

Years 7 and 8 science independent study tasks

- Access the glossaries on Pupil Work Drive. Read through them, cover them over and then see if you can recall all the words. Use the definitions to help you.
- Write new sentences using the words in the glossaries, relating them to the content you have recently covered in class.
- Complete the relevant crosswords from the Glossaries folder on Pupil Work Drive.
- Make flashcards for the glossary. Write the definition on one side and the key word on the other. Use these flashcards to test yourself, or get a parent/sibling/friend to test you.
- Set yourself an Educake quiz (guide below) on a relevant topic area:

YEAR 7 EDUCAKE TOPICS

| Term | Science | Topic | Area |
|--------|------------------------|--|--|
| Autumn | Working scientifically | Experimental skills and investigations | <ul style="list-style-type: none"> • Developing hypotheses • Planning experiments • Recording accurate results |
| | Biology | Structure and function of living organisms | <ul style="list-style-type: none"> • Cells • Components of a cell • Plant and animal cells • Diffusion • Unicellular organisms • Multicellular organisms |
| | Chemistry | Particulate Nature of Matter | ALL |
| | Physics | Motion and forces | <ul style="list-style-type: none"> • Balanced and unbalanced forces • Forces and objects • Measuring forces • Extension and deformation • Non-contact forces • Friction and air resistance |
| Spring | Working scientifically | Analysis and evaluation | <ul style="list-style-type: none"> • Calculating results and presenting data • Interpreting data • Errors |
| | Biology | Structure and function of living organisms | <ul style="list-style-type: none"> • Human skeleton • Biomechanics • Muscles • Gas exchange in humans • Breathing |
| | Chemistry | Atoms, elements and compounds | <ul style="list-style-type: none"> • Atoms, Elements and Compounds... |
| | Physics | Energy | ALL |

| Term | Science | Topic | Area |
|--------|------------------------|--|--|
| Summer | Working scientifically | Scientific attitudes | <ul style="list-style-type: none"> • Accuracy, precision, repeatability and reproducibility • Scientific theories and models • Risks in science |
| | Biology | Structure and function of living organisms | <ul style="list-style-type: none"> • Healthy diet • Energy in food • Imbalances in diet • Human digestion • Exercise, asthma and smoking • Recreational drugs |
| | Chemistry | Reactions | <ul style="list-style-type: none"> • Reactions • Equations • Chemical reactions • Energetics • Conservation of mass • Periodic table (groups) • Reaction patterns |
| | Physics | Electricity and magnetism | ALL |

YEAR 8 EDUCAKE TOPICS

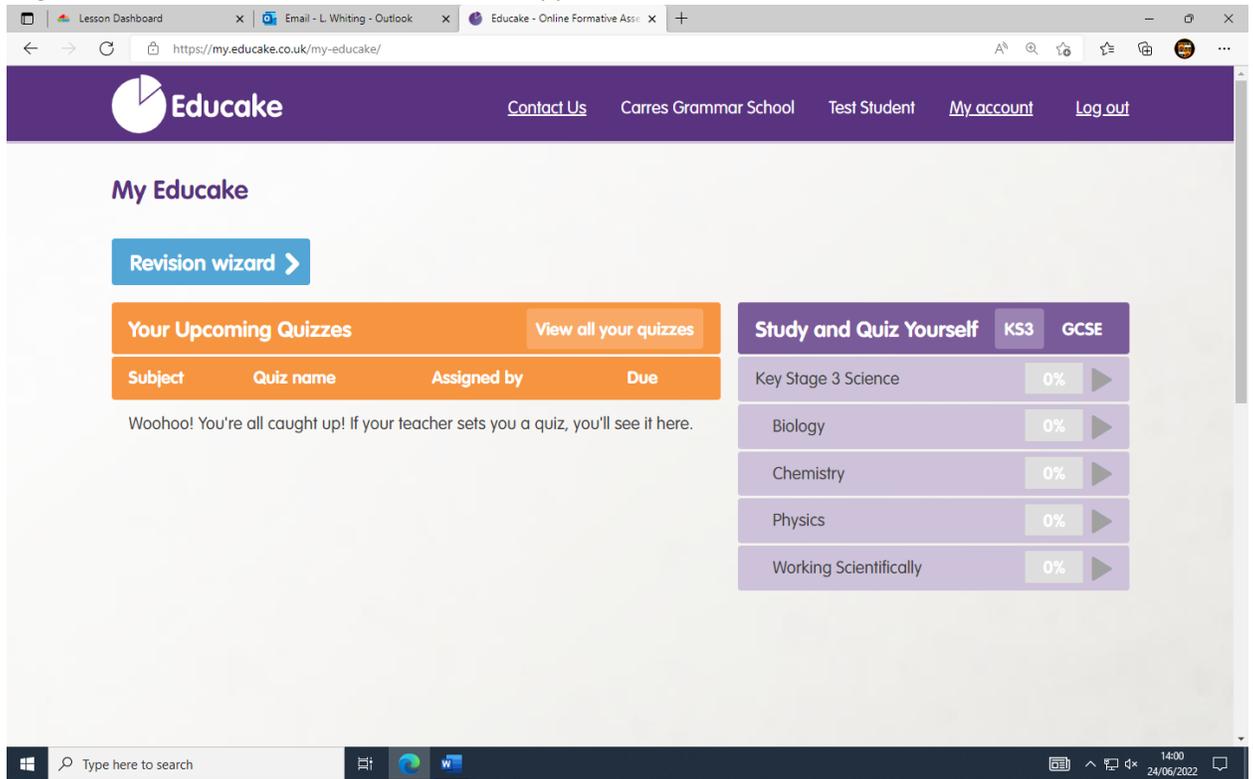
| Term | Science | Topic | Area |
|--------|------------------------|--|--|
| Autumn | Working scientifically | Experimental skills and investigations | <ul style="list-style-type: none"> • Carrying out experiments • Techniques and apparatus • Sampling |
| | Biology | Structure and function of living organisms | <ul style="list-style-type: none"> • Human reproductive systems • Menstruation, gestation and birth • Plant reproduction • Pollination and seed dispersal |
| | Chemistry | Separation techniques (Pure and impure substances) | <ul style="list-style-type: none"> • Separating mixtures |
| | Physics | Forces and motion | <ul style="list-style-type: none"> • Speed, distance and time • Distance-time graphs • Moments • Measuring pressure • Atmospheric pressure • Pressure in liquids |

| | | | |
|--------|------------------------|--|---|
| Spring | Working scientifically | Measurement | <ul style="list-style-type: none"> • SI units • Simple calculations |
| | Biology | Material cycles and energy | <ul style="list-style-type: none"> • Photosynthesis • Life depends on photosynthesis • Adaptations of leaves • Aerobic respiration • Cellular respiration • Anaerobic respiration |
| | | Structure and function of living organisms | <ul style="list-style-type: none"> • Plant nutrients |
| | | Interactions and interdependencies | <ul style="list-style-type: none"> • Food webs and interdependence • Pollution and human impact on the environment |
| | Chemistry | Acids, alkalis and metals | <ul style="list-style-type: none"> • Acids and alkalis • pH Scale • Acid and alkalis reactions |
| | Physics | Waves | ALL |
| Summer | Working scientifically | Scientific attitudes | <ul style="list-style-type: none"> • Peer review and ethics • Hazard symbols |
| | Biology | Genetics and evolution | ALL |
| | Chemistry | The Earth | <ul style="list-style-type: none"> • Composition & structure of the Earth • Earth's atmosphere • Rock cycle • Carbon cycle • Carbon dioxide and climate change • Earth's resources and sustainability |
| | Physics | Space physics | ALL |

