the story, before learners read the text.

The literature is used as a platform for work on values...

...and creative writing

Learner's Book

Project challenge

3 Living things

> 3.6 Project challenge

Project A: A presentation about how an animal survives



- 1 Work in small groups. Choose an animal for your presentation and brainstorm things you know already. Write four questions to find out about how it survives. Think about:
mammals reptiles amphibians birds insects fish
- 2 Research your animal using the internet or library. Use your questions to plan your research. Each group member should take a question to research. Here are some ideas for your questions:
habitat hunting and prey place in the food chain caring for young climate
- 3 Plan your presentation together. Use your questions to organise and write your presentation.
- 4 Create visuals to go with your presentation. Which visuals will engage your audience and make them want to listen and find out more? Think about:
videos 3D models real objects photos diagrams/illustrations
- 5 Check and practise your presentation together, using the visuals. Each group member should present a part.
- 6 Deliver your presentation as a group to your class, with each group member delivering a part.

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3.6 Project challenge

Project B: Create a quiz about an animal

- 1 Work in pairs and choose an animal. Research information about your animal on the internet or in books or magazines. Find out about:
animal type features habitat how they survive what they eat
- 2 Write a quiz for another pair to answer.
 - Include at least one question about each of the topics in Activity 1.
 - You can include images too, e.g., photos, illustrations and diagrams.
 - Make sure you have noted down the answers!
- 3 Check your quiz questions. Check spelling and grammar and correct any errors.
- 4 Now write your quiz questions and add visual images. You can type or write the questions by hand (make sure your handwriting is clear and easy to read).
- 5 Swap your quiz with another pair and answer each other's questions. When you have all finished, get together to check your answers.
- 6 At the end, get together as a class and share two new pieces of information you have learned from each other's quizzes. Make a classroom display of the quizzes.



What did you enjoy most about doing your project?



Self and peer-evaluation checklists for projects are available in the Teacher's Resource.

Reflection on learning processes



Brighter Thinking

Better Learning

The Project Challenge session includes choice of open-ended projects.

Projects encourage 21st century skills such as research, collaboration, and creativity.

Learner's Book

Look what I can do / Summary Checklist & Check your progress

3 Homes

3.7 What do you know now?

How are buildings important to us?

- 1 Make a list of types of buildings in your town or city. Why are they important? Which ones do you visit the most?
- 2 Write the names of five types of house. Which one do you like best? Why? Tell your partner.
I like apartments best because you can see views of the city.
- 3 What materials can you use to build a house or building? What is your home made of?
It has solar panels to heat the house.
- 5 Tell your partner some ways to save energy at home. Which ones do you do?
I always turn off lights if no one is in the room.
- 6 Think of famous buildings in your country. Choose one and write some interesting adjectives to describe it.





Look what I can do!

Write or show examples in your notebook.

- I can talk about different types of home.
- I can describe an eco-house.
- I can identify the materials used to build a house.
- I can talk about ways to save energy at home.
- I can use modal verbs and yes/no questions to talk about buildings.
- I can write about famous landmarks in my town or country.
- I can understand an extract from *The Hobbit*.

Check your progress 1

- 1 Read the clues and guess the words.
 - a This person is your mother's father.
 - b This adjective means very, very cold.
 - c This rocket can travel into space and come back again.
 - d This adjective describes a house with lots of space.
 - e This type of house has only one floor and no stairs.
 - f This person cleans and fixes things in your school.
 - g This machine can move across the surfaces of planets and moons.
 - h This is a sport you can do in the sea.
 - i This type of home is in the same building as other homes.
- 2 Now add one word to each vocabulary group in Activity 1.
 - a grandfather, cousin
- 3 Play Bingo! Choose six words and write them in a grid like the one below.

me book can house call play sing sun old
- 4 Listen to your teacher. Cross out the words that rhyme in your grid. When you have crossed out all of your words, say 'Bingo!'

Games and activities cover what you have learned in the unit or the previous 3 units



Workbook

> 2.2 Comparative adjectives

Language detective

We use comparative adjectives to compare things.

- Short adjectives: adjective + **-er** + than
The Thar Desert is **smaller than** the Sahara Desert.
- Adjectives ending in **-e** add **-r**.
The Mekong River is **wider than** the River Thames.

- Adjectives ending in **-y** add **-ier**.
The weather in Spain is **drier than** the weather in the UK.

- Short adjectives with consonant – vowel – consonant spelling (e.g. big, hot, fat, thin):
Brazil is **bigger than** Argentina.

- Long adjectives: **more** + adjective + **than**:
Are lakes **more beautiful than** rivers?

Some adjectives are irregular, e.g. good – better; bad – worse; many/much – more.

In the UK, the weather is often **worse** in January **than** December.
There are **more** rainforests in South America **than** in Europe.



Focus

1 Circle the correct words in the sentences.

- The Eiffel Tower in Paris is **more old / older** than the Shard in London.
- My brother is **more noisy / noisier** than me!
- Southern Europe is **hotter / hoter** than Northern Europe.
- I think very hot weather is **more dangerous / dangerouser** than very cold weather.
- Today, the roads are **icier / icyer** than yesterday.
- Is East Asia **more humid / humider** than Europe?
- The weather in Spain is **better / more good** than the weather in the United Kingdom.
- The Amazon River is **more short / shorter** than the River Nile.

