

Curriculum Guide Secondary

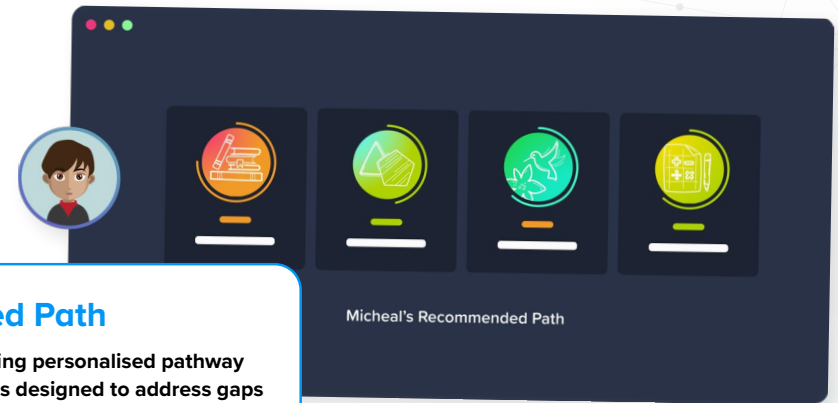
About CENTURY

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

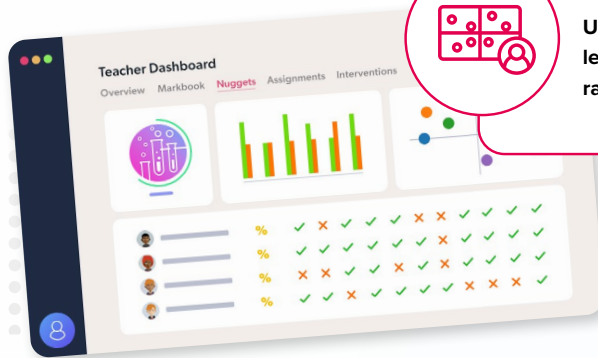
Teachers can view data in real time, to help quickly identify which learners require additional support or further stretch.

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

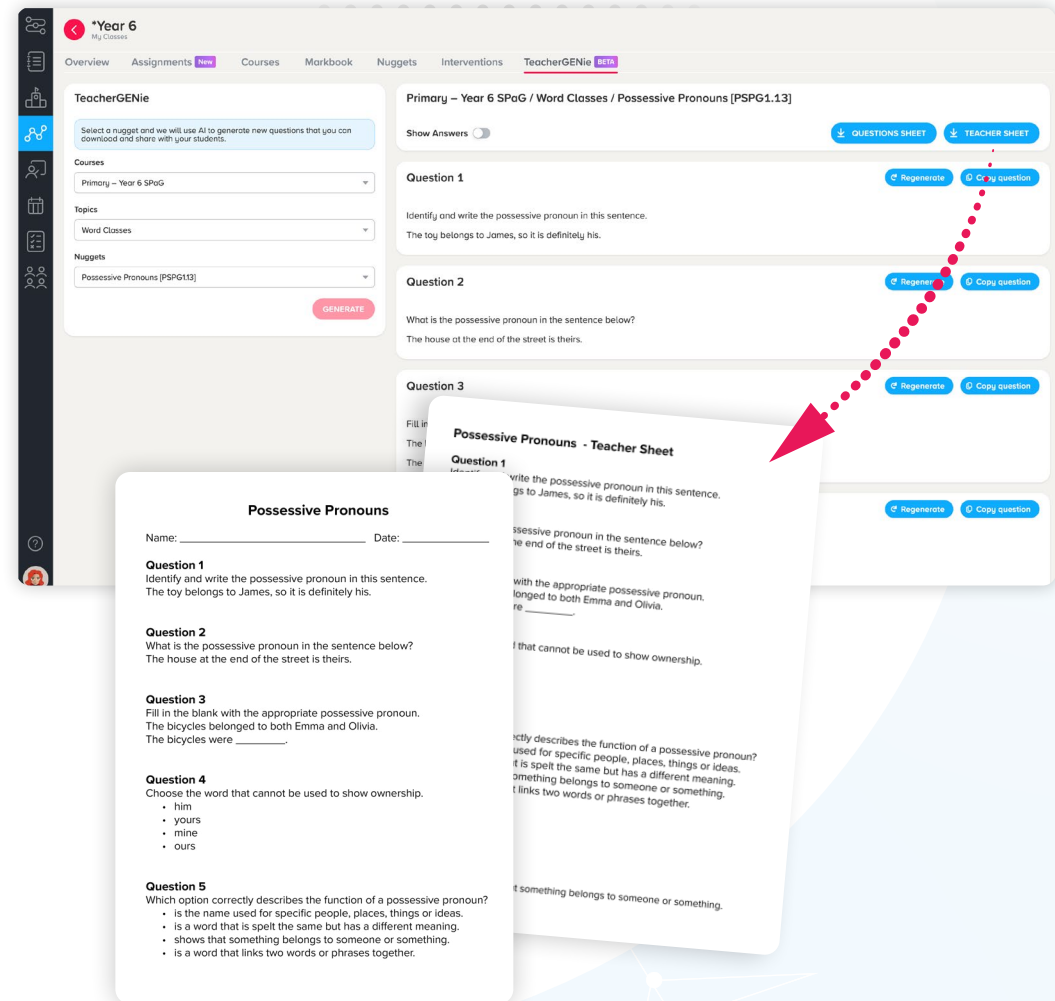
CENTURY has always led the way in embedding AI into education through our teaching and learning platform. TeacherGENie™ goes beyond using generative AI alone, as we know the true value of these tools can only be realised when they are combined with quality, teacher-made resources.

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

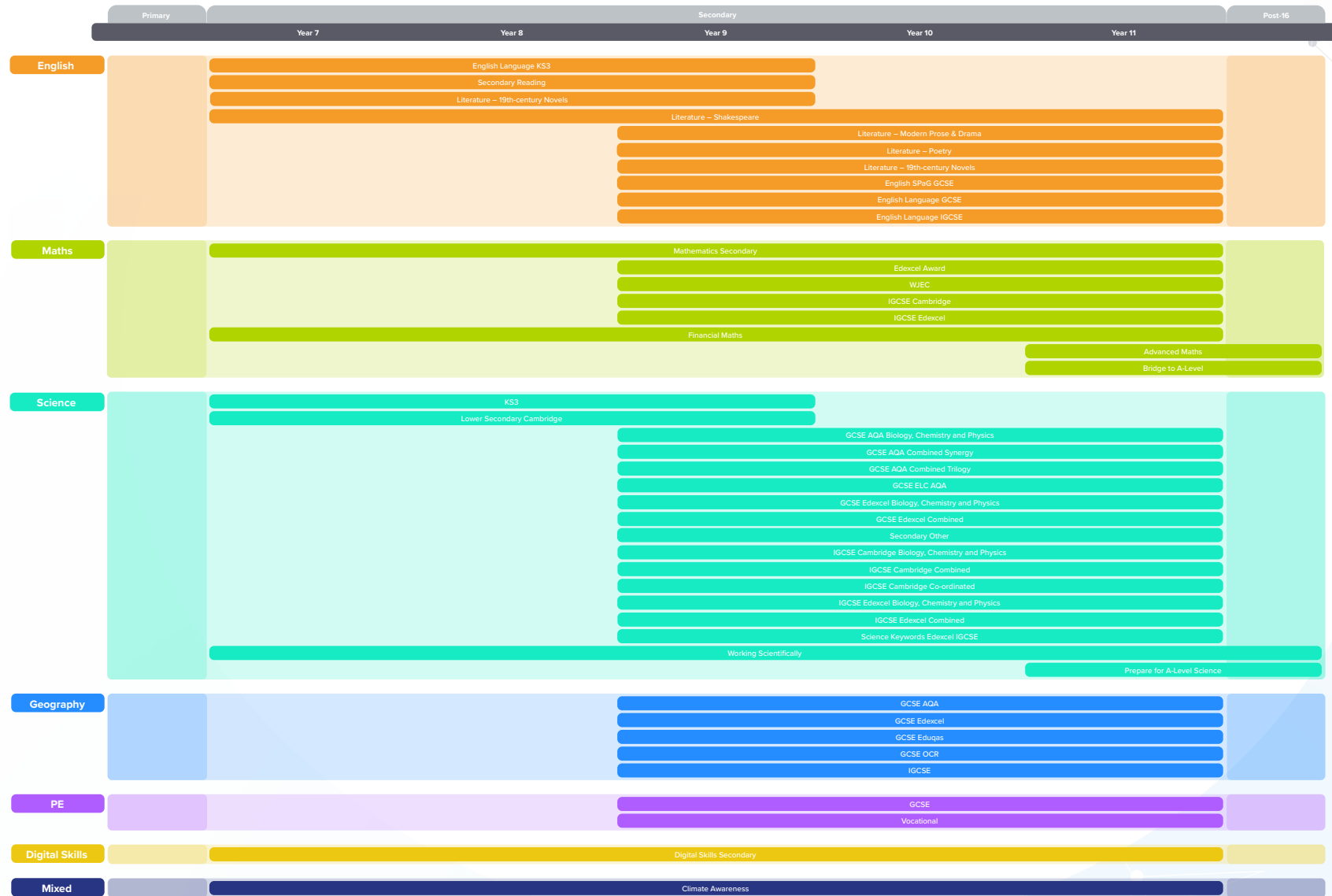
- ✓ in class as a starter to assess prior knowledge,
- ✓ as a plenary to check learning,
- ✓ as part of home learning,
- ✓ as a great revision tool in the run up to exams.

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



English Courses

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

The collage features several educational materials:

- Structuring your writing:** A worksheet with bullet points: "Use a range of sentence structures and sentence lengths." and "Use paragraphs to organise your writing." It includes a sample letter to "Dear Sir/ Madam," about applying for a position at "The Cafe on Saturdays," with words like "Firstly," "Secondly," and "Finally" circled.
- Comparatives and Superlatives:** A worksheet explaining that comparatives are used to compare two things and superlatives are used to compare one thing with everything else in a group. It includes examples: "Jane is taller than John," "She is the best sister!" and "He is more intelligent than they first thought." It also includes a "Did you know?" section about adjective forms and a "CLEVER - adjective (c)" section.
- The four seasons can symbolise different stages of life:** A worksheet with four sections: "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), and "Winter" (represents death: all the trees are bare and all plant life is, essentially, dead).
- Quiz Interface:** A pop-up window titled "Choose the simile below." with four options: "The night sky was as black as coal," "The sky was sunny and clear," "There was a blanket of fog in the sky." (marked with a red X), and "It was such a sunny day. In fact, it was the sunniest day of the summer so far." Below the options, it says "Incorrect" and "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!" At the bottom, it says "correct answer" and has a "NEXT QUESTION" button.

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.