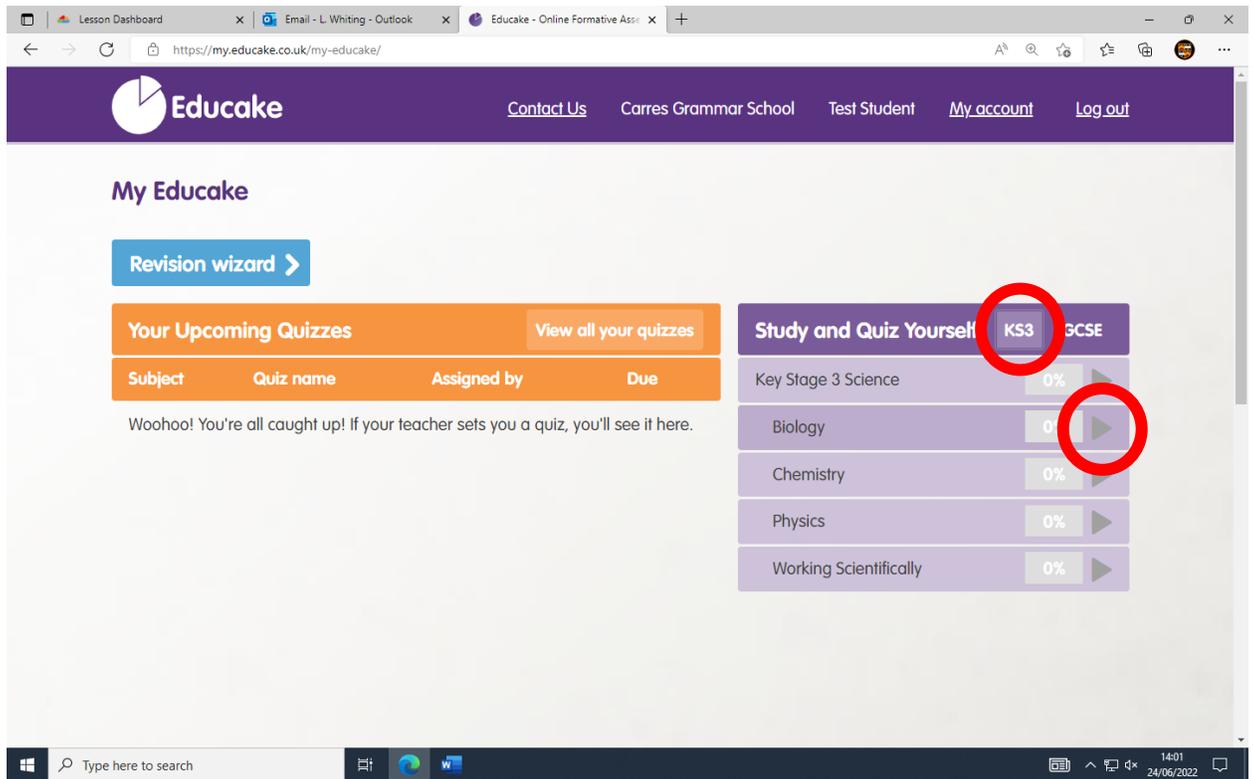
Throughout the year, don't forget to include quizzes revisiting areas from earlier in the year to keep them in your long term memory.

If you can't remember how to set yourself an Educake quiz, you can use the guide starting on the next page:

1. Log in to Educake and the home screen will appear.



2. In the purple 'Study and Quiz Yourself' box, click KS3, and then the science you want to focus on.



3. Select the area you want to work on...

The screenshot shows a web browser window with the URL <https://my.educake.co.uk/my-educake/track-progress/1>. The page title is "Key Stage 3 Science, Biology". There is a button labeled "Show only weakest topics". Below this is a table with columns "Topic", "Qs done", and "%".

| Topic | Qs done | % |
|--|---------|----|
| Key Stage 3 Science | 0 | 0% |
| ^ Biology | 0 | 0% |
| Structure and Function of Living Organisms | 0 | 0% |
| Material Cycles and Energy | 0 | 0% |
| Interactions and Interdependencies | 0 | 0% |
| Genetics and Evolution | 0 | 0% |

Each row has a "Quiz >" button. The "Material Cycles and Energy" row is circled in red.

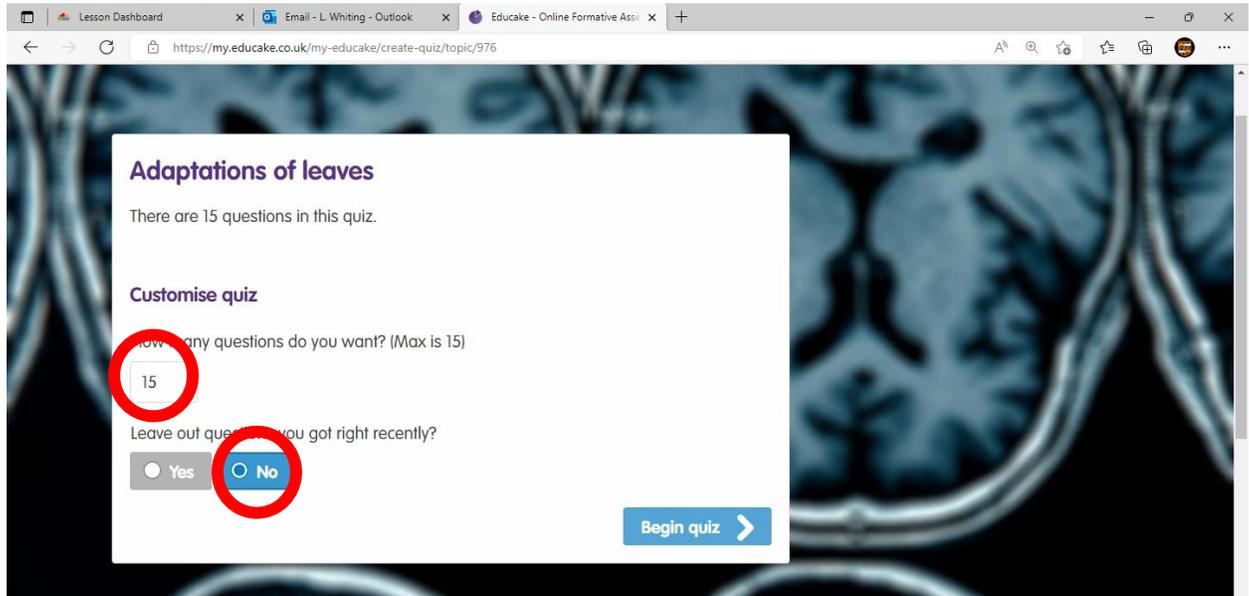
4. Select 'Quiz >' for the area you want to test yourself on.