Practice

2 Complete the sentences about the two mountains.



Mount Everest



Kilimanjaro

Get it right!

Don't forget that adjectives ending in -y change to -ier.
It's ~~eyer~~ icier today than yesterday.

- Mount Everest is higher than Kilimanjaro. (high)
- Mount Everest is _____ than Kilimanjaro. (cold)
- It's _____ to get to the very top of Kilimanjaro than Everest. (difficult)
- Mount Everest is _____ to climb than Kilimanjaro. (dangerous)
- Kilimanjaro is _____ to climb than Mount Everest! (easy)
- Which mountain do you think is _____? (beautiful)

Challenge

3 How are these landscapes different? Write sentences to compare them. Use the adjectives in the box to help you.

wide humid ~~eler~~ dangerous icy long dry beautiful

- Sahara Desert / The Arctic. The Arctic is colder than the Sahara Desert.
- Tropical rainforest / Mountains _____
- The Arctic / Tropical rainforest _____
- Volcanoes / Mountains _____
- Rivers / Lakes _____
- The Amazon River / The Great Barrier Reef _____

4 Use adjectives and comparatives to compare two landscapes in your country. Use the sentences in Activity 2 to help you.

3 tiered approach to differentiation of grammar

Deductive Presentation

Teacher's Resource

Supporting good teaching

Main teaching ideas

1 Adjectives to describe the weather (5 minutes)

- Ask learners what an adjective is. If they are unsure, remind them. Write weather nouns and verbs on the board from the Starter activity, e.g. *rain*, *rainy*. Elicit the adjective *rainy*.
- Allow pairs of learners a minute to write down as many weather adjectives as they can.
- Build up a list of adjectives on the board.

Answers:

Learners' own answers.



Lesson notes and answer keys



Professional development

TEACHING SKILLS FOCUS

Cross-curricular learning

What is cross-curricular learning?

Cross-curricular learning is also known as interdisciplinary learning (or teaching). It is an integrated learning framework where learners are encouraged to apply/contrast knowledge from two or more subject areas at the same time. For example, a modern English language textbook will not just focus on rules about the English language. It will contain reading and listening activities that draw on knowledge from a variety of subjects, as well as projects that require learners to combine knowledge and skills from several disciplines.

The Global English Learner's Book doesn't just focus on aspects of the English language. So far, learners have read, listened and discussed texts about communities, Earth and space, homes, food and adventures, drawing on knowledge and skills from other subjects like citizenship, art, literature, science and creative writing. There are cross-curricular links throughout the teacher's resource to help signpost/support teachers with CCL.

Although cross-curricular learning requires more planning and collaboration between teachers, it can offer a number of benefits. Learners will be more motivated by projects on subjects and

issues that interest them than if they just studied English grammar rules. This increased motivation will make it easier to engage learners, which has been shown to improve their performance in tests. As learners look at information from a variety of different sources, there is also the opportunity to approach each subject from a wider perspective. Cross-curricular learning can be a way to address fragmentation of knowledge and skills, and to give extra support for achieving learning objectives.

Your challenge

When using Global English, consider links between activities and other subjects in order to differentiate between learners. For example, if your learners have studied road safety in another class, it can be an opportunity to create more learner-centred activities, to let them demonstrate what they already know. Have a look through Unit 6 and make a list of all the cross-curricular learning links with different subjects studied in your country.

More information about cross-curricular learning/interdisciplinary learning can be found in *Cross-Curricular Approaches to Language Education*, published by Cambridge Scholars Publishing.

Framework correlations

Learning objectives from the Cambridge Primary English as a Second Language Curriculum Framework: Stage 4 correlated with Cambridge Global English, Stage 4

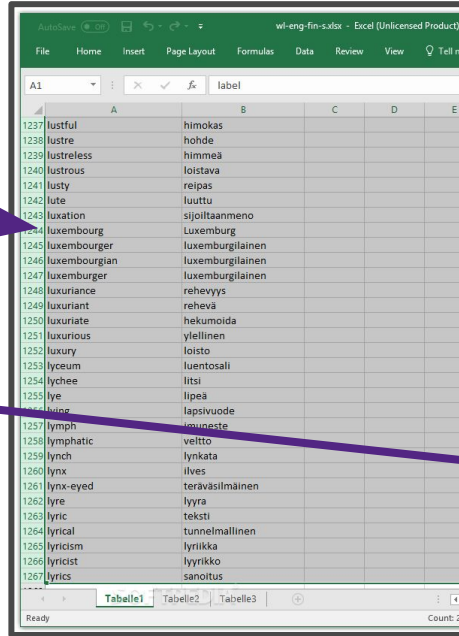
Below you will find a table setting out specifically where to find coverage of the framework objectives for Stage 4.

