



GCSE SCIENCE

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Two Routes

- AQA GCSE Combined Science: Trilogy (sets 2-7)
- AQA GCSE Separate Sciences: Biology, Chemistry, Physics (set 1 only)

Combined Science: Trilogy

Biology Paper 1	Chemistry Paper 1	Physics Paper 1	Required Practicals
<ul style="list-style-type: none">• Cell biology• Organisation• Infection and response• Bioenergetics	<ul style="list-style-type: none">• Atomic structure and the periodic table• Bonding, structure and the properties of matter• Quantitative chemistry• Chemical changes• Energy changes	<ul style="list-style-type: none">• Energy• Electricity• Particle model of matter• Atomic structure	<ul style="list-style-type: none">• Students will complete 21 required practicals during lessons• Skills developed during the required practicals will be assessed across all papers
Biology Paper 2	Chemistry Paper 2	Physics Paper 2	
<ul style="list-style-type: none">• Homeostasis and response• Inheritance, variation and evolution• Ecology	<ul style="list-style-type: none">• The rate and extent of chemical change• Organic chemistry• Chemical analysis• Chemistry of the atmosphere• Using resources	<ul style="list-style-type: none">• Forces• Waves• Magnetism and electromagnetism	

Total of six papers: two biology, two chemistry and two physics.
Each paper lasts 1 hour 15 minutes
Each paper is worth 16.7% of the GCSE

Separate Sciences – Biology

Paper 1

- Cell biology
- Organisation
- Infection and response
- Bioenergetics

Paper 2

- Homeostasis and response
- Inheritance, variation and evolution
- Ecology
- Key ideas

Required practicals

- Students will complete 10 required practicals during lessons
- Skills developed during the required practicals will be assessed across all papers

Two papers:

Each paper is worth 50% of the GCSE

Each paper lasts 1 hour 45 minutes

Separate Sciences – Chemistry

Paper 1

- Atomic structure and the periodic table
- Bonding, structure and the properties of matter
- Quantitative chemistry
- Chemical changes
- Energy changes

Paper 2

- The rate and extent of chemical change
- Organic chemistry
- Chemical analysis
- Chemistry of the atmosphere
- Using resources

Required practicals

- Students will complete 8 required practicals during lessons
- Skills developed during the required practicals will be assessed across all papers

Two papers:

Each paper is worth 50% of the GCSE

Each paper lasts 1 hour 45 minutes

Separate Sciences – Physics

Paper 1

- Energy
- Electricity
- Particle model of matter
- Atomic structure

Paper 2

- Forces
- Waves
- Magnetism and electromagnetism
- Space Physics

Required practicals

- Students will complete 10 required practicals during lessons
- Skills developed during the required practicals will be assessed across all papers

Two papers:
Each paper is worth 50% of the GCSE
Each paper lasts 1 hour 45 minutes

NEW GCSE (9-1), (9-9 to 1-1)

SCIENCE GRADING

BIOLOGY, CHEMISTRY, PHYSICS	COMBINED SCIENCE
9	9-9
8	9-8 8-8
7	8-7 7-7
6	7-6 6-6
5	6-5 5-5
4	5-4 4-4
3	4-3 3-3
2	3-2 2-2
1	2-1 1-1
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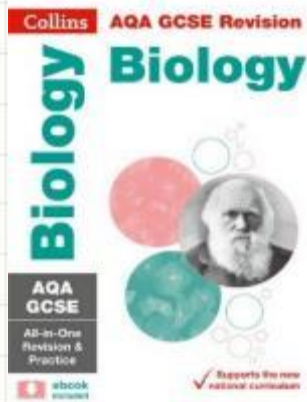
Needed for A Level Sciences

Counts as two 4s for sixth form entry;
Needed for Level 3 Applied Science

Revision Guides

- These can be purchased on ParentPay from w/c 5th October 2020

Separate Science



£3.99



£4.99

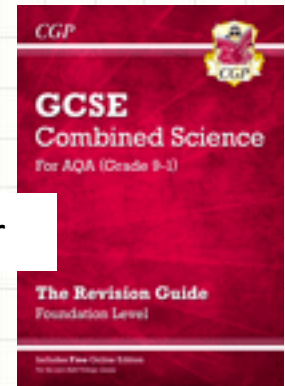
Combined Science

(Higher or Foundation)