A

B

C

D



Reading: Fiction & Nonfiction



Reading: Gothic Fiction



Reading: 19th Century Fiction



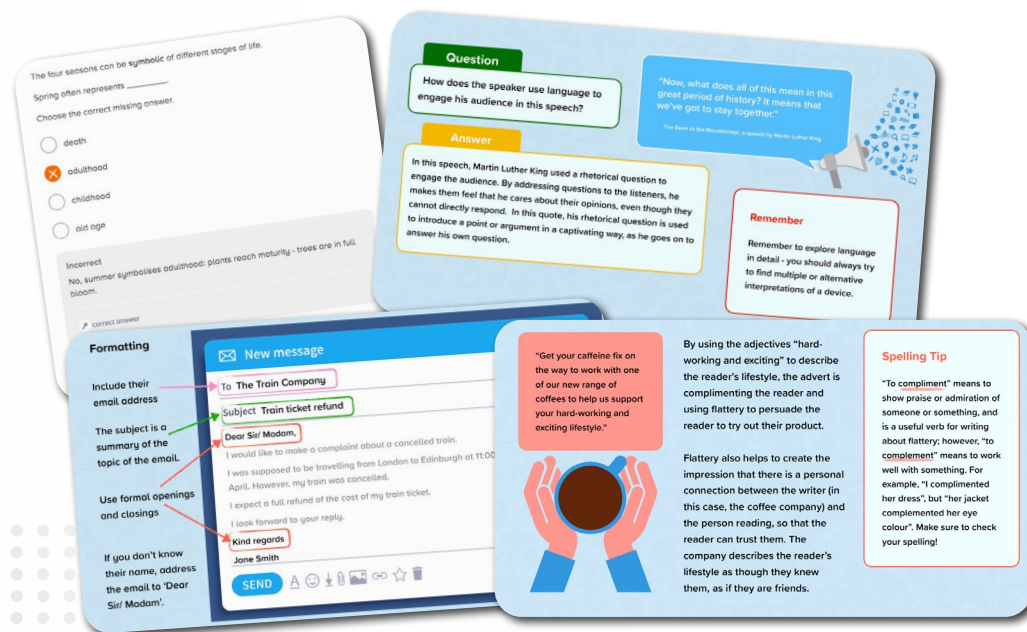
Reading: Children's Classics

[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



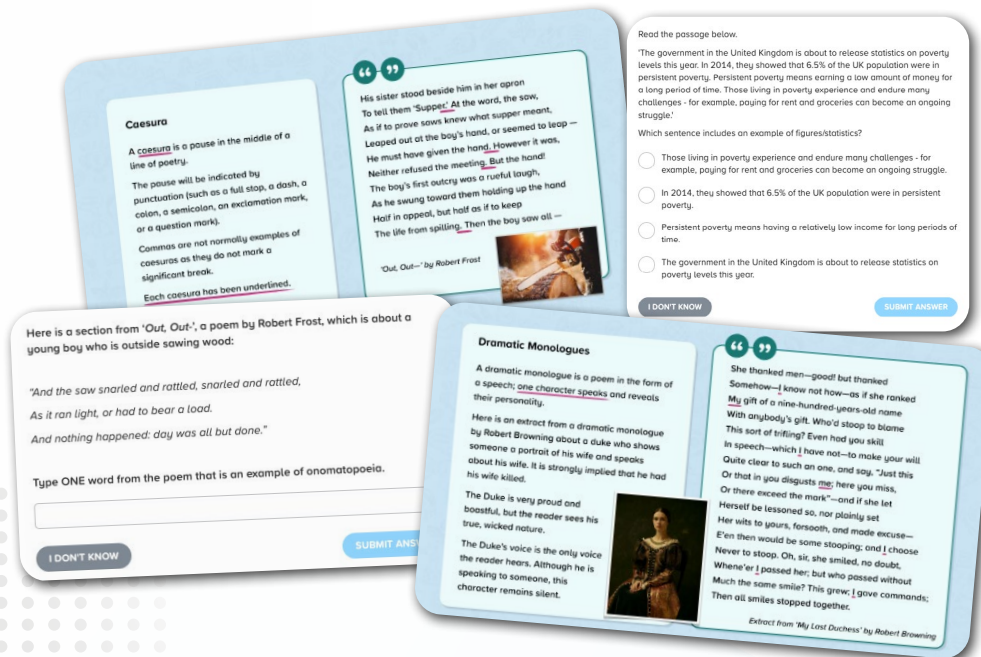
English Language IGCSE: Edexcel B

Specification: 4EB1



English Second Language IGCSE: Cambridge

Specification: 0510/0511



[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](#)

Secondary Literature - Modern Prose & Drama

When Mickey and Edward meet, what does Edward tell Mickey?

☐ a shoe

☐ a piece of paper

☐ a sweet

The boys continue to talk. Their different upbringing and education are immediately clear. Mickey shares swear words with Edward, who says he will "look it up in the dictionary" when he gets home.

Mickey tells Edward that Sammy suffered a head injury when he was a baby when he fell out of a window.

Mickey and Edward quickly become friends.

They realise they share a birthday. Mickey tells Edward this means they can be "blood brothers", so the boys each make a cut in their hand and then clasp their hands together.

Language

The differences in Mickey and Edward's language highlight the differences in their class. Mickey uses swear words like "pissed off", whereas Edward uses typically middle class words, such as "smashing".

In chapter two, the reader first meets Napoleon. What are our first impressions of this character?

☐ He is a quick, smart character who is always thinking up new ideas.

☒ He is quite an aggressive, intimidating bully.

Analysis

By the end of the novel, there is no equality left on the farm.

The pigs have assumed complete control. In the final commandment, we see how the pigs use language to trick the other animals into thinking that there is still equality on the farm. However, it is clear the pigs hold all the power.

The new commandment shows that any dreams of equality have disappeared.

“ ”

All animals are equal but some animals are more equal than others

Chapter ten

...the most honest character who can twist the truth.

...an impressive, likeable character.

...described as "fierce-looking" with "a reputation for getting his own way".

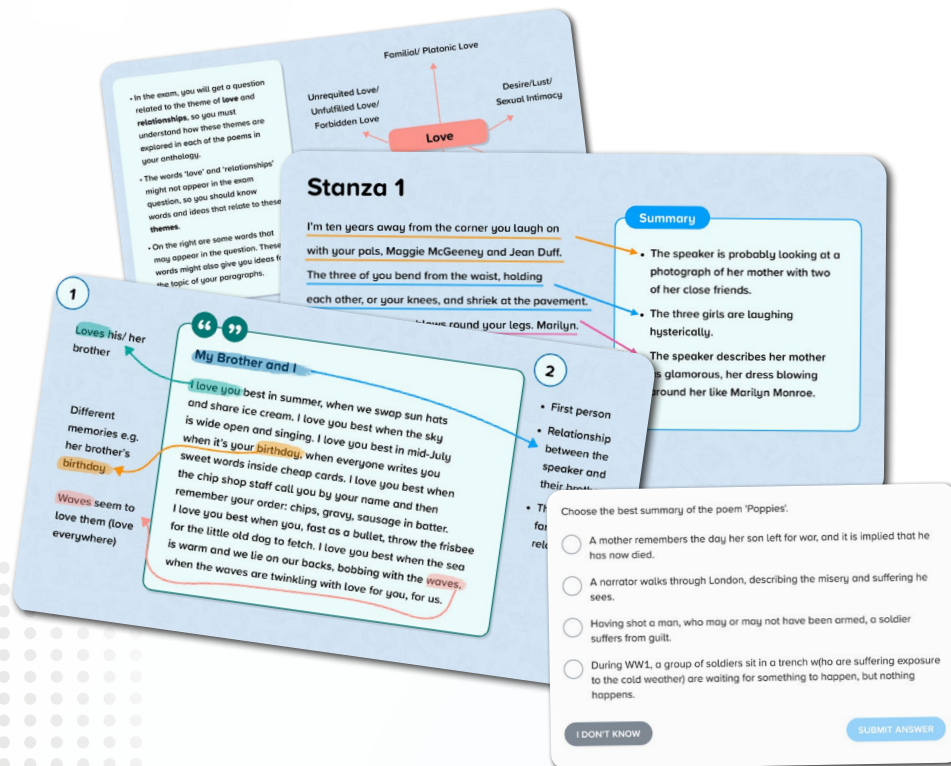
NEXT QUESTION



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

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.

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

Secondary

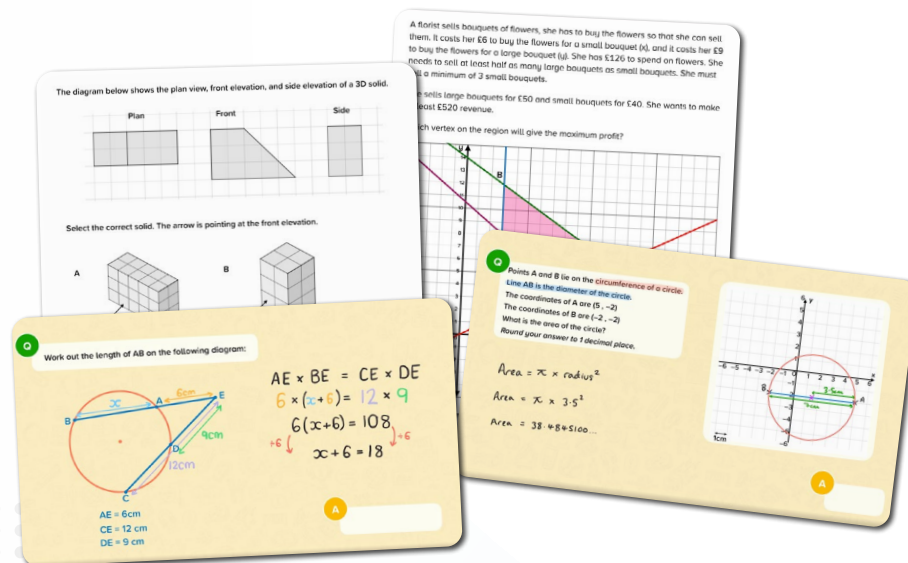
These courses have been created by our team of experienced secondary mathematics teachers.

Edexcel Specification: 1MA1

AQA Specification: 8300

OCR Specification: J560

Eduqas Specification: C300P



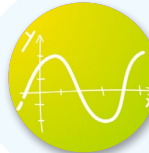
Mathematics Secondary (F)



Mathematics Secondary (H)



Mathematics Secondary (F+)



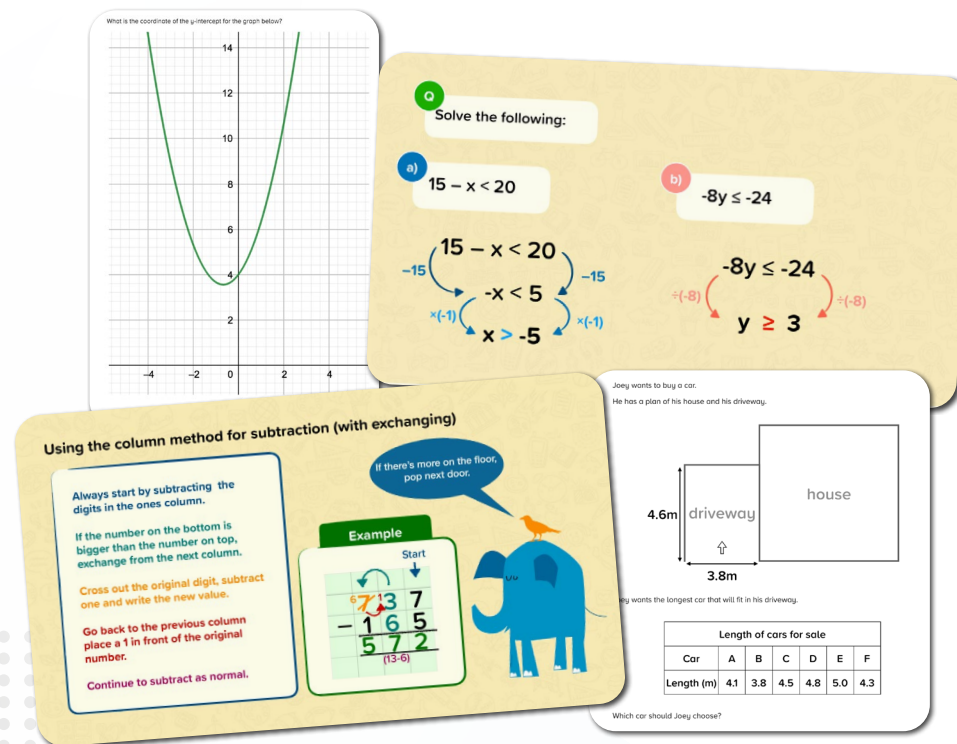
Bridge to A-Level Mathematics

[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



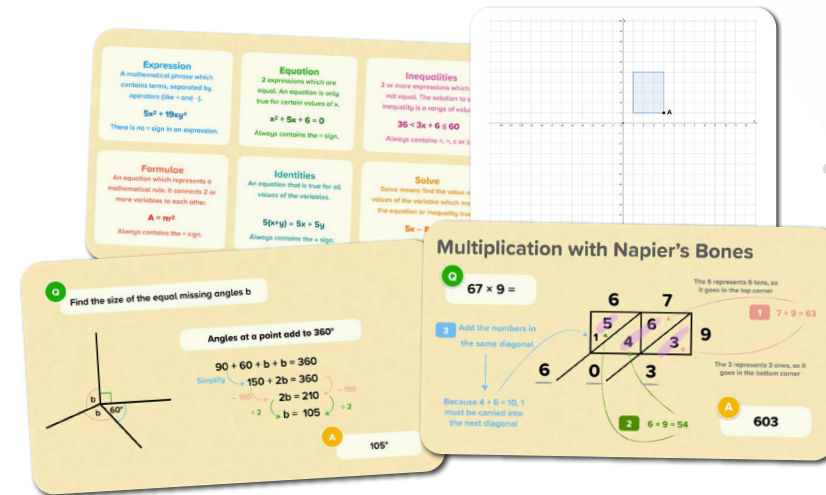
Algebra Level 3: Edexcel Award

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 1: WJEC (H)

Specification: 3320U1
QAN: C00/4968/0



Mathematics GCSE Unit 2: WJEC (F)

Specification: 3320UB
QAN: C00/4968/0



Mathematics GCSE Unit 2: WJEC (H)

Specification: 3320U2
QAN: C00/4968/0



Mathematics GCSE Unit 3: WJEC (F)