Cambridge Primary English as a Second Language curriculum framework: Stage 4		CGE Unit 1	CGE Unit 2	CGE Unit 3	CGE Unit 4	CGE Unit 5	CGE Unit 6	CGE Unit 7	CGE Unit 8	CGE Unit 9
LISTENING										
Listening for global meaning										
4Lm.01	Understand, with support, the main point of short talk.		✓		✓	✓				✓
Listening for detail										
4Ld.01	Understand, with support, a range of instructions.	✓	✓	✓	✓	✓	✓	✓	✓	✓
4Ld.02	Understand, with support, an increasing range of questions which ask for information.	✓	✓	✓	✓	✓	✓	✓	✓	✓
4Ld.03	Deduce meaning from context, with little or no support, in short talk.	✓	✓	✓	✓	✓	✓	✓	✓	✓
4Ld.04	Understand, with little or no support, most specific information and detail of short talk.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Listening for opinion										
4Lo.01	Recognise, with little or no support, the opinions of the speaker(s) in short talk.			✓	✓	✓				✓
SPEAKING										
Communication										
4Sc.01	Give basic information about themselves and others using a short sequence of sentences.	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Describe people, places and objects, and routine past and present actions and events, using a short sequence of sentences.		✓	✓	✓	✓	✓	✓		

Teacher's Resource





Extending language learning


Wordlists and communicative grammar games




	A	B	C	D	E
1237	lustful	himokas			
1238	lustre	hohde			
1239	lustreless	himmeä			
1240	lustrous	loistava			
1241	lusty	reipas			
1242	lute	luuttu			
1243	luxation	sijoittaminen			
1244	luxembourg	Luxemburg			
1245	luxembourger	luxemburgilainen			
1246	luxembourgtan	luxemburgilainen			
1247	luxemburger	luxemburgilainen			
1248	luxuriance	rehevyy			
1249	luxuriant	rehevä			
1250	luxuriate	hekumoida			
1251	luxurious	yllellinen			
1252	luxury	loisto			
1253	lyceum	luentosali			
1254	lychee	litsi			
1255	lye	lipeä			
1256	lymph	lapsivuode			
1257	lymphatic	lynneste			
1258	lynch	veltto			
1259	lynch	lynkata			
1260	lynx	ilves			
1261	lynx-eyed	teräväsilmäinen			
1262	lyre	lyyra			
1263	lyric	teksti			
1264	lyrical	tunnelmallinen			
1265	lyricism	lyriikka			
1266	lyricist	lyriikko			
1267	lyrics	sanoitus			

Photocopiable 13: Past simple time expression cards

<p>Card A</p> <p>Nature Find someone who...</p>  <p>... went for a walk in a forest last weekend. <i>(Did you go for a walk in a forest last weekend?)</i></p> <p>... saw a wild animal last weekend.</p> <p>... swam in a lake or pool last month.</p> <p>... walked in the mountains last weekend.</p>	<p>Card B</p> <p>Holidays Find someone who...</p>  <p>... stayed at a campsite last year. <i>(Did you stay at a campsite last year?)</i></p> <p>... travelled to a special place on their last holiday.</p> <p>... stayed in the mountains on their last holiday.</p> <p>... stayed away from the city on their last holiday.</p>
<p>Card C</p> <p>Reading Find someone who...</p>  <p>... read a book about a secret place last year. <i>(Did you read a book about a secret place last year?)</i></p> <p>... found something out on a website last week.</p> <p>... read about a superhero in a comic yesterday.</p> <p>... read a story about a black bear a few days ago.</p>	<p>Card D</p> <p>Films Find someone who...</p>  <p>... saw a film about a superhero last week. <i>(Did you see a film about a superhero last week?)</i></p> <p>... watched a film with a wicked enemy last year.</p> <p>... saw a film about children hunting for treasure last month.</p> <p>... saw a funny film yesterday.</p>



Audio access



Teacher's Resource

Assessment for learning



Unit 1: A post for the school website

Sample answer 1

My first few weeks at secondary school have gone well. At first I know anyone, but after few time I meet good friend, name was Alex because he new like me at the school and we are become friendly.

My favourite subject is chemistry. It's fun learning how do you do the experiment, but weve had quite homework, but not much in the fisic. Although I hate fisic, is too difficult.

I've had good mark in English and I haven't done so well in Chinese but I need for the future.

I've joined the club of football and I've been very well.

I've enjoyed all at my school and I've learned too much.

I've made some new friends so All in all everything has been for me good.

128 words

Attempt
Adequate.

Language/Ambition
Uses simple grammatical forms with reasonable control.

Range
Attempt at range of vocabulary, e.g. 'do the experiment', 'need for the future'. Also attempt at some complexity in grammatical forms though with some loss of control, e.g. 'At first ... become friendly'.

Organisation/Cohesion
Paragraphed as in the suggested plan. Linking words used, e.g. 'but', 'because', 'so'. 'Although' is attempted, but is incorrect here.

Relative pronouns are studied in this unit but opportunity for use missed here – 'I meet good friend, name was Alex'.

Accuracy
A number of errors are present, e.g. 'I know anyone', 'I've learned too much'. Has made good use of the suggestions in the plan.