£9

or



£5.60

Revision Support

- Weekly fact recall questions in lessons
(booklet with questions and answers is on Firefly)
- Revision resources on Firefly
- Educake

		Question from		Question	Answer
Interleaved Questions		229	18	How many electrons does calcium have?	20 (same as atomic number!)
			105	Explain why methane has a low melting point	It is a simple molecular substance with weak forces between the molecules (which are easy to break)
			162	How do you measure pH?	With an indicator or pH probe.
Topic Questions	1	3	1	Define an atom	The smallest part of an element that can still be recognised as that element
			2	Define element	A substance made of only one type of atom
			3	Define compound	A substance made of two or more different atoms chemically bonded together

Other Revision Resources

Click on the images below to go to the website:



Tips for Success

Encourage your child:

- To work hard in lessons and ask for help when needed,
- To regularly work through tasks on **Educake**
- To practice exam questions,
- To learn the fact recall questions ready for the weekly tests,
- To use Seneca Learning,
- To access other revision resources

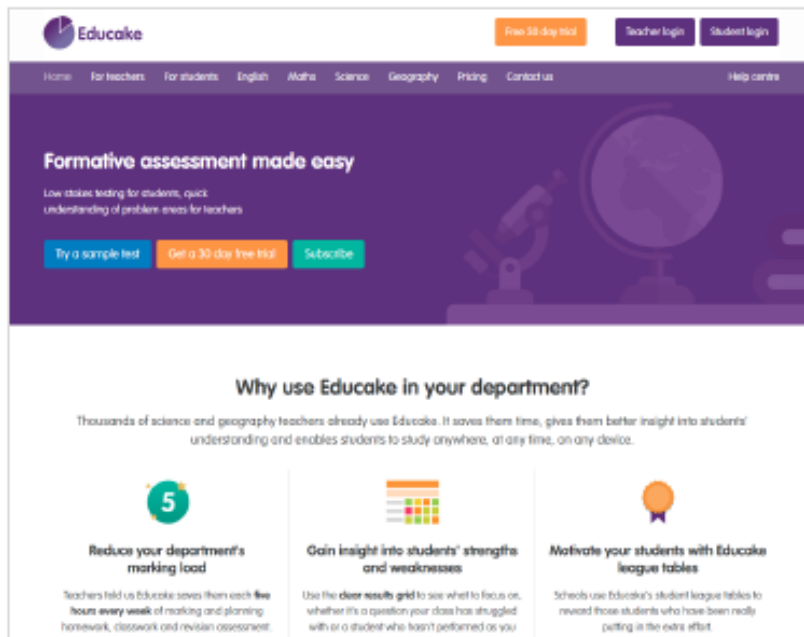
Educake

Educake is a website for homework, classwork and revision

Teachers can set you homework with Educake

You can set yourself revision tests

Educake works on PCs, tablets and smartphones



The screenshot shows the Educake website homepage. At the top, there's a navigation bar with the Educake logo, a 'Free 30-day trial' button, and links for 'Teacher login' and 'Student login'. Below this is a secondary navigation bar with links for 'Home', 'For teachers', 'For students', 'English', 'Maths', 'Science', 'Geography', 'Pricing', 'Contact us', and 'Help centre'. The main content area features a large purple banner with the headline 'Formative assessment made easy' and subtext 'Low stakes testing for students, quick understanding of problem areas for teachers'. It includes three buttons: 'Try a sample test', 'Get a 30 day free trial', and 'Subscribe'. Below the banner, a section titled 'Why use Educake in your department?' lists three benefits: 1. 'Reduce your department's marking load' (highlighted with a green circle containing the number 5), 2. 'Gain insight into students' strengths and weaknesses' (illustrated with a grid icon), and 3. 'Motivate your students with Educake league tables' (illustrated with a medal icon). Each benefit includes a brief description of how it works.