Specification: 3320UC
QAN: C00/4968/0



Mathematics GCSE Unit 3: WJEC (H)

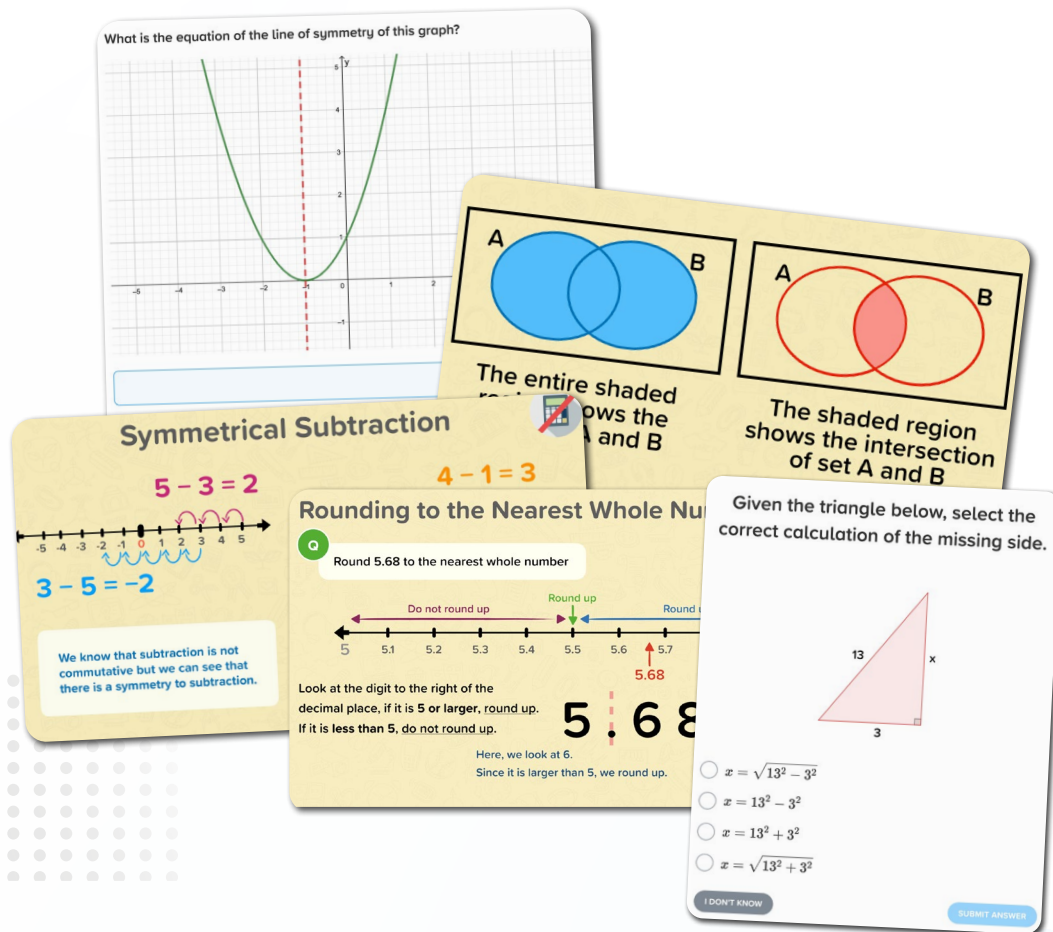
Specification: 3320U3
QAN: C00/4968/0

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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)

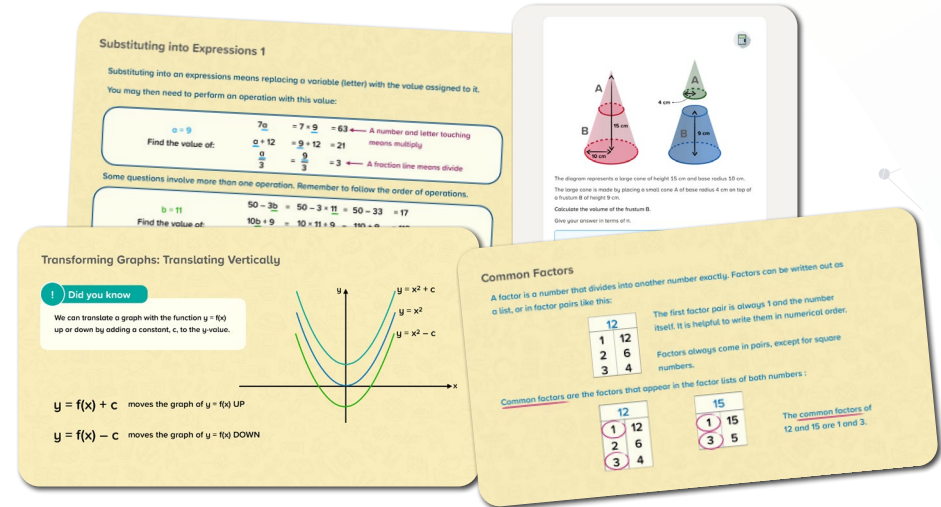
Specification: 0607

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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)

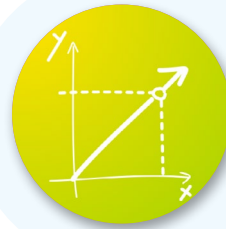
Specification: 4XMAH

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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
Somerby
SB3 8PY
Account No. →
Bill Ref. EB3

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%

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Mathematics Courses

Secondary White Rose

This mapping document shows how our content aligns with the White Rose scheme of learning.

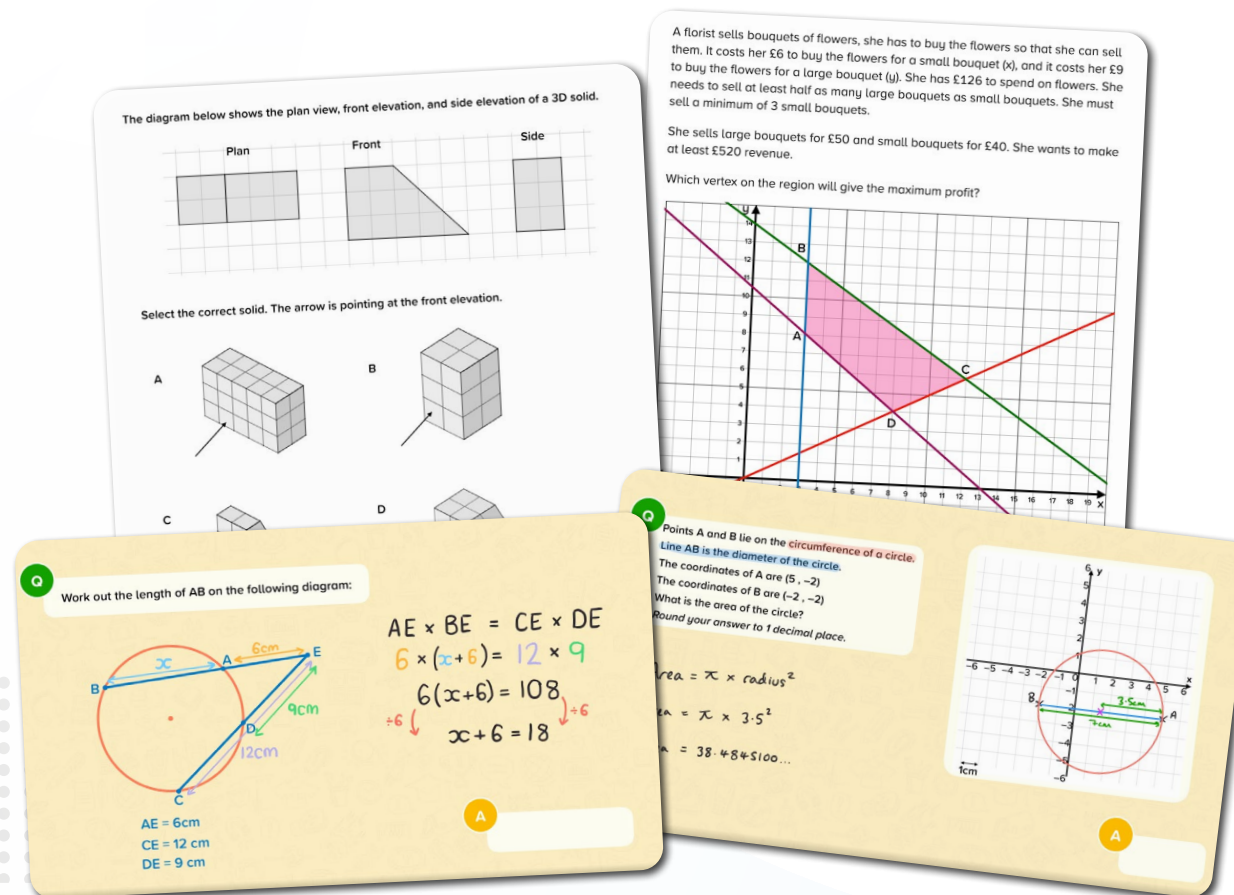
White Rose Mathematics - Year 7

White Rose Mathematics - Year 8

White Rose Mathematics - Year 9

White Rose Mathematics - Year 10

White Rose Mathematics - Year 11

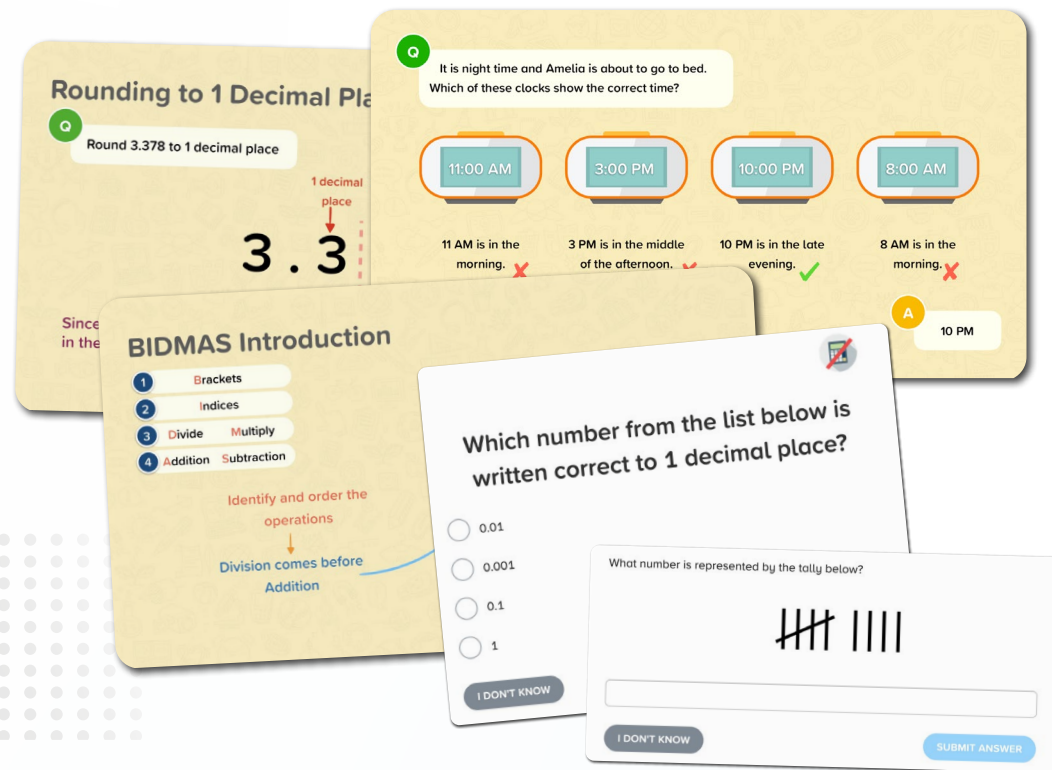


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Mathematics Courses

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)**



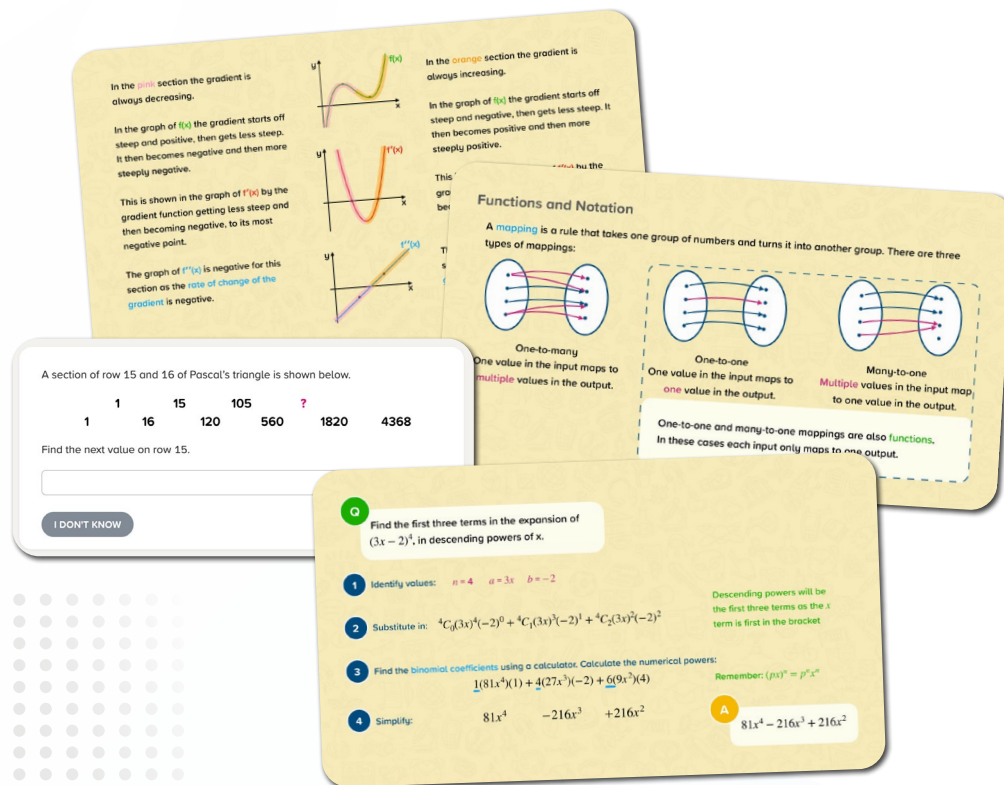
**Mathematics Functional Skills
(Level 2)**

