

Curriculum Guide Independent

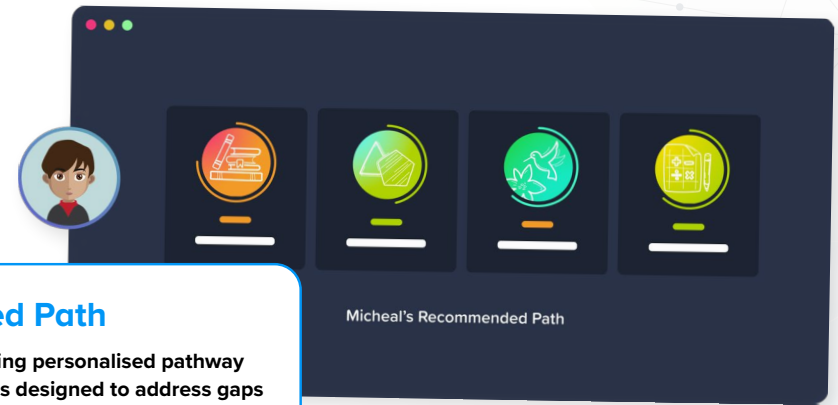
About CENTURY

CENTURY is a learning platform that uses artificial intelligence to personalise learning for every learner. Our team of experienced teachers have created all of our content for English, maths, science, geography and physical education from years 2 to 11, as well as functional skills content for post-16 learners. All courses are aligned to the national curriculum and national standards.

- ✓ Learning materials and questions for primary, secondary and post-16 learners
- ✓ Tailored to each learner's skills and knowledge
- ✓ Powered by the world's leading adaptive learning platform
- ✓ Web-based learning for tablets, laptops and desktops



How does CENTURY work?



Diagnostics

Learners begin by completing diagnostics that quickly identify knowledge gaps and misconceptions, and help CENTURY recommend the best learning materials for each individual learner.

Recommended Path

This constantly adapting personalised pathway contains micro-lessons designed to address gaps in knowledge, provide stretch and challenge and promote long-term memory retention.

Leadership Dashboard

Senior and middle leaders get an overview of performance and engagement on a subject, class and learner level.

Achievements

Learners get rewarded with badges and streaks for completing micro-lessons or for using CENTURY over a certain period of time to increase their motivation and engagement.

Automated Marking

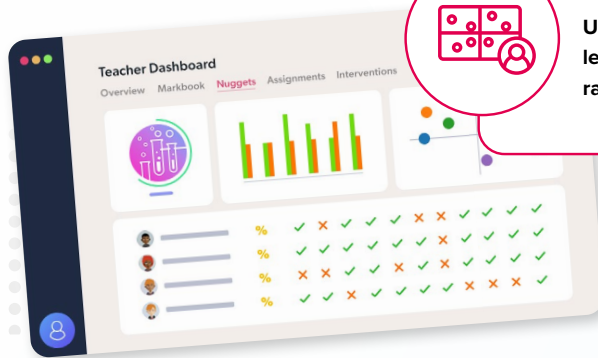
Teachers can view data in real time, to help quickly identify which learners require additional support or further stretch.

Teacher Dashboard

Use the markbook to monitor individual learners and whole-class trends with a range of dashboards.

Learner Dashboard & Guardian Portal

Learners can identify their strengths and areas for improvement. Parents and guardians can monitor their learner's progress, completed work, and see work set.



Want to see this in action?

Watch a CENTURY platform walkthrough

TeacherGENie™

Making generative AI work for teachers

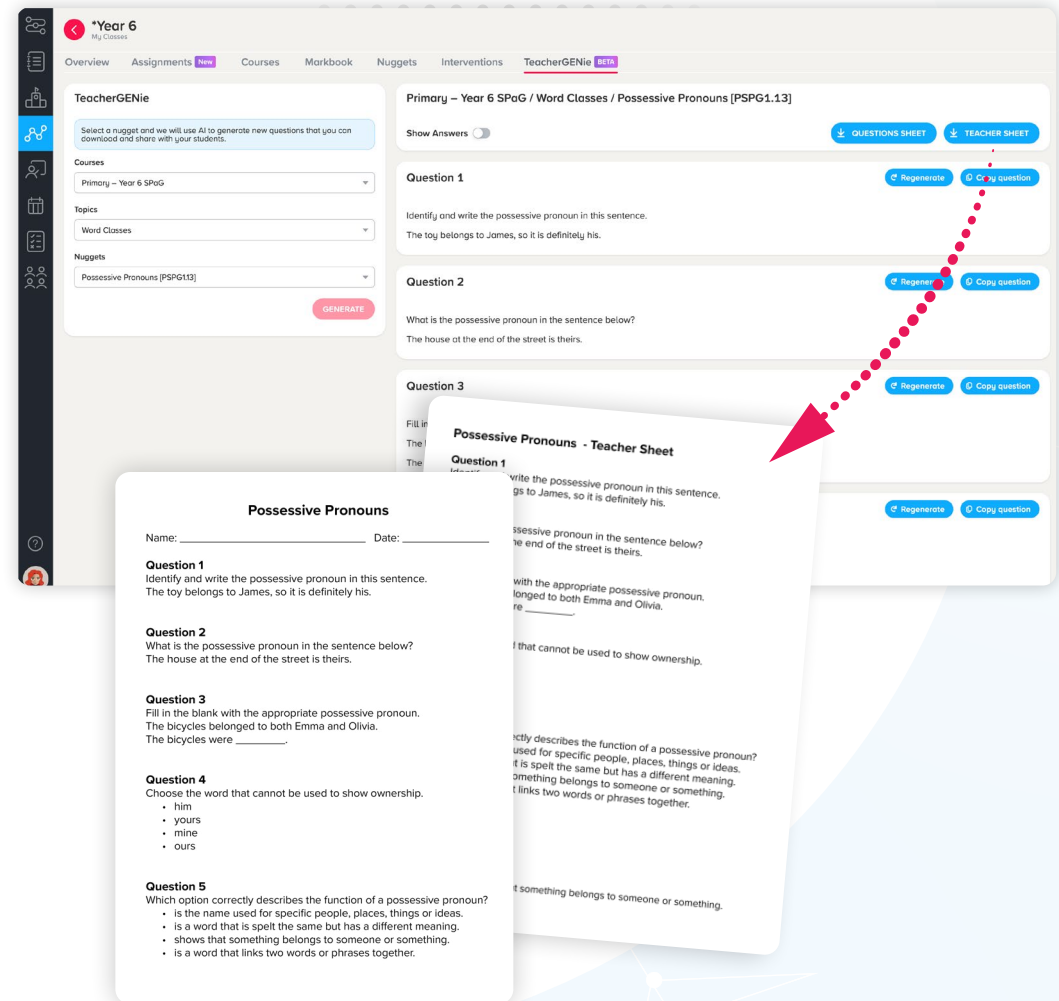
CENTURY has always led the way in embedding AI into education through our teaching and learning platform. TeacherGENie™ goes beyond using generative AI alone, as we know the true value of these tools can only be realised when they are combined with quality, teacher-made resources.

These worksheets, consisting of five questions, can be used:

- ✓ in class as a starter to assess prior knowledge,
- ✓ as a plenary to check learning,
- ✓ as part of home learning,
- ✓ as a great revision tool in the run up to exams.

With the 'Copy question' button, you can easily copy and paste the generated content to use elsewhere.

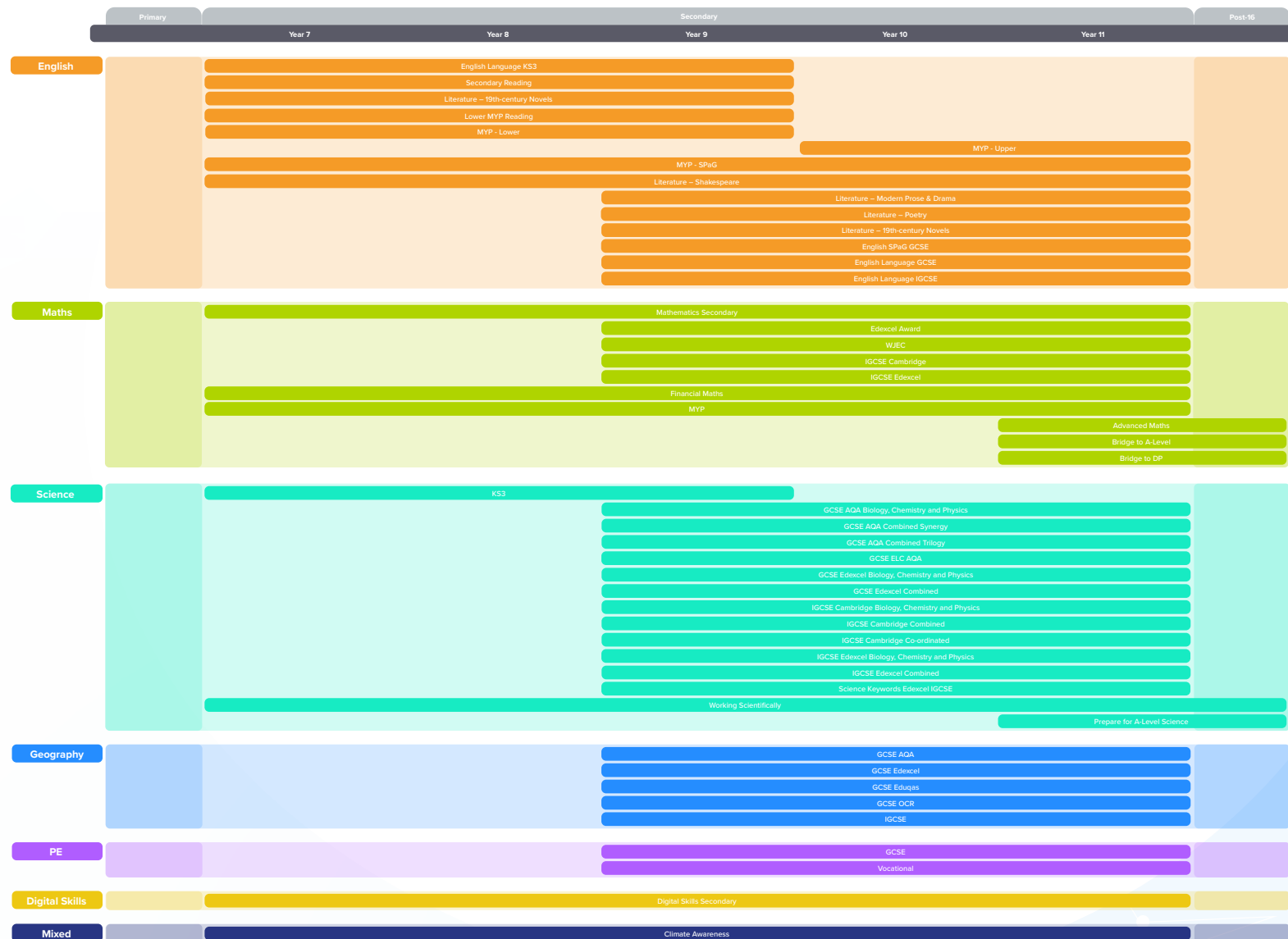
By grounding generative AI in expertly crafted learning resources, we're making sure that tools such as TeacherGENie™ deliver meaningful, classroom-ready materials that genuinely support teaching goals.



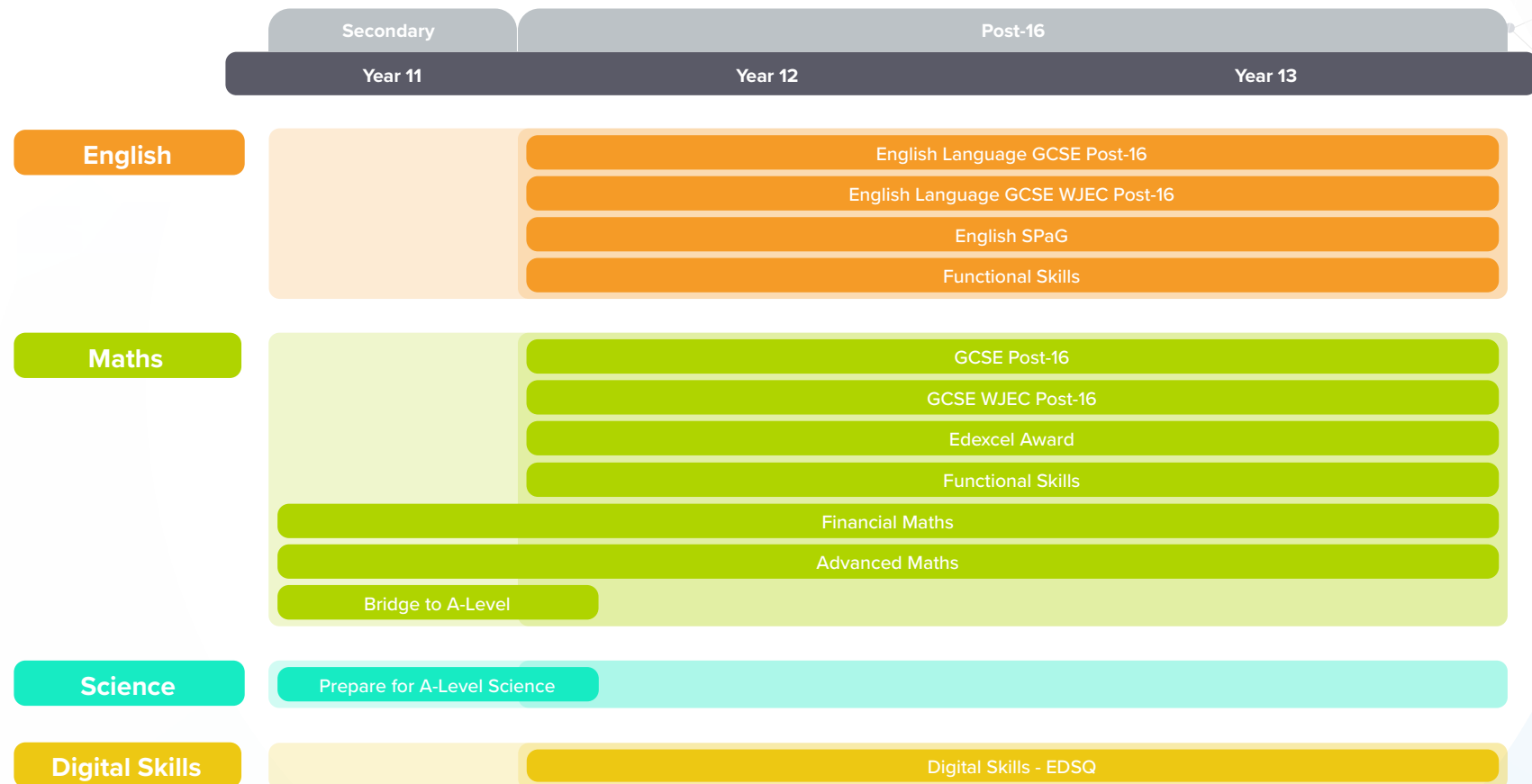
Course Coverage - Primary

		Primary				
		Year 2	Year 3	Year 4	Year 5	Year 6
		Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
English	Year 2 SPaG					
	Grade 1 SPaG					
	Year 3 SPaG					
	Grade 2 SPaG					
	Year 4 SPaG					
	Grade 3 SPaG					
	Year 5 SPaG					
	Grade 4 SPaG					
	Year 6 SPaG					
	Grade 5 SPaG					
11+	Year 3&4 Reading Comprehension					
	Reading Comprehension Grades 2 & 3					
					Year 5&6 Reading	
					Reading - Grades 4 & 5	
Maths	Year 2 Maths					
	Mathematics – Grade 1					
	Stage 2 Mathematics: Cambridge					
	Year 3 Maths					
	Mathematics – Grade 2					
	Stage 3 Mathematics: Cambridge					
	Year 4 Maths					
	Mathematics – Grade 3					
	Stage 4 Mathematics: Cambridge					
	Year 5 Maths					
Science	Mathematics – Grade 4					
	Stage 5 Mathematics: Cambridge					
	Year 6 Maths					
	Mathematics – Grade 5					
	Stage 6 Mathematics: Cambridge					
	Year 2 Multiplication Tables					
	Multiplication Tables					
	Year 5 & 6 Arithmetic					
	11+ Mathematics					
	11+ Non-Verbal Reasoning					
Science	Year 3 Science					
	Science - Grade 2					
	Stage 3 Science: Cambridge					
	Year 4 Science					
	Science - Grade 3					
	Stage 4 Science: Cambridge					
	Year 5 Science					
Science - Grade 4						
Stage 5 Science: Cambridge						
Year 6 Science						
Science - Grade 5						
Stage 6 Science: Cambridge						
KS2 Science						
Science - All Topics - Grades 2-5						

Course Coverage - Secondary



Course Coverage - Post-16



English Courses



Primary

Primary SPaG →

Year 2 SPaG
Year 3 SPaG
Year 4 SPaG
Year 5 SPaG
Year 6 SPaG

Primary Reading →

Year 3-4 Reading Comprehension
Year 5-6 Reading

International Baccalaureate - PYP →

Grades 2 & 3 Reading Comprehension
Grades 4 & 5 Reading
Grade 1 SPaG
Grades 2 & 3 SPaG
Grades 4 & 5 SPaG

Secondary

Secondary English Language KS3 →

English Language KS3
English SPaG Secondary

Secondary Reading →

Reading: Fiction & Nonfiction
Reading: Gothic Fiction
Reading: 19th Century Fiction
Reading: Children's Classics

Secondary English Language GCSE →

English Language GCSE
English Language GCSE: AQA
English Language GCSE: Edexcel
English Language GCSE: Eduqas
English SPaG GCSE

Secondary English Language IGCSE →

English Language IGCSE: Cambridge
English Language IGCSE: Edexcel A
English Language IGCSE: Edexcel B
English Second Language IGCSE: Cambridge

Secondary Literature - 19th-century Novels →

Literature: A Christmas Carol
Literature: Jekyll and Hyde
Literature: The Sign of the Four

Secondary Literature - Shakespeare →

Literature: A Midsummer Night's Dream
Literature: Macbeth
Literature: Much Ado About Nothing
Literature: Romeo and Juliet

Secondary Literature - Modern Prose & Drama →

Literature: An Inspector Calls
Literature: Animal Farm
Literature: Blood Brothers

Secondary Literature - Poetry →

Love and Relationships Poetry: AQA
Power & Conflict Poetry: AQA
Power & Conflict Poetry: Edexcel
Unseen Poetry

International Baccalaureate - MYP →

Reading MYP
English Language Lower MYP
English Language Upper MYP
SPaG MYP

Post-16

English Language GCSE Post-16 →

English Language GCSE Post-16
English Language GCSE: AQA Post-16
English Language GCSE: Edexcel Post-16
English Language GCSE: Edexcel 2.0 Post-16
English Language GCSE: Eduqas Post-16
English SPaG Post-16

English Language GCSE WJEC Post-16 →

English Language GCSE WJEC Post-16

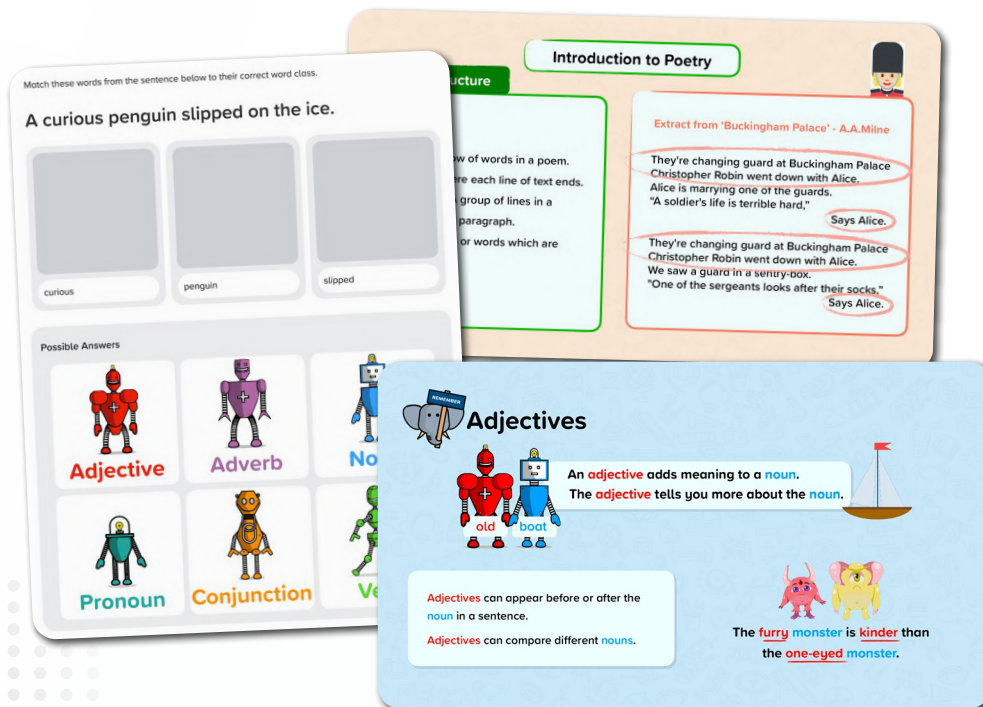
English Courses - Functional Skills →

English Functional Skills (Entry 1, 2 & 3)
English Functional Skills (Level 1 & 2)

English Courses

Primary SPaG

Our primary English offering includes both SPaG and reading courses for years 2 to 6. There is a specific SPaG course for each year group, but they also include prerequisite learning from previous years.



Year 2 SPaG



Year 3 SPaG



Year 4 SPaG



Year 5 SPaG



Year 6 SPaG

[Download course content](#)

English Courses

Primary Reading

We have a reading comprehension course for years 3 and 4, as well as a separate reading course for years 5 and 6 which focuses on specific reading skills.



Year 3-4 Reading Comprehension



Year 5-6 Reading

YOUR TURN

Life Cycles of Plants and Animals

Butterflies don't start life as the beautiful winged creatures we all think of. They start life as an egg like many other insects, laid by an adult female butterfly. You can actually see the tiny caterpillar inside the egg of some species from this egg hatches a caterpillar, which is an eating machine! They spend most of their time eating in order to gain strength for the next phase. In fact, they normally eat the whole leaf they are hatched on. When they have reached their full size, they form themselves into a chrysalis, also known as a pupa. Inside their chrysalis, the caterpillar undergoes a complete transformation. It grows wings, new organs and then emerges fully formed as an adult butterfly.