Communicative achievement
While errors are noticeable, meaning can still be determined.

Content
On task.

Sample student written answers with teacher comments

GLOBAL ENGLISH STAGE 4: PROGRESS TEST 3

Part 4

Questions 17–22

Read the texts. For each question, circle the correct answer.

Example:

0 Who is Lucy?

My dad's sister's staying with us. Her name's Lucy. She lives in Paris. (A)

a Jo's aunt
b Jo's uncle
c Jo's cousin [1]

17 What does this sign say?

Students mustn't talk loudly in the school dining room.

a Don't speak
b Don't eat
c Don't run

18 What is this message about?

To save water, please don't shower. Don't waste water in the garden.

a a blizzard
b a flood
c a drought

Progress Report

GLOBAL ENGLISH STAGE 4: PROGRESS TEST 3

19 Where could you see this sign?

No shoes by pool. Don't forget your towel!

a a museum
b a theatre
c a sports centre [1]

20 What does Sam have to find out about for homework?

Match: Please to find out about reptiles, write and draw for homework! Sam.

a clothes
b food
c games [1]

PROGRESS REPORT

Unit 2

	Curriculum code	Comments
Listen for specific details comparing natural landscapes.	4Ld.04	
Use comparative adjectives to write a quiz about landscapes.	4Ug.11	
Ask and answer quiz questions about landscapes.	4Sc.03	
Find specific information about planets in a text about the solar system.	4Rd.01	
Use superlative adjectives to ask and answer questions about the solar system	4Sc.03/4Ug.11	
Describe an experience using a sequence of sentences.	4Sc.02	
Understand specific details of a short commentary describing an experience.	4Ld.04	
Understand the main points of a short fact file about a space shuttle.	4Rm.01	
Organise information to create a fact file about a spacecraft.	4Wor.03	
Read and enjoy a poem, understanding its underlying message.	4Rm.02	
Write a simple descriptive poem about unit topics using adjectives.	4Wc.03/4Wor.03	
Design a space shuttle and describe an imaginary journey.	4Wc.02	

Teacher's Resource

Personalising learning



GLOBAL ENGLISH STAGE 4: UNIT 6 DIFFERENTIATED WORKSHEET

Name _____ Date _____

Worksheet 6A: Language for telling stories 2

Where to use past simple or past continuous:

- Use the past simple if an action is *short and finished*.
- Use the past continuous for a *longer action*, especially if the action is *interrupted*.

How to make the past simple:

- Make the past simple by adding *-ed* to regular verbs. *She walked in the woods.*
- Use *didn't + base form* for negatives. *She didn't walk in the woods.*

How to make the past continuous:

- Make the past continuous using *Subject + was/were + verb+ing*.
She was walking in the woods.
- Use *was not/were not + verb+ing* for negatives:
She was not walking in the woods. She wasn't walking in the woods.

1 Read the sentences about Rabin's story. Underline the past simple verbs and highlight the past continuous verbs.

Example: Rabin got lost while he was walking in the desert with her friends.

- She ran off the track because she was following a rabbit.
- Rabin sat down near a tree and she was feeling very sad and worried.
- While Rabin was crying, she saw a snake.
- She fell asleep. When she woke up, the rabbit was standing by her head.
- Rabin was following the rabbit when her father called her.

Past continuous: Use *was/were + subject + verb+ing* to form for questions.

2 Make questions about the story using the past continuous.

Example: (Rabin, walk) Was Rabin walking (walk) in the street?
No, she wasn't. She was walking in the desert.

- (Rabin, walk) _____ with her parents?
No, she wasn't. She was walking with her friends.
- (she, feel) _____ happy?
No, she wasn't. She was feeling sad and worried.
- (the rabbit, sit) _____ near her head?
No, it wasn't. The rabbit was standing near her head.
- (the rabbit, run) _____ off along the river?
No, it wasn't. The rabbit was running off through the trees.

Global English – Nicola Mabbott © Cambridge University Press 2021 2

GLOBAL ENGLISH STAGE 4: UNIT 6 DIFFERENTIATED WORKSHEET

Name _____ Date _____

Worksheet 6B: Language for telling stories 2

Where to use past simple or past continuous:

- Use the past simple if an action is *short and finished*.
- Use the past continuous for a *longer action*, especially if the action is *interrupted*.

How to make the past simple:

- Make the past simple by adding *-ed* to regular verbs. *She walked in the woods.*
- Use *didn't + base form* for negatives. *She didn't walk in the woods.*

How to make the past continuous:

- Make the past continuous using *Subject + was/were + verb+ing*.
She was walking in the woods.
- Use *was not/were not + verb + ing* for negatives:
She was not walking in the woods. She wasn't walking in the woods.

1 Read the sentences about Rabin's story.


- Complete the sentences. Use these verbs in the past continuous:
cry feel follow (2) stand walk

If you need help, re-read the story on pages 102–104 of the Learner's Book.

- She ran off the track because she _____ a rabbit.
- Rabin sat down near a tree because she _____ very sad and worried.
- While Rabin _____ she saw a snake.
- When she woke up, the rabbit _____ by her head.
- Rabin _____ the rabbit when her father called her.

