CARDINAL NEWMAN
CATHOLIC SCHOOL

How to Revise: Science

CWK

Thursday, 30 January 2025

LEARNING OUTCOME:

To understand how to revise Science

3. How do I revise?
2. Where to revise from?
1. Review Science exam expectations

LESSON DESTINATIONS

'We are all made for greatness'

LEARNING OUTCOME: To understand how to revise science

1 **Review science exam topics**

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Bio: 13 May 2025
Chem: 19 May 2025
Physics: 22 May 2025

Paper 1 (1hr 15 trilogy/1hr 45 separates

Biology:
Topic 1: Cell biology
Topic 2: Organisation
Topic 3: Infection and response
Topic 4: Bioenergetics

Chemistry
Topic 1: Atomic structure and periodic table
Topic 2: Bonding
Topic 3: Quantitative
Topic 4: Chemical changes
Topic 5 Energy changes

Physics:
Topic 1: Energy
Topic 2: Electricity
Topic 3: Particle model
Topic 4: Atomic structure

Bio: 9 June 2025
Chem: 13 June 2025
Physics: 16 June 2025

Paper 2 (1hr 15 trilogy/1hr 45 separates

Biology:
Topic 5: Homeostasis
Topic 6: Inheritance and variation
Topic 7: Ecology

Chemistry:
Topic 6: Rate of reaction
Topic 7: Organic chemistry
Topic 8: Chemical analysis
Topic 9: Chemistry of the atmosphere
Topic 10: Earth's resources

Physics:
Topic 5: Forces
Topic 6: Waves
Topic 7: Electromagnetism
Topic 8: Space **(separates only)**

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2 Where to revise from?

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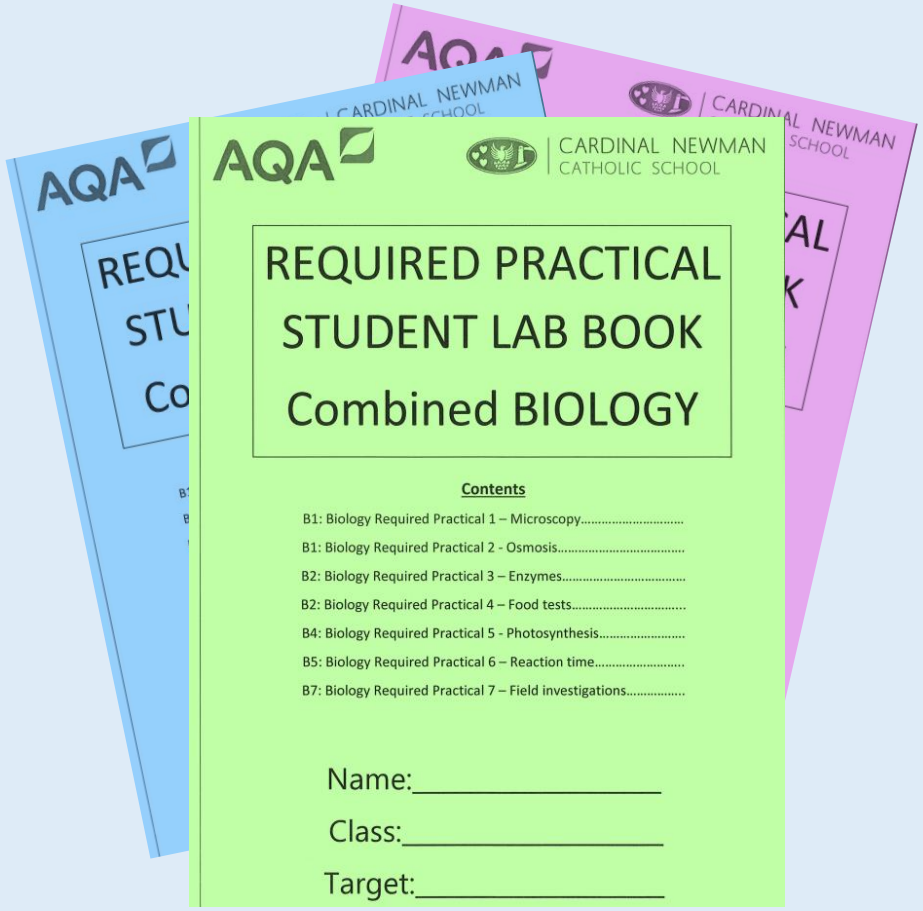
LEARNING OUTCOME: To understand how to revise science