Which statement includes two events?

- ☐ Caterpillars form themselves into a chrysalis. They then emerge as butterflies.
- ☐ From this egg hatches a caterpillar. Caterpillars are eating most of the leaf they are laid on.
- ☐ They start life as an egg like many other insects. They are laid by a female butterfly.
- ☐ Inside their chrysalis, the caterpillar undergoes a complete transformation.

I DON'T KNOW

Q Which word is a synonym of 'enchanted' in this sentence?

Everyone agreed that they were **enchanted** children. One had a bad word to say about them!

Naughty

Clever

Oliver balanced on the edge of his track. He reached around Henry's leg and pulled as hard as he could. Together, they wrestled one foot and then the other out of the thick mud. Henry was free.

Now for the bike. Henry took off his jacket and tied it around the back wheel. Using all their strength, the boys pulled hard and slowly freed the bike. Cold, tired, and caked in mud, the boys slowly wheeled the bike back over the track.

Henry and Oliver woke up early and ran downstairs to have their breakfast. The boys had heard about a new cycle track in the woods. They couldn't wait to try it out. They were so excited that they hadn't noticed it was raining. Outside, it was gushing down.

"We can't go out in this weather," said their mum. "It's far too wet. You'll have to wait until later."

"OK," said the boys. "We'll wait."

What were the boys excited about?

- ☐ playing in the rain
- ☐ trying out the new bike track
- ☒ waking up early
- ☐ eating their breakfast

Incorrect

This was not the reason that they were excited. Read the first paragraph carefully.

Correct Answer

NEXT QUESTION

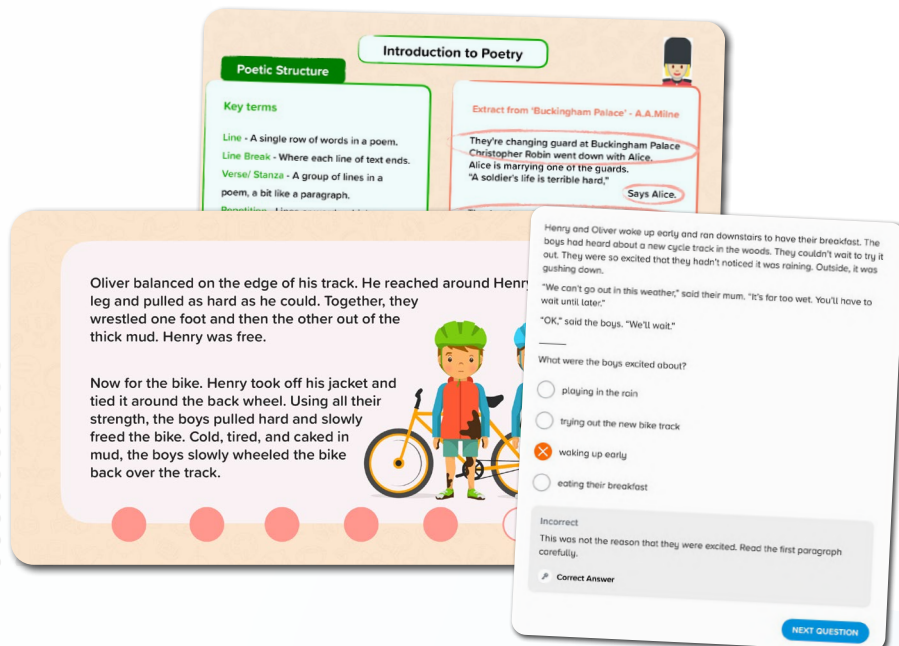
[Download course content](#)

English Courses

PYP

Our primary English offering includes both SPaG and reading courses for grades 2 to 5. There is a specific SPaG course for each grade, but they also include prerequisite learning from previous grades.

We have a reading comprehension course for grades 2 and 3, as well as a separate reading course for grades 4 and 5 which focuses on specific reading skills.



Grades 2 & 3 Reading Comprehension



Grades 4 & 5 Reading



Grade 1 SPaG



Grades 2 & 3 SPaG



Grades 4 & 5 SPaG

[Download course content](#)

Secondary English Language KS3

Our KS3 English Language courses cover reading and writing skills across both fiction and non-fiction, including language, structure, analysis, text types and writing for purpose.



English Language KS3



English SPaG Secondary

Structuring your writing

- Use a range of sentence structures and sentence lengths.
- Use paragraphs to organise your writing.

Dear Sir/ Madam,

I am writing to apply for the position of waiter at The Cafe on Saturdays.

Firstly, I would like to begin by stating how much I love The Cafe and that I would very much enjoy working here. I have always lived just down the road and have frequently visited The Cafe. The food is always delicious, the staff are unfailingly friendly and it is my favourite place to meet a friend for a cup of tea. I would make it my mission to help create the warm and welcoming atmosphere that I have always enjoyed so much.

Secondly, I think that I would make an excellent addition to the staff. I am a very confident and reliable person. I have worked in the cafe industry for three years and the customers feel welcome from the moment they walk in. I am a hard-worker, organised and reliable.

I would like to apply to a hospitality and tourism course, so I can continue to develop my skills. I believe that my experience at The Cafe would be invaluable to me.

1 Comparatives and Superlatives

Comparatives are used to compare two things.

Superlatives are used to compare one thing with everything else in that group.

Jane is taller than John.

She is the best sister!

He is more intelligent than they first thought.

That is the worst smelling

Did you know?

Most adjectives have three forms: the absolute, the comparative and the superlative. You can often find these forms in a dictionary if they do not fit the regular pattern.

Choose the simile below.

☐ The night sky was as black as coal.

☐ The sky was sunny and clear.

☒ There was a blanket of fog in the sky.

☐ It was such a sunny day. In fact, it was the sunniest day of the summer so far.

Correct answer

Incorrect

No, this is a metaphor, not a simile. Remember to look out for the words 'like' and 'as' when deciding if a sentence includes a simile!

The four seasons can symbolise different stages of life:

Spring
represents childhood: just as children are growing up, plants and seeds begin to grow.

Summer
symbolises adulthood: plants reach maturity - trees are in full bloom.

Autumn
symbolises old age: the leaves on the trees turn golden brown, preparing to fall.

Winter
represents death: all the trees are bare and all plant life is, essentially, dead.

[Download course content](#)

English Courses

Secondary Reading

These courses contain a selection of extracts taken from a range of texts, followed by reading questions which assess skills such as comprehension, inference, and analysing language and structure devices.

The Body Snatchers

By Robert Louis Stevenson

This is an extract from 'The Body Snatchers', a short story written in 1885 by Robert Louis Stevenson. It tells the story of two men, Macfarlane and Fettes, who are body snatchers - people who steal the corpses of people who have recently died from their graves. They would then use these bodies to universities for dissection and other medical research. At the time the story was written, body snatching was a crime punishable by imprisonment.

It was by this time growing somewhat late. The gig, according to order, was brought round the door with both lamps brightly shining, and the young men had to pay their bill and take their hats. They entered the house, and the young men, having paid their bill, returned upon their way. They entered the house, and the young men, having paid their bill, returned upon their way. They entered the house, and the young men, having paid their bill, returned upon their way.

Which image most accurately matches the description of Sleepy Hollow?

Question

Label each image with the correct word or phrase from the extract. You can use a dictionary to help you.

moorland

fertile country

draped in ivy

Question

Match each part of this image to the correct quotation.



Reading: Fiction & Nonfiction



Reading: Gothic Fiction



Reading: 19th Century Fiction



Reading: Children's Classics

[Download course content](#)

English Courses

Secondary English Language GCSE

Our GCSE English Language courses cover reading and writing skills across both fiction and non-fiction, including language, structure, analysis, text types and writing for purpose.



English Language GCSE: Eduqas

Specification: C700QS



English Language GCSE



English Language GCSE: AQA

Specification: 8700



English Language GCSE: Edexcel

Specification: 1EN0



English SPaG GCSE

[Download course content](#)

English Courses

Secondary English Language IGCSE

Our IGCSE English Language courses cover reading and writing skills across both fiction and non-fiction, including language, structure, analysis, text types and writing for purpose.



English Language IGCSE: Cambridge

Specification: 500



English Language IGCSE: Edexcel A

Specification: 4EA1



English Language IGCSE: Edexcel B

Specification: 4EB1



English Second Language IGCSE: Cambridge

Specification: 0510/0511

Caesura
A **caesura** is a pause in the middle of a line of poetry.
The pause will be indicated by punctuation (such as a full stop, a dash, a colon, a semicolon, an exclamation mark, or a question mark).
Commas are not normally examples of caesuras as they do not mark a significant break.
Each caesura has been underlined.

His sister stood beside him in her apron
To tell them 'Supper'. At the word, she saw,
As if to prove saws knew what supper meant,
Leaped out at the boy's hand, or seemed to leap—
He must have given the hand. However it was,
Neither refused the meeting. But the hand!
The boy's first outcry was a rueful laugh,
As he swung toward them holding up the hand
Half in appeal, but half as if to keep
The life from spilling. Then the boy saw all—
'Out, Out—' by Robert Frost

Read the passage below.
'The government in the United Kingdom is about to release statistics on poverty levels this year. In 2014, they showed that 6.5% of the UK population were in persistent poverty. Persistent poverty means earning a low amount of money for a long period of time. Those living in poverty experience and endure many challenges - for example, paying for rent and groceries can become an ongoing struggle.'
Which sentence includes an example of figures/statistics?
☐ Those living in poverty experience and endure many challenges - for example, paying for rent and groceries can become an ongoing struggle.
☐ In 2014, they showed that 6.5% of the UK population were in persistent poverty.
☐ Persistent poverty means having a relatively low income for long periods of time.
☐ The government in the United Kingdom is about to release statistics on poverty levels this year.

Dramatic Monologues
A dramatic monologue is a poem in the form of a speech; one **character speaks** and reveals their personality.
Here is an extract from a dramatic monologue by Robert Browning about a duke who shows someone a portrait of his wife and speaks about his wife. It is strongly implied that he had his wife killed.
The Duke is very proud and boastful, but the reader sees his true, wicked nature.
The Duke's voice is the only voice the reader hears. Although he is speaking to someone, this character remains silent.

She thanked men—good! but thanked
Somehow—I know not how—as if she ranked
My gift of a nine-hundred years-old name
With anybody's gift. What'd stoop to blame
This sort of trifling? Even had you skill
In speech—which I have not—to make your will
Quite clear to such an one, and say, 'Just this
Or that in you disgusts me; here you miss,
Or there exceed the mark'—and if she let
Herself be lessoned so, nor plainly set
Her wits to yours, forsooth, and made excuse—
E'en then would be some stooping; and I choose
Never to stoop. Oh, sir, she smiled, no doubt,
Whene'er I passed her; but who passed without
Much the same smile? This grew; I gave commands;
Then all smiles stopped together.

Extract from 'My Last Duchess' by Robert Browning

[Download course content](#)

English Courses

Secondary Literature - 19th-century Novels

Our literature courses explore plot, characters, themes, context, language, structure, form, and are suitable for all exam boards.



Literature: A Christmas Carol



Literature: Jekyll and Hyde



Literature: The Sign of the Four

[Download course content](#)

English Courses

Secondary Literature - Shakespeare

Our literature courses explore plot, characters, themes, context, language, structure, form, and are suitable for all exam boards.



Literature:
A Midsummer Night's Dream



Literature: Macbeth



Literature: Much Ado About Nothing



Literature: Romeo and Juliet

[Download course content](#)

English Courses

Secondary Literature - Modern Prose & Drama

Our literature courses explore plot, characters, themes, context, language, structure, form, and are suitable for all exam boards.



Literature: An Inspector Calls



Literature: Animal Farm



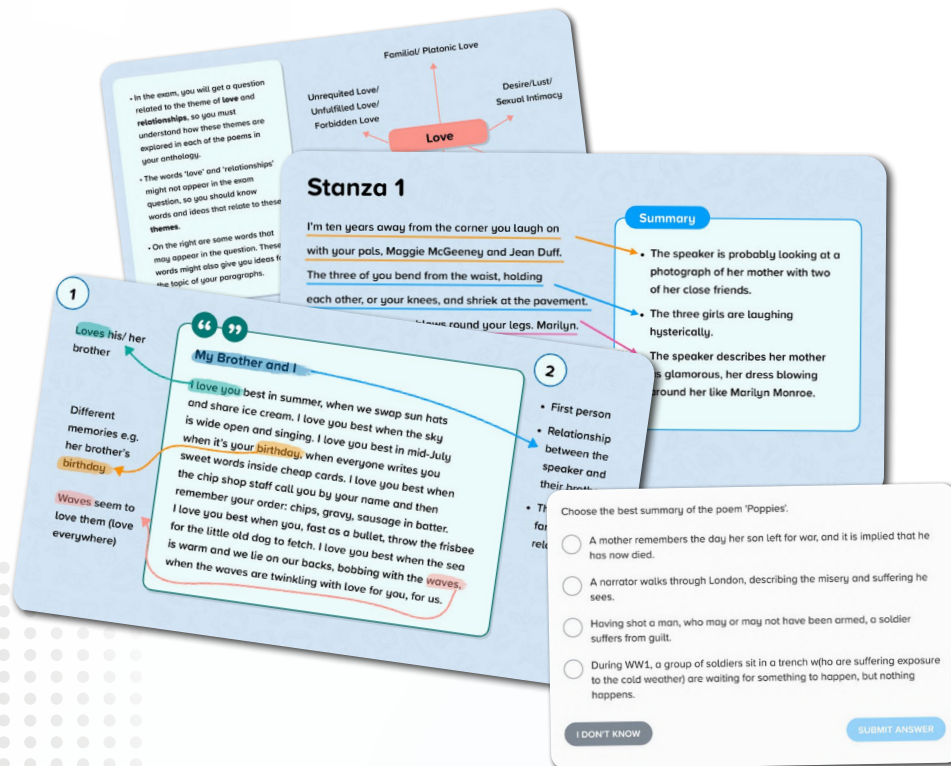
Literature: Blood Brothers

[Download course content](#)

English Courses

Secondary Literature - Poetry

Our literature courses explore plot, characters, themes, context, language, structure, form, and are suitable for all exam boards.



Love and Relationships Poetry: AQA



Power & Conflict Poetry: AQA



Power & Conflict Poetry: Edexcel



Unseen Poetry

[Download course content](#)

English Courses

MYP

Our secondary English Language courses cover reading and writing skills across both fiction and non-fiction, including language, structure, analysis, text types and writing for purpose. There are separate SPaG courses which cover spelling, punctuation and grammar.



Reading MYP



English Language Lower MYP



English Language Upper MYP



SPaG MYP

Structuring your writing

- Use a range of sentence structures and sentence lengths.
- Use paragraphs to organise your writing.

Dear Sir/ Madam,

I am writing to apply for the position of waiter at The Cafe on Saturdays.

Firstly, I would like to begin by stating how much I love The Cafe and that I would very much enjoy working here. I have always lived just down the road and have frequently visited The Cafe. The food is always delicious, the staff are unfailingly friendly and it is my favourite place to meet a friend for a cup of tea. I would make it my mission to help create the warm and welcoming atmosphere that I have always enjoyed so much.

Secondly, I think that I would make an excellent addition to the staff. I am a very confident and friendly person who has worked in the cafe industry for three years. The customers feel welcome from the moment they walk in. I am a hard-worker, organised and reliable.

I am keen to apply to a hospitality and tourism course, so I believe that working at The Cafe would be invaluable to me.

1 Comparatives and Superlatives

Comparatives are used to compare two things.

Superlatives are used to compare everything else.

Did you know?

Most adjectives have the comparative and superlative forms. However, some often find these forms do not fit the regular pattern.

Example: Jane is taller than John.

Choose the simile below.

- ☐ The night sky was as black as coal.
- ☐ The sky was sunny and clear.
- ☒ There was a blanket of fog in the sky.
- ☐ It was such a sunny day. In fact, it was the sunniest day of the summer so far.

Incorrect

No, this is a metaphor, not a simile. Remember to look out for the words 'like' and 'as' when deciding if a sentence includes a simile!

correct answer

Next Question

Our seasons can symbolise different stages of life:

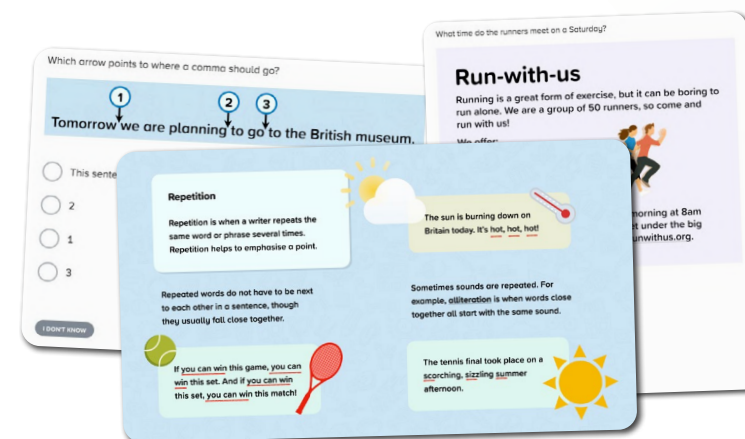
Season	Symbolism
Spring	symbolises childhood: children are growing up, plants and animals begin to grow.
Summer	symbolises adulthood: each maturity - in full bloom.
Autumn	symbolises old age: the leaves on the trees turn golden brown, preparing to fall.
Winter	represents death: all the trees are bare and all plant life is essentially dead.

[Download course content](#)

English Courses

English Language GCSE Post-16

Our GCSE English Language courses cover reading and writing skills across both fiction and non-fiction, including language, structure, analysis, text types and writing for purpose.



English Language GCSE Post-16



English Language GCSE: Edexcel 2.0 Post-16

Specification: 1EN2



English Language GCSE: AQA Post-16

Specification: 8700



English Language GCSE: Eduqas Post-16

Specification: C700QS



English Language GCSE: Edexcel Post-16

Specification: 1EN0



English SPaG Post-16

[Download course content](#)

English Courses

English Language GCSE: WJEC Post-16

The course covers reading and writing skills and a variety of language and structural techniques for both fiction and non-fiction extracts.



English Language GCSE: WJEC Post-16

Specification: 3700QS
QAN: 601/4943/7

Question
Match the image with the description

Task
Let's try exploring connotations with the image of a rose.
When you look at a rose, what does it make you think of?

Delicate **Beautiful** **Love**

Formatting
Include their email address
The subject is a summary of the topic of the email.
Use format openings and closings
If you don't know their name, address the email to 'Dear Sir/ Madam'.

New message
To: The Train Company
Subject: Train ticket refund
Dear Sir/ Madam,
I would like to make a complaint about a cancelled train. I was supposed to be travelling from London to Edinburgh on the 15th of April. However, my train was cancelled. I expect a full refund of the cost of my train ticket. I look forward to your reply.
Kind regards
Jane Smith
SEND

The curtains flapped violently. Thunder clapped and lightning shot through the air. A door slammed shut. Ellie jumped.

The narrator describes that the "thunder clapped" and a "door slammed" to evoke the sudden, sharp, surprising noises. This explains why the character, Ellie, feels scared.

The campsite was illuminated by a fat yellow moon which glowed merrily; stars winked in the night sky. The canvas tent fluttered and flapped comfortably in the mild breeze as I sat beside the fire, warming my hands. The fire crackled and snapped, sparks shooting out into the dark air.

The writer evokes a vivid image of the fire by describing the sound it makes as it "crackled" and "snapped". This helps us to understand why the warm fire was such a comfort to the character at this point.

'We must do something to protect the endangered red squirrel in the UK. This poor creature is _____ the larger, more powerful grey squirrel, and needs our help to save it from being totally wiped out. It is this nation's greatest test yet!'

to fill the gap to make us feel sympathy for the

Download course content

English Courses

Functional Skills

Our functional skills courses cover the knowledge and skills required for the functional skills qualifications, mapped to the national requirements outlined by the DfE.

Similes

A simile is when you say one thing is like another. It is a comparison between the two things. It often includes the word 'like' or 'as'.

The ball flew into the sky like a rocket.

Rockets go high into the sky very quickly.

This simile suggests that the ball went upwards very quickly.

Question

What is the main point of this text?

Read this text and identify what the key words are.

Are you p...

Who we an...

We are a s...

the middle...

working, re...

What we a...

We are see...

person whi...

positions o...

commitme...

Contact jo...

Which of these sentences is a simile?

☐ She was fishing for compliments.

☐ He was as brave as a lion.

☐ Lions are powerful and majestic.

☐ He was the apple of her eye.