- Highlight the past simple form in each sentence.
Example: Rabin got lost while she was walking in the desert with her friends.

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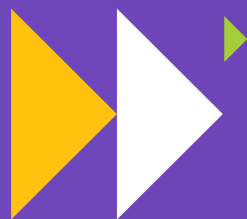
Differentiated worksheets

Differentiation guidance

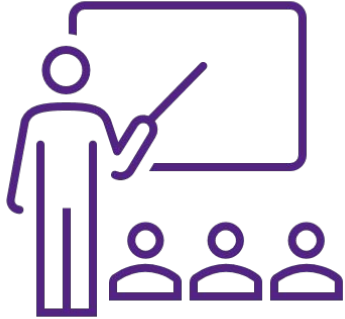


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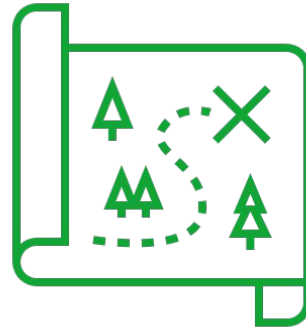
Professional development for Cambridge Primary & Lower Secondary



Product overview



Preparing to Teach
courses



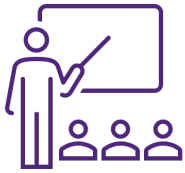
Cambridge Teaching
Skills Roadmap



Cambridge Teacher
Support Service



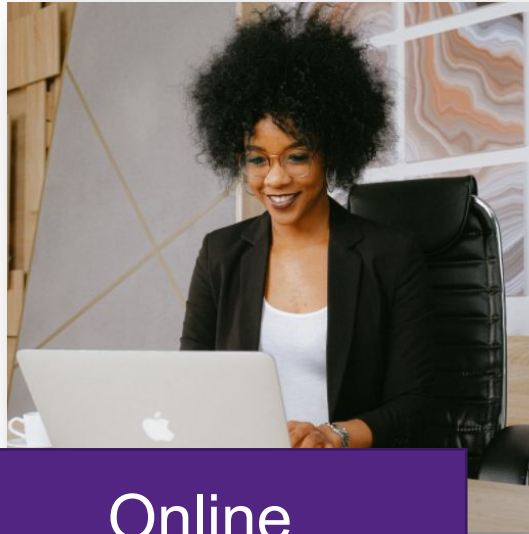
How are the Preparing to Teach courses delivered?



Preparing to Teach courses are available in three formats:



Self-Study
(PPTs + webinar recordings)



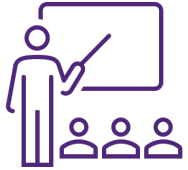
Online masterclasses
(PPTs + 2 x live webinars)



Face-to-Face Workshops
(PPTs + One day workshop)



What do the Preparing to Teach courses cover?



Preparing to Teach courses are available for every subject and level:

Cambridge Primary English	Cambridge Global English (Stages 1-6)	Cambridge Primary Mathematics	Cambridge Primary Science
Cambridge Lower Secondary English	Cambridge Global English (Stages 7-9)	Cambridge Lower Secondary Mathematics	Cambridge Lower Secondary Science



An example of the Cambridge Teaching Skills Roadmap



Communicating the objective/intention(s) in an exciting way, linked to real life where possible

Ineffective Practice

Lesson objectives/ intentions are not shared.
Teachers introduce the lesson with activity-centred language

Successful Practice

Lesson objectives/ intentions are shared in pupil-friendly language and direct connections are made with previous lessons and previous experience. There is some attempt made to 'hook' the students with engaging and relevant content.

Excellent Practice

Teachers choose an imaginative and engaging opening strategy (hook) to stimulate interest and link the learning to real life. Lesson objectives/ intentions are shared in the context of students' responses and previous learning.

Introducing the lesson in pupil-friendly language:

In this video, the teacher introduces the lesson in clear and pupil-friendly language.

Video Source: Videolearning.co.uk





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An example of the Cambridge Teacher Support Service

Checkpoint Science 7
 Checkpoint Science 8
 Checkpoint Science 9
 Global English 1
 Global English 2
 Global English 3
 Global English 4
 Global English 5
 Global English 6
 Global English 7
 Global English 8
 Global English 9
 Global Starters
 Primary English 1
 Primary English 2
 Primary English 3
 Primary English 4

Cambridge University Press Remote Tutor
 Lovely, thanks for sharing Andrew :-)
 Like • 1 Reply • May 18, 2020, 12:55 PM

Andrew Rasti
 I really appreciate it.
 Like • May 18, 2020, 2:35 PM

Write a reply...

Write a comment...