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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

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Science Courses

KS3

This map show how our KS3 Biology, Chemistry and Physics courses are aligned to the KS3 national curriculum. You can edit each of these courses to match your KS3 schemes of work.



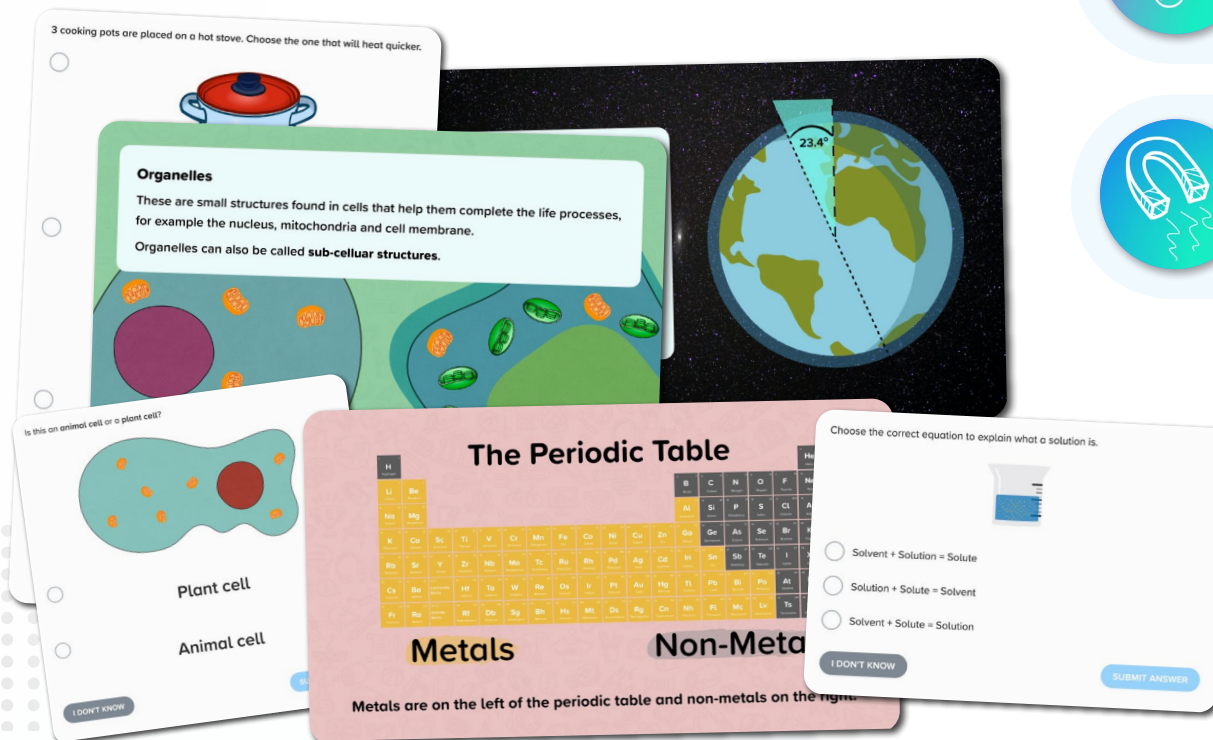
Science – KS3 Biology



Science – KS3 Chemistry



Science – KS3 Physics

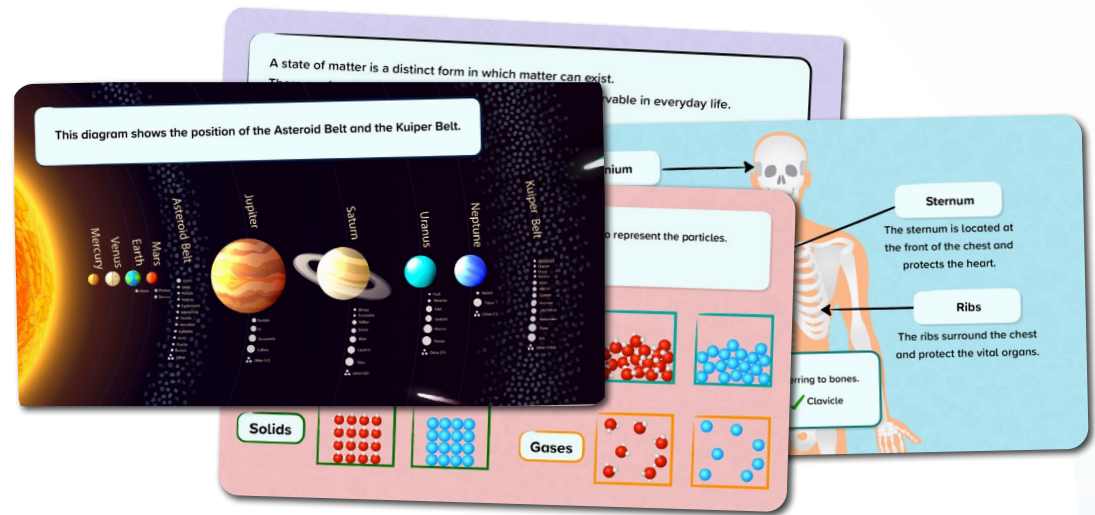


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Science Courses

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

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Science Courses

GCSE AQA Biology

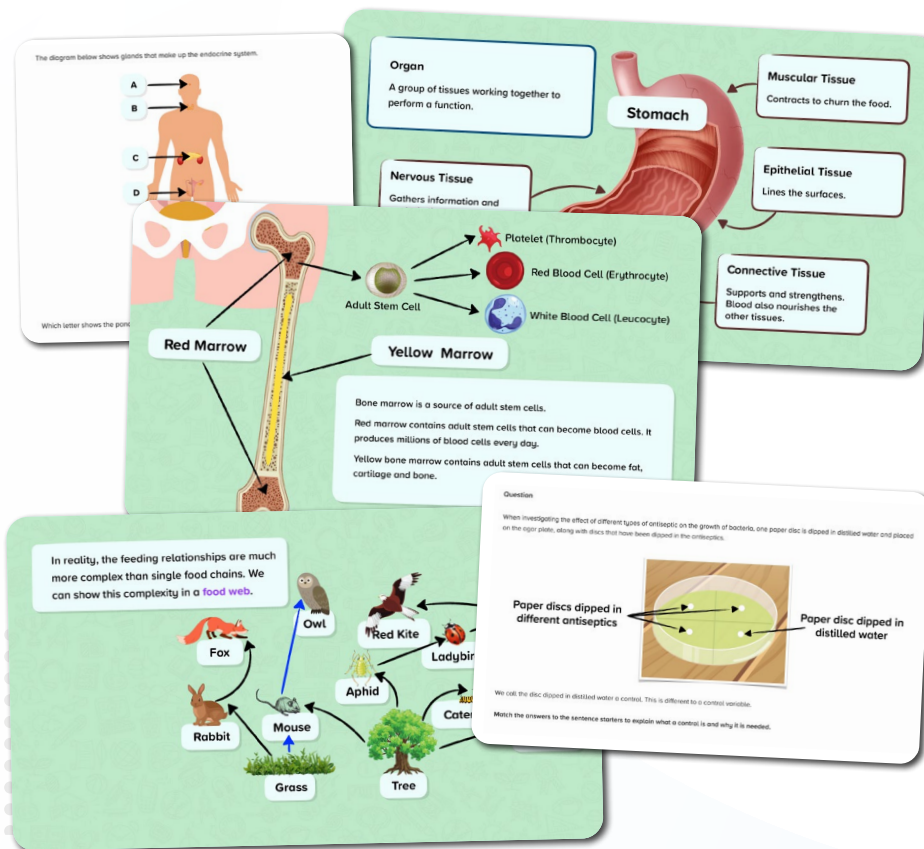
These courses were created by our experienced team of science teachers to support learners studying the GCSE AQA Biology scheme of learning.



Biology GCSE: AQA (F)



Biology GCSE: AQA (H)

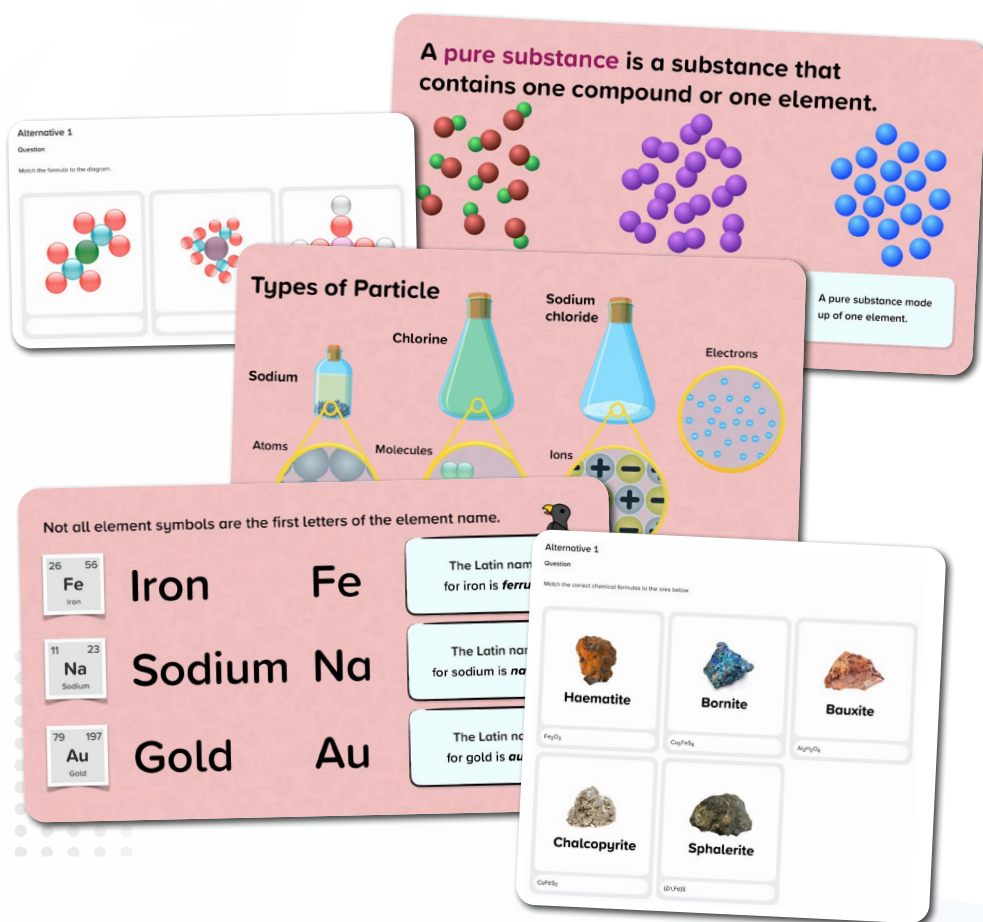


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Science Courses

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.