I DON'T KNOW

SUBMIT ANSWER



English Functional Skills (Entry 1)



English Functional Skills (Entry 2)



English Functional Skills (Entry 3)



English Functional Skills (Level 1)



English Functional Skills (Level 2)

[Download course content](#)

Mathematics Courses

Primary

Year Group Specific →

Year 2 Mathematics
Year 3 Mathematics
Year 4 Mathematics
Year 5 Mathematics
Year 6 Mathematics

Additional →

Year 2 Multiplication Tables
Multiplication Tables
Year 5-6 Arithmetic

Cambridge →

Stage 2 Mathematics
Stage 3 Mathematics
Stage 4 Mathematics
Stage 5 Mathematics
Stage 6 Mathematics

International Baccalaureate - PYP →

Grade 1 Mathematics
Grade 2 Mathematics
Grade 3 Mathematics
Grade 4 Mathematics
Grade 5 Mathematics

Secondary

Secondary →

Mathematics Secondary (F & H)
Mathematics Secondary (F+)
Bridge to A-Level Mathematics

Edexcel →

Number and Measure Level 1 & 2: Edexcel Award
Algebra Level 2 & 3: Edexcel Award

WJEC →

Mathematics GCSE Unit 1, 2 & 3 WJEC (F & H)

IGCSE Cambridge →

IGCSE Cambridge (Core & Extended)
International IGCSE Cambridge (Core & Extended)

IGCSE Edexcel →

IGCSE Edexcel (F & H)
Mathematics IGCSE Unit 1: Edexcel Modular (F & H)
Mathematics IGCSE Unit 2: Edexcel Modular (F & H)

Financial Maths →

Financial Maths

International Baccalaureate - MYP →

Bridge to DP Mathematics
Mathematics MYP

Post-16

Advanced Maths →

Advanced Maths: Differentiation
Advanced Maths: Functions
Advanced Maths: Binomial Expansion

GCSE Post-16 →

Mathematics GCSE Post-16 (F & H)
Number and Measure Level 1 & 2: Edexcel Award

GCSE Post-16 WJEC →

Mathematics GCSE: WJEC Post-16

Mathematics Courses - Functional Skills →

Mathematics Functional Skills (Entry 1 - Level 2)



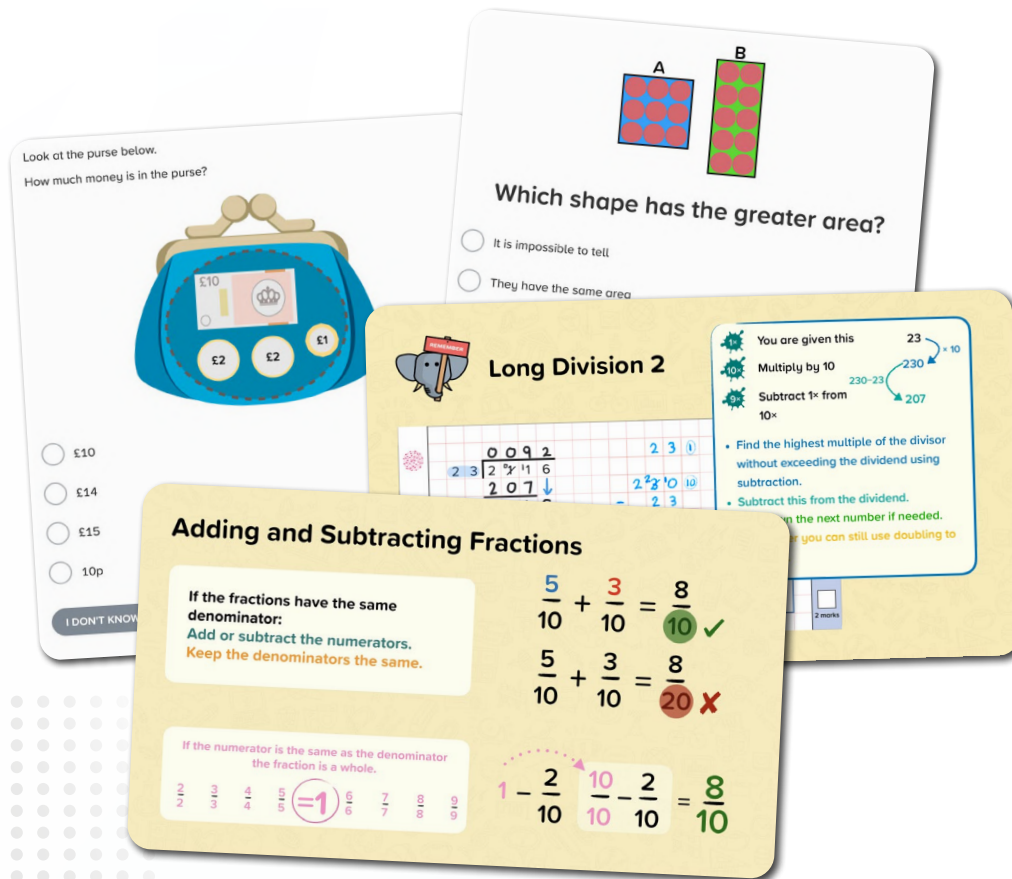
[Curriculum Overview](#)

[Customer Hub](#)

Mathematics Courses

Primary - Year Group Specific

Our primary mathematics offering includes specific courses for each year group, from years 2 to 6.



Year 2 Mathematics



Year 3 Mathematics



Year 4 Mathematics



Year 5 Mathematics



Year 6 Mathematics

Mathematics Courses

Primary - Additional Courses

Our primary mathematics offering includes specific courses for each year group, from years 2 to 6.



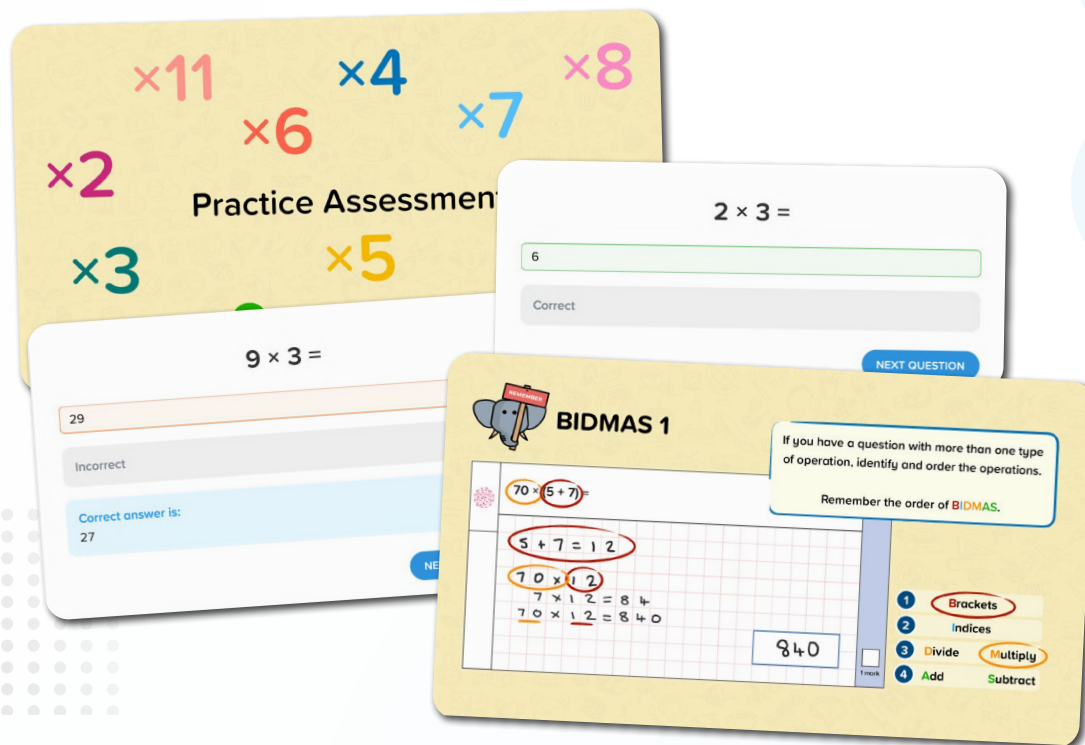
Year 2 Multiplication Tables



Multiplication Tables



Year 5-6 Arithmetic

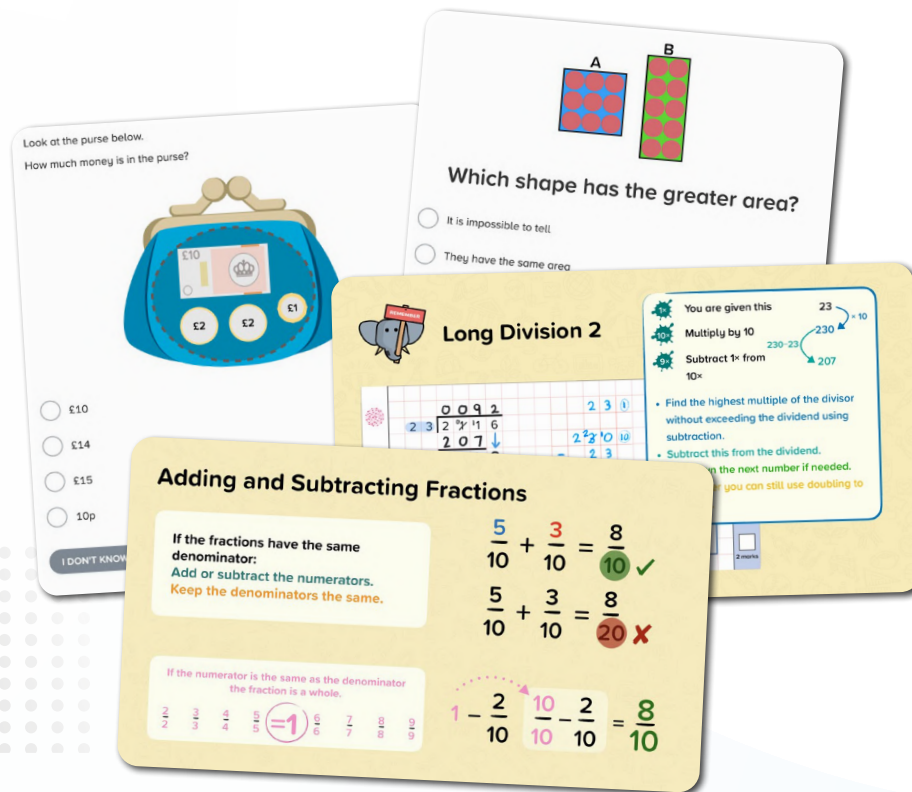


[Download course content](#)

Mathematics Courses

Primary - Cambridge

Our Cambridge courses are aligned to the Curriculum Framework for Cambridge Primary Mathematics 0096. They provide the mathematic skills, knowledge and practice required to support and stretch students from stage 2 to 6.



Stage 2 Mathematics: Cambridge



Stage 3 Mathematics: Cambridge



Stage 4 Mathematics: Cambridge



Stage 5 Mathematics: Cambridge



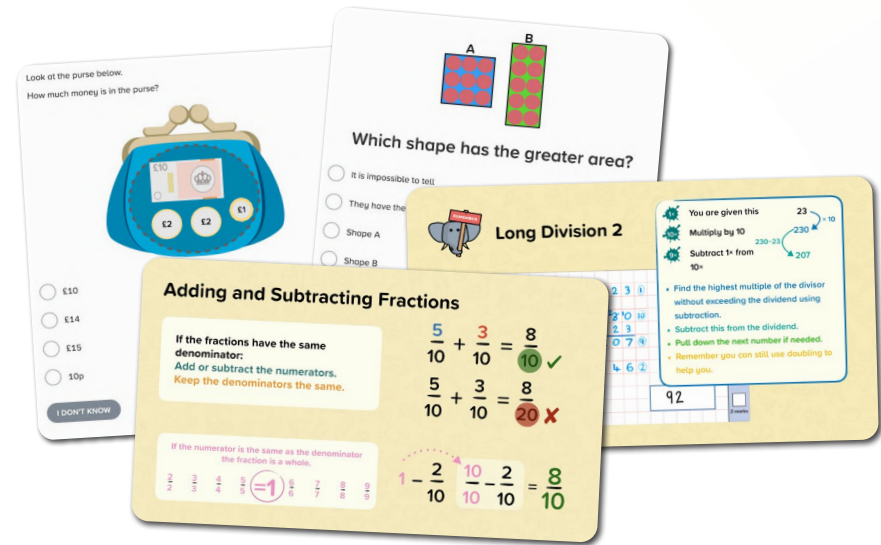
Stage 6 Mathematics: Cambridge

[Download course content](#)

Mathematics Courses

International Baccalaureate PYP

Our IB courses provide the mathematical skills, knowledge and practice required for those studying either PYP or MYP.



Grade 1 Mathematics



Grade 1 Multiplication Tables



Grade 2 Mathematics



Grade 3 Mathematics



Grade 4 Mathematics



Grade 5 Mathematics

Mathematics Courses

Secondary

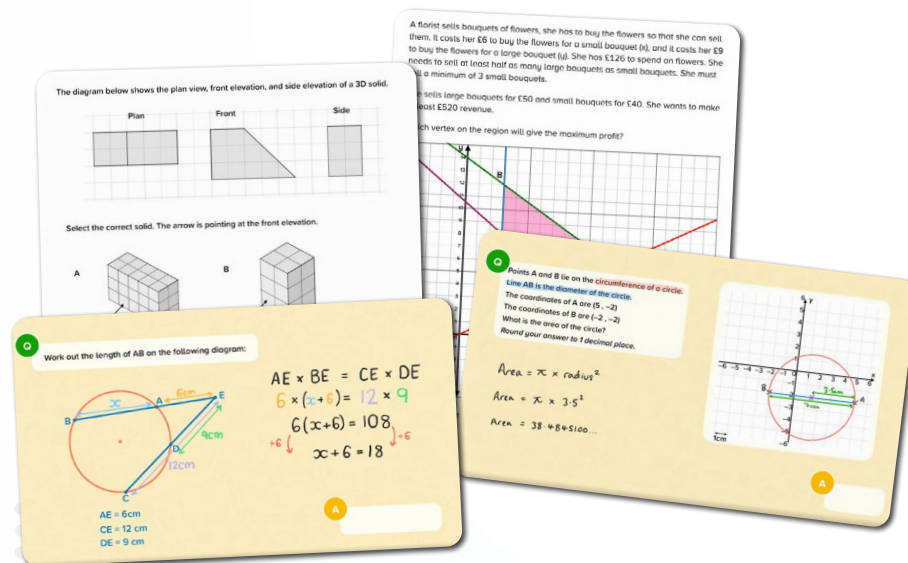
These courses have been created by our team of experienced secondary mathematics teachers.

Edexcel Specification: 1MA1

AQA Specification: 8300

OCR Specification: J560

Eduqas Specification: C300P



Mathematics Secondary (F)



Mathematics Secondary (H)



Mathematics Secondary (F+)



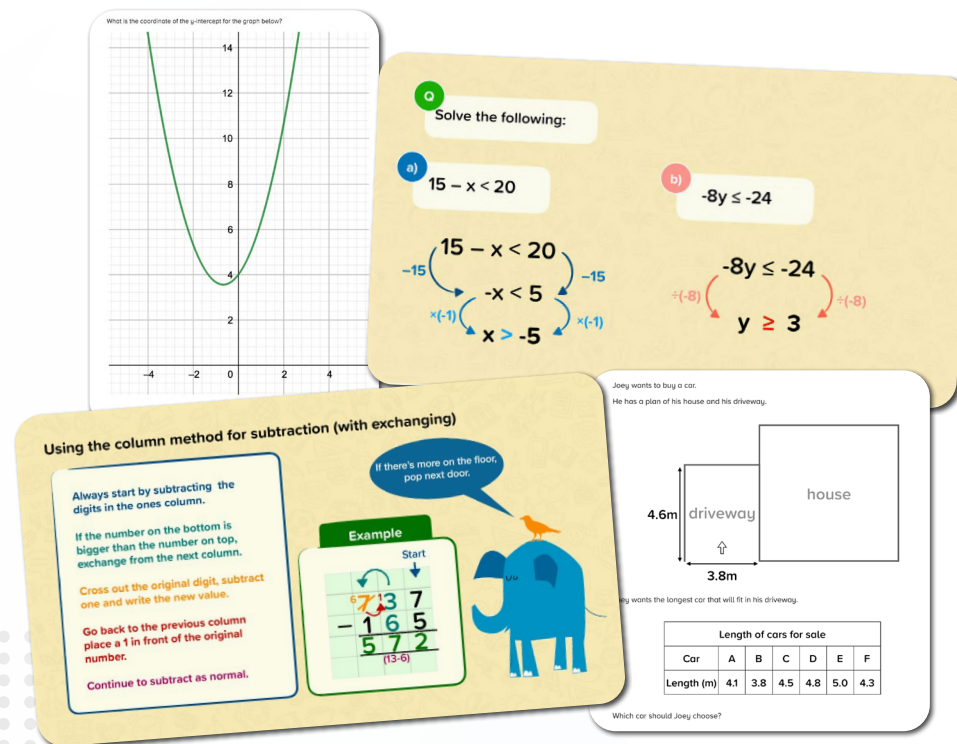
Bridge to A-Level Mathematics

[Download course content](#)

Mathematics Courses

Secondary Edexcel

These courses have been created by our team of experienced secondary mathematics teachers.



Number & Measure Level 1: Edexcel Award

Specification: ANM10
QAN: 600/2241/3



Number & Measure Level 2: Edexcel Award

Specification: ANM10
QAN: 600/2242/5



Algebra Level 2: Edexcel Award

Specification: AAL20
QAN: 600/6631/3



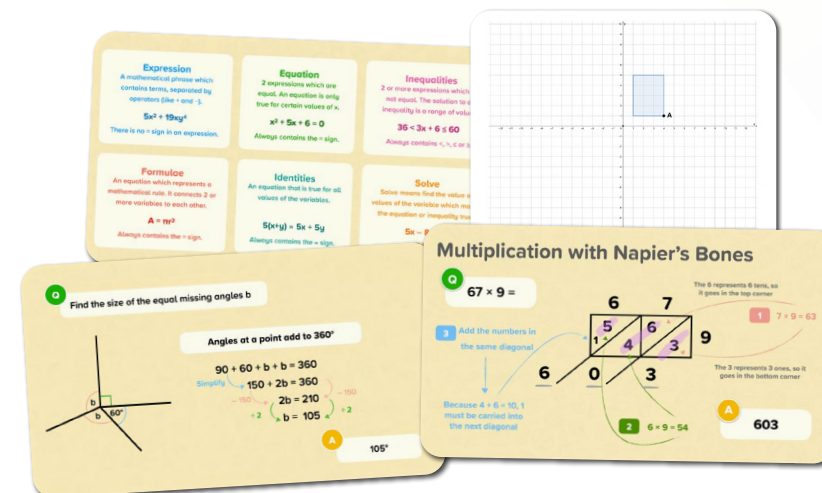
Algebra Level 3: Edexcel Award

Specification: AAL30
QAN: 600/6632/5

Mathematics Courses

Secondary WJEC

These courses have been created by our team of experienced secondary mathematics teachers.



Mathematics GCSE Unit 1: WJEC (F)

Specification: 3320UA
QAN: C00/4968/0



Mathematics GCSE Unit 2: WJEC (H)

Specification: 3320U2
QAN: C00/4968/0



Mathematics GCSE Unit 1: WJEC (H)

Specification: 3320U1
QAN: C00/4968/0



Mathematics GCSE Unit 3: WJEC (F)

Specification: 3320UC
QAN: C00/4968/0



Mathematics GCSE Unit 2: WJEC (F)

Specification: 3320UB
QAN: C00/4968/0



Mathematics GCSE Unit 3: WJEC (H)

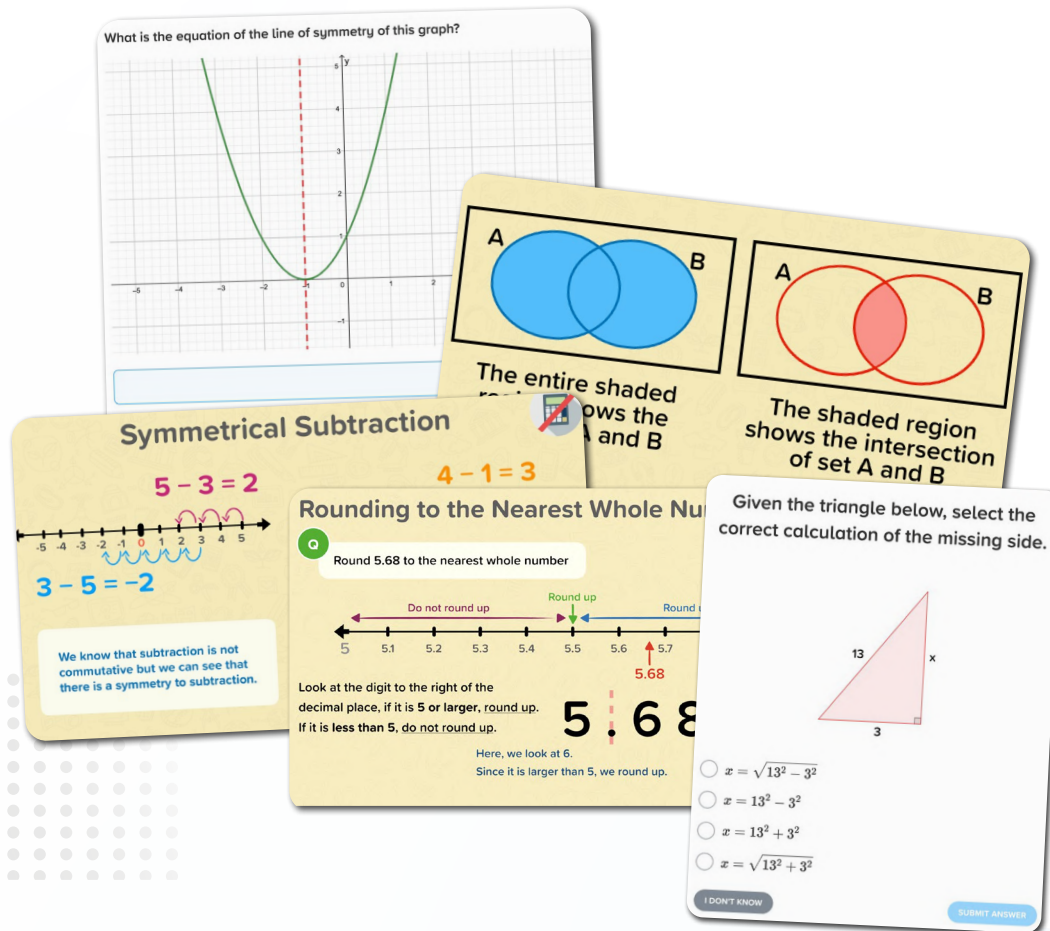
Specification: 3320U3
QAN: C00/4968/0

[Download course content](#)

Mathematics Courses

IGCSE Cambridge

These courses have been created by our team of experienced secondary mathematics teachers.



