

# Course Mapping Guide

## International Science - Edexcel GCSE

# 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 and science 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 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 you quickly identify which learners require additional support or further stretch.



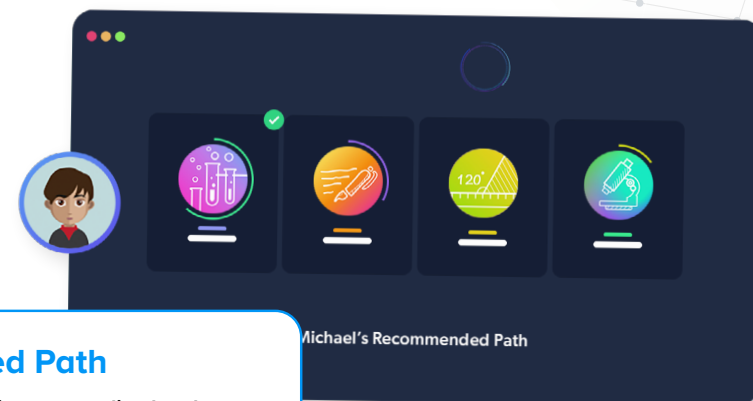
## Teacher Dashboard

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.



# Science Courses

## GCSE Edexcel

These courses are mapped to the GCSE Edexcel scheme.



Science Biology GCSE (F)



Science Biology GCSE (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.

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.

**Cardiac Muscle**

**Question**

The flow diagram below summarises the process involved in the control of blood glucose concentration by insulin. The steps in the process have been replaced with letters, A to E.

How insulin controls blood glucose concentration

After a meal

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

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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: Review the 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
Mass of mixture (sample)	24 g	× 100	
Percentage (%) = 75% (2 sf)			75%

Question: Nitric acid (HNO<sub>3</sub>) and potassium hydroxide (KOH) react to form potassium nitrate (KNO<sub>3</sub>) and water (H<sub>2</sub>O).

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 HNO<sub>3</sub> needed = \_\_\_\_\_ moles

Type your answer as a number, without a unit.



Science Chemistry GCSE (F)



Science Chemistry GCSE (H)

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# Science Courses

## GCSE Edexcel

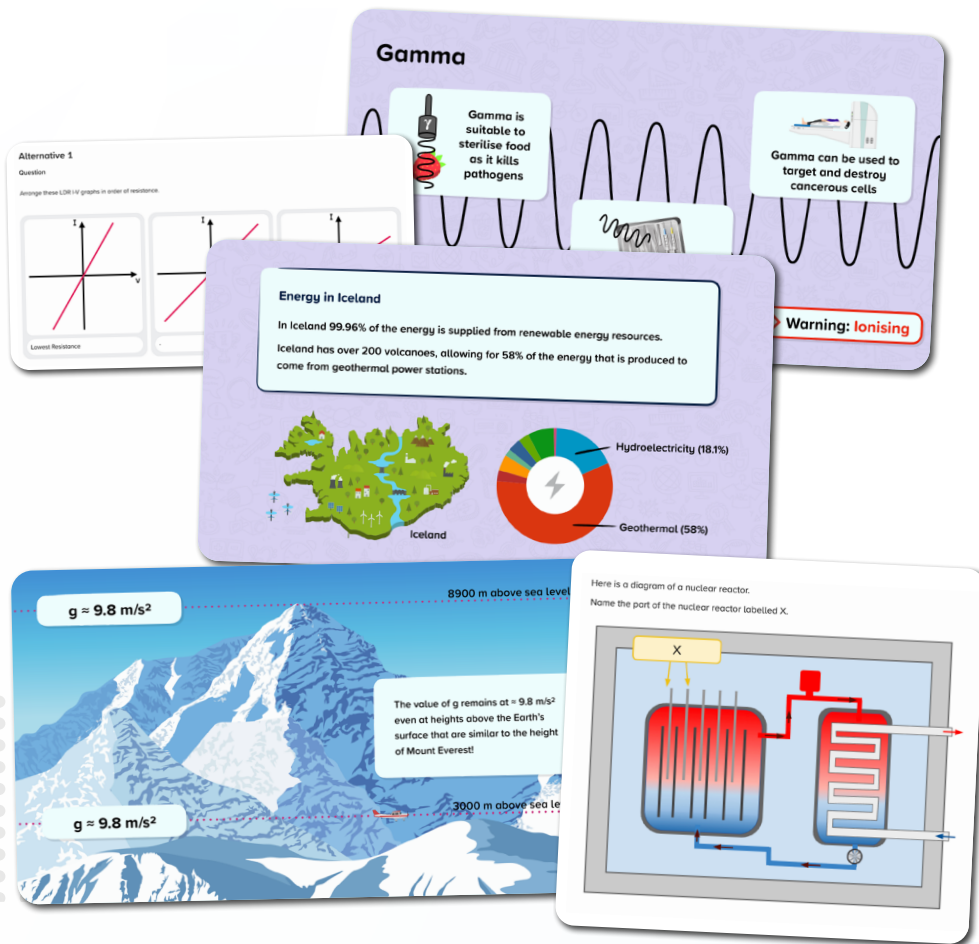
These courses are mapped to the GCSE Edexcel scheme.