Chemistry GCSE: AQA (F)



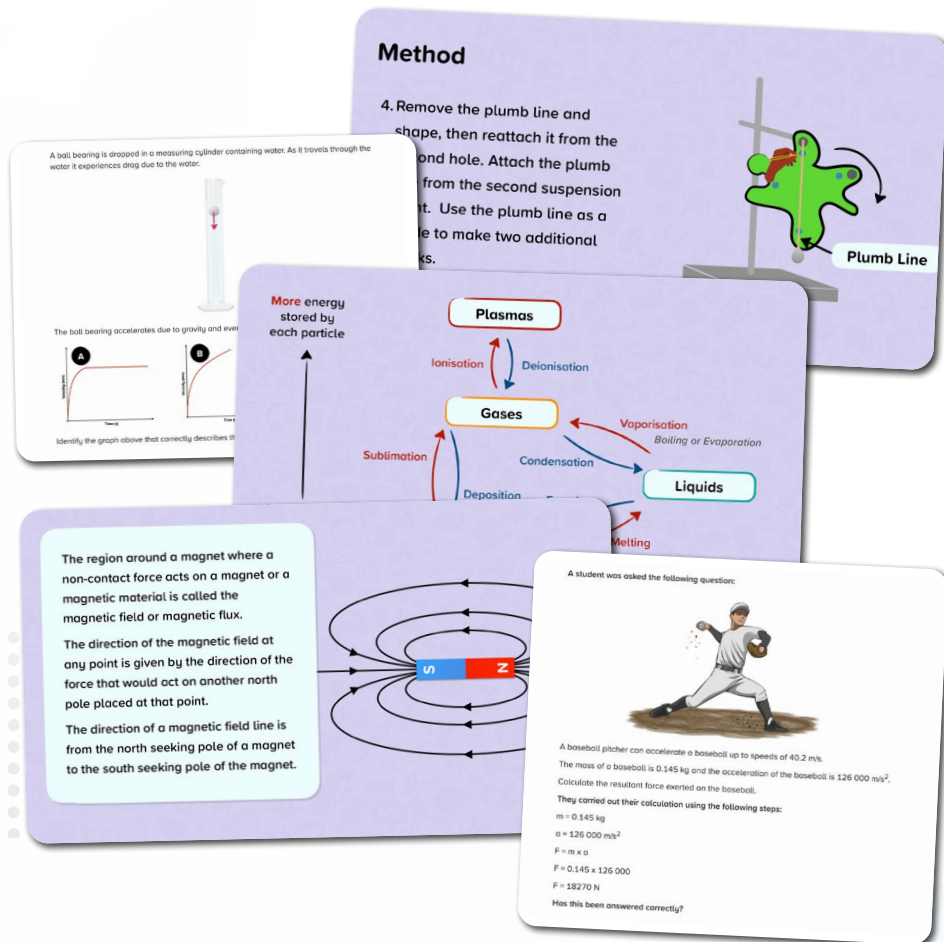
Chemistry GCSE: AQA (H)

[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)



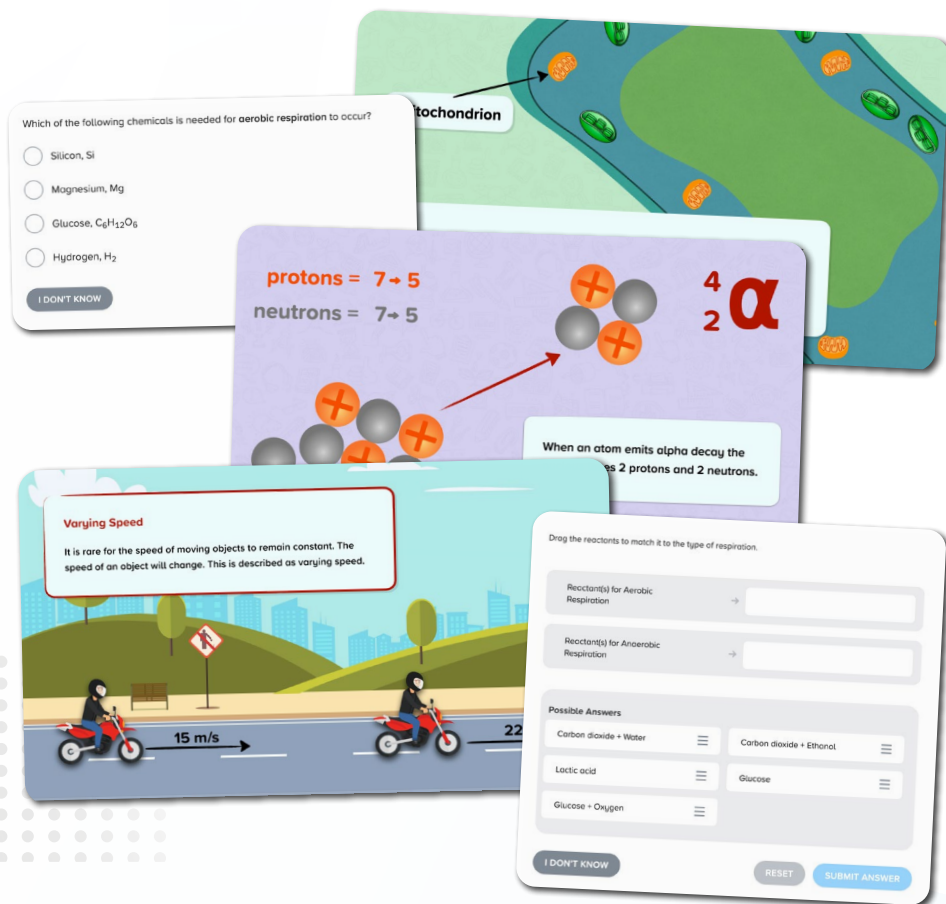
Science Physics GCSE: AQA (H)

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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

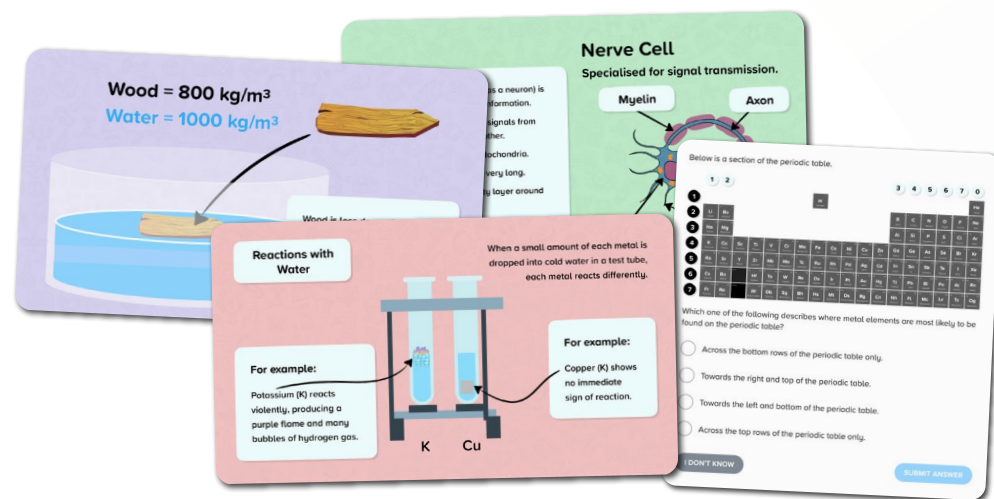
Specification: 8465

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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.



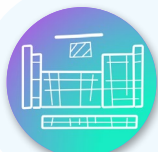
Combined Science GCSE: AQA Trilogy (F) – Biology

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

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Science Courses

Science Courses - ELC

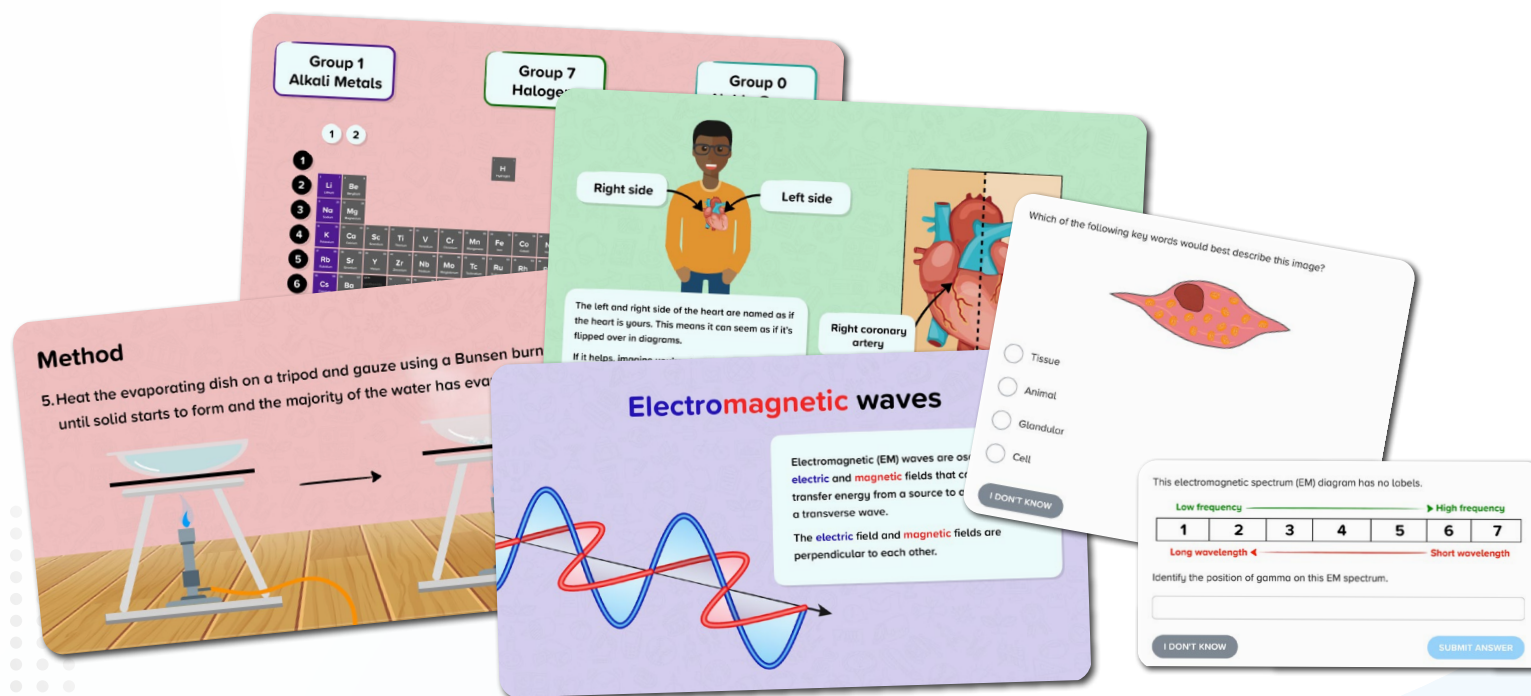
This course is mapped to AQA ELC Science, and is designed for students studying both ELC and GCSE.

AQA: 5960

QAN: 601/7522/9ng



Science ELC+ (Double Award): AQA



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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.



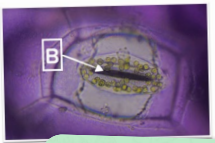
Biology GCSE: Edexcel (F)



Biology GCSE: Edexcel (H)

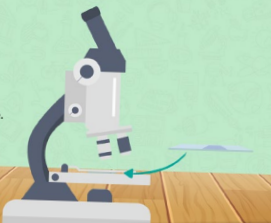
Study the diagram below.

Identify the structure labelled B.

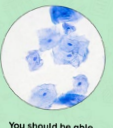


Method

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



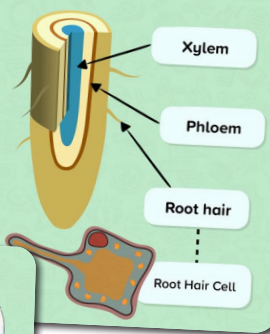
You should be able to see something like this!



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.



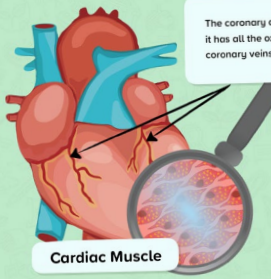
Xylem

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).

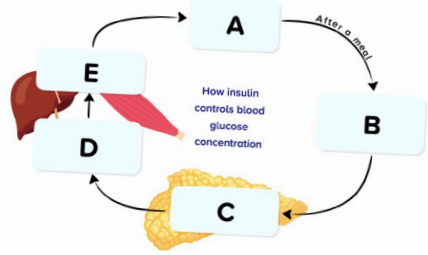
The contractions are automatic; you cannot control this movement.