Mathematics IGCSE: Cambridge (Core)

Specification: 0580/0980



Mathematics IGCSE: Cambridge (Extended)

Specification: 0580/0980



Mathematics International IGCSE: Cambridge (Core)

Specification: 0607



Mathematics International IGCSE: Cambridge (Extended)

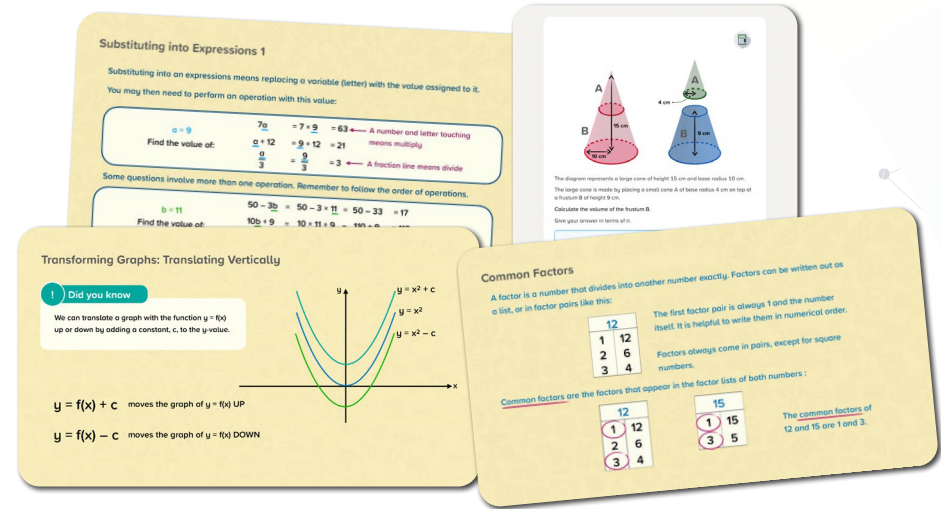
Specification: 0607

[Download course content](#)

Mathematics Courses

IGCSE Edexcel

These courses have been created by our team of experienced secondary mathematics teachers.



Mathematics IGCSE: Edexcel (F)

Specification: 4MA1



Mathematics IGCSE: Edexcel (H)

Specification: 4MA1



Mathematics IGCSE Unit 1: Edexcel Modular (F)

Specification: 4XMAF



Mathematics IGCSE Unit 1: Edexcel Modular (H)

Specification: 4XMAH



Mathematics IGCSE Unit 2: Edexcel Modular (F)

Specification: 4XMAF



Mathematics IGCSE Unit 2: Edexcel Modular (H)

Specification: 4XMAH

[Download course content](#)

Mathematics Courses

Financial Maths

This course covers skills relating to financial maths; including underlying mathematical skills as well as understanding of everyday finance and financial products.



Financial Maths

Here is a part of a debit card statement.

BANKKEYS
Current Account Statement
Account number: 019832723478
Sort Code: 40-00-15

Date	Description	£ Out	£ In
19th Oct	Barista Coffee - Salary	£125.00	
19th Oct	Best Gym	£34.50	
20th Oct	PizzaPalace	£19.95	
21st Oct	Big Bank - Cash Deposit		£50.00
22nd Oct	Denim Direct	£65.99	

How much money was paid into the account?
£ _____

Lords FlexSuper
✓ £2.50 a month
✓ Free European travel insurance
✓ Free roadside breakdown cover

Lords FlexPremier
✓ \$4 a month
✓ 2% cashback on utility bills
✓ 1% cashback on mobile bills and gym memberships

Some current accounts may have a monthly fee, but come with benefits which may include things like:

- Breakdown cover
- Travel insurance
- Cashback

There may be a requirement on these accounts to pay a minimum amount in to it every month.

calculated every month
the changes in prices
services. Prices are
ess areas in the UK,
regional differences

ded are known as
oods. It is designed
il things people
around 700
n the basket, under
ood, clothing,
sehold utilities.

Inflation Measures:
Consumer Price Index (CPI)
Retail Price Index (RPI)

The basket of goods is regularly updated.
Recently taken from...

Bryn wants to change some pounds to euros for his holiday to Italy. He has £300 to exchange.

EUROS ARE US!

Amount to exchange	Rate
£1 - £99.99	1.1598
£100 - £499.99	1.1619
£500 - £10,000	1.1623

How many euros will he get?
You do not need to include units in your answer.

Budgeting

Budgeting can help with managing your money. Every month there are essential things to spend money on, these are usually:

- Rent or mortgage
- Bills (gas, electricity and water)
- Council Tax
- Internet and television
- Car or travel expenses
- Food

Any left over money is called your disposable income.

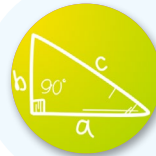
Electricity Co.
Name and address: Dr. Kate Jones, 12 Woodford Drive, Somersby, SB3 8PY
Account No.: 1234567890, Bill Ref: EB3-456
Statement Date 13th April, Bill Period: 12/03/24 - 12/04/24
Your Electricity Statement
Account Balance: £35.23 CR
Electricity Costs: £87.05, Inc. VAT at 5%

[Download course content](#)

Mathematics Courses

International Baccalaureate MYP

Our IB courses provide the mathematical skills, knowledge and practice required for those studying either PYP or MYP.



Bridge to DP Mathematics



Mathematics MYP

Points A and B lie on the circumference of a circle.
Line AB is the diameter of the circle.
The coordinates of A are (5, -2)
The coordinates of B are (-2, -2)
What is the area of the circle?
Round your answer to 1 decimal place.

Interpreting Venn Diagrams
Remember
A Venn diagram can show the number of elements in sets.
A school completed a survey to see how many pupils play football and netball.
Football: 46, Netball: 26, Both: 10, Neither: 8

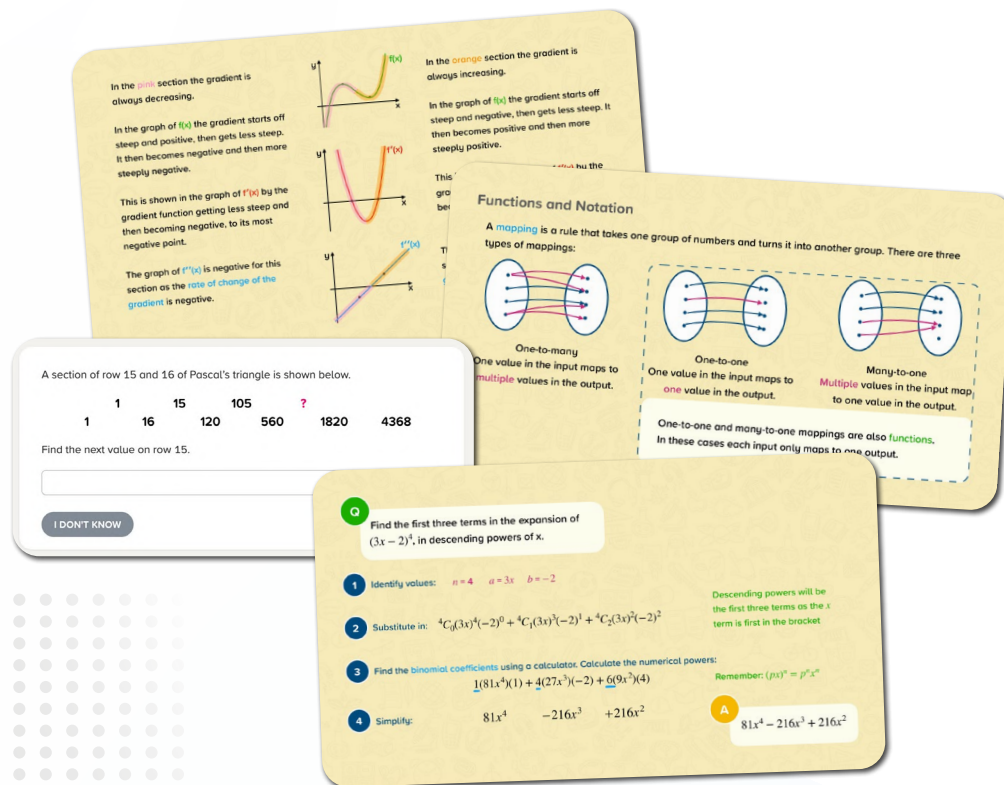
Bidmas: Brackets
Remember
1 Brackets
2 Indices
3 Divide Multiply
4 Add Subtract
Example
 $96 \div (12 - 4) = 12$
If you have a question with more than one type of operation, identify and order the operations.
You need to do any operations inside brackets before continuing on with the other operations.
 $96 \div (12 - 4) = 12$
 $12 - 4 = 8$
 $96 \div 8 = 12$

Maya's Shopping Trip
Maya left to go shopping at 4:41 pm and came back home at 5:27 pm.
How long was her shopping trip?
☐ 1 hour and 27 minutes
☐ 1 hour and 8 minutes
☐ 14 minutes
☒ 46 minutes
Correct
NEXT QUESTION

Mathematics Courses

Advanced Maths

These courses have been created by our team of experienced secondary mathematics teachers to support students taking advanced maths qualifications.



Advanced Maths: Differentiation



Advanced Maths: Functions



Advanced Maths: Binomial Expansion

Mathematics Courses

GCSE Post-16

Our Post-16 GCSE courses are adapted from our secondary courses, with adult learners in mind. The courses have diagnostics which are designed to quickly identify a learner's strengths and weaknesses.

Mathematics GCSE Post-16 Courses suitable for all GCSE specifications:

Edexcel: 1MA1 (QAN: 601/4700/3)

AQA: 8300 (QAN: 601/4608/4)

OCR: J560 (QAN: 601/4606/0)

Eduqas: C300P (QAN: 601/5503/6)

You can find a quarter of an object, like a shape.
These shapes all have one quarter coloured in:

You can also find a quarter of a group of objects.

Here are some shapes.

Steph's windowsill is 70cm wide.
She places flowers in plant pots onto the windowsill.

Each plant pot is 10 cm wide.
How many plant pots can Steph fit on the windowsill?

Total Area = $1 + 2 + 3$
 $= 10 + 48 + 24$
 $= 82\text{cm}^2$



Mathematics GCSE Post-16 (F)



Mathematics GCSE Post-16 (H)



Number & Measure Level 1: Edexcel

Specification: ANM10



Number & Measure Level 2: Edexcel

Specification: ANM20

[Download course content](#)

Mathematics Courses

GCSE Post-16 WJEC

These courses cover the WJEC GCSE Maths specification with a 'quickstart' diagnostic to start off recommendations, and focussed diagnostics on foundation/intermediate cross over topics and intermediate/higher cross over topics.



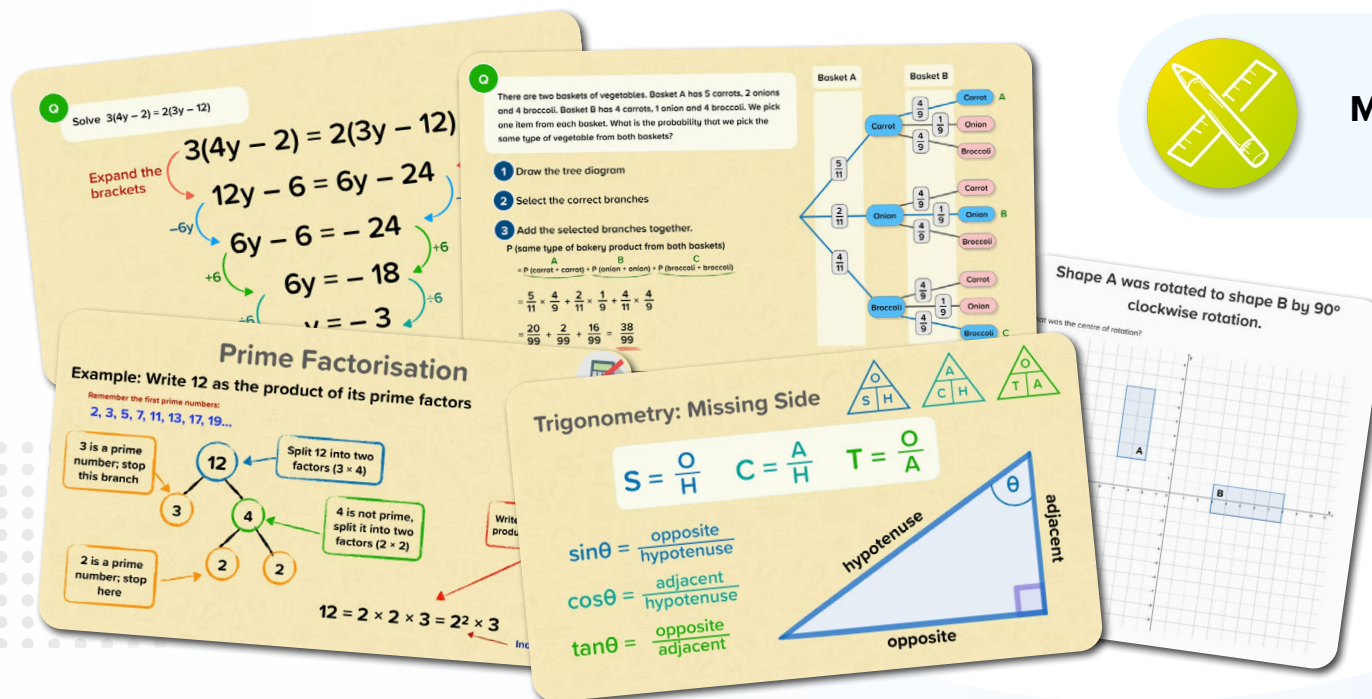
Mathematics GCSE: WJEC (F)



Mathematics GCSE: WJEC (I)



Mathematics GCSE: WJEC (H)

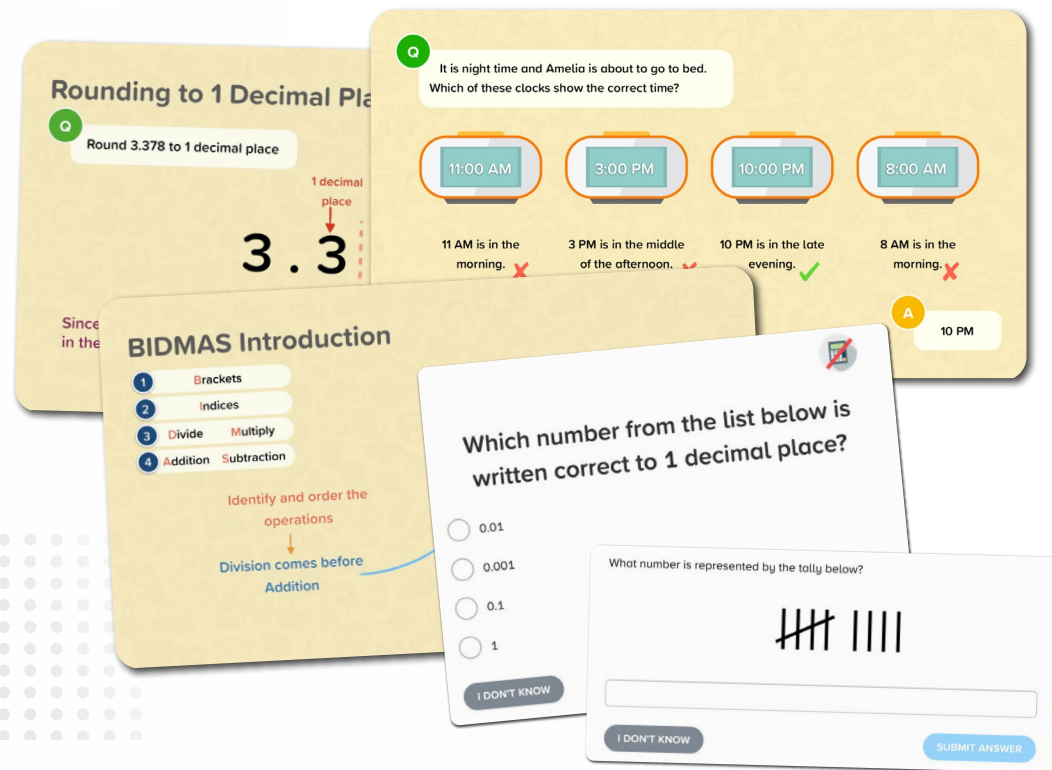


[Download course content](#)

Mathematics Courses

Functional Skills

Our functional skills courses cover the knowledge and skills required for the functional skills qualifications, mapped to the national requirements outlined by the DfE.



**Mathematics Functional Skills
(Entry 1)**



**Mathematics Functional Skills
(Entry 2)**



**Mathematics Functional Skills
(Entry 3)**



**Mathematics Functional Skills
(Level 1)**



**Mathematics Functional Skills
(Level 2)**

[Download course content](#)

Science Courses

Primary

Primary Science →

KS2 Science

Year 3 Science

Year 4 Science

Year 5 Science

Year 6 Science

Primary International Baccalaureate →

Grades 2-5 Science: All Topics

Grade 2 Science

Grade 3 Science

Grade 4 Science

Grade 5 Science

Primary Cambridge →

Stage 3 Science: Cambridge

Stage 4 Science: Cambridge

Stage 5 Science: Cambridge

Stage 6 Science: Cambridge

Secondary

Science KS3 →

Science KS3

Lower Secondary Cambridge →

Stage 7 - 9 Science: Cambridge University Press Aligned

Stage 7 - 9 Science: Cambridge Framework Aligned

GCSE AQA Biology →

Biology GCSE: AQA (F & H)

GCSE AQA Chemistry →

Chemistry GCSE: AQA (F & H)

GCSE AQA Physics →

Physics GCSE: AQA (F & H)

Combined Science GCSE: AQA Synergy →

Life & Environmental Sciences (F & H)

Physical Sciences (F & H)

Combined Science GCSE: AQA Trilogy →

Biology (F & H)

Chemistry (F & H)

Physics (F & H)

ELC AQA →

Science ELC+ (Double Award): AQA

GCSE Edexcel Biology →

Biology GCSE: AQA (F & H)

GCSE Edexcel Chemistry →

Chemistry GCSE: AQA (F & H)

GCSE Edexcel Physics →

Physics GCSE: AQA (F & H)

GCSE Edexcel Combined →

Biology (F & H)

Chemistry (F & H)

Physics (F & H)

Secondary Other →

Biology/Chemistry/Physics GCSE

IGCSE Cambridge Biology →

Biology IGCSE (Core & Extended)

IGCSE Cambridge Chemistry →

Chemistry IGCSE (Core & Extended)

IGCSE Cambridge Physics →

Physics IGCSE (Core & Extended)

IGCSE Cambridge Combined →

Biology/Chemistry/Physics (Core & Extended)

IGCSE Cambridge Co-ordinated →

Biology/Chemistry/Physics (Core & Extended)

IGCSE Edexcel Biology →

Biology IGCSE

Human Biology IGCSE

IGCSE Edexcel Chemistry →

Chemistry IGCSE

IGCSE Edexcel Physics →

Physics IGCSE

IGCSE Edexcel Combined →

Science Combined Single Award IGCSE Bio/Chem/Phys

Science Combined Double Award IGCSE Bio/Chem/Phys

Science Keywords Edexcel IGCSE →

Science Keywords Edexcel IGCSE

Secondary International Baccalaureate →

Prepare for A-Level: Biology/Chemistry/Physics

Working Scientifically →

Working Scientifically

Prepare for A-Level Science →

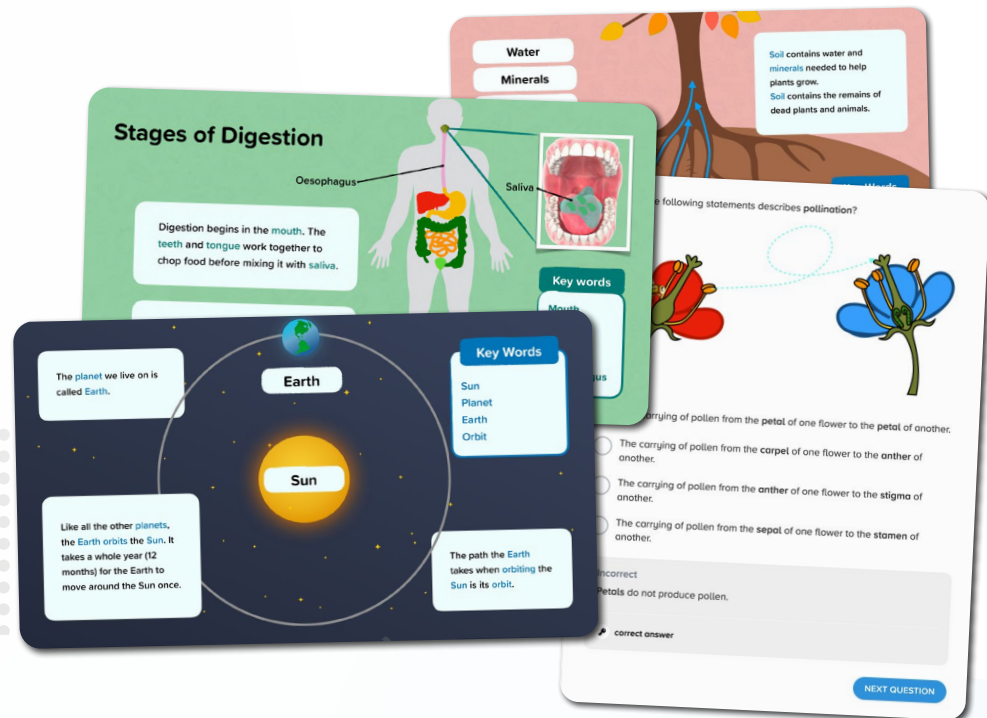
Prepare for A-Level: Biology/Chemistry/Physics

Science Courses

Primary

Our science courses are aligned to the English national curriculum for each specific year group. We also have a KS2 course that combines all of the science content from our year 3-6 courses.

There are + versions of the year 5 and KS2 courses that contain nuggets on reproduction and human life cycles.