The screenshot shows a web browser window with the URL <https://my.educake.co.uk/my-educake/track-progress/1>. The page title is "Material Cycles and Energy". There is a button labeled "Select multiple topics". Below this is a table with columns "Topic", "Qs done", and "%".

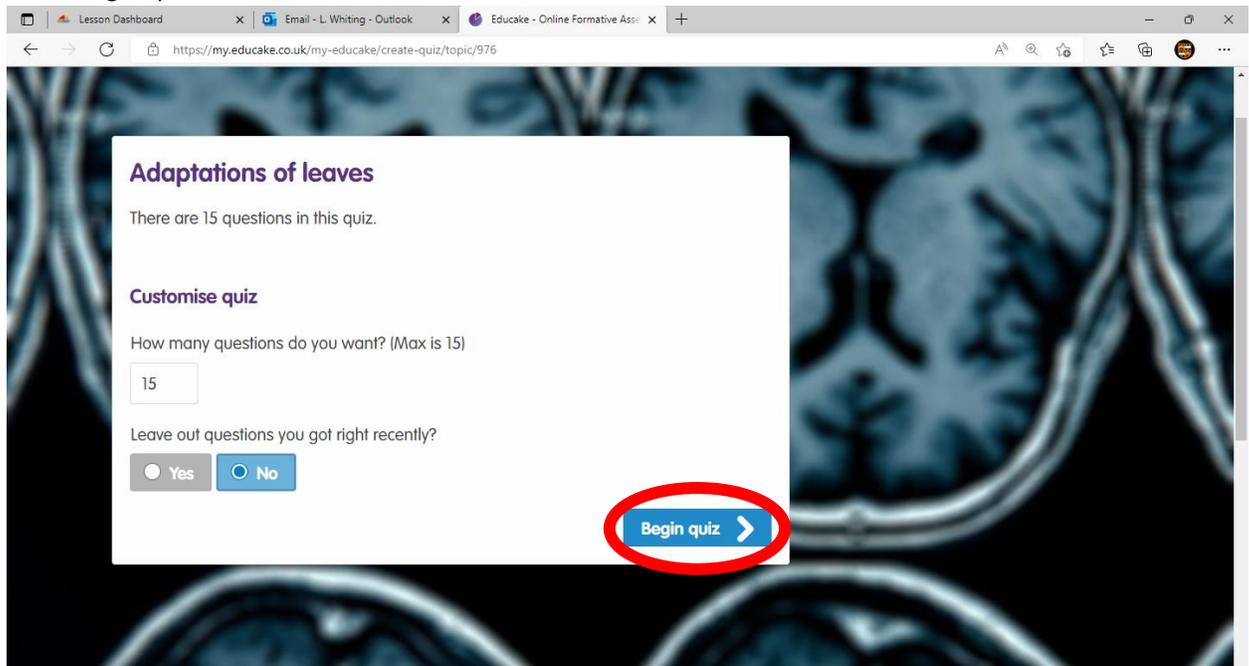
| Topic | Qs done | % |
|--------------------------------|---------|----|
| Material Cycles and Energy | 0 | 0% |
| Photosynthesis | 0 | 0% |
| Life Depends on Photosynthesis | 0 | 0% |
| Adaptations of leaves | 0 | 0% |
| Cellular respiration | 0 | 0% |
| Anaerobic respiration | 0 | 0% |
| Aerobic Respiration | 0 | 0% |

Each row has a "Quiz >" button. The "Quiz >" button for "Adaptations of leaves" is circled in red.

5. Choose how many questions you want to do, and whether to include questions you have recently answered correctly – selecting 'No' will make the test more useful as it will focus on areas for development more.



6. Click 'Begin quiz >'.



7. Take the quiz. Make sure to read the explanations after each question, even if you got it right. If you got a low score (less than 60%), repeat the same quiz the next day. If not, try out a different topic.

Year 9 Biology independent study tasks

- Access the glossaries on Pupil Work Drive. Read through them, cover them over and then see if you can recall all the words. Use the definitions to help you.
- Write new sentences using the words in the glossaries, relating them to the content you have recently covered in class.
- Complete the relevant crosswords from the Glossaries folder on Pupil Work Drive.
- Make flashcards for the glossary. Write the definition on one side and the key word on the other. Use these flashcards to test yourself, or get a parent/sibling/friend to test you.
- Set yourself an Educake quiz (guide below) on a relevant topic area:

| Term | Topic | Area |
|--------|--------------------------------------|--|
| Autumn | 4.7 Ecology | <ul style="list-style-type: none"> • Communities • Distribution of organisms • Ecosystems (separate biology only) • Environmental change |
| | Maths for Science | <ul style="list-style-type: none"> • Handling data • Geometry and trigonometry |
| | Biology practicals | <ul style="list-style-type: none"> • Field investigations |
| Spring | 4.7 Ecology | <ul style="list-style-type: none"> • Decomposition • Waste management and recycling • Land use and deforestation • Ecosystems (separate biology only) • Food production (separate biology only) |
| | Maths for Science | <ul style="list-style-type: none"> • Handling data • Arithmetic and numerical computation |
| | Biology practicals | <ul style="list-style-type: none"> • Decay (separate biology only) |
| Summer | 4.1 Cell biology 4.2 organisation | <ul style="list-style-type: none"> • ALL • Principles of organisation • Structure of plants |
| | Maths for Science | <ul style="list-style-type: none"> • Handling data • Arithmetic and numerical computation |
| | Biology practicals | <ul style="list-style-type: none"> • Microscopy • Osmosis |

Throughout the year, don't forget to include quizzes on Maths in Science and Working Scientifically, as well as revisiting areas from earlier in the year to keep them in your long-term memory.

1. Log in to Educake and the home screen will appear.

The screenshot shows the Educake website interface. At the top, there is a purple navigation bar with the Educake logo and links for 'Contact Us', 'Carres Grammar School', 'Test Student', 'My account', and 'Log out'. Below this is the 'My Educake' section. On the left, there is a blue 'Revision wizard' button. In the center, there is an orange box titled 'Your Upcoming Quizzes' with a 'View all your quizzes' button. Below this is a table with columns for 'Subject', 'Quiz name', 'Assigned by', and 'Due'. The table is currently empty, with a message below it: 'Woohoo! You're all caught up! If your teacher sets you a quiz, you'll see it here.' On the right, there is a purple box titled 'Study and Quiz Yourself' with two tabs: 'KS3' and 'GCSE'. The 'GCSE' tab is selected. Below the tabs is a list of subjects: 'Key Stage 3 Science', 'Biology', 'Chemistry', 'Physics', and 'Working Scientifically'. Each subject has a progress indicator showing '0%' and a play button icon.

| Subject | Quiz name | Assigned by | Due |
|--|-----------|-------------|-----|
| Woohoo! You're all caught up! If your teacher sets you a quiz, you'll see it here. | | | |

| Subject | Progress |
|------------------------|----------|
| Key Stage 3 Science | 0% |
| Biology | 0% |
| Chemistry | 0% |
| Physics | 0% |
| Working Scientifically | 0% |