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

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

Percentage (%) = 75% (2 s.f.)

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

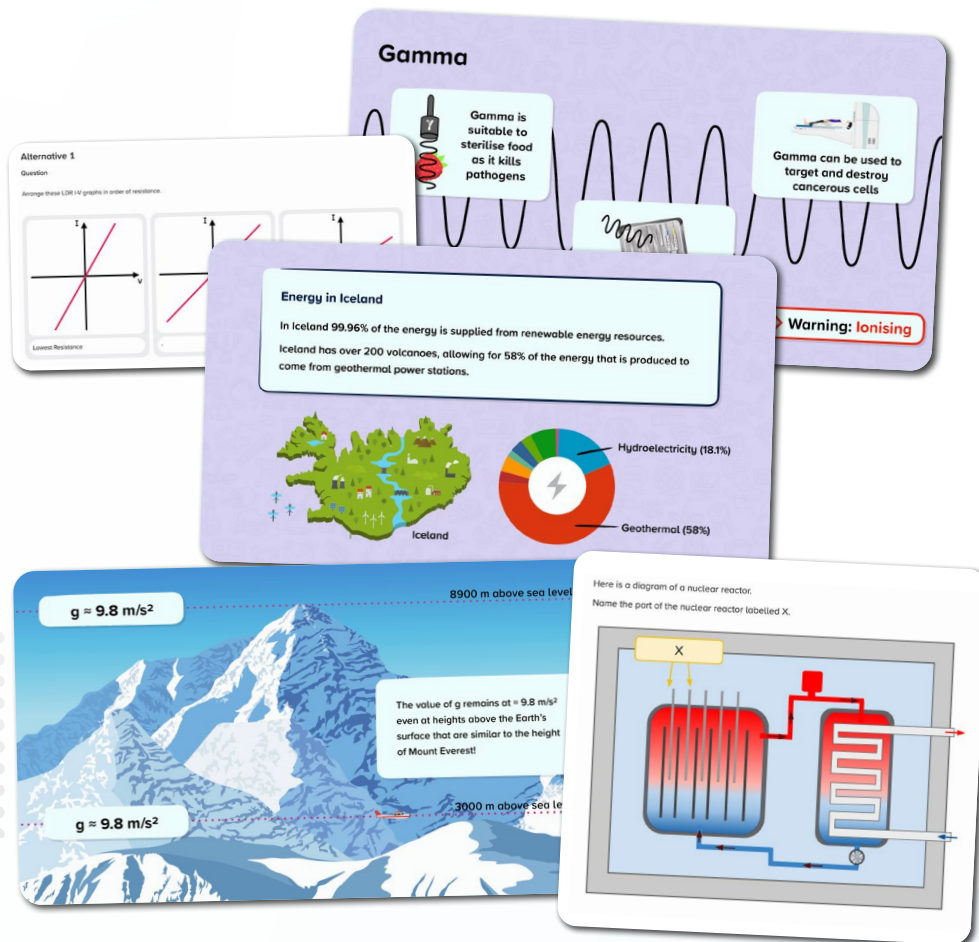
Type your answer as a number, without a unit.

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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)



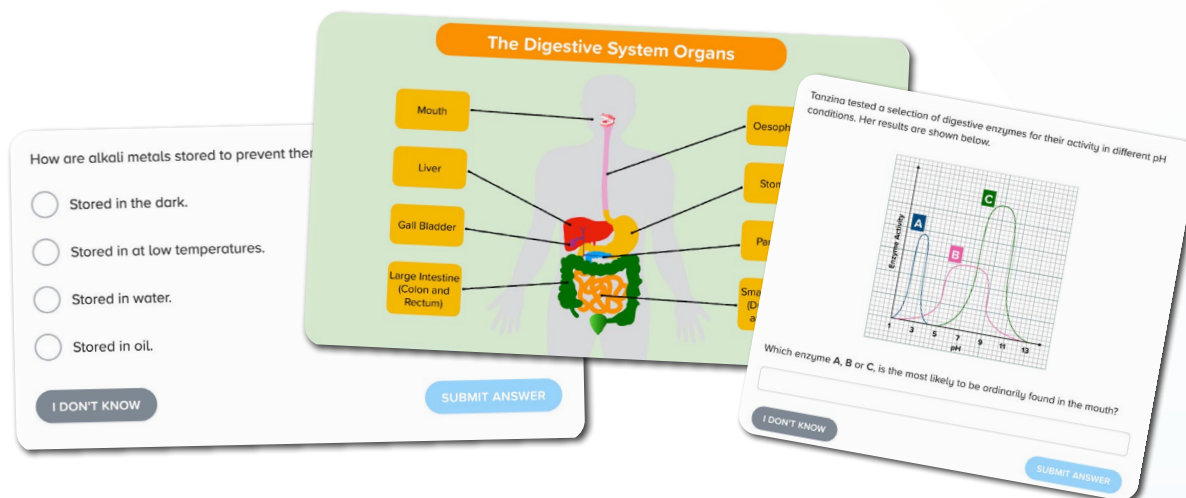
Physics GCSE: Edexcel (H)

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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)**



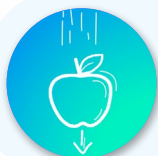
**Combined Science GCSE:
Edexcel – Biology (H)**



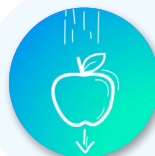
**Combined Science GCSE:
Edexcel – Chemistry (F)**



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



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



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

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Science Courses

Secondary Other

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



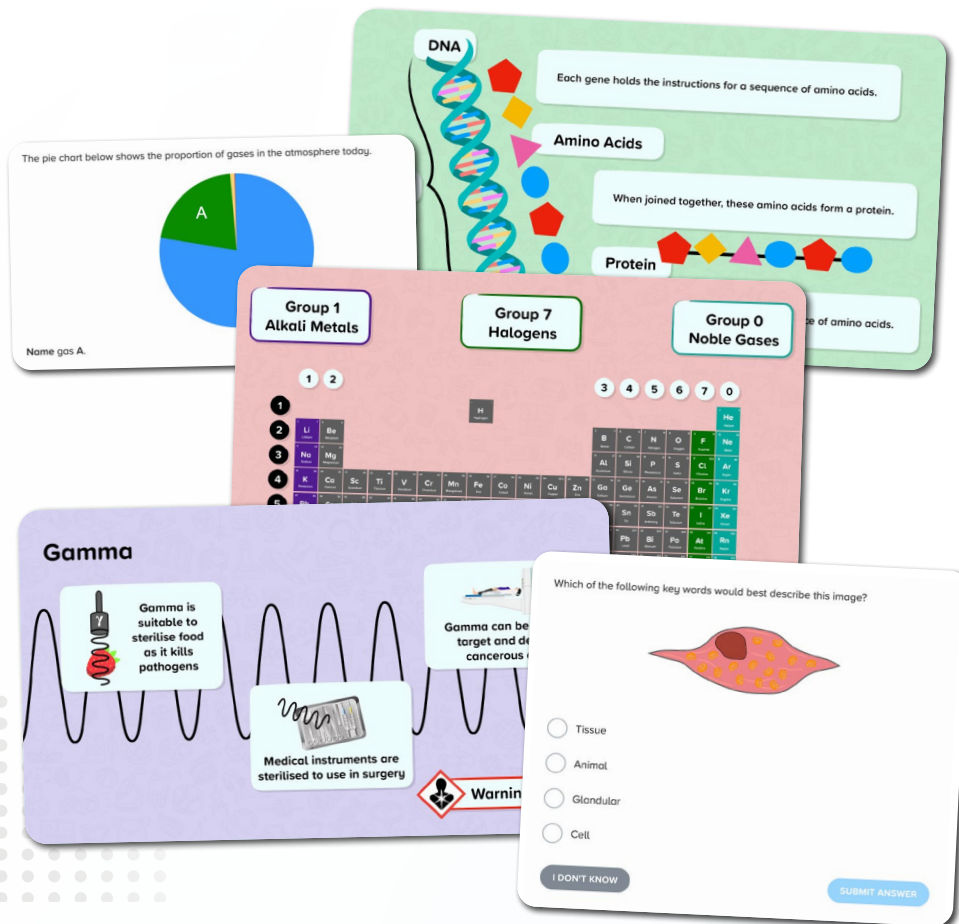
Biology GCSE



Chemistry GCSE



Physics GCSE

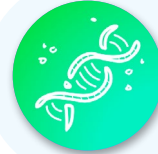


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Science Courses

IGCSE Cambridge Biology

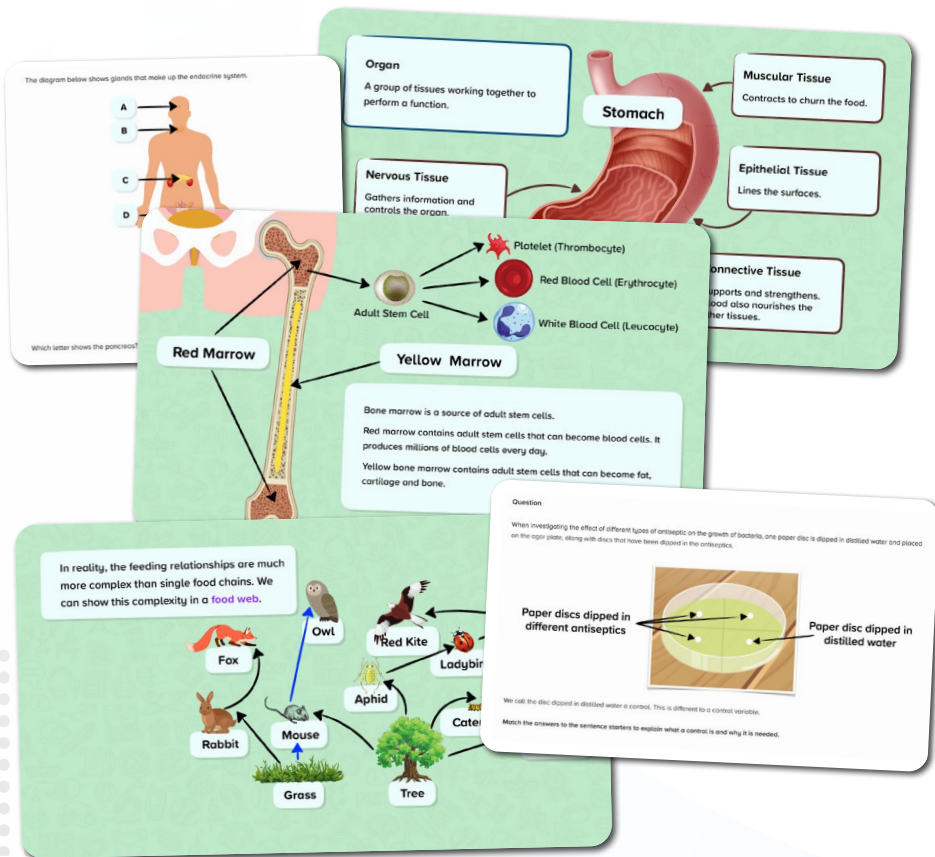
These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Biology scheme of learning.



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.

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Silica

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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
Mass of Mixture (sample)	24 g
Percentage of gold	75%

Answer 75%

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.

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Science Courses

IGCSE Cambridge Physics

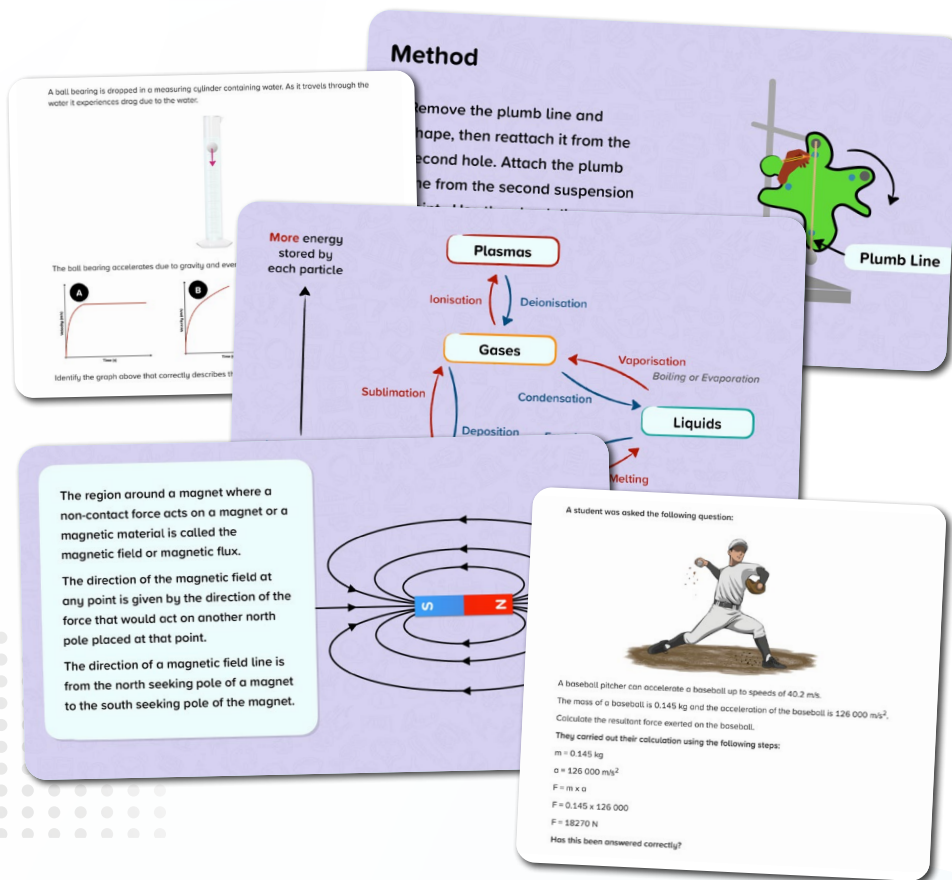
These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Physics scheme of learning.