Year 3 Science



Year 4 Science



Year 5 Science



Year 6 Science



KS2 Science

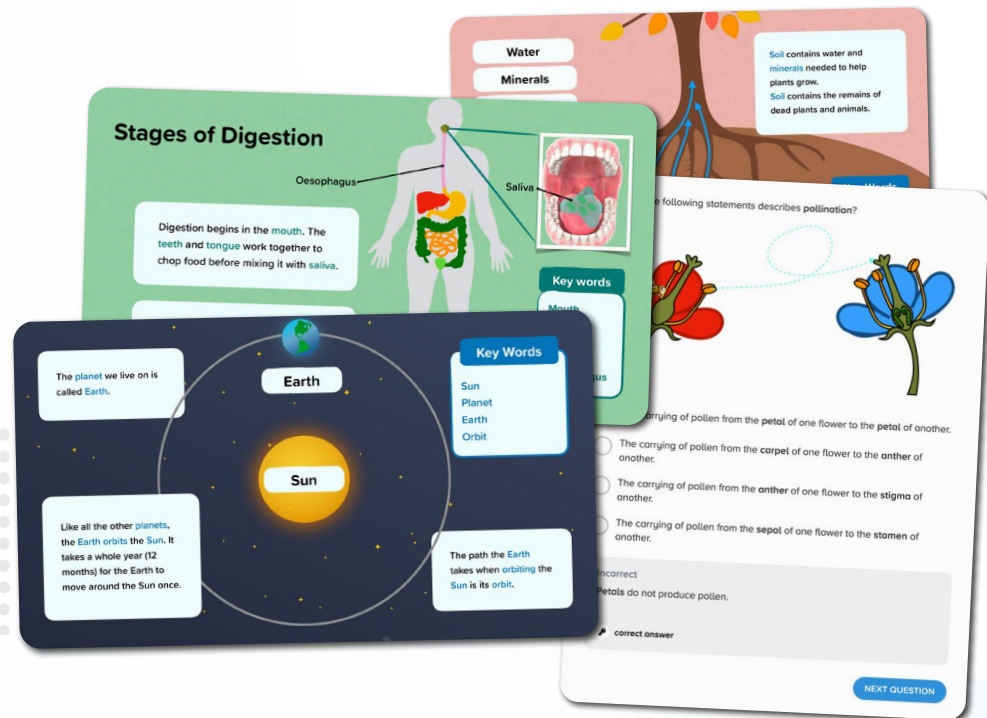
[Download course content](#)

Science Courses

Primary - International Baccalaureate

The courses are mapped to the International Baccalaureate scheme. We also have a Primary All Topics course that combines all of the science content from our grades 2-5 courses.

There are + versions of the grade 4 and All Topics courses that contain nuggets on reproduction and human life cycles.



Grades 2–5 Science: All Topics



Grade 2 Science



Grade 3 Science



Grade 4 Science



Grade 5 Science

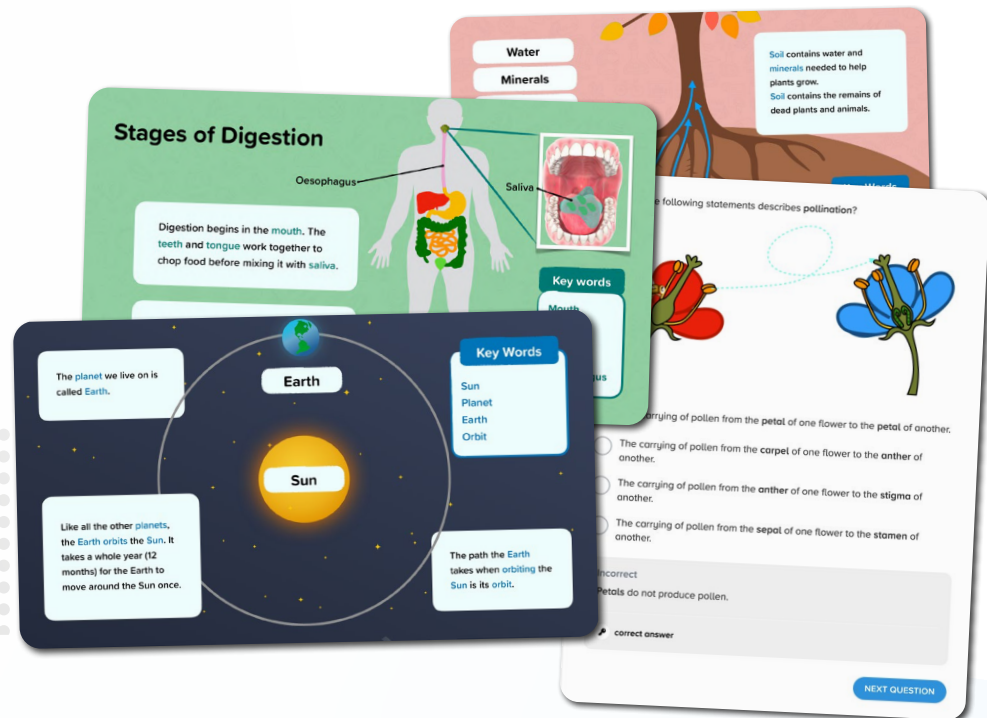
[Download course content](#)

Science Courses

Primary - Cambridge

Our Cambridge courses are aligned to the Curriculum Framework for Cambridge Primary.

There are + versions of the year 5 course that contain nuggets on reproduction and human life cycles.



Stage 3 Science: Cambridge



Stage 4 Science: Cambridge



Stage 5 Science: Cambridge



Stage 6 Science: Cambridge

[Download course content](#)

Science Courses

KS3

These maps show how our KS3 Biology, Chemistry and Physics courses are aligned to the KS3 national curriculum.



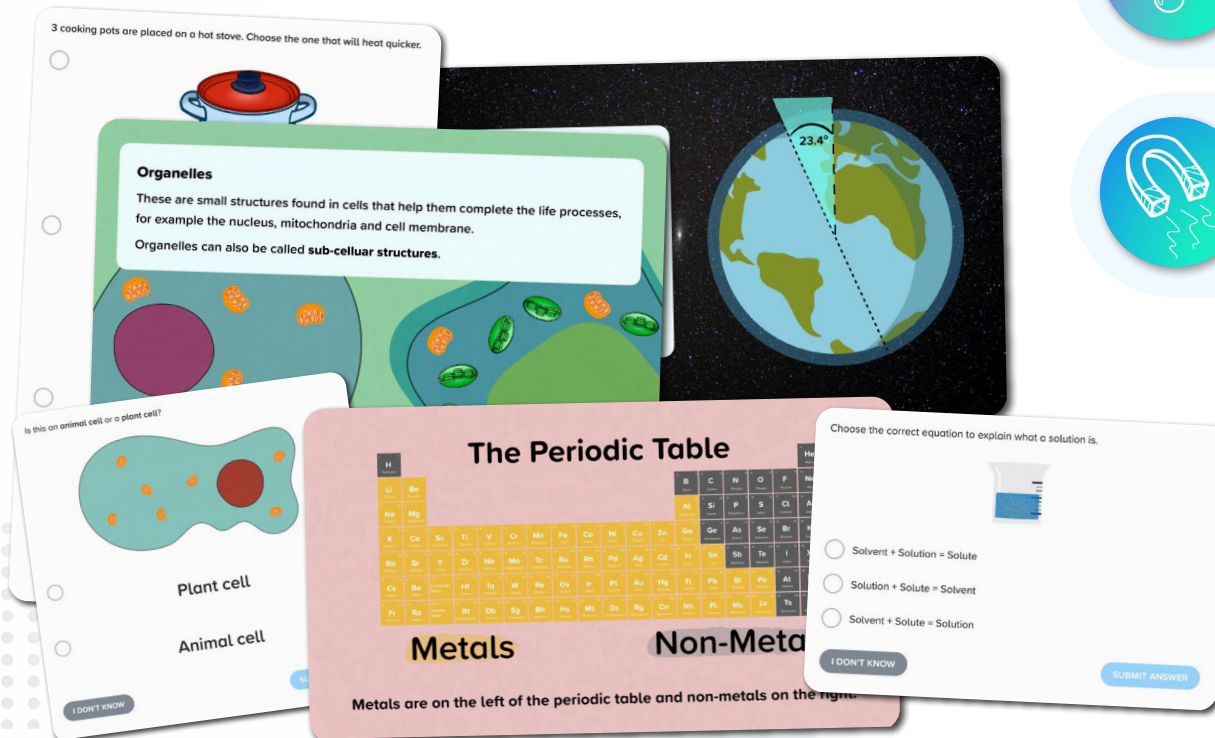
KS3 Biology



KS3 Chemistry



KS3 Physics

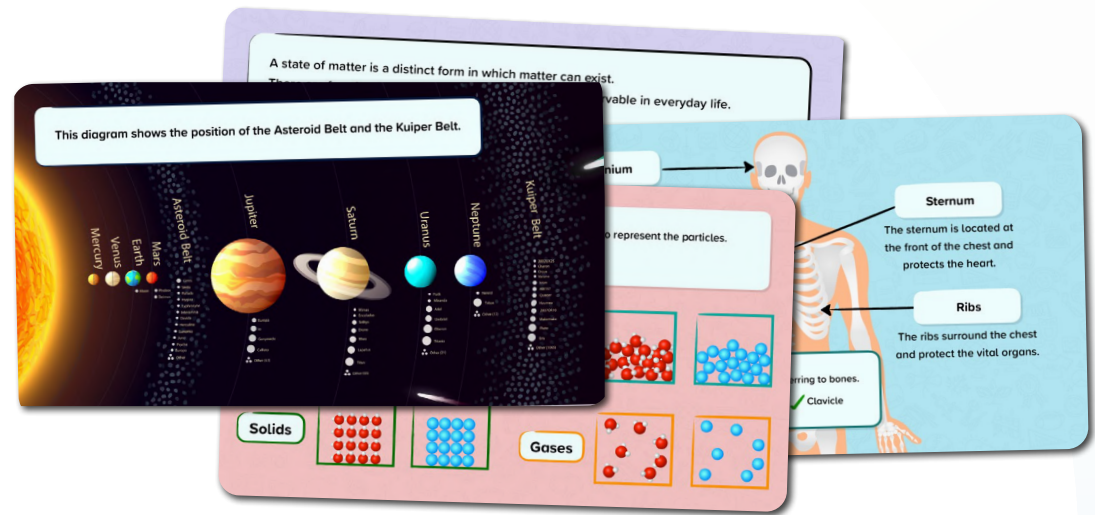


[Download course content](#)

Science Courses

Lower Secondary Cambridge

These maps show how our KS3 Biology, Chemistry and Physics courses are aligned to the Cambridge scheme.



Science – Stage 7: Cambridge University Press Aligned



Science – Stage 7: Cambridge Framework Aligned



Science – Stage 8: Cambridge University Press Aligned



Science – Stage 8: Cambridge Framework Aligned



Science – Stage 9: Cambridge University Press Aligned



Science – Stage 9: Cambridge Framework Aligned

[Download course content](#)

Science Courses

GCSE AQA Biology

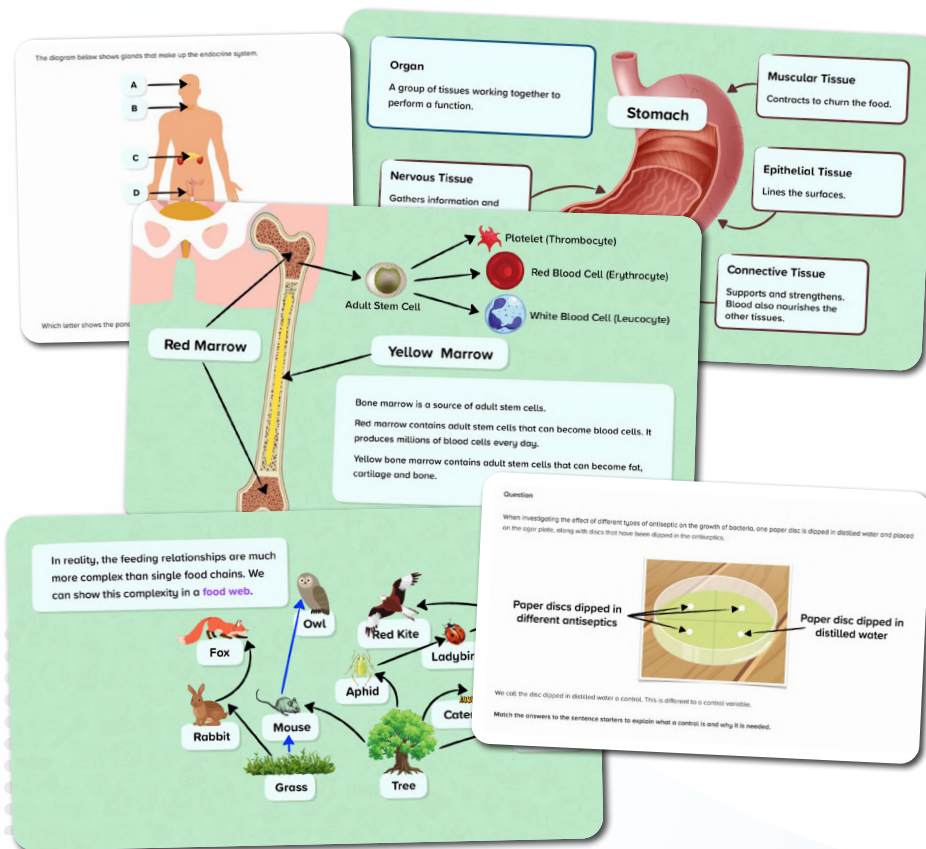
These courses were created by our experienced team of science teachers to support learners studying the GCSE AQA Biology scheme of learning.



Biology GCSE: AQA (F)



Biology GCSE: AQA (H)



[Download course content](#)

Science Courses

GCSE AQA Chemistry

These courses were created by our experienced team of science teachers to support learners studying the GCSE AQA Chemistry scheme of learning.

Alternative 1
Question
Match the formula to the diagram.

A pure substance is a substance that contains one compound or one element.

Types of Particle

Sodium Chloride

Chlorine

Sodium

Atoms

Molecules

Ions

Electrons

A pure substance made up of one element.

Not all element symbols are the first letters of the element name.

26	56	Fe	Iron	Fe
11	23	Na	Sodium	Na
79	197	Au	Gold	Au

Alternative 1
Question
Match the correct chemical formula to the ores below.

Haematite	Bornite	Bauxite
Fe_2O_3	Cu_5FeS_4	$\text{Al}_2\text{O}_3 \cdot \text{H}_2\text{O}$
Chalcopyrite	Sphalerite	
CuFeS_2	ZnS	



Chemistry GCSE: AQA (F)



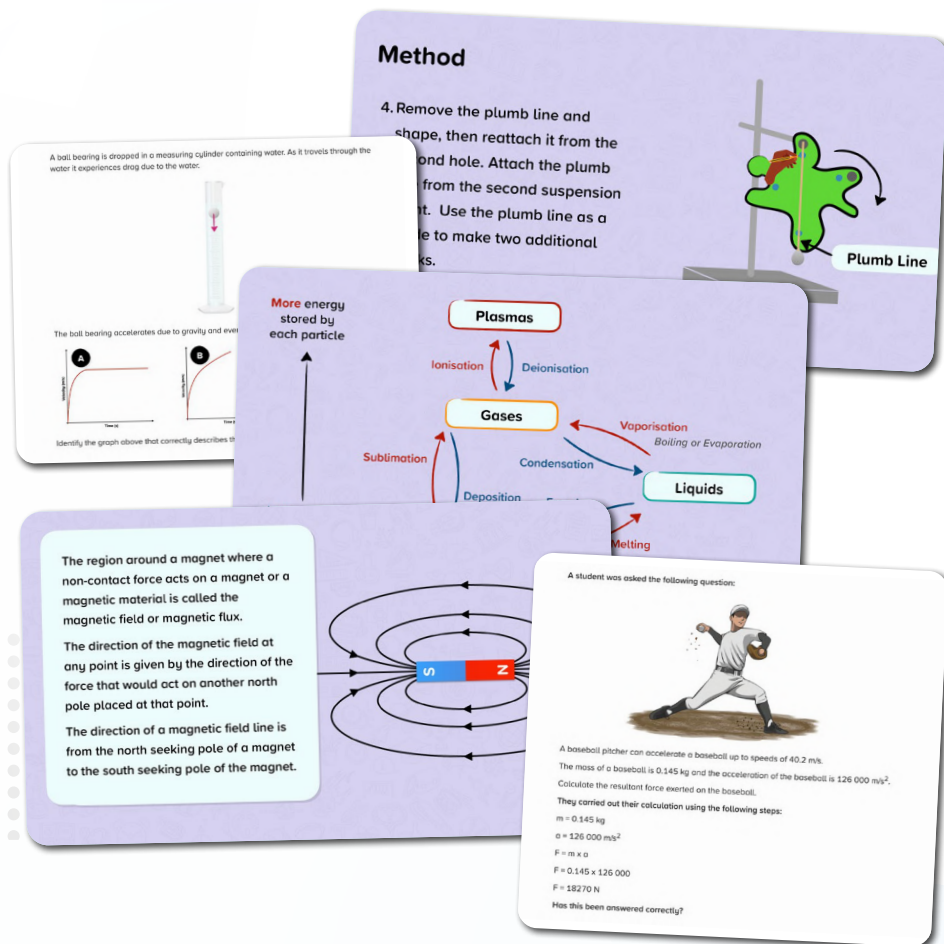
Chemistry GCSE: AQA (H)

[Download course content](#)

Science Courses

GCSE AQA Physics

These courses were created by our experienced team of science teachers to support learners studying the GCSE AQA Physics scheme of learning.



Science Physics GCSE: AQA (F)



Science Physics GCSE: AQA (H)

[Download course content](#)

Secondary Science Courses

GCSE AQA Synergy

These courses were created by our experienced team of science teachers to support learners studying the GCSE AQA Synergy scheme of learning.



Combined Science GCSE: AQA Synergy (F) – Life & Environmental Sciences

Specification: 8465



Combined Science GCSE: AQA Synergy (H) – Life & Environmental Sciences

Specification: 8465



Combined Science GCSE: AQA Synergy (F) – Physical Sciences

Specification: 8465



Combined Science GCSE: AQA Synergy (H) – Physical Sciences

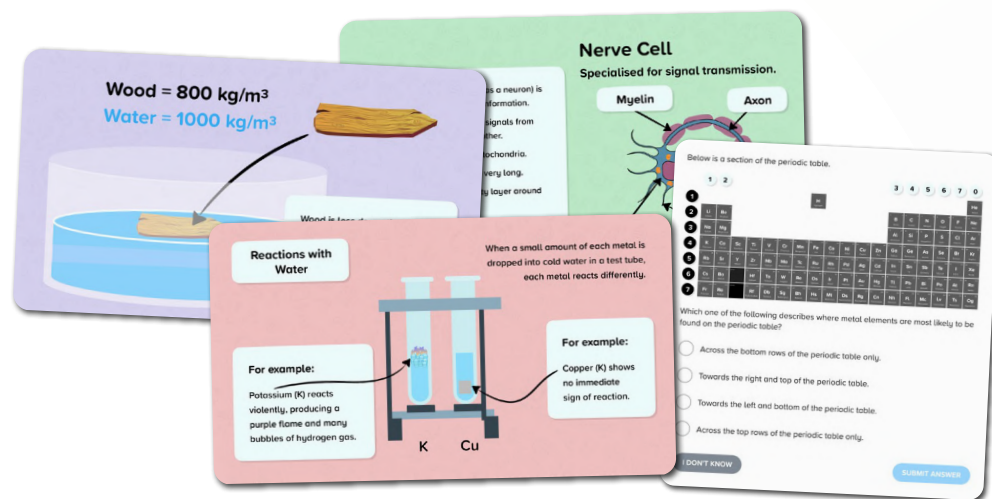
Specification: 8465

[Download course content](#)

Science Courses

GCSE AQA Trilogy

These courses were created by our experienced team of science teachers to support learners studying the GCSE AQA Synergy scheme of learning.



Combined Science GCSE: AQA Trilogy (F) – Biology

Specification: 8464



Combined Science GCSE: AQA Trilogy (H) – Biology

Specification: 8464



Combined Science GCSE: AQA Trilogy (F) – Chemistry

Specification: 8464



Combined Science GCSE: AQA Trilogy (H) – Chemistry

Specification: 8464



Combined Science GCSE: AQA Trilogy (F) – Physics

Specification: 8464



Combined Science GCSE: AQA Trilogy (H) – Physics

Specification: 8464

[Download course content](#)

Science Courses

Science Courses - ELC

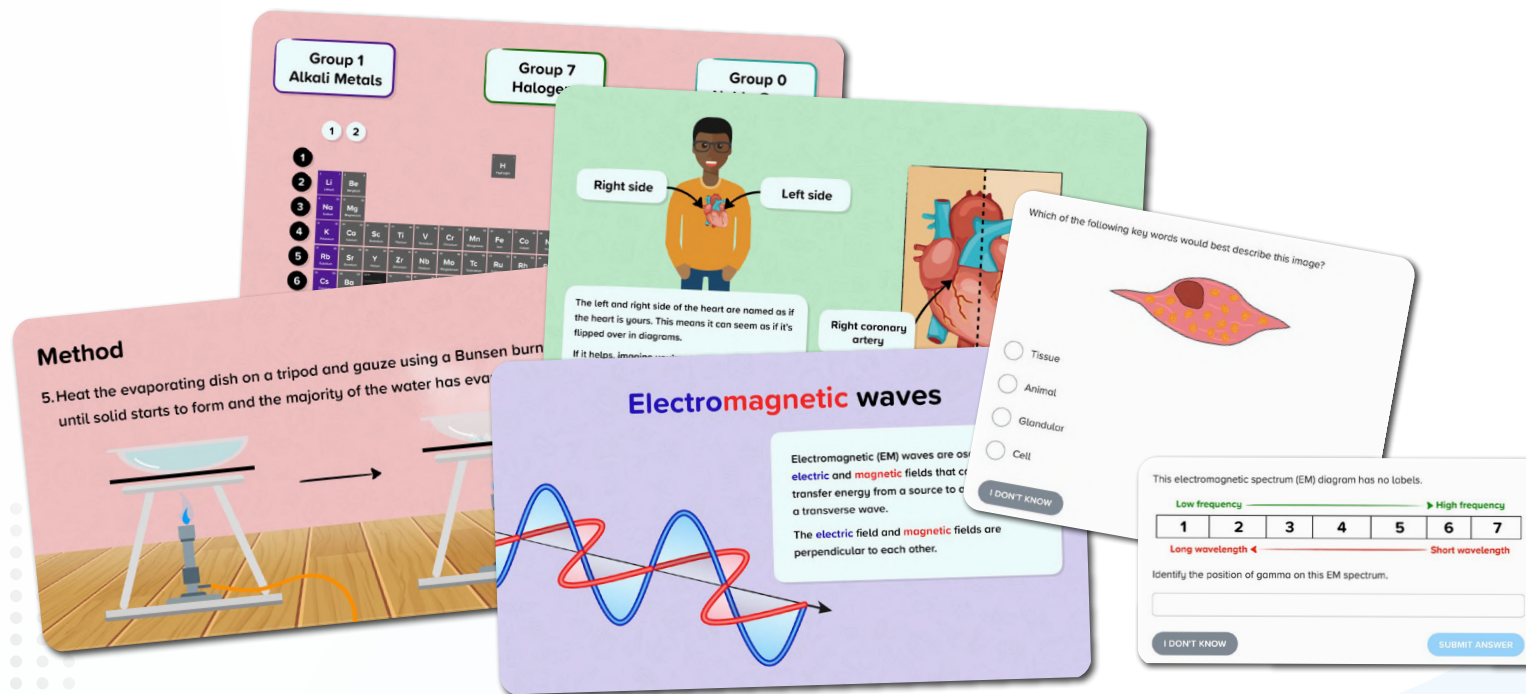
This course is mapped to AQA ELC Science, and is designed for students studying both ELC and GCSE.