2. In the purple 'Study and Quiz Yourself' box, click GCSE, then the science you want to focus on.

Lesson Dashboard | Email - L. Whiting - Outlook | Educake - Online Formative Asses

https://my.educake.co.uk/my-educake/

Educake | [Contact Us](#) | Carres Grammar School | Test Student | [My account](#) | [Log out](#)

My Educake

[Revision wizard >](#)

Your Upcoming Quizzes | [View all your quizzes](#)

| Subject | Quiz name | Assigned by | Due |
|--|-----------|-------------|-----|
| Woohoo! You're all caught up! If your teacher sets you a quiz, you'll see it here. | | | |

Study and Quiz Yourself | **KS3** | **GCSE**

| | | |
|------------------------|----|---|
| Key Stage 3 Science | 0% | ▶ |
| Biology | 0% | ▶ |
| Chemistry | 0% | ▶ |
| Physics | 0% | ▶ |
| Working Scientifically | 0% | ▶ |

Type here to search | 14:01 24/06/2022

3. Select the area you want to work on...

Topic | **Qs done** | **%**

[Expand all](#) | [Select multiple topics](#)

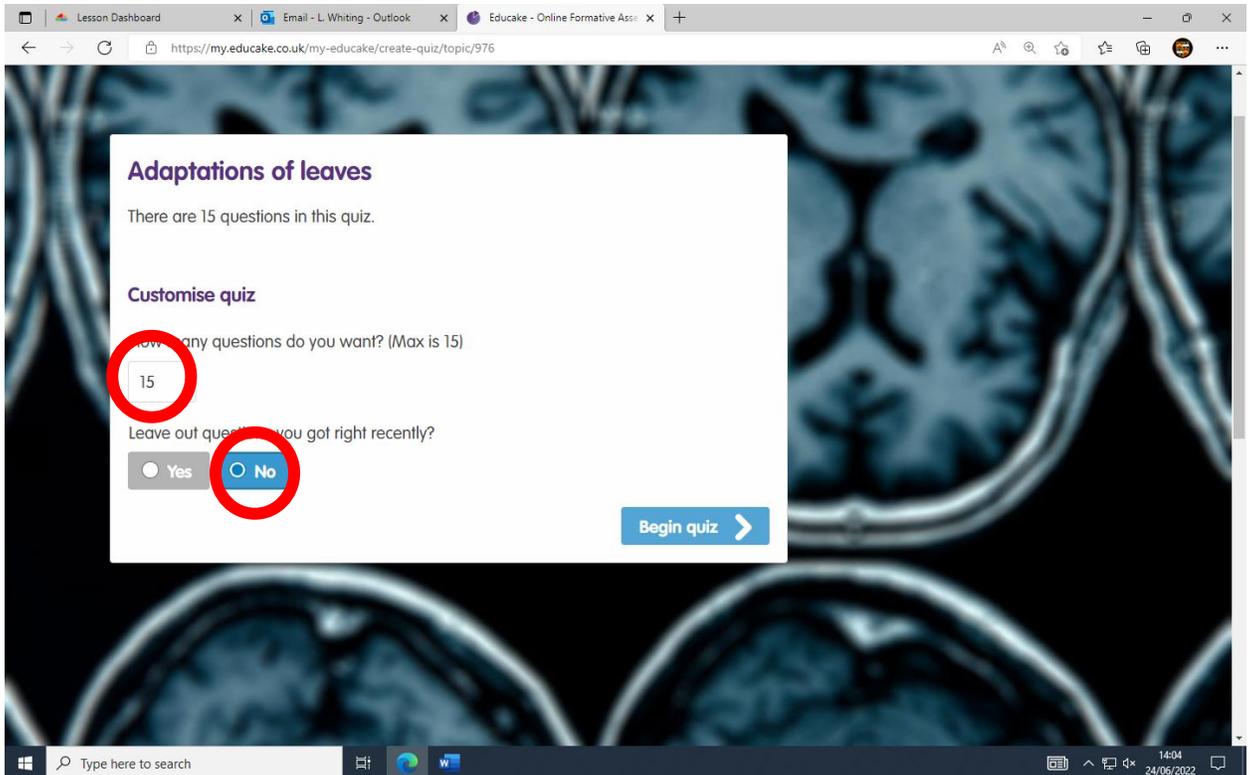
| | | | |
|--|---|----|---------------------------|
| Key Stage 3 Science | 0 | 0% | Quiz > |
| ^ Biology | 0 | 0% | Quiz > |
| v Structure and Function of Living Organisms | 0 | 0% | Quiz > |
| v Material Cycles and Energy | 0 | 0% | Quiz > |
| v Interactions and Interdependencies | 0 | 0% | Quiz > |
| v Genetics and Evolution | 0 | 0% | Quiz > |

4. Select 'Quiz >' for the area you want to test yourself on.

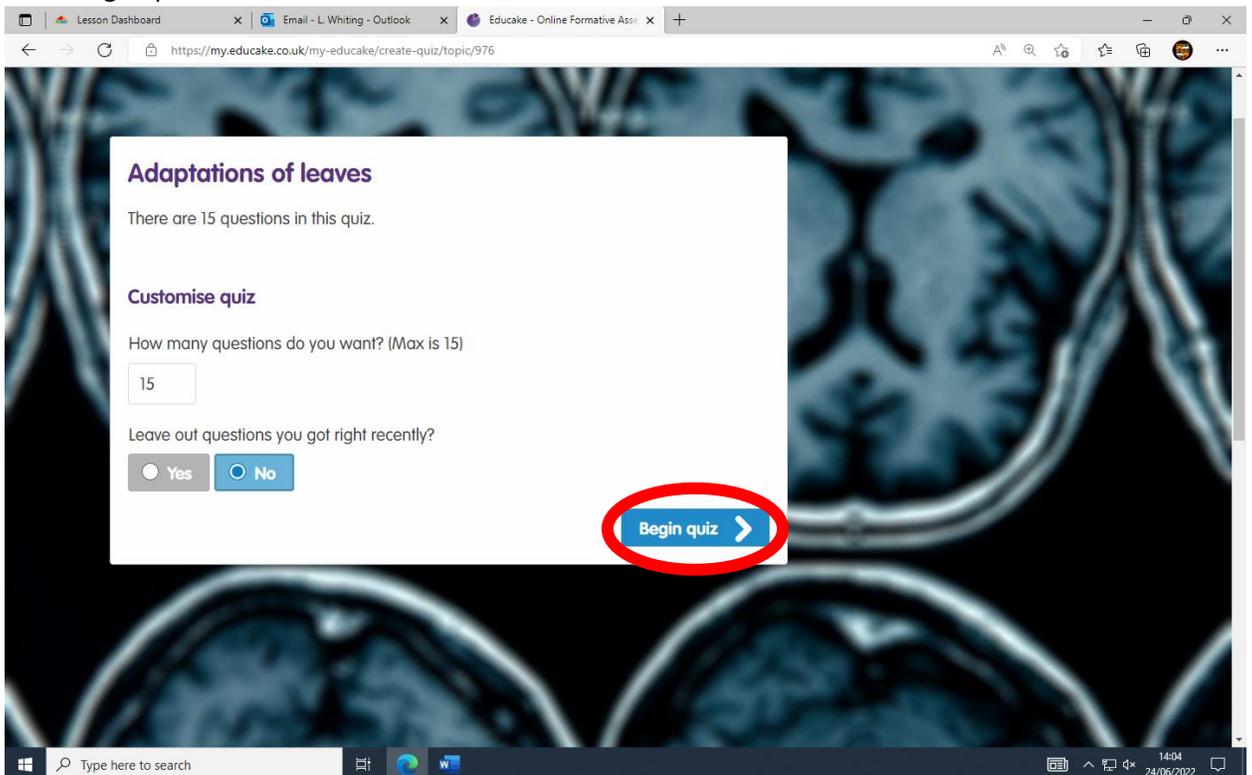
The screenshot shows a web browser window with the URL <https://my.educake.co.uk/my-educake/track-progress/1>. The page displays a list of topics under the heading 'Material Cycles and Energy'. Each topic has a score of 0 and a progress indicator of 0%. The 'Adaptations of leaves' topic is circled in red, highlighting its 'Quiz' button.