Physics IGCSE (Core)



Physics IGCSE (Extended)

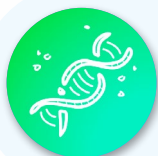
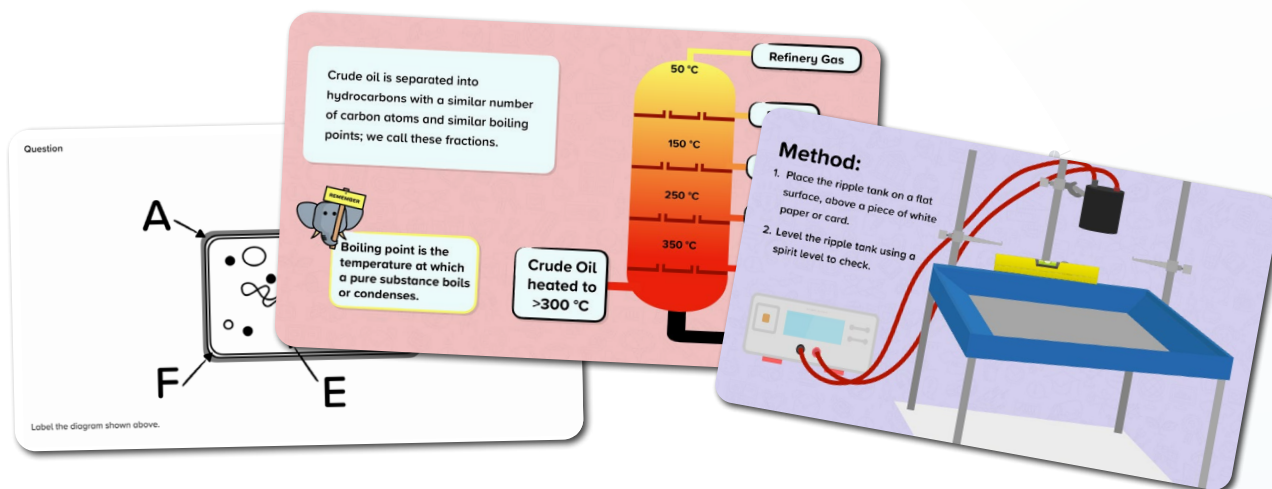


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Science Courses

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)**



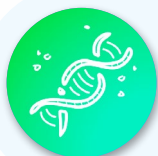
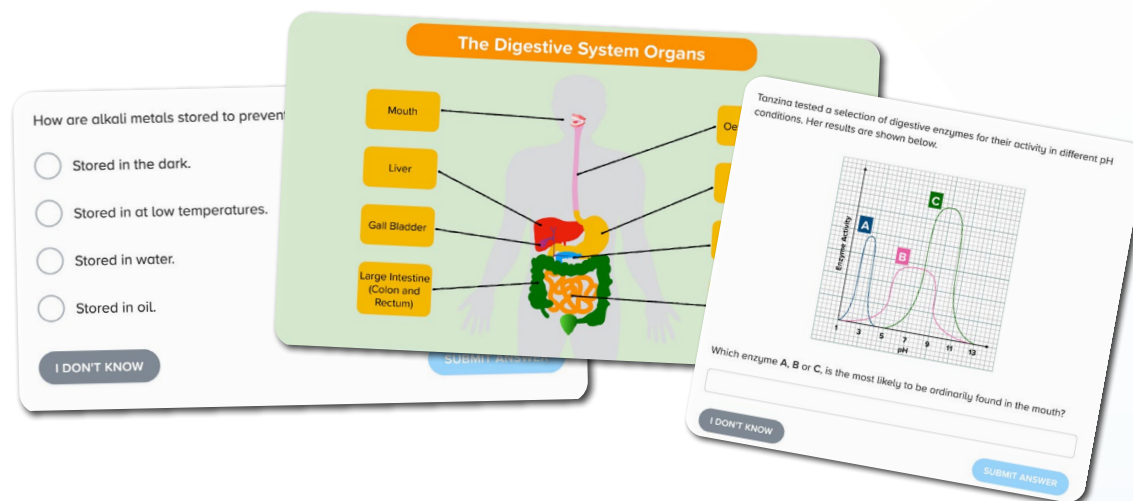
**Combined Science IGCSE –
Physics (Extended)**

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Science Courses

IGCSE Cambridge Co-ordinated

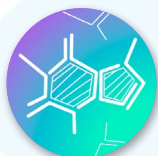
These courses were created by our experienced team of science teachers to support learners studying the IGCSE Cambridge Co-ordinated scheme of learning.



**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)**



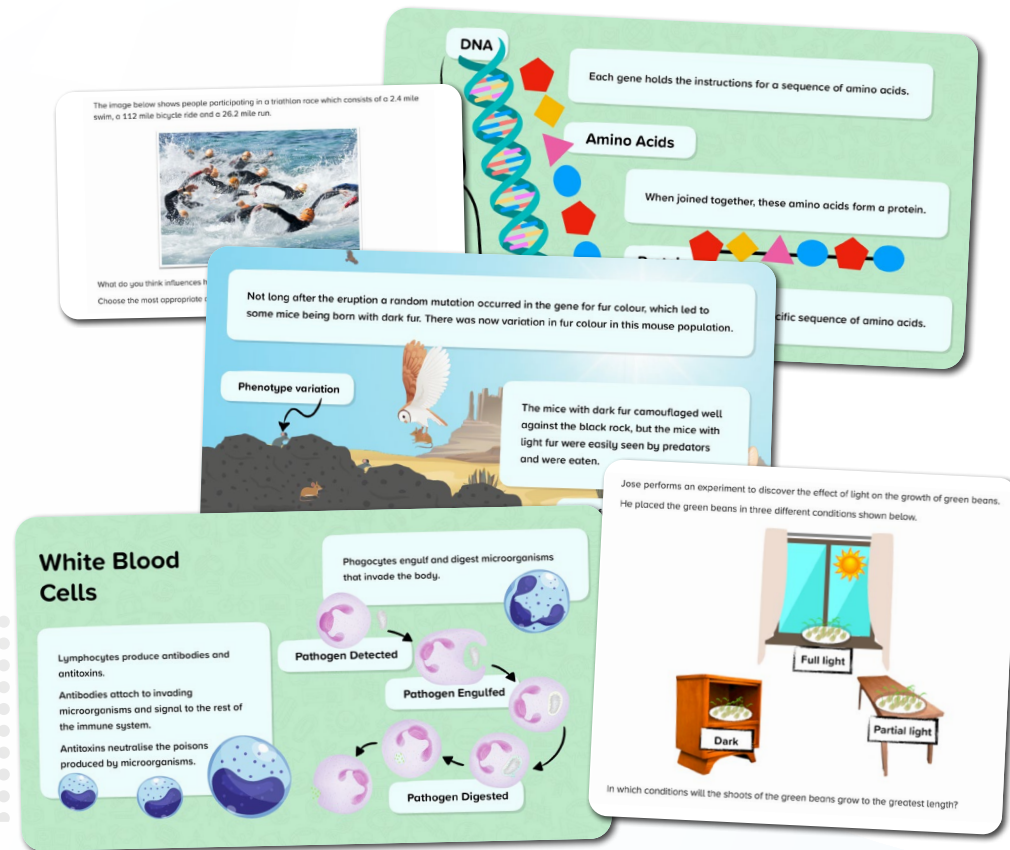
**Co-ordinated Science IGCSE –
Physics (Extended)**

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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

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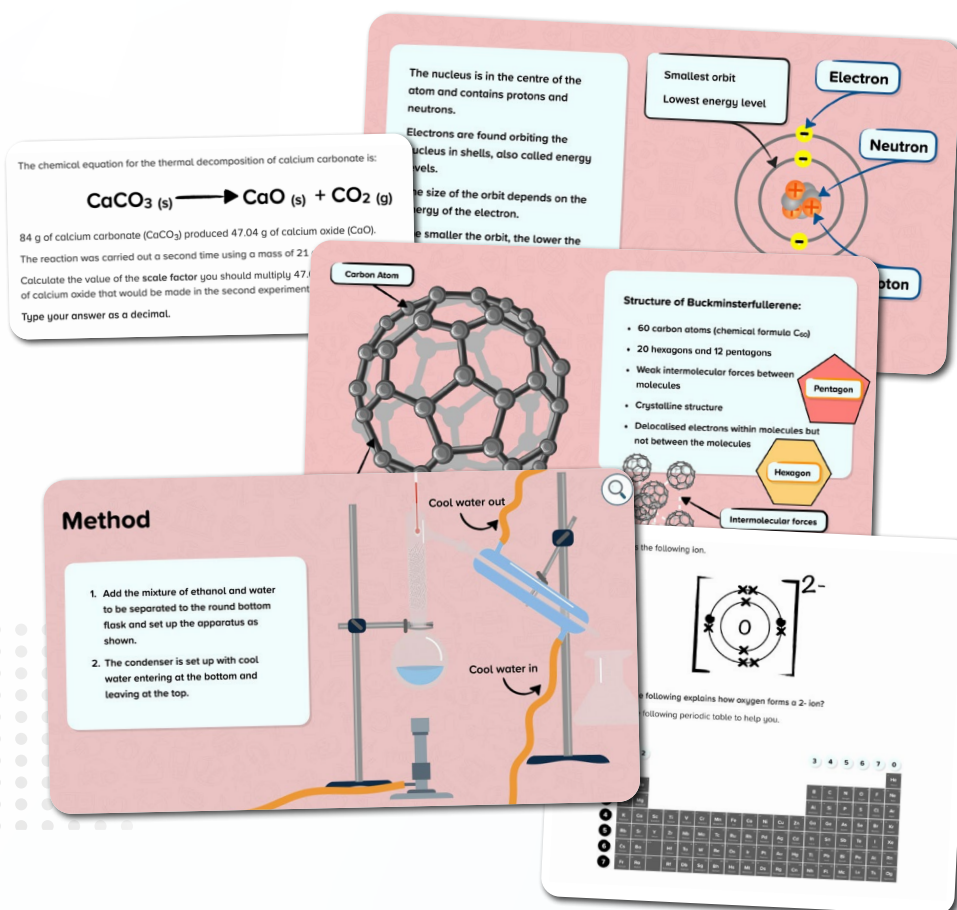
Science Courses

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

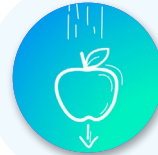


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Science Courses

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.