AQA: 5960

QAN: 601/7522/9ng



Science ELC+ (Double Award): AQA



[Download course content](#)

Science Courses

GCSE Edexcel

These courses were created by our experienced team of science teachers to support learners studying the GCSE Edexcel Biology scheme of learning.



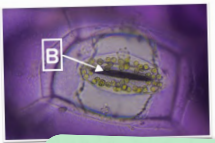
Biology GCSE: Edexcel (F)



Biology GCSE: Edexcel (H)

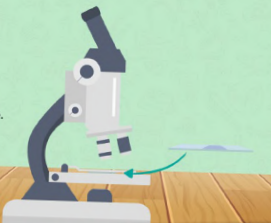
Study the diagram below.

Identify the structure labelled B.




Method

7. The slide is now ready for viewing under a microscope.



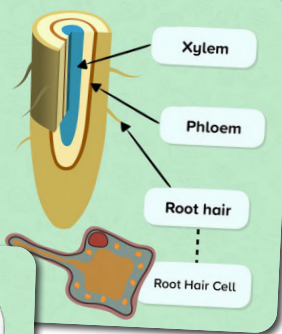
You should be able to see something like this!



Minerals are dissolved in water found in the soil.

The water and minerals are absorbed by the root hair cells.

The water and minerals are then transported around the plant in the xylem vessels.



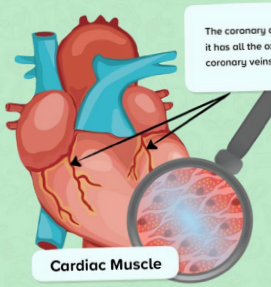
Xylem

Phloem

Root hair

Root Hair Cell

The coronary arteries carry blood into the heart muscle, making sure it has all the oxygen and glucose it needs for respiration. The coronary veins carry away waste products.



Cardiac Muscle

The walls of the heart are made up of cardiac muscle.

The cardiac muscle enables the heart to pump blood (by the contraction of different heart chambers).

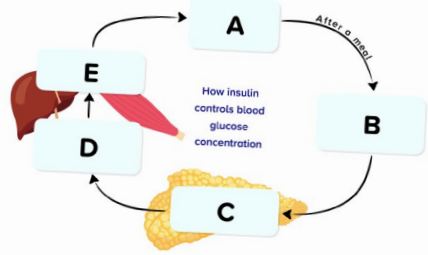
The contractions are automatic; you cannot control this movement.

This is called your pulse.

Question

The flow diagram below summarises the process involved in the control of blood glucose concentration by insulin.

The steps in the process have been replaced with letters, A to E.



How insulin controls blood glucose concentration

After a meal

Drag each of the steps to the letter it corresponds to.

[Download course content](#)

Science Courses

GCSE Edexcel

These courses were created by our experienced team of science teachers to support learners studying the GCSE Edexcel Chemistry scheme of learning.



Chemistry GCSE: Edexcel (F)



Chemistry GCSE: Edexcel (H)

Thomson's Conclusions

- The cathode ray is made up of negatively charged particles.
- These particles are only 1/1840 the mass of a hydrogen atom, so these negative particles must actually be part of the atom.

Atomic particles can be found in all elements. The atom must be positively charged to balance out the negative charge of the electrons.

Question

Below are four particle diagrams. Label each of the particle diagrams with the correct state of matter.

Examples of Giant Covalent Structures

Diamond **Graphite** **Silicon Dioxide**
Silica

Question

A 24 carat sample of 18 carat gold was found to contain 18 g of pure gold and 6 g of other metals. Calculate the percentage of gold in the sample. Give your answer to 2 significant figures.

You are given in the question:

Mass of substance (gold) = 18 g
Mass of Mixture (sample) = 24 g

To find the percentage of gold in the sample:

Mass of substance (gold)	18 g	× 100	
Mass of Mixture (sample)	24 g	× 100	
Percentage (%)	75%		

Answer 75%

Hydrochloric acid (HNO₃) and potassium hydroxide (KOH) react to form potassium nitrate (KNO₃) and water (H₂O).

$$\text{HNO}_3 (\text{aq}) + \text{KOH} (\text{aq}) \longrightarrow \text{KNO}_3 (\text{aq}) + \text{H}_2\text{O} (\text{l})$$

Use the chemical equation to work out how many moles of hydrochloric acid will be needed.

Moles of HNO₃ needed = _____ moles

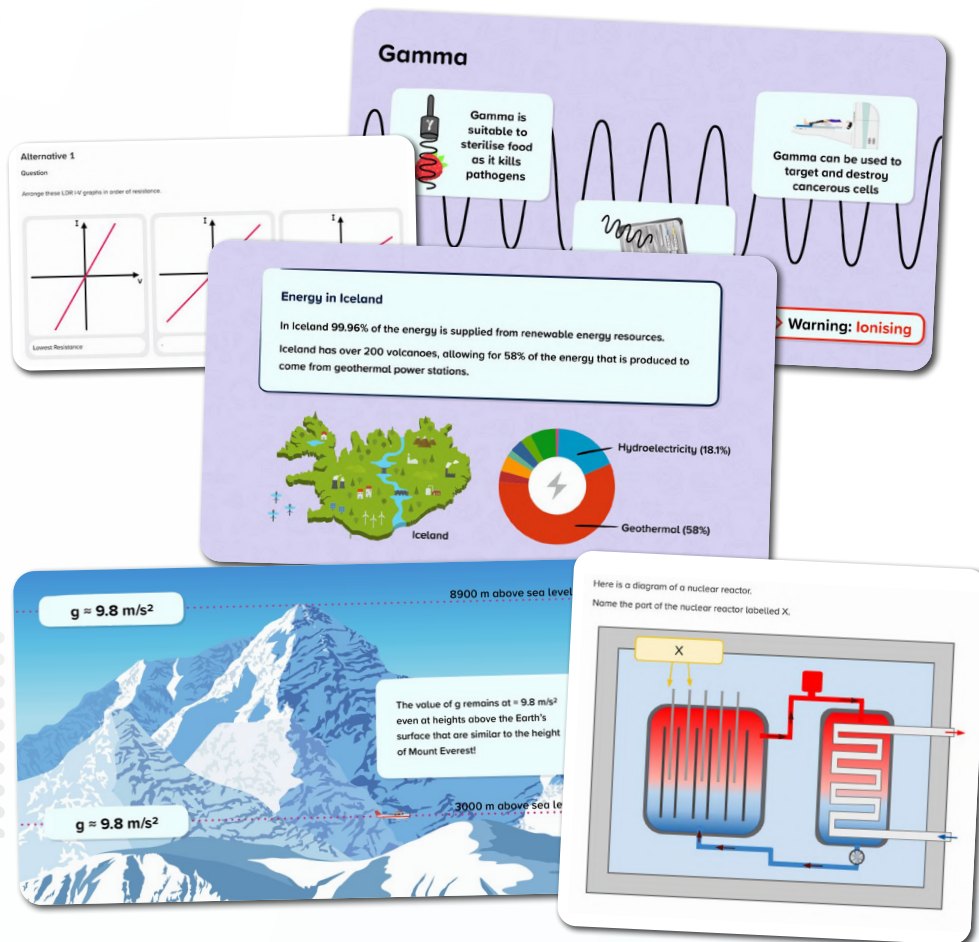
Type your answer as a number, without a unit.

[Download course content](#)

Science Courses

GCSE Edexcel

These courses were created by our experienced team of science teachers to support learners studying the GCSE Edexcel Physics scheme of learning.



Physics GCSE: Edexcel (F)



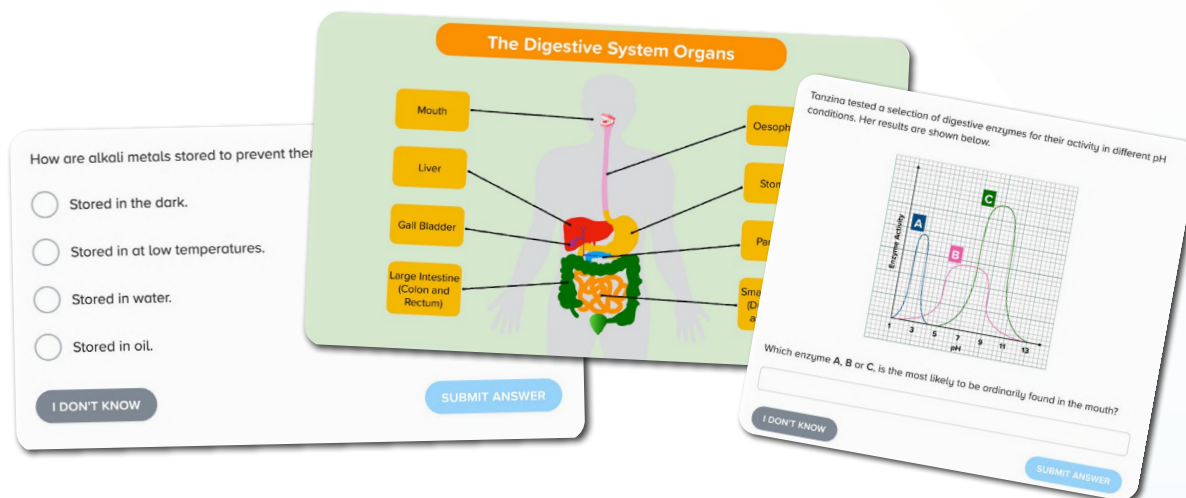
Physics GCSE: Edexcel (H)

[Download course content](#)

Science Courses

GCSE Edexcel

These courses were created by our experienced team of science teachers to support learners studying the GCSE Edexcel Combined scheme of learning.



**Combined Science GCSE:
Edexcel – Biology (F)**



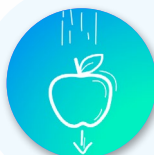
**Combined Science GCSE:
Edexcel – Biology (H)**



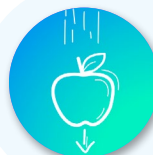
**Combined Science GCSE:
Edexcel – Chemistry (F)**



**Combined Science GCSE:
Edexcel – Chemistry (H)**



**Combined Science GCSE:
Edexcel – Physics (F)**



**Combined Science GCSE:
Edexcel – Physics (H)**

[Download course content](#)

Science Courses

Secondary Other

These courses were created by our experienced team of science teachers.



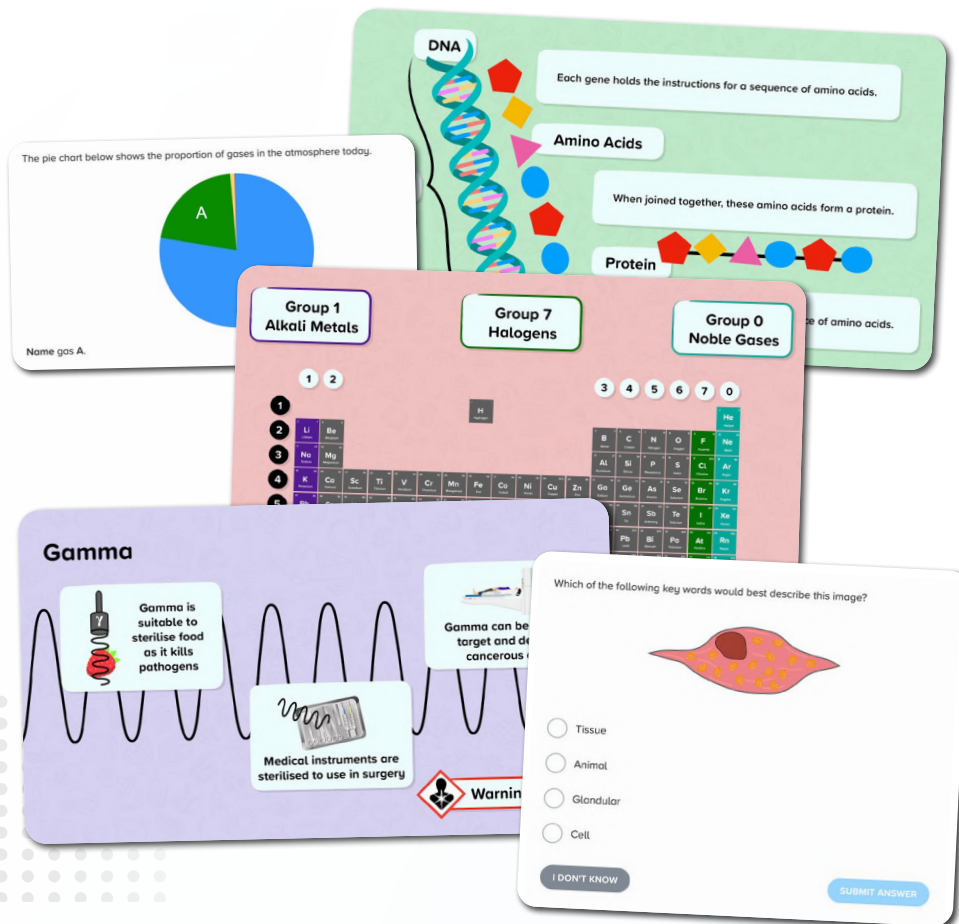
Biology GCSE



Chemistry GCSE



Physics GCSE

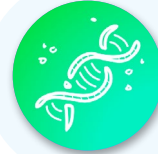


[Download course content](#)

Science Courses

IGCSE Cambridge Biology

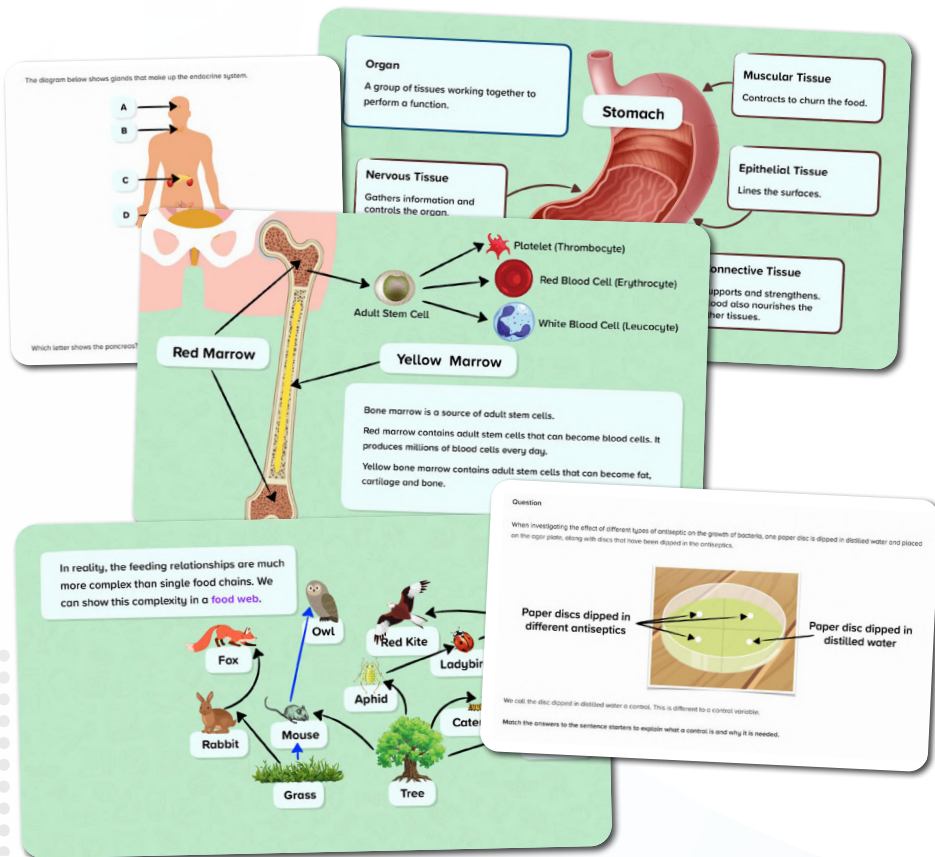
These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Biology scheme of learning.



Biology IGCSE (Core)



Biology IGCSE (Extended)



[Download course content](#)

Science Courses

IGCSE Cambridge Chemistry

These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Chemistry scheme of learning.



Chemistry IGCSE (Core)



Chemistry IGCSE (Extended)

Thomson's Conclusions

- The cathode ray is made up of negatively charged particles.
- These particles are only 1/1840 the mass of a hydrogen atom, so these negative particles must actually be part of the atom.

Atomic particles can be found in all elements. The atom must be positively charged to balance out the negative charge of the electrons.

Question

Below are four particle diagrams. Label each of the particle diagrams with the correct state of matter.

Examples of Giant Covalent Structures

Diamond **Graphite** **Silicon Dioxide**
Silica

Question

A 24 carat sample of 18 carat gold was found to contain 18 g of pure gold and 6 g of other metals. Calculate the percentage of gold in the sample. Give your answer to 2 significant figures.

You are given in the question:

Mass of substance (gold) = 18 g
Mass of Mixture (sample) = 24 g

To find the percentage of gold in the sample:

Mass of substance (gold)	18 g	× 100	Answer 75%
Mass of Mixture (sample)	24 g	× 100	

Percentage (%) = 75% (2 sf)

Hydrochloric acid (HNO₃) and potassium hydroxide (KOH) react to form potassium nitrate (KNO₃) and water (H₂O).

Chemical Equation:

$$\text{HNO}_3 (\text{aq}) + \text{KOH} (\text{aq}) \longrightarrow \text{KNO}_3 (\text{aq}) + \text{H}_2\text{O} (\text{l})$$

Use the chemical equation to work out how many moles of hydrochloric acid will be needed.

Moles of HNO₃ needed = _____ moles

Type your answer as a number, without a unit.

[Download course content](#)

Science Courses

IGCSE Cambridge Physics

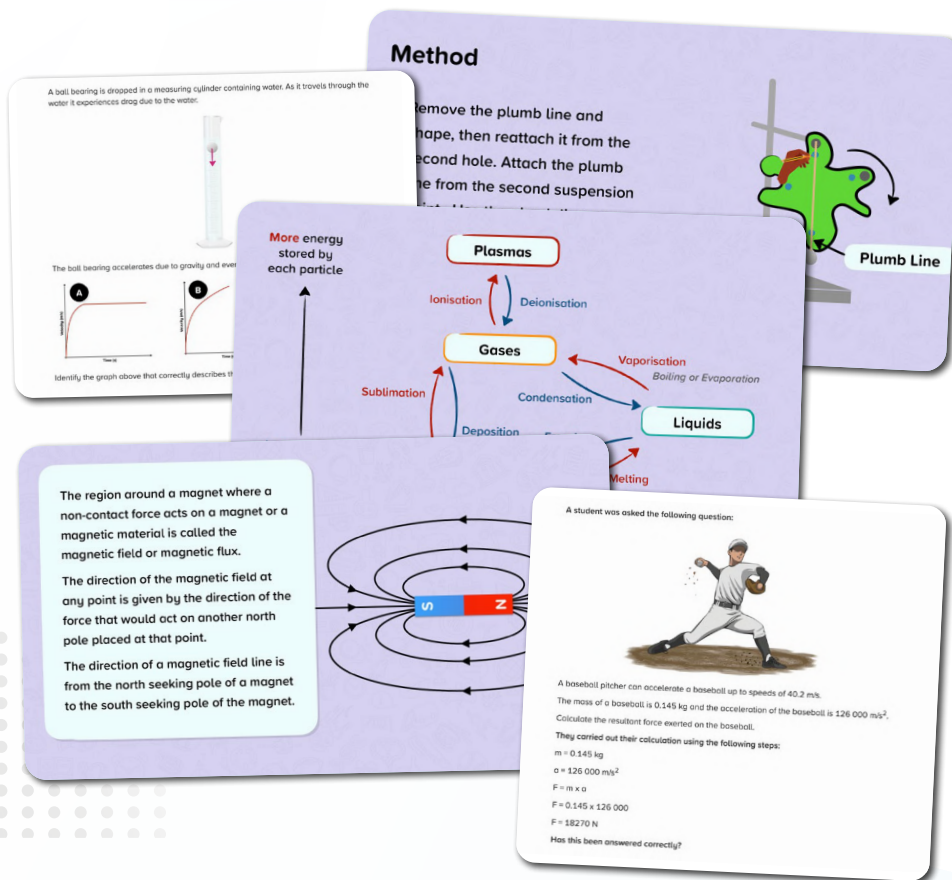
These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Physics scheme of learning.