| Topic | Description | Score | Progress | Action |
|--------------------------------|--|-------|----------|--------|
| Material Cycles and Energy | | 0 | 0% | Quiz > |
| Photosynthesis | Reactants in, and products of, photosynthesis, and a word summary for photosynthesis | 0 | 0% | Quiz > |
| Life Depends on Photosynthesis | The dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere | 0 | 0% | Quiz > |
| Adaptations of leaves | Adaptations of leaves for photosynthesis | 0 | 0% | Quiz > |
| Cellular respiration | Aerobic and anaerobic respiration in living organisms, including the breakdown of organic molecules to enable all the other chemical processes necessary for life, and the word summary for aerobic respiration | 0 | 0% | Quiz > |
| Anaerobic respiration | Process of anaerobic respiration in humans and micro-organisms, including fermentation, and a word summary for anaerobic respiration; the differences between aerobic and anaerobic respiration in terms of the reactants | 0 | 0% | Quiz > |
| Aerobic Respiration | aerobic respiration in living organisms, including a word summary for aerobic respiration | 0 | 0% | Quiz > |

5. Choose how many questions you want to do, and whether to include questions you have recently answered correctly – selecting 'No' will make the test more useful as it will focus on areas for development more.



6. Click 'Begin quiz >'.



7. Take the quiz. Make sure to read the explanations after each question, even if you got it right. If you got a low score, repeat the same quiz the next day. If not, try out a different topic.

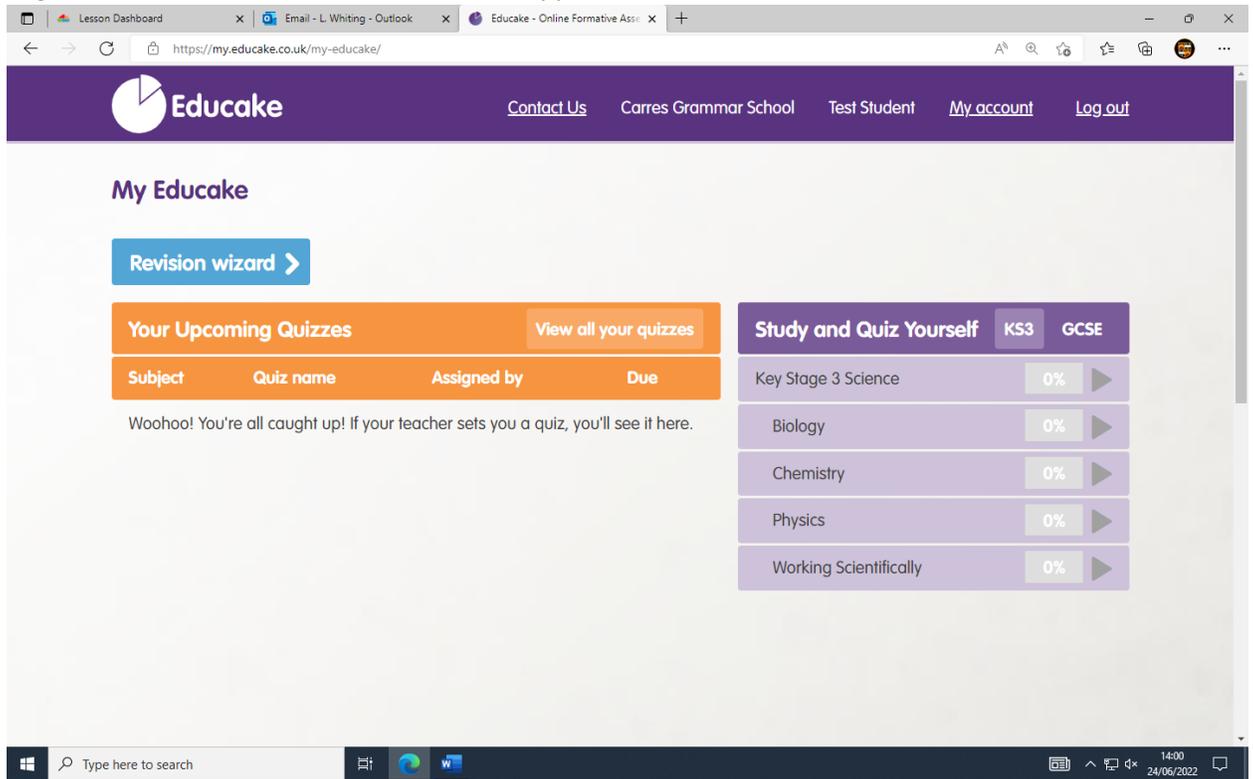
Year 9 Chemistry independent study tasks

- Access the glossaries on Pupil Work Drive. Read through them, cover them over and then see if you can recall all the words. Use the definitions to help you.
- Write new sentences using the words in the glossaries, relating them to the content you have recently covered in class.
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- Make flashcards for the glossary. Write the definition on one side and the key word on the other. Use these flashcards to test yourself, or get a parent/sibling/friend to test you.
- Set yourself an Educake quiz (guide below) on a relevant topic area:

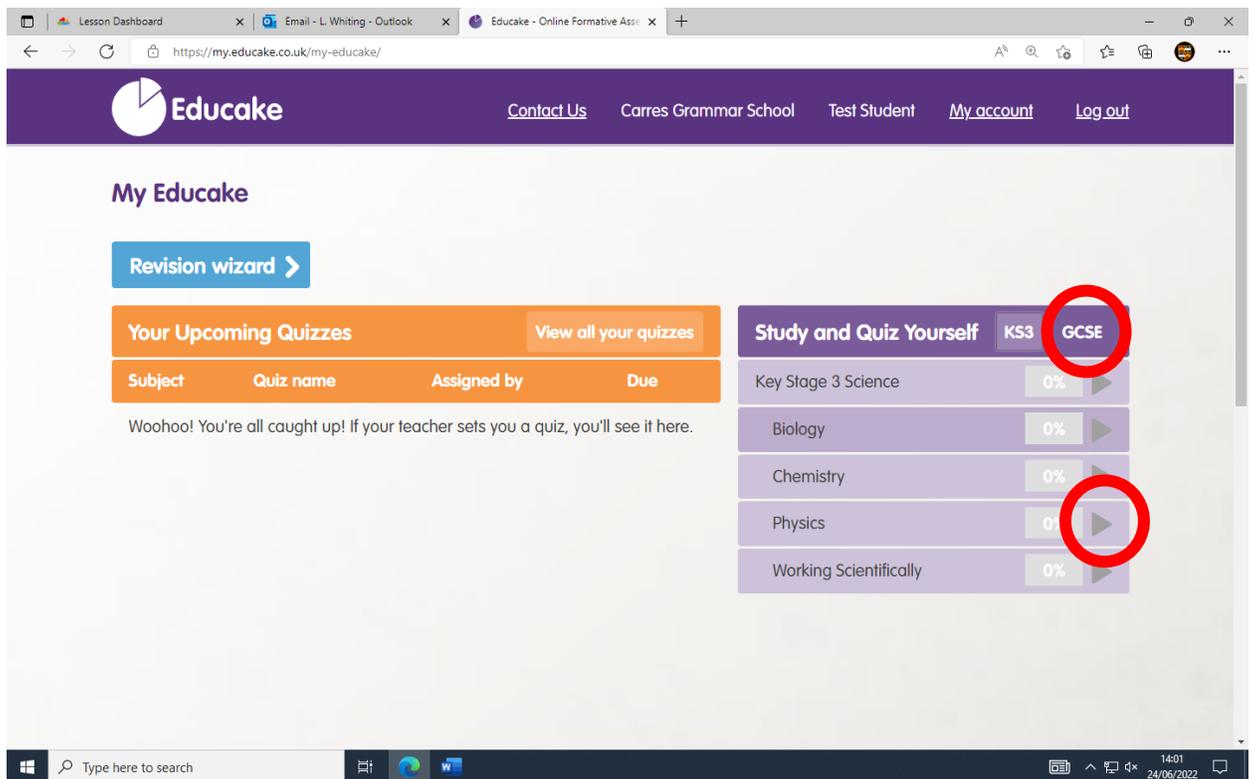
| Term | Topic | Area |
|------|---|--|
| 1 | 4.9 – Chemistry of the Atmosphere | <ul style="list-style-type: none"> • Composition of Earth’s atmosphere • The Greenhouse Effect • Atmospheric Pollutants • Carbon Footprint and Climate Change |
| 2 | 4.10 – Using Resources (Paper 2) | <ul style="list-style-type: none"> • Earth’s Resources • Water Treatment • Lifecycle Assessments and Recycling |
| | Chemistry Practicals | <ul style="list-style-type: none"> • Water Purification |
| 3 | 4.1 – Atomic Structure and the Periodic Table (Paper 1) | <ul style="list-style-type: none"> • Atoms, elements, and compounds: the basics • Mixtures • Atomic models |
| 4 | Working Scientifically | <ul style="list-style-type: none"> • Scientific theories and methods • Scientific models |
| | Chemistry Practicals | <ul style="list-style-type: none"> • Chromatography |
| 5 | 4.1 – Atomic Structure and the Periodic Table (Paper 1) | <ul style="list-style-type: none"> • The Periodic Table • Group 1 • Group 1 • Group 7 • Transition Metals |
| 6 | 4.2 – Bonding, Structure and the Properties of Matter | <ul style="list-style-type: none"> • Chemical Bonds • State of Matter • Types of Compounds • Metals & Alloys • Giant Covalent Structures • Nanoscience |

Throughout the year, don’t forget to include quizzes on Maths in Science and Working Scientifically, as well as revisiting areas from earlier in the year to keep them in your long-term memory.

8. Log in to Educake and the home screen will appear.



9. In the purple 'Study and Quiz Yourself' box, click GCSE, then the science you want to focus on.



10. Select the area you want to work on...

| Topic | Qs done | % | |
|--|---------|----|--|
| Expand all | | | Select multiple topics |
| Key Stage 3 Science | 0 | 0% | Quiz > |
| ^ Biology | 0 | 0% | Quiz > |
| Structure and Function of Living Organisms | 0 | 0% | Quiz > |
| Material Cycles and Energy | 0 | 0% | Quiz > |
| Interactions and Interdependencies | 0 | 0% | Quiz > |
| Genetics and Evolution | 0 | 0% | Quiz > |

11. Select 'Quiz >' for the area you want to test yourself on.

| Topic | Qs done | % | |
|--------------------------------|---------|----|---------------------------|
| ^ Material Cycles and Energy | 0 | 0% | Quiz > |
| Photosynthesis | 0 | 0% | Quiz > |
| Life Depends on Photosynthesis | 0 | 0% | Quiz > |
| Adaptations of leaves | 0 | 0% | Quiz > |
| Cellular respiration | 0 | 0% | Quiz > |
| Anaerobic respiration | 0 | 0% | Quiz > |
| Aerobic Respiration | 0 | 0% | Quiz > |

12. Choose how many questions you want to do, and whether to include questions you have recently answered correctly – selecting ‘No’ will make the test more useful as it will focus on areas for development more.

Adaptations of leaves

There are 15 questions in this quiz.

Customise quiz

How many questions do you want? (Max is 15)

15

Leave out questions you got right recently?

Yes No

Begin quiz >

13. Click ‘Begin quiz >’.

Adaptations of leaves

There are 15 questions in this quiz.

Customise quiz

How many questions do you want? (Max is 15)

15

Leave out questions you got right recently?

Yes No

Begin quiz >

14. Take the quiz. Make sure to read the explanations after each question, even if you got it right. If you got a low score (i.e. less than 60%), repeat the same quiz the next day. If not, try out a different topic.