Science Physics GCSE (F)



Science Physics GCSE (H)

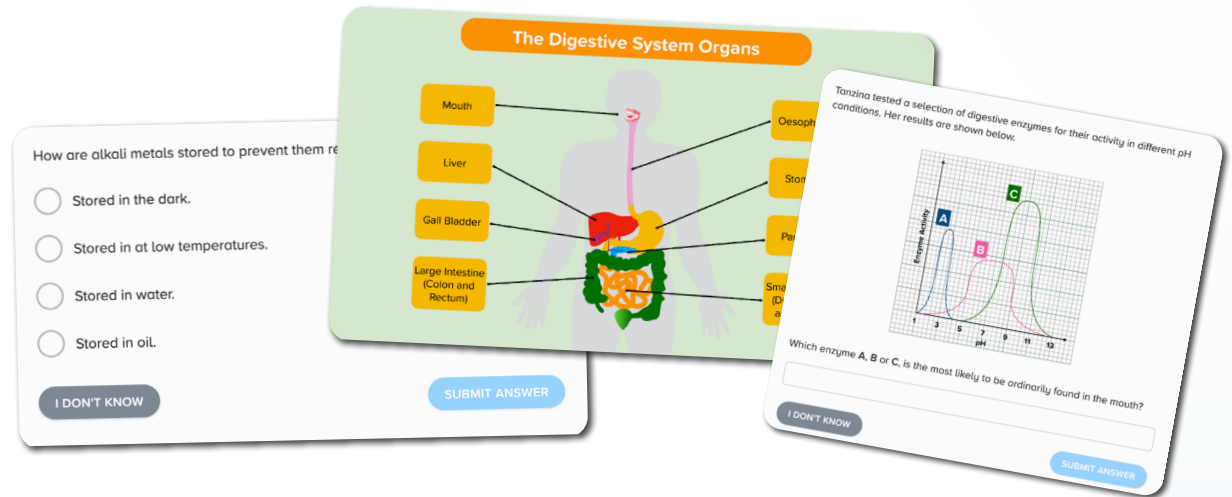


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# Science Courses

## GCSE Edexcel

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



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



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



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



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



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

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# Science Courses

## Working Scientifically Secondary

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



## Working Scientifically Secondary

The collage features four overlapping cards with various scientific illustrations and text:

- Top Left Card (Green background):** Illustrates a Bunsen burner with labels: "Barrel or Chimney", "Collar", "Air Hole", and "Gas Inlet". Text: "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."
- Top Right Card (Pink background):** Shows four target diagrams illustrating accuracy and precision. Labels below targets: "Not Accurate Not Precise", "Not Accurate Precise", "Accurate Not Precise", and "Accurate Precise". Text: "Consider an archery player: The arrows are considered to be **precise** if they are close together. They 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**."
- Bottom Left Card (Green background):** Illustrates a classic photosynthesis experiment with a beaker of water, a plant, and a gas syringe. A digital timer shows "00:03:00". Text: "Let's take a look at the classic investigation into the effect of light intensity on the rate of photosynthesis."
- Bottom Right Card (Green background):** Illustrates a neutralisation experiment with "Acid" and "Base" being added to a beaker containing "Salt + Water". Text: "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.