Educake Free 30-day trial Teacher login Student login

Home For teachers For students English Maths Science Geography Pricing Contact us Help centre

Formative assessment made easy

Low stakes testing for students, quick understanding of problem areas for teachers

Try a sample test Get a 30 day free trial Subscribe

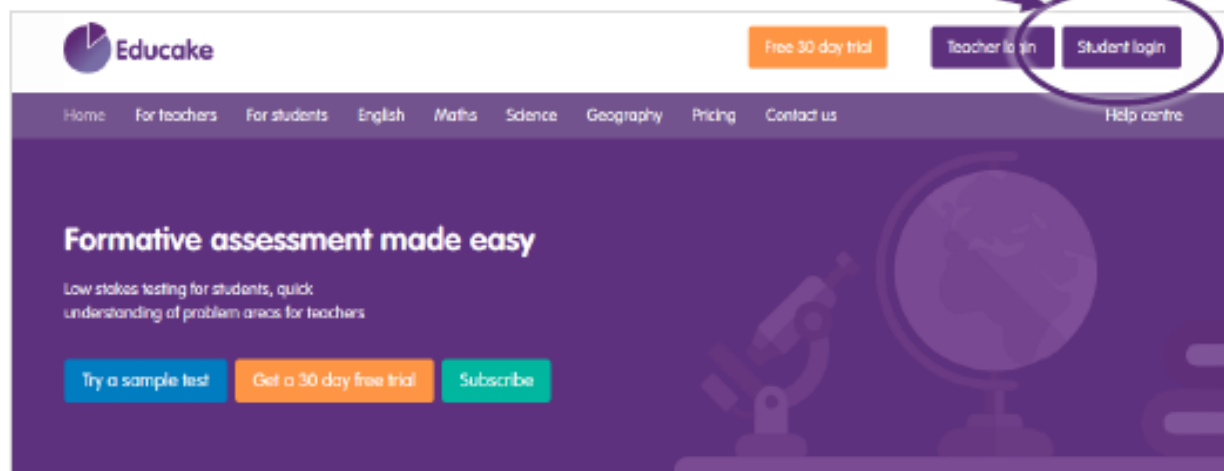
Why use Educake in your department?

Thousands of science and geography teachers already use Educake. It saves them time, gives them better insight into students' understanding and enables students to study anywhere, at any time, on any device.

- 5 Reduce your department's marking load**
Teachers told us Educake saves them each **five hours every week** of marking and planning homework, classwork and revision assessment.
- Gain insight into students' strengths and weaknesses**
Use the **clear results grid** to see what to focus on, whether it's a question your class has struggled with or a student who hasn't performed as you
- Motivate your students with Educake league tables**
Schools use Educake's student league tables to reward those students who have been really putting in the extra effort.

How do you log in to Educake?

- Go to www.educake.co.uk in a web browser, like Chrome or Safari
- Click on the "Student Login" button:



- Enter the username and password your teacher gave you
- Usernames are your first name, then the first letter of your last name, then a 4 digit number.
- For example, Brian Pie's username might be brianp0007

How do I answer a test?

- When you log in you will see this page:

The screenshot shows the 'My Educake' dashboard. At the top, it says 'Your teachers have set you 2 new tests...' with a 'Hide New Tests' button. Below this is a table of tests:

Set By	Test Name	Questions	End Date
Dr Newton	Properties of waves, Waves, hearing, exploration and detection (separate physics...	22	23 days ago
Miss Curie	Forces and elasticity, Pressure in a fluid 1 (separate physics only), Pressure L...	51	103 days ago

Below the table are three main sections of buttons:

- Key Stage 3 Science**
 - Answer 10 Random Questions
 - Set Yourself a Test
 - View Your Test Results
 - View Your Results by Topic
- GCSE (9-1) Science – AQA**
 - Answer 10 Random Questions
 - Set Yourself a Test
 - View Your Test Results
- Reports**
 - View Your Report
- Help**
 - Change Your Password
 - What Do You Think of Educake?