Physics IGCSE (Core)



Physics IGCSE (Extended)

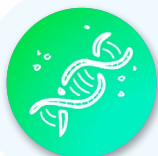
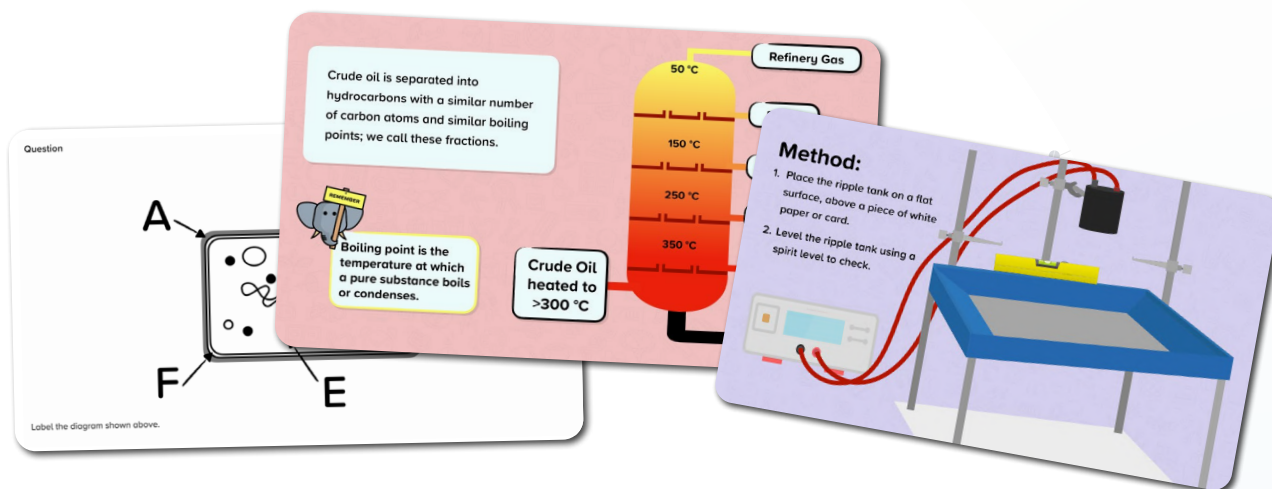


[Download course content](#)

Science Courses

IGCSE Cambridge Combined

These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Combined scheme of learning.



**Combined Science IGCSE –
Biology (Core)**



**Combined Science IGCSE –
Biology (Extended)**



**Combined Science IGCSE –
Chemistry (Core)**



**Combined Science IGCSE –
Chemistry (Extended)**



**Combined Science IGCSE –
Physics (Core)**



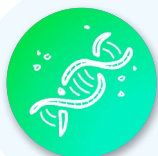
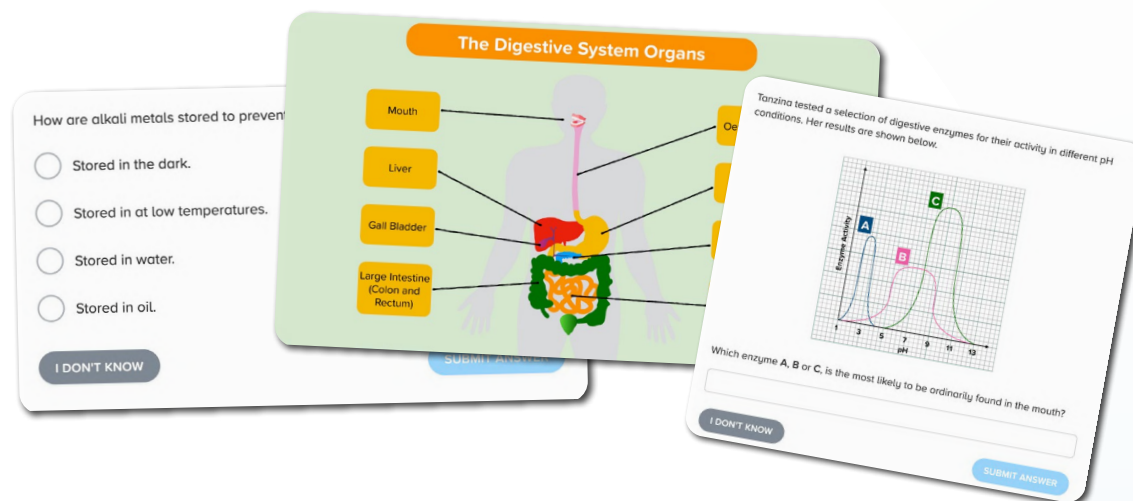
**Combined Science IGCSE –
Physics (Extended)**

[Download course content](#)

Science Courses

IGCSE Cambridge Co-ordinated

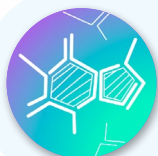
These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Co-ordinated scheme of learning.



**Co-ordinated Science IGCSE –
Biology (Core)**



**Co-ordinated Science IGCSE –
Biology (Extended)**



**Co-ordinated Science IGCSE –
Chemistry (Core)**



**Co-ordinated Science IGCSE –
Chemistry (Extended)**



**Co-ordinated Science IGCSE –
Physics (Core)**



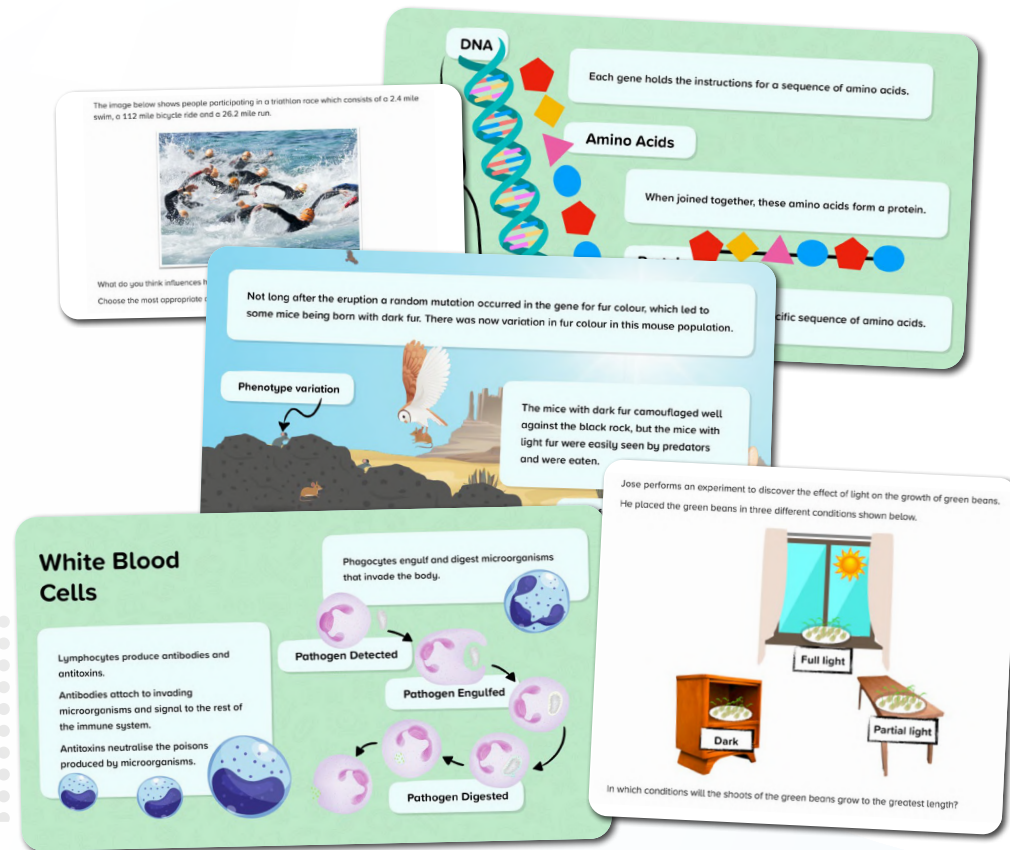
**Co-ordinated Science IGCSE –
Physics (Extended)**

[Download course content](#)

Science Courses

IGCSE Edexcel Biology

These courses were created by our experienced team of science teachers to support learners studying the IGCSE Edexcel Biology scheme of learning.



Biology IGCSE



Human Biology IGCSE

[Download course content](#)

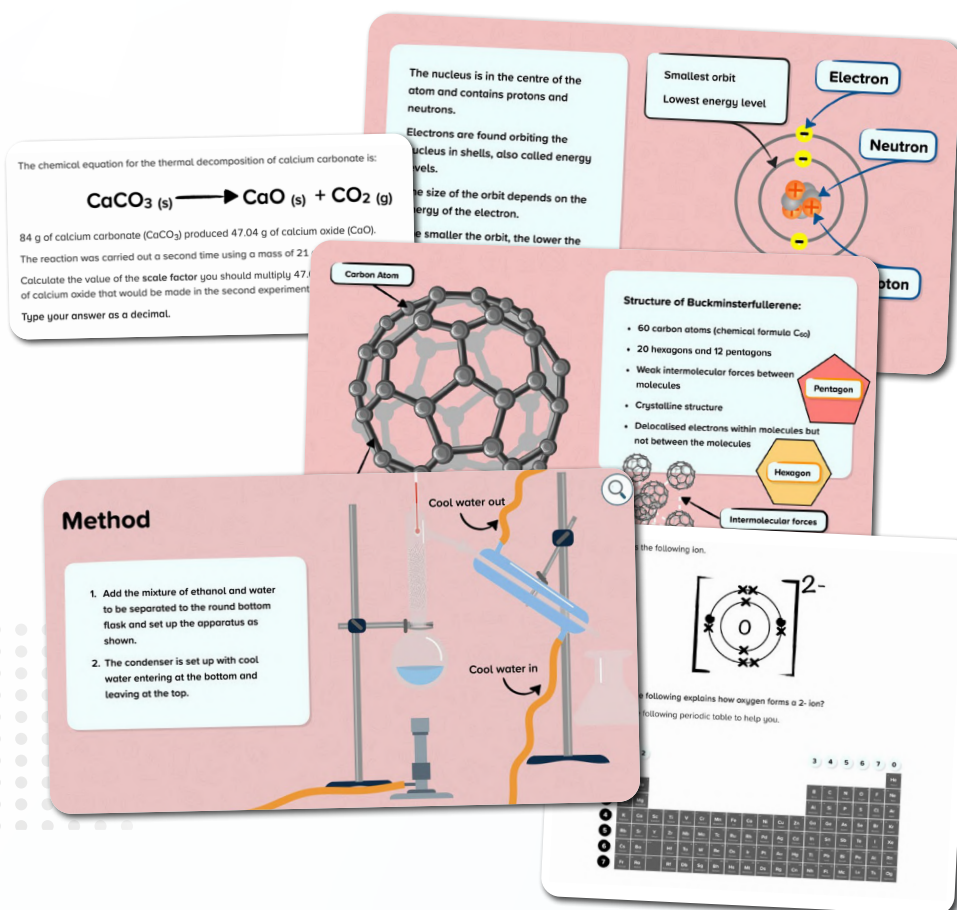
Science Courses

IGCSE Edexcel Chemistry

These courses were created by our experienced team of science teachers to support learners studying the IGCSE Edexcel Chemistry scheme of learning.



Chemistry IGCSE

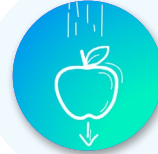


Download course content

Science Courses

IGCSE Edexcel Physics

These courses were created by our experienced team of science teachers to support learners studying the IGCSE Edexcel Physics scheme of learning.



Physics IGCSE

A fighter jet accelerates uniformly at 10 m/s^2 to a velocity of 610 m/s . During this period of acceleration, the aircraft travels 15 km . Calculate the initial velocity of the aircraft.
Give your answer to 1 decimal place.

$u =$ _____

Air Resistance

The sky diver falls through the air due to the force of weight.
As air is a fluid, the sky diver experiences drag force in the opposite direction to the sky diver's motion.

Medical Diagnosis Medical Treatments or Diagnosis

Radio-waves Microwaves Infrared Visible light Ultraviolet X-rays Gamma

Warning: Ionising

Short wavelength

Boiler Turbine Generator

Bio-fuels

How does a bio-fuel power station work?

1. Biofuels can be burnt to heat water and turn it into steam.
2. The steam is extracted and used to turn a turbine.
3. The turbines turn the generator to produce electricity.

The motion of a galloping horse is represented using a velocity-time graph.

Velocity (m/s)

Time (s)

The acceleration of the horse at 9 s into the journey is to be found. To find the acceleration of the horse, a tangent is drawn at 9 s . Two points are identified on the tangent and Δx and Δt are labelled.

Use the graph above to calculate the acceleration of the cyclist at 9 s .
Do not include a unit in your answer.

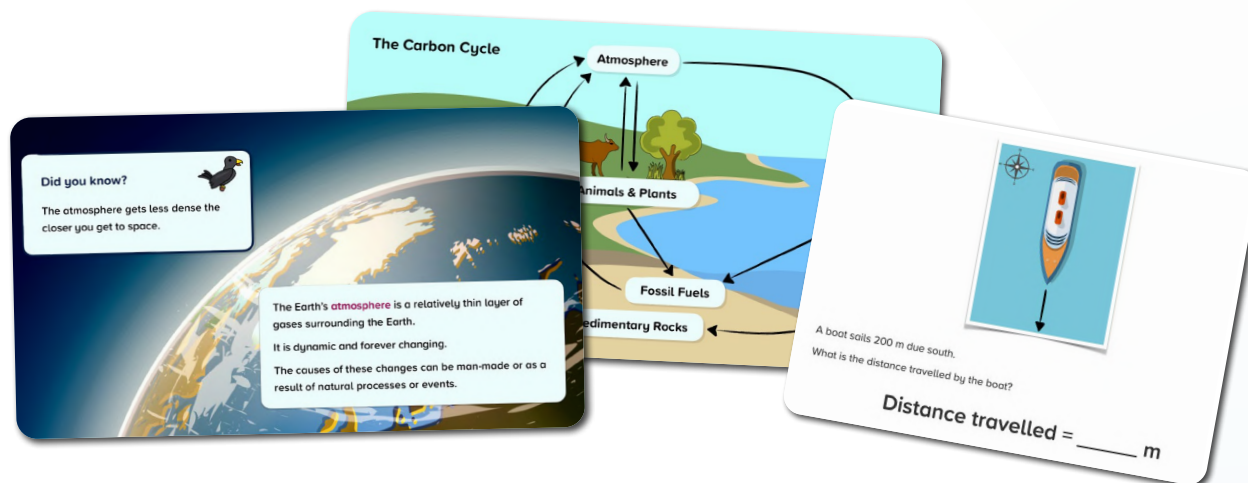
Acceleration = _____ m/s^2

Download course content

Science Courses

IGCSE Edexcel Combined

These courses were created by our experienced team of science teachers to support learners studying the IGCSE Edexcel Combined schemes of learning.



**Science Combined Single Award IGCSE
– Biology**



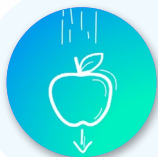
**Science Combined Double Award IGCSE
– Biology**



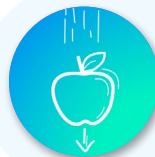
**Science Combined Single Award IGCSE
– Chemistry**



**Science Combined Double Award IGCSE
– Chemistry**



**Science Combined Single Award IGCSE
– Physics**



**Science Combined Double Award IGCSE
– Physics**

[Download course content](#)

Science Courses

Science Keywords Edexcel IGCSE

This course contains assessments from each topic in the IGCSE Edexcel specification to test the spelling and definition of key words.



Science Keywords Edexcel IGCSE

Keyword Quiz

Quiz yourself on the
This helps develop
allowing you to write

- The angle of incidence beyond which total internal reflection occurs is known as the ____.
- ☐ refractive index
 - ☐ angle of reflection
 - ☐ angle of refraction
 - ☐ critical angle

I DON'T KNOW

SUBMIT ANSWER

What do we call a solid conductive material through which electricity can flow?

- ☐ Electrolyte
- ☐ Cathode
- ☐ Electrode
- ☐ Anode

SUBMIT ANSWER

Herbivores that consume producers at trophic level 2 of a food chain are called ____.

- ☐ Tertiary consumers
- ☐ Producers
- ☐ Secondary consumers
- ☐ Primary consumers

SUBMIT ANSWER

What is complete combustion?

- ☐ A reaction that breaks down large hydrocarbons into smaller molecules.
- ☐ Combustion carried out in sufficient oxygen, producing only water and carbon dioxide.
- ☐ Combustion with insufficient oxygen, producing harmful substances.
- ☐ A reaction that joins monomers to form polymers.

I DON'T KNOW

SUBMIT ANSWER

Keyword Quiz



Quiz yourself on the scientific keywords for this topic.

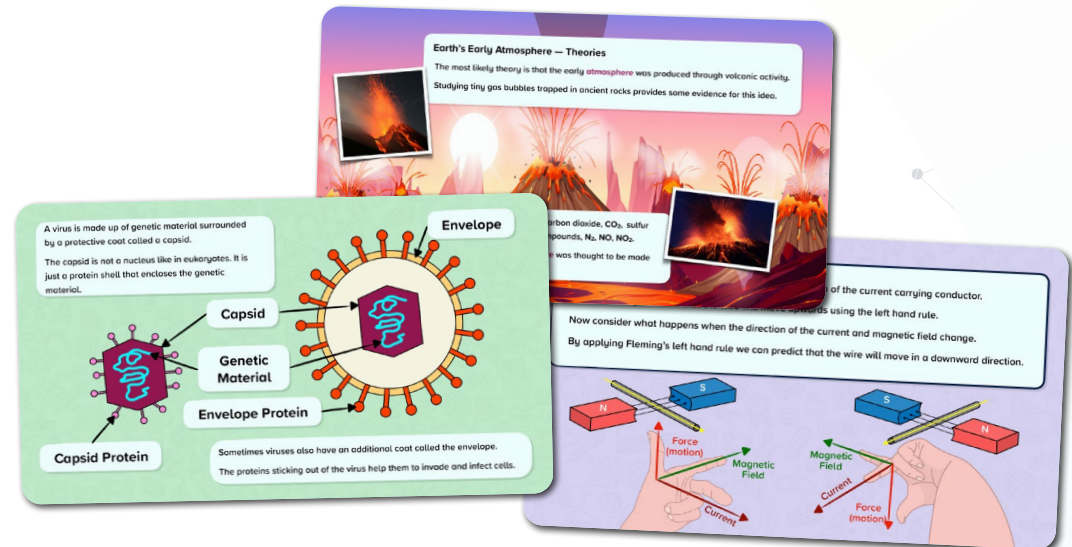
This helps develop your scientific literacy and oracy skills,
allowing you to write and speak like a scientist.

Download course content

Science Courses

Secondary - International Baccalaureate

These courses are mapped to the International Baccalaureate MYP scheme.



Science MYP: Biology



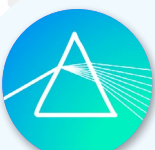
Science GCSE: Biology



Science MYP: Chemistry



Science GCSE: Chemistry



Science MYP: Physics



Science GCSE: Physics

[Download course content](#)

Science Courses

Working Scientifically

This course includes scientific skills and ideas that flow through all scientific disciplines. It is suitable for study alongside secondary science subjects.



Working Scientifically

Card 1: Bunsen burner parts and safety

Barrel or Chimney
Collar
Air Hole
Gas Inlet

It is important to know the names of the parts on the Bunsen burner. This will make it easier to safely operate it.

The barrel or chimney can get very hot during use, so the burner should be carried by the base to avoid burns.

The collar controls the size of the air hole, this is how the size & temperature of the flame can be regulated.

Card 2: Precision and Accuracy in Archery

Consider an archery player:

The arrows are considered to be **precise** if they are close together.

Arrows are considered to be **accurate** if they are near the centre of the bullseye.

Like the results in an experiment, can be **precise** without being **accurate**.

Not Accurate Not Precise
Not Accurate Not Precise
Accurate Not Precise
Accurate Precise

Card 3: Photosynthesis Investigation

Let's take a look at the classic investigation into the effect of light intensity on the rate of photosynthesis.

00:03:00

70 80 90 100 cm

Card 4: Neutralisation Experiment

Medium

Acid

Base

Salt + Water

Hazard: Using dilute hydrochloric acid in a neutralisation experiment.

Risk: **Medium** – The acid is mildly corrosive and could cause skin or eye irritation if spilled. The risk is higher if protective equipment is not used.

[Download course content](#)

Science Courses

Prepare for A-Level Science

These courses covers the key concepts and foundational knowledge to aid transition and preparation to study science at A-level.



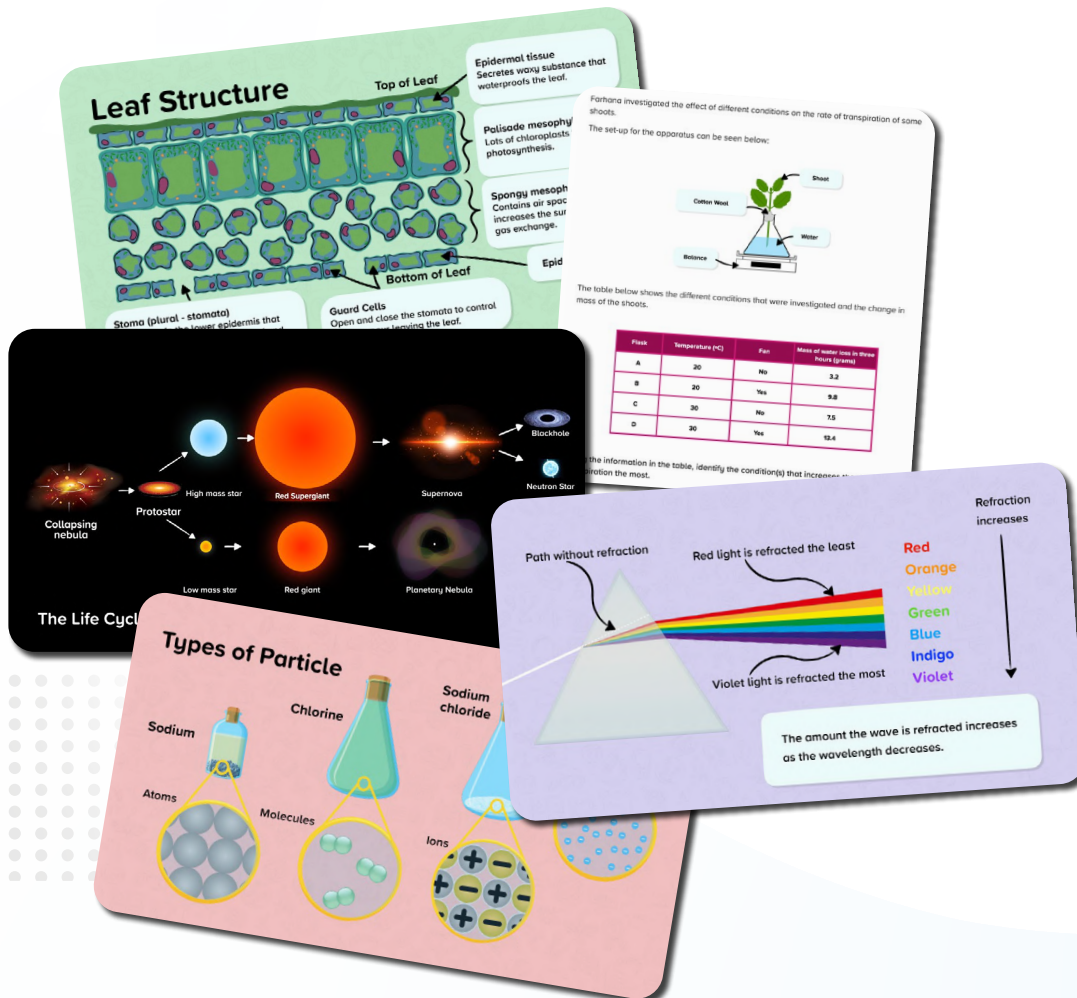
Prepare for A-Level: Biology



Prepare for A-Level: Chemistry



Prepare for A-Level: Physics



[Download course content](#)

Geography Courses

AQA

This course covers the huge variety of both physical and human geographical content. They also cover specific geographical skills, including fieldwork and cartographical skills.