Sevgi Irk posted to International Primary Tea... More
 Teacher · MEV College İzmir
 May 15 · 7:01 PM · 📍

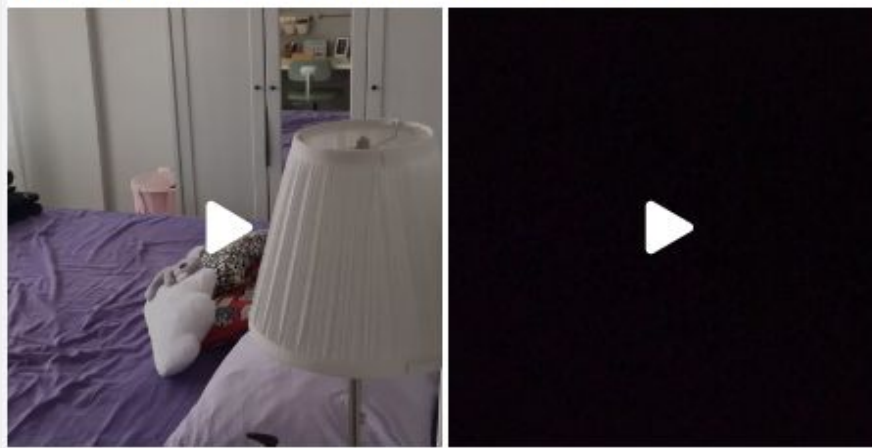
Here is another kahoot I've prepared. It includes "despite" "in spite of" "although" and "modals". You can use in your lessons too if you're teaching Global English 8. It's visible to everyone.

<https://create.kahoot.it/share/global-english-8-online-lesson-4/e11ec2c5-aef2-4228-9895-19fa83644400>

3 Likes Comment Share

Sevgi Irk posted to International Primary Tea... More
 Teacher · TR
 May 04 · 10:28 PM · 📍

Hi again! This is Sevgi from Izmir MEV College. I would also like to share my students' videos that they prepared for Unit 14, Global English 8. The unit was all about treasured possessions and personal space, so I wanted them to record a video that shows their room by using the words and structures that we have learnt.


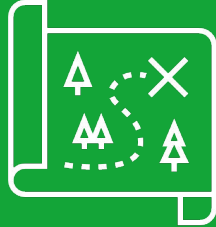



6 Likes 4 Comments Share

Cambridge University Press Remote Tutor
 Hi Sevgi! Thanks for sharing the videos. Such a nice way to show what students learned!

A summary of how our offer meets school needs

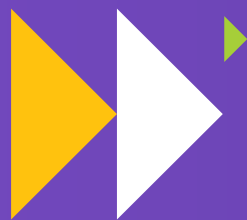


Customer needs	Preparing to Teach courses	Cambridge Teaching Skills Roadmap	Cambridge Teacher Support Service
<p>Introduction to resources and key pedagogies:</p> <ul style="list-style-type: none"> • All teachers trained on resources and key pedagogies • Support for HODs responsible for training their teams • An introduction to teaching our series remotely • A low-cost solution • Certificates 			
<p>Improvement in teaching skills:</p> <ul style="list-style-type: none"> • To see key teaching skills in practice • Reassurance – are we doing active learning right? • Consistency of teaching across staff and campuses • To structure long term progress for teachers • Support in becoming a ‘Cambridge school’ 			
<p>Sustained personalised support:</p> <ul style="list-style-type: none"> • Sustained and intensive help • Cambridge trainers available for questions year-long • Regular webinars • Connection with global teacher community / fresh ideas • Parents to feel 'valueadd' of Cambridge 			



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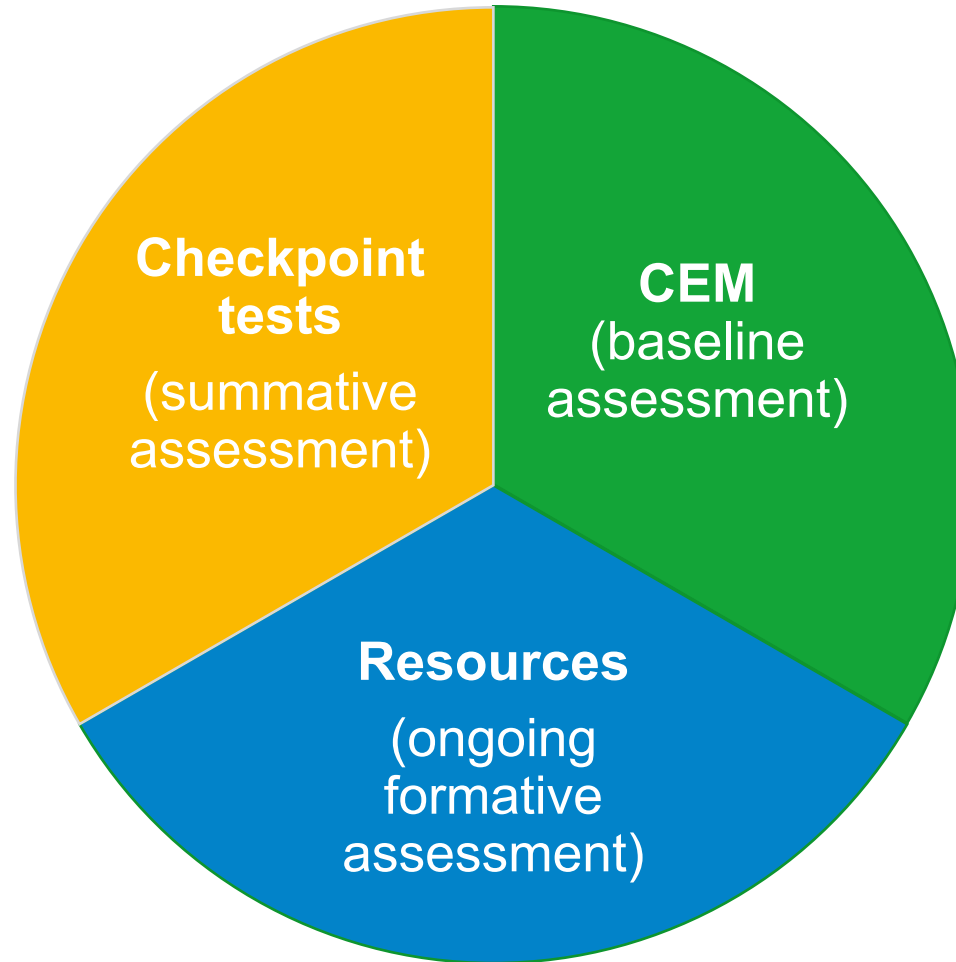
Assessment support for Cambridge Primary & Lower Secondary