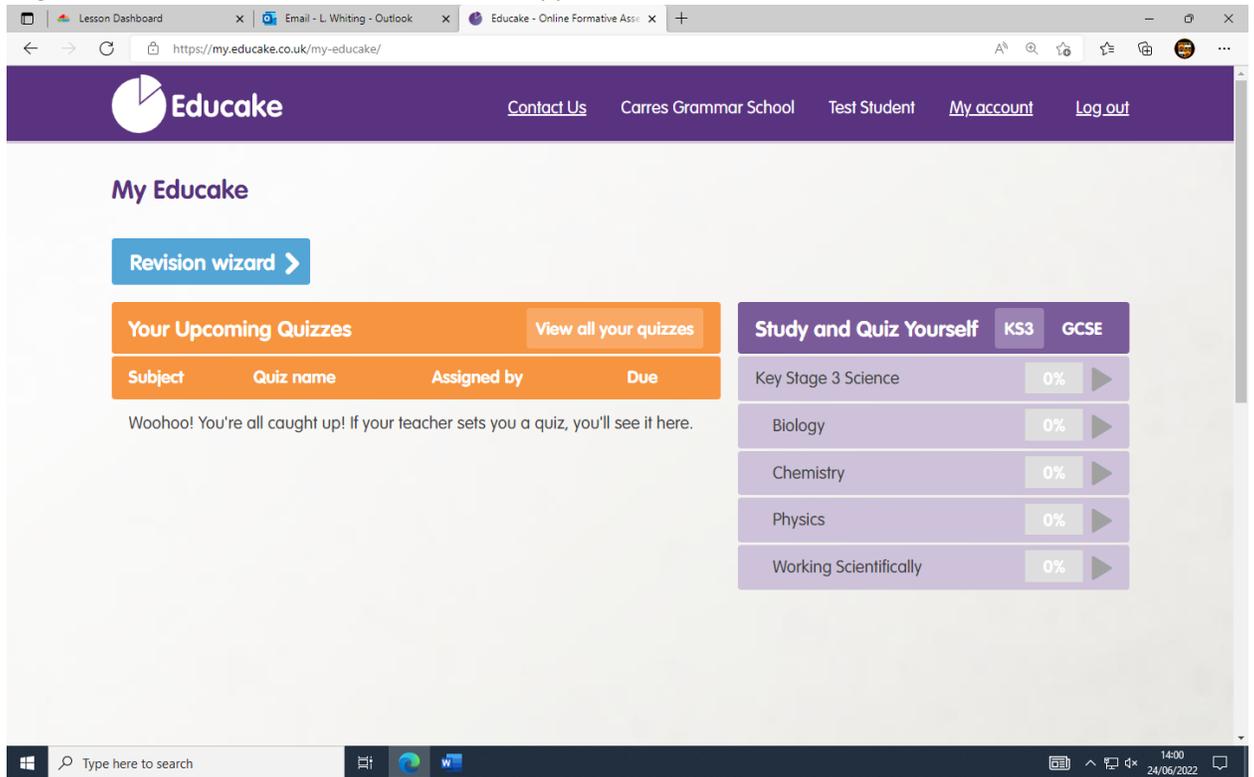
Year 9 Physics independent study tasks

- Access the glossaries on Pupil Work Drive. Read through them, cover them over and then see if you can recall all the words. Use the definitions to help you.
- Write new sentences using the words in the glossaries, relating them to the content you have recently covered in class.
- Complete the relevant crosswords from the Glossaries folder on Pupil Work Drive.
- Make flashcards for the glossary. Write the definition on one side and the key word on the other. Use these flashcards to test yourself, or get a parent/sibling/friend to test you.
- Set yourself an Educake quiz (guide below) on a relevant topic area:

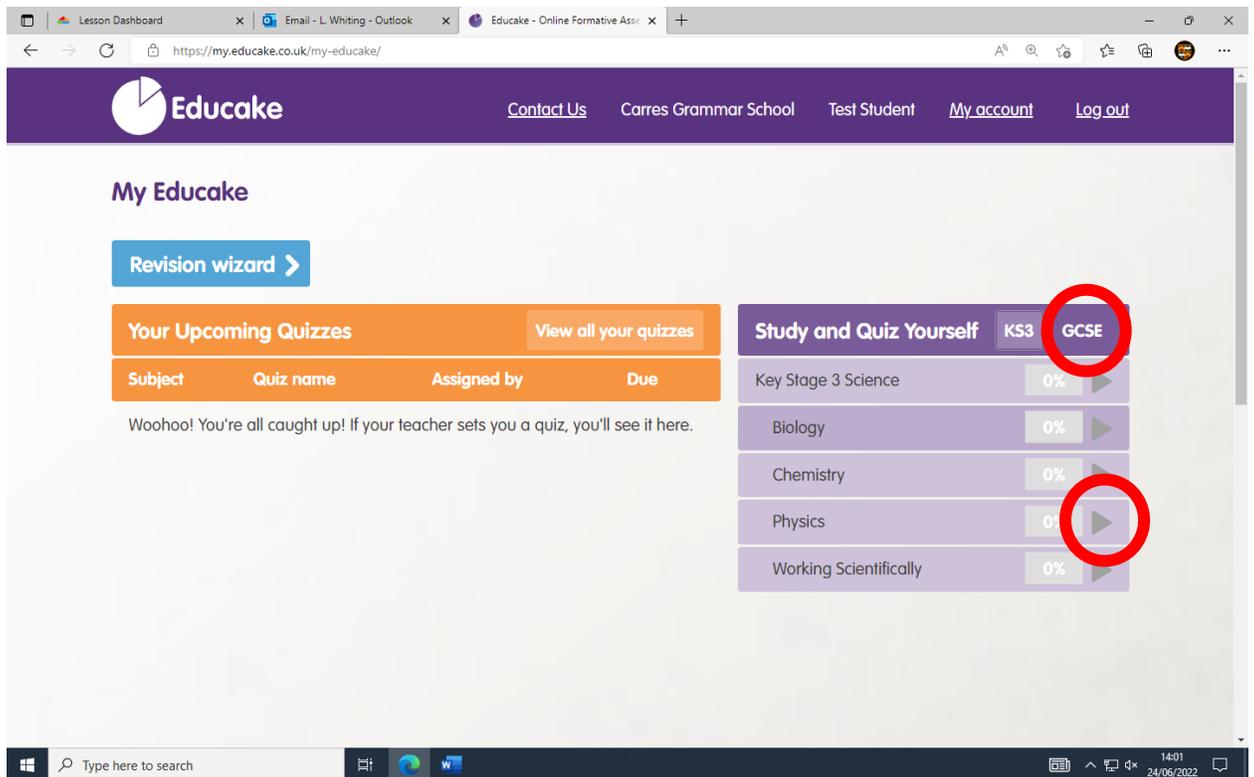
| Term | Topic | Area |
|------|--|--|
| 1 | 4.3 – Particle Model of Matter (Paper 1) | <ul style="list-style-type: none"> • Density of materials • Changes of states • Energy transfers |
| | Physics Practicals | <ul style="list-style-type: none"> • Specific heat capacity • Density |
| | Physics Equations | <ul style="list-style-type: none"> • Density equation |
| 2 | 4.3 – Particle Model of Matter (Paper 1) | <ul style="list-style-type: none"> • Particle motion in gases • Pressure in gases (separate physics only) • Work done on gases (separate physics only) |
| 3 | 4.4 – Atomic Structure (Paper 1) | <ul style="list-style-type: none"> • Atoms and isotopes • Radiation |
| 4 | 4.4 – Atomic Structure (Paper 1) | <ul style="list-style-type: none"> • Radioactive contamination • Hazards and uses of radiation (separate physics only) • Nuclear fission and fusion (separate physics only) |
| 5 | 4.1 – Energy (Paper 1) | <ul style="list-style-type: none"> • Energy • Power |
| | Physics Equations | <ul style="list-style-type: none"> • Power equations • Efficiency equations |
| 6 | 4.1 – Energy (Paper 1) | <ul style="list-style-type: none"> • Energy changes in systems • Energy resources |
| | Physics Practicals | <ul style="list-style-type: none"> • Thermal insulation (separate physics only) |
| | Physics Equations | <ul style="list-style-type: none"> • Equations for changes in energy |

Throughout the year, don't forget to include quizzes on Maths in Science and Working Scientifically, as well as revisiting areas from earlier in the year to keep them in your long-term memory.