A purple arrow points from the '51' in the 'Questions' column of the second test row to the 'View Your Report' button in the 'Reports' section.

- Tests your teachers have set you are in green at the top
- Click on a green test to take it and answer the questions

How do I set myself a test?

- Click on "Set Yourself a Test" to revise a topic

The screenshot shows the 'My Educake' dashboard. At the top right is a 'Show Help' button. Below it is a green banner that says 'Your teachers have set you 2 new tests...' with a 'Hide New Tests' button and an upward arrow. A table lists these tests:

Set By	Test Name	Questions	End Date
Dr Newton	Properties of waves, Waves, hearing, exploration and detection (separate physics...	22	23 days ago
Miss Curie	Forces and electricity, Pressure in a fluid (separate physics only), Pressure L...	51	103 days ago

Below the table are two main sections of buttons. The left section is for 'Key Stage 3 Science' and 'GCSE (9-1) Science - AQA', each with options to 'Answer 10 Random Questions', 'Set Yourself a Test', 'View Your Test Results', and 'View Your Results by Topic'. The right section has 'Reports' (with 'View Your Report') and 'Help' (with 'Change Your Password' and 'What Do You Think of Educake?'). A purple arrow points from the 'Set Yourself a Test' button under 'Key Stage 3 Science' to the 'Set Yourself a Test' button under 'GCSE (9-1) Science - AQA', which is highlighted with a red rectangle.

- You can choose the topics you want to revise
- You can choose the number of questions you want to answer

What are Educake tests like?

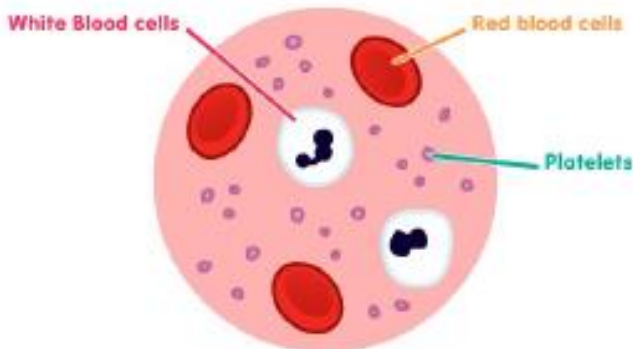
- Educake tests are made of short questions
- They are carefully-written to improve your knowledge and understanding

Key Stage 3 Science - Biology [Show Help](#)

Question 1 of 17 0 ✓ 0 %

Look at the picture of a blood sample: What do white blood cells have that red blood cells do not?