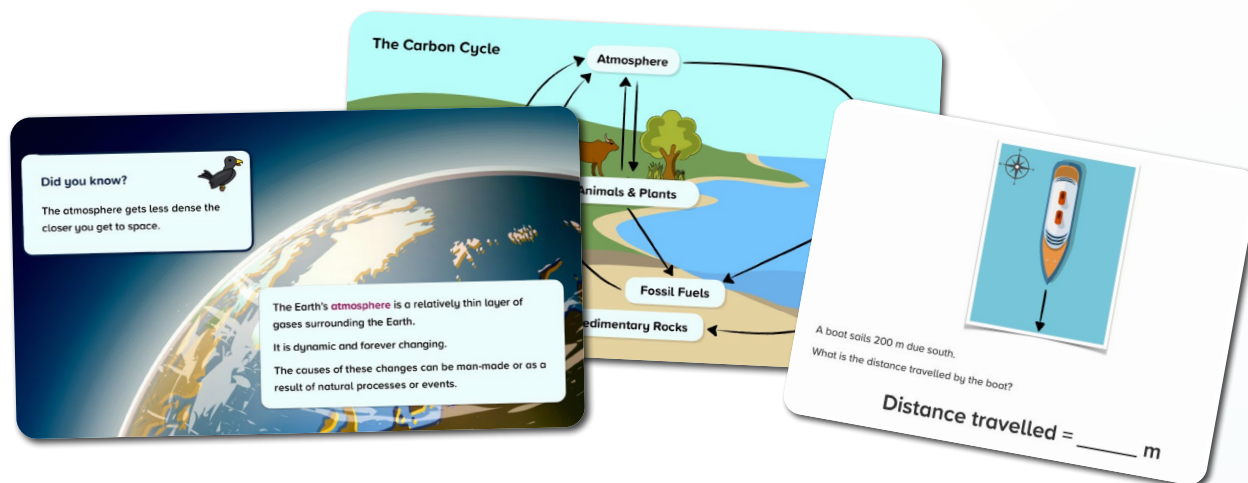
Acceleration = _____ m/s^2

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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**



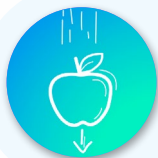
**Science Combined Double Award IGCSE
– Biology**



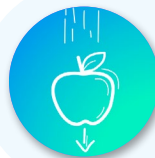
**Science Combined Single Award IGCSE
– Chemistry**



**Science Combined Double Award IGCSE
– Chemistry**



**Science Combined Single Award IGCSE
– Physics**



**Science Combined Double Award IGCSE
– Physics**

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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

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

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 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

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

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

Consider an archery player:
The arrows are considered to be **precise** if they are close together.
The 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**.

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.

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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.



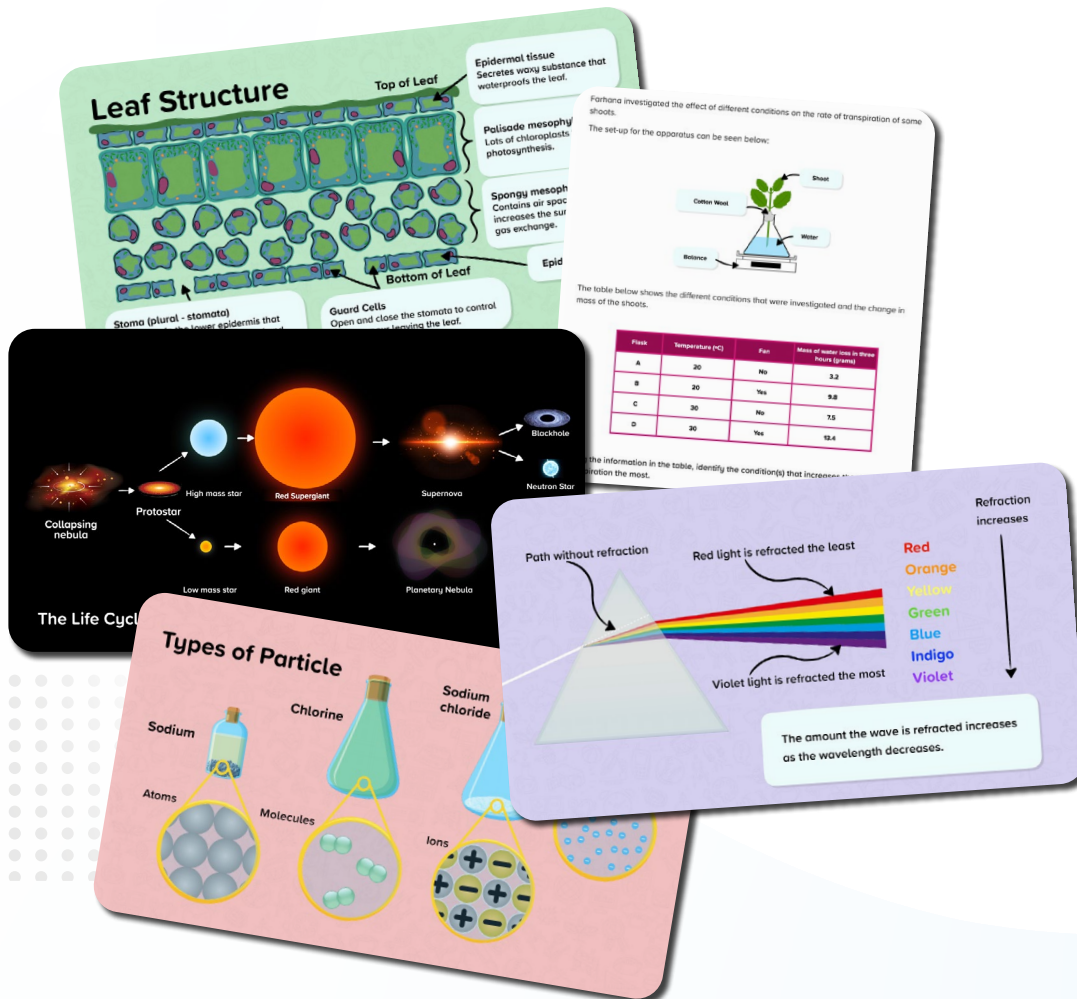
Prepare for A-Level: Biology



Prepare for A-Level: Chemistry



Prepare for A-Level: Physics



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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



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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



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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

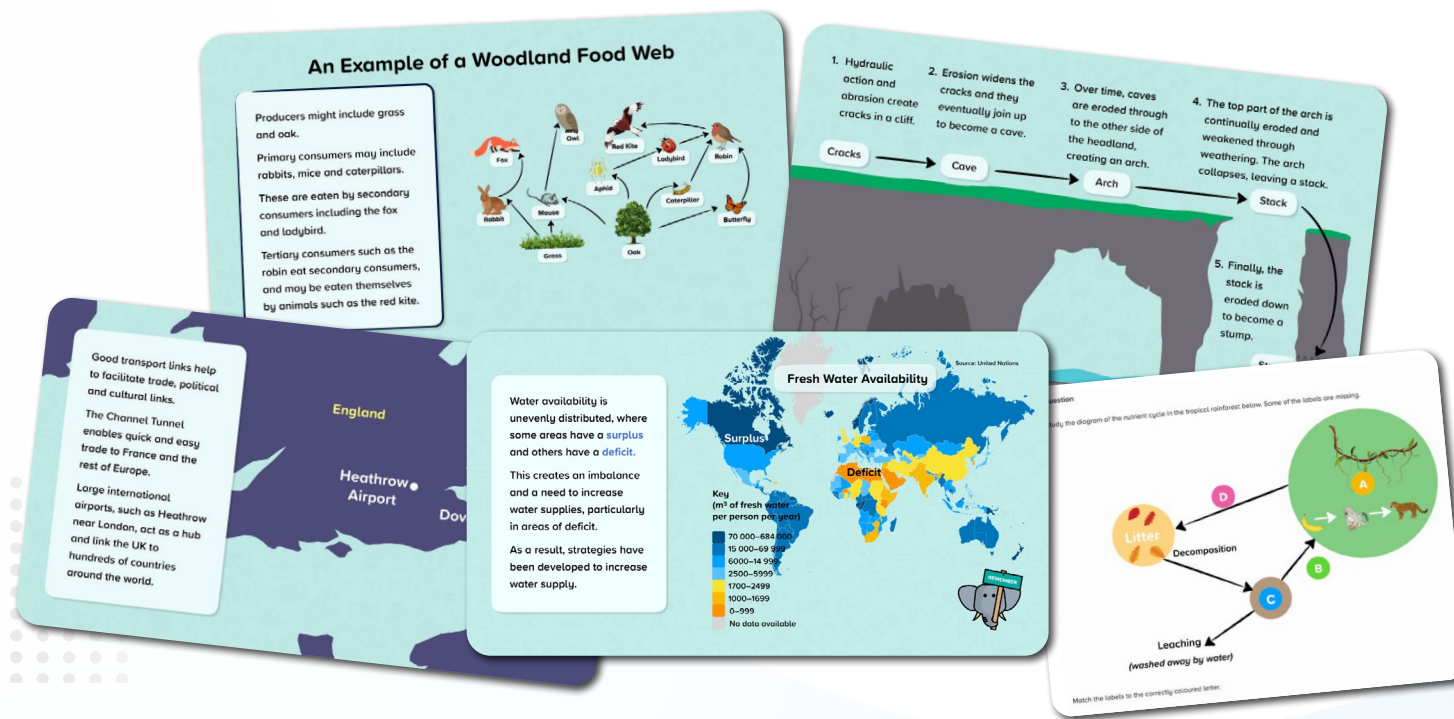
QAN: 601/8152/7



Geography GCSE: Eduqas B

Specification: C112QS

QAN: 601/8153/9



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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) Hult

North Sea

Spurn Head

Silt

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 IGCSE: Cambridge

Specification: 0413

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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.



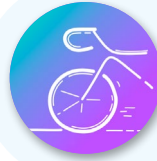
Sport BTEC Level 2: First Award



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

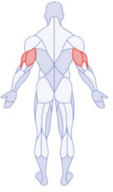
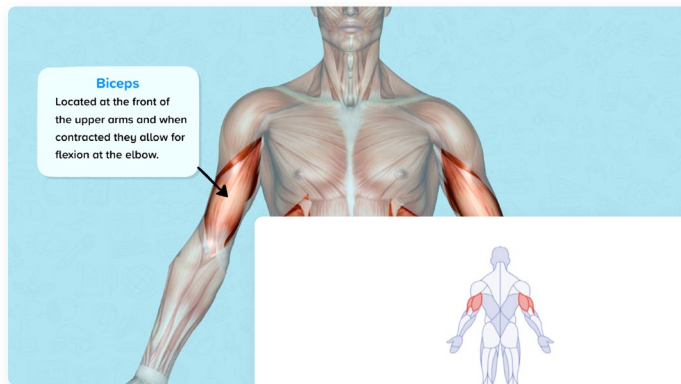
Specification: J828

[Download course content](#)

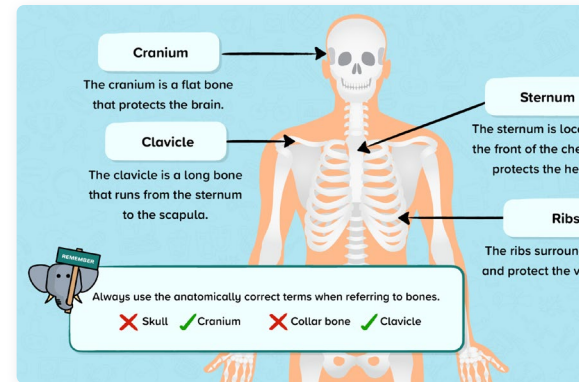
PE Special Feature!

Recall and Review Nuggets

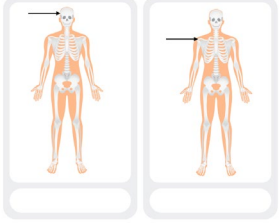
Testing specific A01 subject knowledge quickly identifying misconceptions and gaps in learning to the teacher.



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

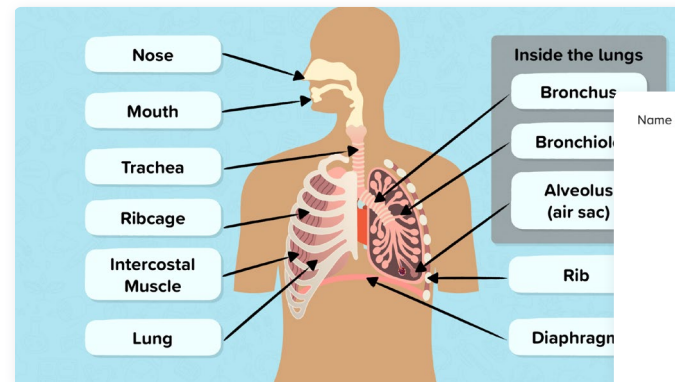


Label the correct bone identified by the arrow.

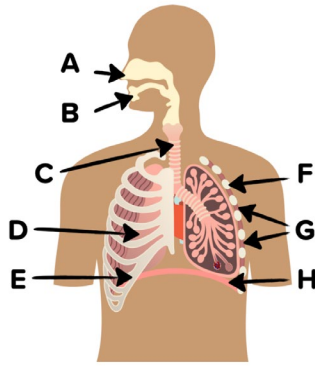


Possible Answers

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 19°C

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

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

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

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.

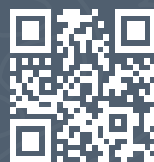
Sea wall

Flood barrier

Mangrove forest planting

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