Geography GCSE: AQA

Specification: 8035



[Download course content](#)

Geography Courses

Edexcel

These courses cover a huge variety of both physical and human geographical content. They also cover specific geographical skills, including fieldwork and cartographical skills.



Geography GCSE: Edexcel A

Specification: 1GA0

QAN: 601/8134/5



Geography GCSE: Edexcel B

Specification: 1GB0

QAN: 601/8135/7



[Download course content](#)

Geography Courses

Eduqas

These courses cover a huge variety of both physical and human geographical content. They also cover specific geographical skills, including fieldwork and cartographical skills.



Geography GCSE: Eduqas A

Specification: C111QS

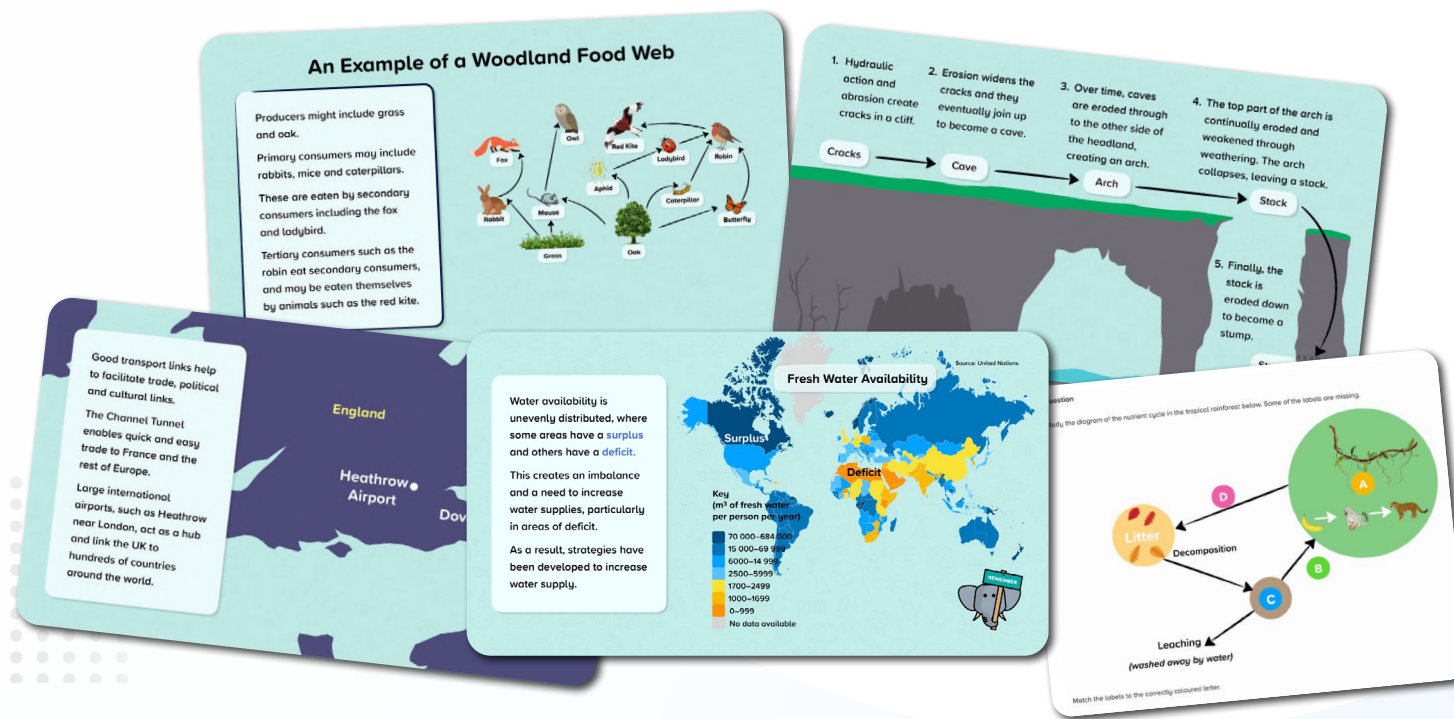
QAN: 601/8152/7



Geography GCSE: Eduqas B

Specification: C112QS

QAN: 601/8153/9



[Download course content](#)

Geography Courses

OCR

These courses cover a huge variety of both physical and human geographical content. They also cover specific geographical skills, including fieldwork and cartographical skills.



Geography GCSE: OCR A

Specification: J383

QAN: 601/8310/X



Geography GCSE: OCR B

Specification: J384

QAN: 601/8224/6

Human Factors

The growth of cities is occurring in most parts of the world. Cities need hard surfaces for roads and buildings which increases the amount of impermeable surfaces. This is increasing the risk of flooding.

Physical Factors: Processes

Chalk (more resistant) → Flamborough Head

Boulder Clay (less resistant)

North Sea

Hull

Spurn Head

Silt

The boulder clay along this coastline is also prone to slumping. The clay becomes saturated in heavy rain when water enters cracks. This added weight makes it slump.

Like the yolk of an egg, the Earth has the core at the centre. This is the hottest part of the Earth.

The core can be divided into the inner and outer core.

The inner and outer core are both made of iron and nickel, but the inner core is a solid layer and the outer core is liquid.

The mantle that surrounds the core is made of liquid rock called magma.

The crust is the outer layer of the Earth and is the thinnest layer.

Scientific Research

When preserved as unpolluted and unspoiled, cold environments are outdoor laboratories for scientific research on important global issues such as climate change. Access to undisturbed plant and animal communities for scientific research is crucial.

Many people argue that we should always have some places in the world completely natural so we can understand and remember how much developed places have changed over time.

The table below shows the amount of carbon dioxide produced per kilogram of produce. Study the table.

Food	Origin & Transport	Amount of CO ₂ per kg of produce
Apples	UK: Road	0.3
Apples	New Zealand: Ship	0.6
Lettuce	UK: Road	0.6
Lettuce	Spain: Road	1.8
Asparagus	UK: Road	1.1
Asparagus	Peru: Flight	18.5

How much CO₂ is produced per kg of lettuce when imported from Spain?

Type your answer in the box below, e.g. 1.2

Geography Courses

IGCSE

This course is suitable for learners working towards an Essential Skills qualification in Wales or Northern Ireland.



Geography IGCSE: Cambridge



Geography IGCSE: Edexcel



Geography IGCSE: Oxford AQA

[Download course content](#)

Physical Education Courses

GCSE

These courses have been created by our team of experienced secondary Physical Education teachers. Each set of courses are separated into topic strands with a wide range of practical examples, data analysis and topic nuggets available throughout.



Physical Education GCSE: Edexcel

Specification: 1PE0



Physical Education GCSE: WJEC

Specification: 3550QS



Physical Education GCSE: AQA

Specification: 8582



Physical Education GCSE: WJEC (Short Course)

Specification: 3555QT



Physical Education GCSE: OCR

Specification: J587



Physical Education GCSE: Cambridge

Specification: 0413

[Download course content](#)

Physical Education Courses

Vocational

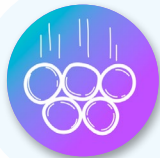
These courses have been created by our team of experienced secondary Physical Education teachers in line with the Sport BTEC and Sport Science schemes of learning.



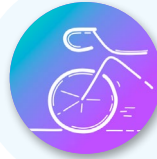
Sport BTEC Level 2: First Award



Sport BTEC Level 2: First Diploma



Sport BTEC Level 2: Tech Award



Sport BTEC Level 1: Introductory



Sport BTEC Level 2: First Certificate



Sport BTEC Level 2: First Extended Certificate



Sport Science Level 2: Cambridge National


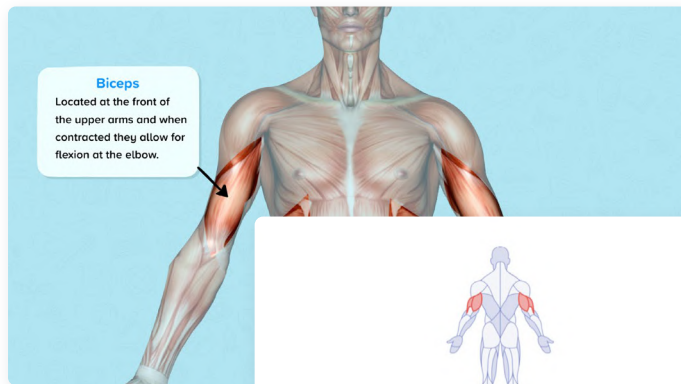
Specification: J828

[Download course content](#)

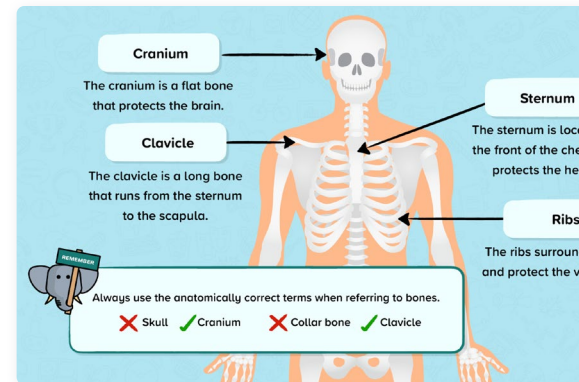
PE Special Feature!

Recall and Review Nuggets

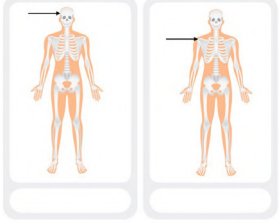
Testing specific A01 subject knowledge quickly identifying misconceptions and gaps in learning to the teacher.



What is the name of the muscles identified in the picture?

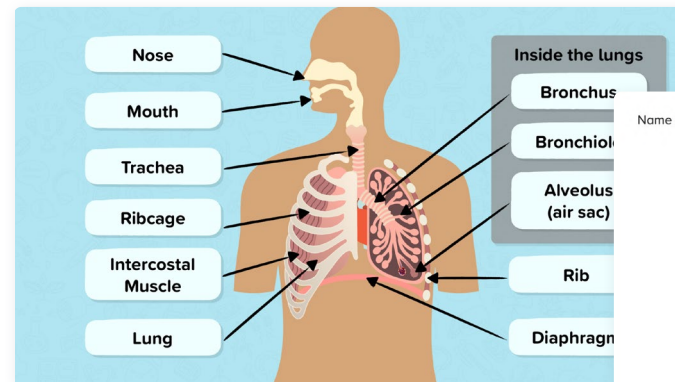


Label the correct bone identified by the arrow.

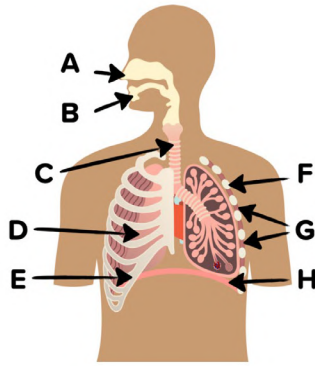


Possible Answers

Sternum	Cranium	Clavicle
Vertebrae	Scapula	



Name the part of the respiratory system identified by the label B.



Digital Skills Courses

Secondary

This course explores the key skills that learners will need for life and work, covering using devices and handling information, creating and editing, communicating, transacting and being safe and responsible online.



Secondary Digital Skills

Name the devices.

Smart Thermostat

Possible Answers

Laptop

Tablet

VR

I DON'T KNOW

Identifying Appropriate Websites

Some websites will be more relevant to your search than others.

It is important to identify which websites are appropriate for your search and which ones have an **agenda**.

Websites with an **agenda** might be trying to sell you something or may not be relevant to your search at all.

Google Home improvements

All Images Videos Maps

This worksheet is divided into **rows**, **columns** and **individual cells**. Rows are labelled using letters. Columns are labelled using numbers.

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							
8							

Spending a long time on a device can cause physical problems such as pain, discomfort and injury.

Common problems include:

- Eyestrain
- Headaches
- Muscle pain
- Repetitive strain injury

Which of the following could a spreadsheet be used for?

☐ creating a slideshow presentation for work

☐ scheduling an email

☒ carrying out data calculations using formulae

☐ writing a newspaper article

I DON'T KNOW

SUBMIT ANSWER

[Download course content](#)

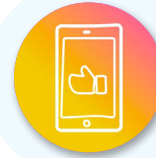
Digital Skills Courses

EDSQ Essential Digital Skills

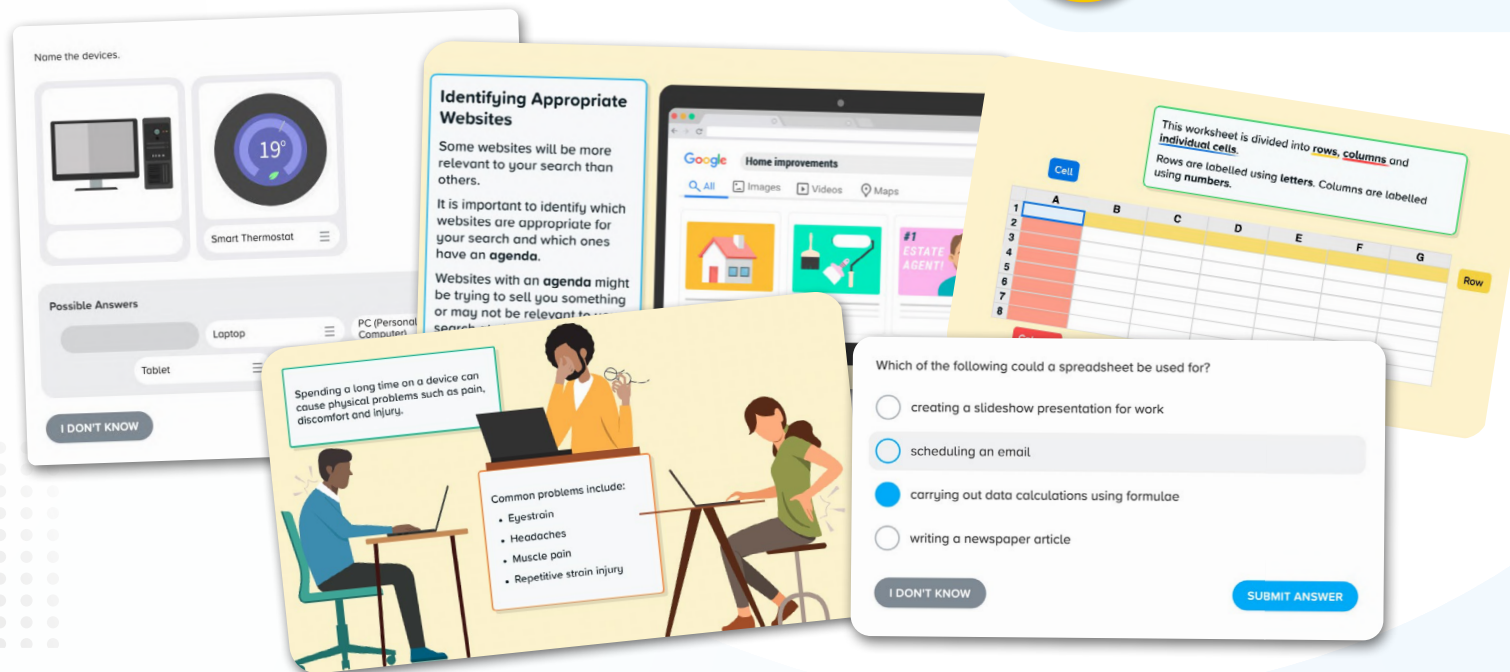
These courses explore the key skills that learners will need for life and work, covering using devices and handling information, creating and editing, communicating, transacting and being safe and responsible online.



Essential Digital Skills: EDSQ (Entry 3)



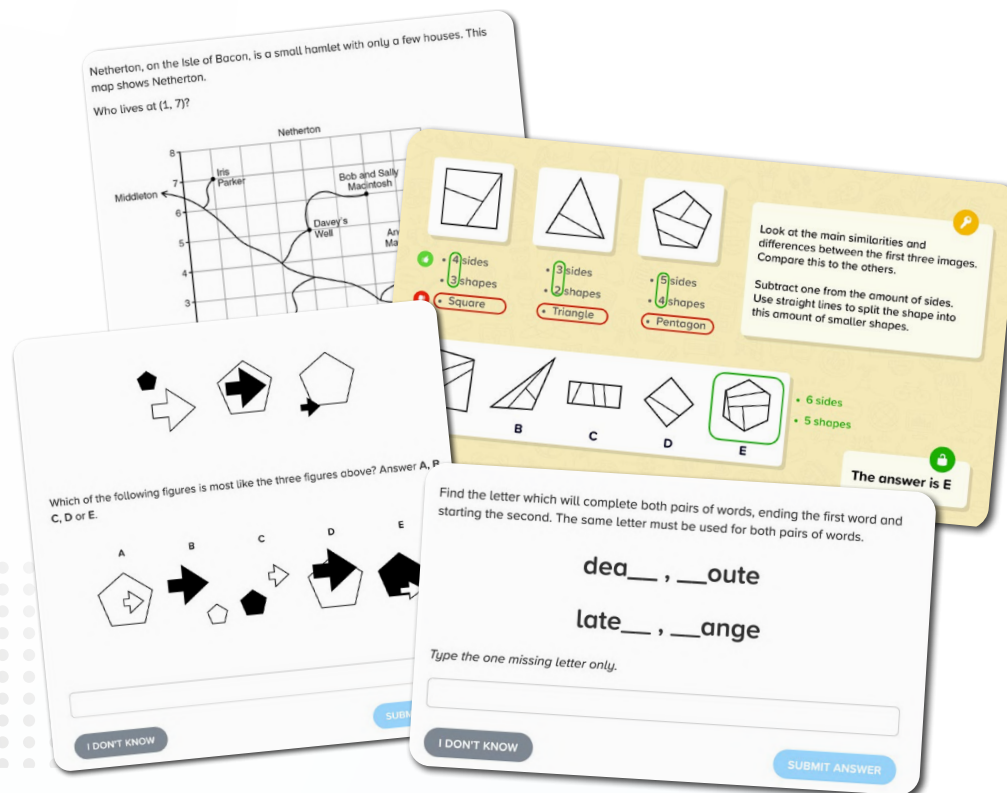
Essential Digital Skills EDSQ (Level 1)



[Download course content](#)

11+ Courses

Our primary 11+ offering includes English, maths, verbal and non-verbal reasoning courses. These courses help students to prepare for their senior school entrance tests, including those produced by GL, CEM, and ISEB.



11+ Verbal Reasoning



11+ Non-Verbal Reasoning



11+ English: ISEB



11+ English: GL



11+ Mathematics

[Download course content](#)

Climate Awareness

This course is a collection of learning nuggets to provide awareness and understanding of climate change, while also exploring how we can respond and adapt.



Climate Awareness

Environmental Impacts

The impacts on the surrounding landscape

The environmental impacts of the weather event include:

- Up to 50 cm of snow on high ground in places such as Dartmoor and Exmoor.
- Some rural areas had temperatures as low as -12 °C.
- Gusts of 60 to 70 mph in parts of northern England and Wales.
- The strong winds caused snow drifts as high as 7 metres.

Gusts of 60 to 70 mph

Snow Drifts of 7 m

50 cm Snow

Temperatures of -12 °C

Question

The graphs below show how the global use of copper and world population has changed since 1900.

Copper Production

Year	Annual production of copper (million tonnes)
1900	0.1
1910	0.2
1920	0.3
1930	0.5
1940	0.8
1950	1.2
1960	2.0
1970	3.5
1980	5.5
1990	8.0
2000	10.0

World Population

Year	World population (billions)
1900	1.5
1910	1.6
1920	1.7
1930	1.8
1940	2.0
1950	2.3
1960	2.8
1970	3.5
1980	4.5
1990	5.5
2000	6.0

Match the sentences below to explain how the trends in the two graphs are related.

Engineering

Sea Wall

Rock Armour

Coastal defences such as hard engineering with sea walls and rock armour could be used to prevent flooding and reduce the energy in waves.

This is more likely in places where there are towns and cities at risk or vital infrastructure.

Wildlife, such as Adelie penguins on the Antarctic Peninsula and polar bears in the Arctic, could disappear as the polar ice melts.

In the UK we use about 1.8 billion steel cans every year but only 30% of these are recycled. Recycling reduces waste. Producing steel from recycled cans requires only 25% of the energy needed to make steel from iron ore.

Give three environmental benefits of recycling a higher proportion of used steel cans. Choose the option below that contains the three points you would include to correctly answer this question.

☐ Less ore is used, less fuel is used, less pollution is made.

☐ You need to name the pollution that will be less.

☒ Less ore is used, less fuel is used, less carbon dioxide is made.

☐ Less ore is used, less fuel is used, less waste.

☐ The question says less waste, so you need to say what effect less waste will have on the environment.

☐ Less ore is used, less fuel is used, less of an effect on the ozone layer.

☐ Carbon dioxide is the main pollutant and this does not affect the ozone layer.

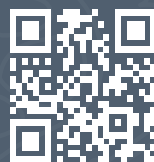
Sea wall

Flood barrier

Mangrove forest planting

Download course content

Questions?
Email support@century.tech



CENTURY