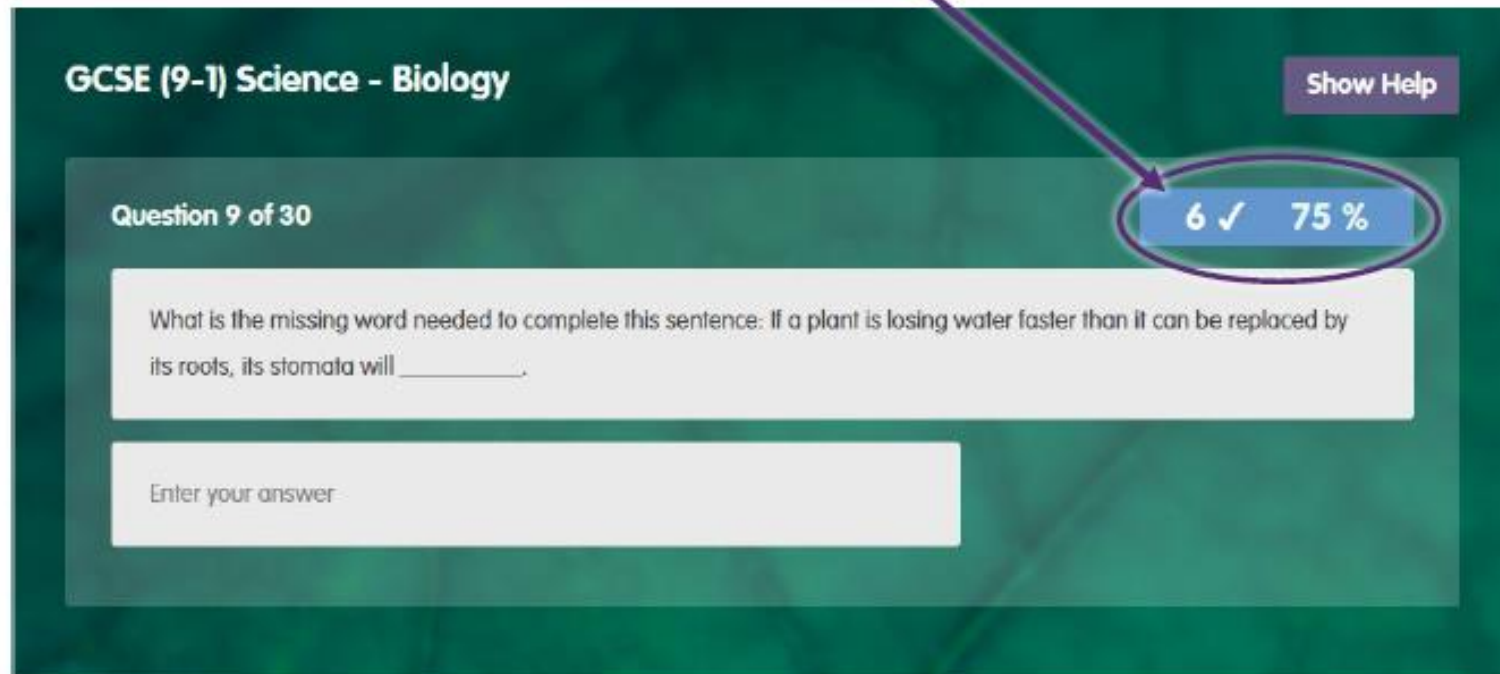
Enter your answer



A blood sample

What are Educake tests like?

- The questions aren't all multiple choice
- You usually type in the answer
- Educake accepts small spelling mistakes
- Your score so far on the test is shown here:



GCSE (9-1) Science - Biology [Show Help](#)

Question 9 of 30

What is the missing word needed to complete this sentence: If a plant is losing water faster than it can be replaced by its roots, its stomata will _____.

Enter your answer

6 / 75 %

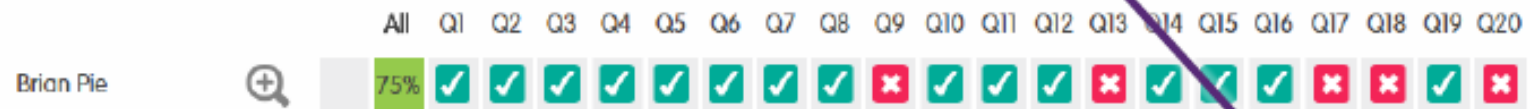
What happens when I finish a test?

- When you finish a test you can see your results
- You can take tests again by clicking here:

My Educake > GCSE (9-1) Science Test Results

[Show Help](#)

Name / Main Topic	Year	Class	Completed	Start Date	End Date
Communicable diseases	9	All	1 / 1	06-04-2017	06-04-2017

[Take test again >](#)[View Your Progress >](#)

- You can view your progress by clicking here:

View your progress each time you finish a test

- Topics you know well are coloured green
- Topics you need to revise more are coloured red
- Click on a topic to take a revision test on it

My Educake > Track Your Progress on GCSE (9-1) Science, Chemistry

Topic	Percentage Correct	Questions Answered	Answer 10 More Questions
4.1 Atomic Structure and the Periodic Table (Paper 1)			
Atoms, elements, and compounds: th...	91%	247	▶
Mixtures	71%	14	▶
Atomic models	65%	129	▶
The periodic table	72%	65	▶
Group 0	19%	41	▶
The transition metals (separate ch...	88%	8	▶
4.2 Bonding, Structure and the Properties of Matter (Paper 1)			
Chemical bonds	74%	57	▶