15. Log in to Educake and the home screen will appear.



16. In the purple 'Study and Quiz Yourself' box, click GCSE, then the science you want to focus on.



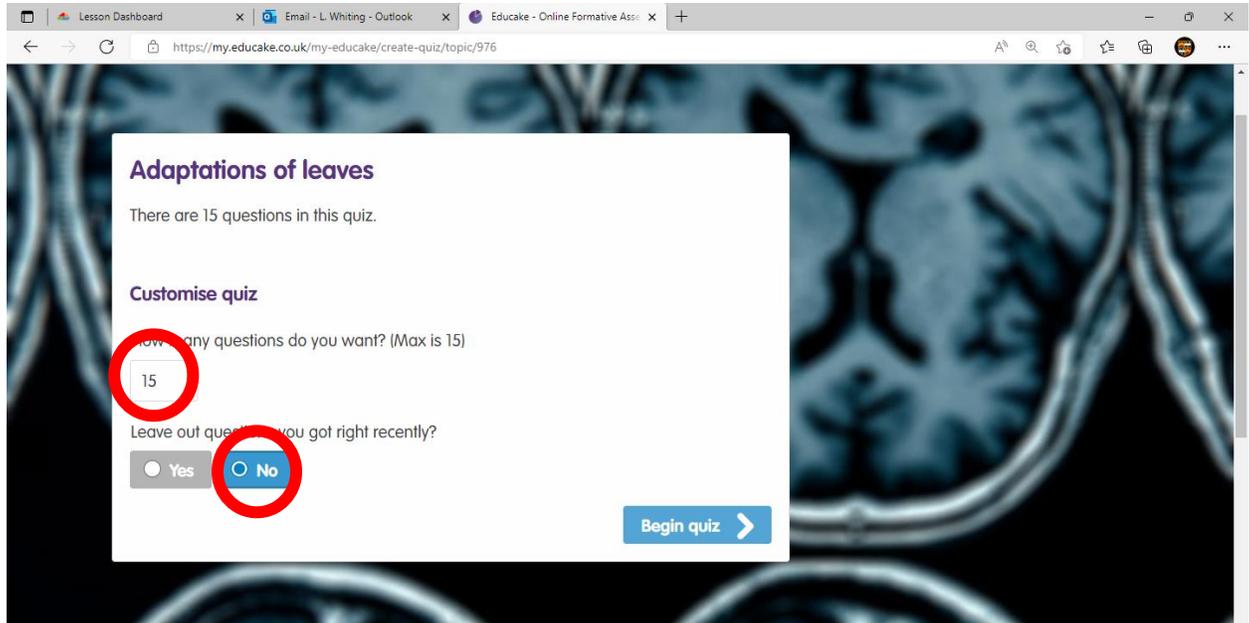
17. Select the area you want to work on...

| Topic | Qs done | % | |
|--|---------|----|--|
| Expand all | | | Select multiple topics |
| Key Stage 3 Science | 0 | 0% | Quiz > |
| ^ Biology | 0 | 0% | Quiz > |
| v Structure and Function of Living Organisms | 0 | 0% | Quiz > |
| v Material Cycles and Energy | 0 | 0% | Quiz > |
| v Interactions and Interdependencies | 0 | 0% | Quiz > |
| v Genetics and Evolution | 0 | 0% | Quiz > |

18. Select 'Quiz >' for the area you want to test yourself on.

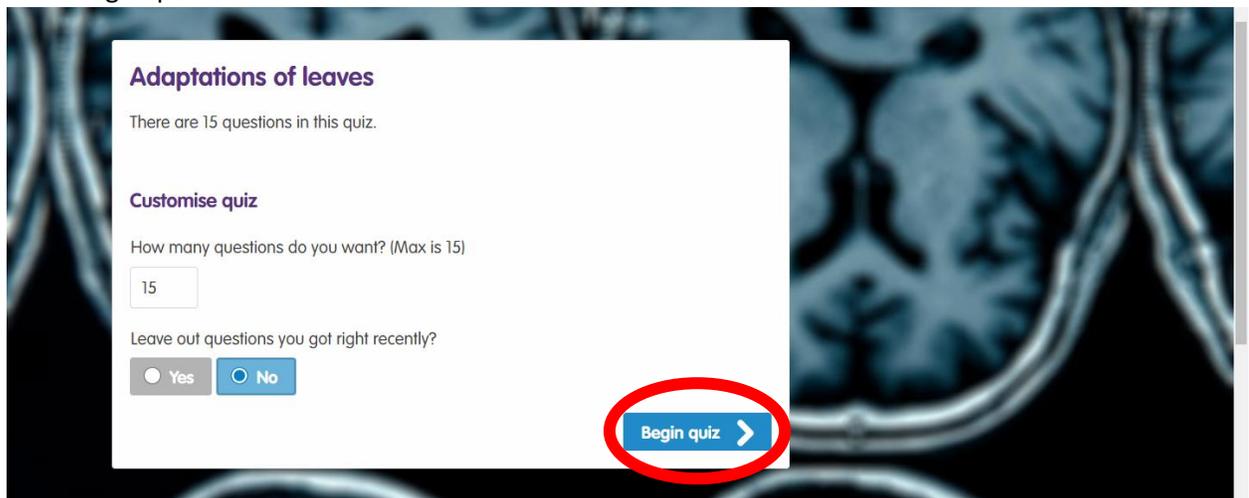
| Topic | Qs done | % | |
|--------------------------------|---------|----|---------------------------|
| ^ Material Cycles and Energy | 0 | 0% | Quiz > |
| Photosynthesis | 0 | 0% | Quiz > |
| Life Depends on Photosynthesis | 0 | 0% | Quiz > |
| Adaptations of leaves | 0 | 0% | Quiz > |
| Cellular respiration | 0 | 0% | Quiz > |
| Anaerobic respiration | 0 | 0% | Quiz > |
| Aerobic Respiration | 0 | 0% | Quiz > |

19. Choose how many questions you want to do, and whether to include questions you have recently answered correctly – selecting ‘No’ will make the test more useful as it will focus on areas for development more.



The screenshot shows a web browser window with the URL <https://my.educake.co.uk/my-educake/create-quiz/topic/976>. The page title is "Adaptations of leaves". Below the title, it says "There are 15 questions in this quiz." Under the heading "Customise quiz", there are two questions: "How many questions do you want? (Max is 15)" with a text input field containing "15", and "Leave out questions you got right recently?" with two radio buttons: "Yes" (unselected) and "No" (selected). A blue "Begin quiz" button with a right-pointing arrow is located at the bottom right of the form. Red circles highlight the "15" input field and the "No" radio button.

20. Click ‘Begin quiz >’.



This screenshot is identical to the previous one, showing the same quiz customization form. In this image, the blue "Begin quiz" button with a right-pointing arrow is circled in red.

21. Take the quiz. Make sure to read the explanations after each question, even if you got it right. If you got a low score (i.e. less than 60%), repeat the same quiz the next day. If not, try out a different topic.