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A complete assessment offer with Cambridge





Assessment in our resources





Assessment for learning – in the teacher’s resource

Plenary idea

Review of progress (10 mins)

Resources: Learners work in pairs. Each pair needs two dice.

Description: Ask learners to work in pairs. Learners take it in turns to throw two dice twice, adding the scores each time. The learner throwing then finds the lowest common multiple of the two totals. The other learner in the pair decides whether the thrower is correct or not. The learners swap roles and repeat.

For reflection, ask ‘Can you identify an easy/difficult pair of numbers to answer?’.

> **Assessment ideas:** Watch learners as they play. Listen to their comments and be prepared to discuss disagreements.

Guidance on selected Thinking and working mathematically questions

Conjecturing and convincing

Learner’s Book Exercise 1.3, Questions 10 and 11

Questions 10 and 11 are examples of generating a question by reversing a simple question. There is another example of this earlier in this unit. A simple question would be ‘Find the LCM of 4 and 9.’ [36]. The question ‘The LCM of two numbers is 36, what are the numbers?’ is more challenging, as it has several answers. This type of question also develops understanding, as well as the skills of conjecturing and convincing.

Homework idea

Set suitable parts of Workbook Section 1.3 as homework. Marking should be done by learners at the start of the next lesson. Any help or discussions with any of the problems should take place immediately.

Assessment idea

Opportunities to check learner understanding will occur during discussion. Some activities include peer assessment.

1.4 Highest common factors

LEARNING OBJECTIVES

Curriculum reference	Learning intentions	Success criteria
7Ni.04	Understand highest common factor (numbers less than 100).	Learners have strategies to find the highest common factor of two numbers.

LANGUAGE SUPPORT

Common factor: a number that is a factor of two (or more) numbers

Factor: a factor of an integer will divide into that integer without a remainder; 6 and 8 are factors of 24

Highest common factor: the largest factor of two (or more) other numbers. You can abbreviate highest common factor to HCF.

$7 \times 8 = 56$, so 7 and 8 are factors of 56. 1 is a factor of any positive integer.

5 is a common factor of 15 and 40.

Common misconceptions

Misconception	How to elicit	How to overcome
Learners do not think of 1 and the number itself as factors of a given number.	Check when learners list the factors.	Remind learners of these two factors as much as possible.

Starter idea

Reminder of factors (10 mins)

Description: On the board write ‘20 is a multiple of 5.’ Then, under the first sentence, write ‘5 is a ____ of 20.’ Ask ‘What is the missing word?’. Learners should know the word *factor*.

Ask learners in turn to give more pairs of similar sentences. The first should be ‘20 is a multiple of ____.’ Ask ‘Have we got all the factors?’. Learners should be able to agree that there are six factors.

The factors of 20 are 1, 2, 4, 5, 10 and 20. Make sure learners do not forget 1 and 20.

Now, ask learners to work in pairs to find numbers with exactly: four factors, two factors, eight factors, three factors, and five factors.

Then collect their answers. Ask ‘Can you see any patterns?’.

Possible answers include:

- ‘It is not true that larger numbers always have more factors.’
- ‘Prime numbers have just two factors.’ (Learners might not know about prime numbers.)
- ‘Square numbers have an odd number of factors.’

If learners do not give the answers listed, then elicit them. The act of looking for factors and writing all the factors of a number is the focus here. Look at learners’ work as they are finding factors. Make sure they always include 1 and the number itself. Make sure learners use the words *factor* and *multiple* correctly.



Assessment for learning – in the teacher’s resource

> CAMBRIDGE LOWER SECONDARY MATHEMATICS: END OF UNIT 1 TEST

Name _____ Date _____

Stage 7 End of unit 1 test

Calculators are not allowed.