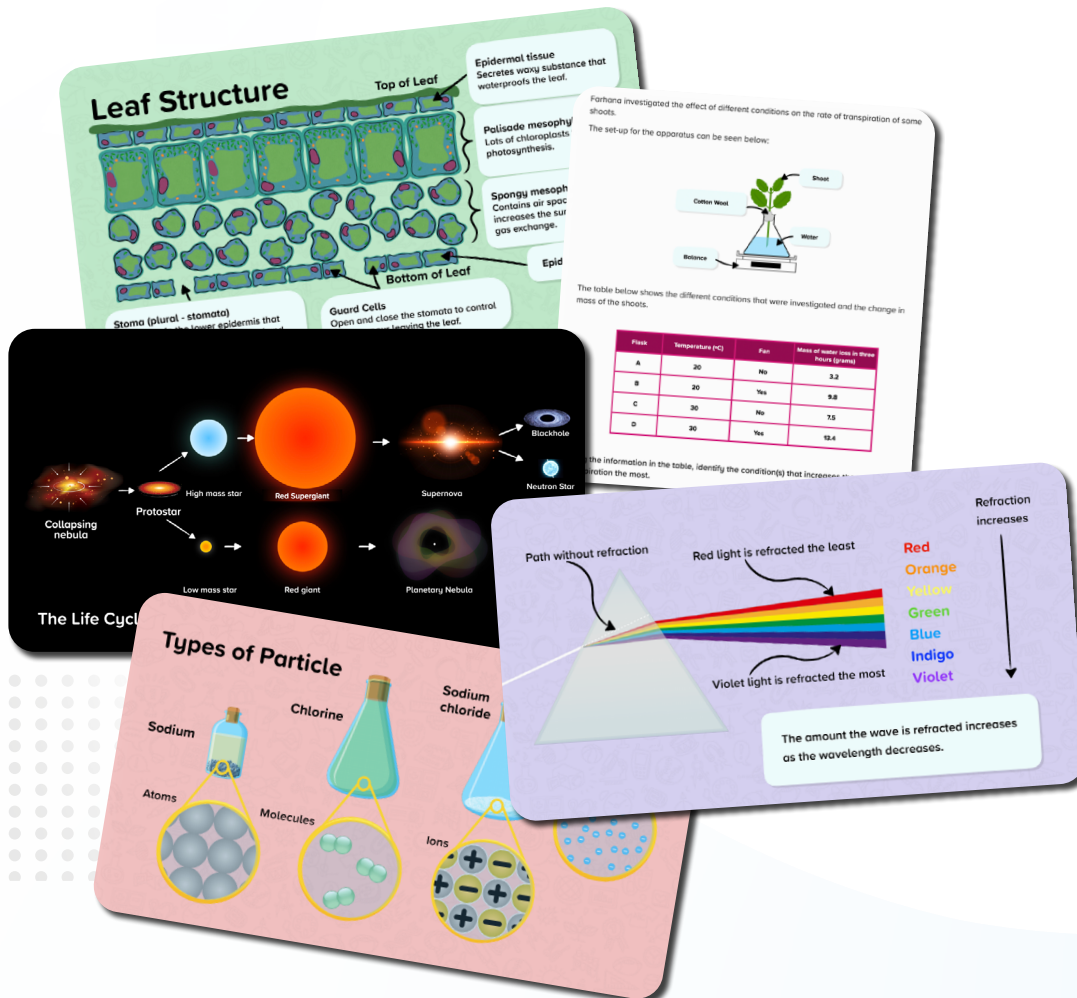
**Prepare for A-Level: Biology**



**Prepare for A-Level: Chemistry**



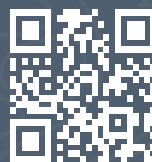
**Prepare for A-Level: Physics**



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**Questions?**  
Email [support@century.tech](mailto:support@century.tech)



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