1 Work out:

a $8 + -12$

b $-6 - -9$

_____ [2]

2 Fill in the missing integer in each calculation.

a $_ \times 5 = -15$

b $_ \div 4 = -8$ [2]

3 Find the lowest common multiple of 6 and 10.

_____ [2]

4 Find the highest common factor of 24 and 40.

_____ [2]

5 Work out $\sqrt[3]{125} - \sqrt[3]{27}$.

_____ [1]

6 The cube root of a number is 4. Work out the square root of the number.

_____ [2]

7 The highest common factor of two numbers is 3. The lowest common multiple of the two numbers is 18.

Work out the two numbers.

_____ [2]

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Assessment for learning – in the learner’s book



1.3 Train trouble

The second sentence is longer and more detailed. The first **clause** introduces an image of the clutter of the station. The **subordinate clause** (*who was winding . . .*) contains more detail, using ‘and’ twice. The effect is to convey the huge number of things in the station. The length and detail of the sentence reflects the detail of the scene being described.

Copy and complete the following table in your notebook to identify examples of simple, compound and complex sentences in the extract from *Around India in 80 Trains*. In the last column, comment on their effect. Explain how the writer builds up detail and the impression this gives the reader.

Sentence type	Example	Effect
Simple		
Compound		
Complex		

5 In Activity 1, you told an anecdote about difficult journey. Now turn this into a written version. Before you write, think about how you will describe the scene. Remember how the extract uses lots of images, lists and interesting words to bring the scene to life. Use a range of **simple, compound and complex sentences** to add detail and variety to your writing.

Peer assessment

Share your finished account with another student. Discuss the following questions:

- Which bits of your writing do you think are most effective and why?
- Did you use a variety of sentences?
- If you were to redraft your work, what would you do differently?

Summary checklist

- I can use language to engage listeners in a spoken account.
- I can identify and understand implicit information in a text.
- I can use different sentence types to write an interesting account.

1 Adventure

> 1.4 A hard journey

In this session, you will:

- look for explicit and implicit meanings in poetry
- explore how poets use language features for effect
- learn how to write an analysis of a poem.

Getting started

Some people and some poems describe life as a journey. In pairs, discuss what life has in common with a journey. How could life be described as an adventure?

‘Hard is the Journey’

Read the following poem by Li Po, an 8th century Chinese poet.

Gold vessels
[. . .]
Jade dishes of rare meats, costing more thousands,

I lay my chopsticks down, no more can **banquet**, I draw my sword and stare wildly about me:

Ice bars my way to cross the Yellow River, Snows from dark skies to climb the T’al-hang mountains!

At peace I drop a hook into a **brooklet**,
At once I’m in a boat but sailing sunward...

(Hard is the journey,
Hard is the journey,
So many turnings,
And now where am I?)

So when a breeze breaks waves,
bringing fair weather,
I set a cloud for sails,
cross the blue oceans!

vessels: hollow containers
jade: a hard, green stone
banquet: a feast
brooklet: a small stream



CEM's assessments 5-14

BASE (aged 4-5 years)



BASE 4-5

- Teacher led
- Story based assessment
- 1-1 format
- Literacy, numeracy, communication and emotional development
- Detailed reporting

CEM's assessments 5-14

InCAS (aged 5-11 years)



InCAS 5-11

- Computer adaptive test
- Independent – no teacher input
- Age equivalent scores
- Detailed reporting
- Reading, spelling, maths, developed ability

CEM's assessments 5-14

MidYIS (aged 11-14 years)



MidYIS 11-14

- Vocabulary, maths, non-verbal ability and skills
- Baseline data and value added scores
- Identifies likely grade outcomes at O Level & Cambridge IGCSE™
- Detailed reporting

CEM's assessments 5-14

What the reports show – a rich source of diagnostic data for schools and teachers

BASE

Pupil report
Class report
Question level report (all pupils)
Standardised scores
Interactive reports
Parent report

InCAS

Age equivalences
Ability profiles
Cohort Profiles
Pupil Progress charts
Standardised scores

MidYIS

Baseline

Standardised scores
Ability profiles
Cohort profiles

Predictive

Predicted grades
Chances graphs (student and subject)

Value added

Student level

Table of achieved grades

Subject level

Scatter graphs
Standardised residuals
SPC (statistical process control charts)

The purpose and value of CEM Baseline

Assessment *for* learning - baseline

- A measure of a student's skills and aptitude (developed ability) at a given moment in time
- Not a label for life - a baseline for measuring progress later on
- A broad measure of knowledge not dependent upon an academic curriculum
- It saves time
- Highlights strengths and weaknesses
- Develop teaching and learning plans
- Inclusive for all
- The computerised tests are adaptive. In this way stress is reduced and no time is wasted. No two students will answer exactly the same set of questions.

Why choose Cambridge?

- ✓ Complete alignment with Cambridge International
- ✓ Integrated resources, professional development and assessment
- ✓ Resources developed to support effective pedagogy
- ✓ A set of fully harmonised resources
- ✓ A range of print and digital resources to meet all your needs
- ✓ Comprehensive teaching support, including downloadable differentiation and language worksheets, tests and answers



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