Required Practicals



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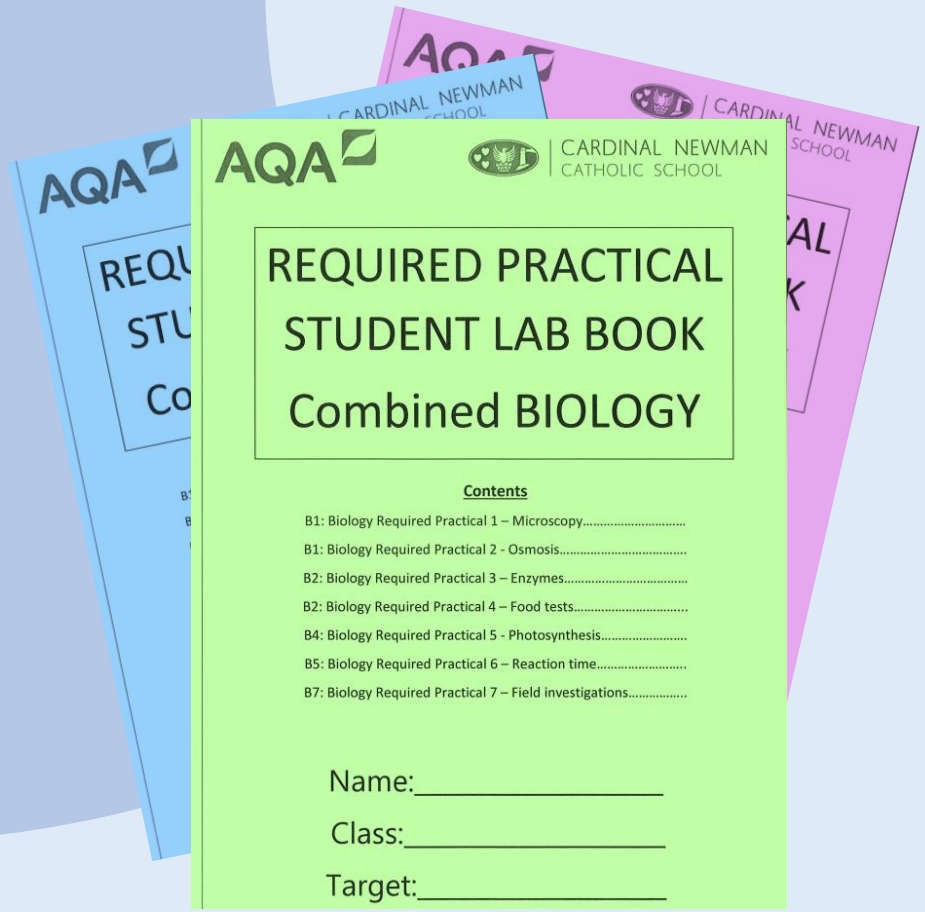
Paper 2 Required practicals (Trilogy)

Biology:
Reaction time
Field investigations

Chemistry:
Rate of reaction
Chromatography
Water purification

Physics:
Force and extension
Acceleration
Waves
Radiation and absorption



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Paper 2 Required practicals (Separate science)

Biology:
Reaction time
Plant responses
Field investigations
Decay

Chemistry:
Rate of reaction
Chromatography
Identifying ions
Water purification

Physics:
Force and extension
Acceleration
Waves
Light
Radiation and absorption

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Required practical 1 – Microscopy

http://www.bing.com/videos/search?q=microscopy+required+practical+aqa&adlt=strict&view=detail&mid=D310DDA9FC507F6103BBD310DDA9FC507F6103BB&FORM=VRDGAR

(View the practical using the link above)

Risk assessment:

Care should be taken:

cutting onion tissue

handling glass slides/cover slips

using mounting needles

Equipment list

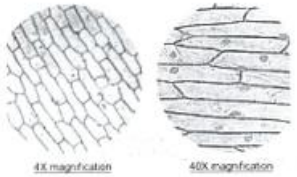
- a small piece of onion
- a knife
- a white tile
- forceps
- a microscope slide
- a coverslip
- a microscope
- iodine solution in a dropping bottle
- prepared animal and plant cells

Method

1. Use a dropping pipette to put **one** drop of water onto a microscope slide.
2. Peel off a thin layer of epidermal tissue from the inner surface and place onto the drop of water on the slide
3. Put **two** drops of iodine solution onto the onion tissue.
4. Carefully lower a coverslip onto the slide. Do this by:
   - placing one edge of the coverslip on the slide
   - use the forceps to lower the other edge onto the slide
5. Put the slide on the microscope stage.
6. Use the lowest power objective lens.

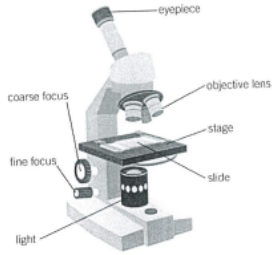
Calculating magnification

Microscopes are used to study cells. Modern **light microscopes** can magnify images about 1500 times, while **electron microscopes** can magnify images about two million times.



Microscopy Required Practical

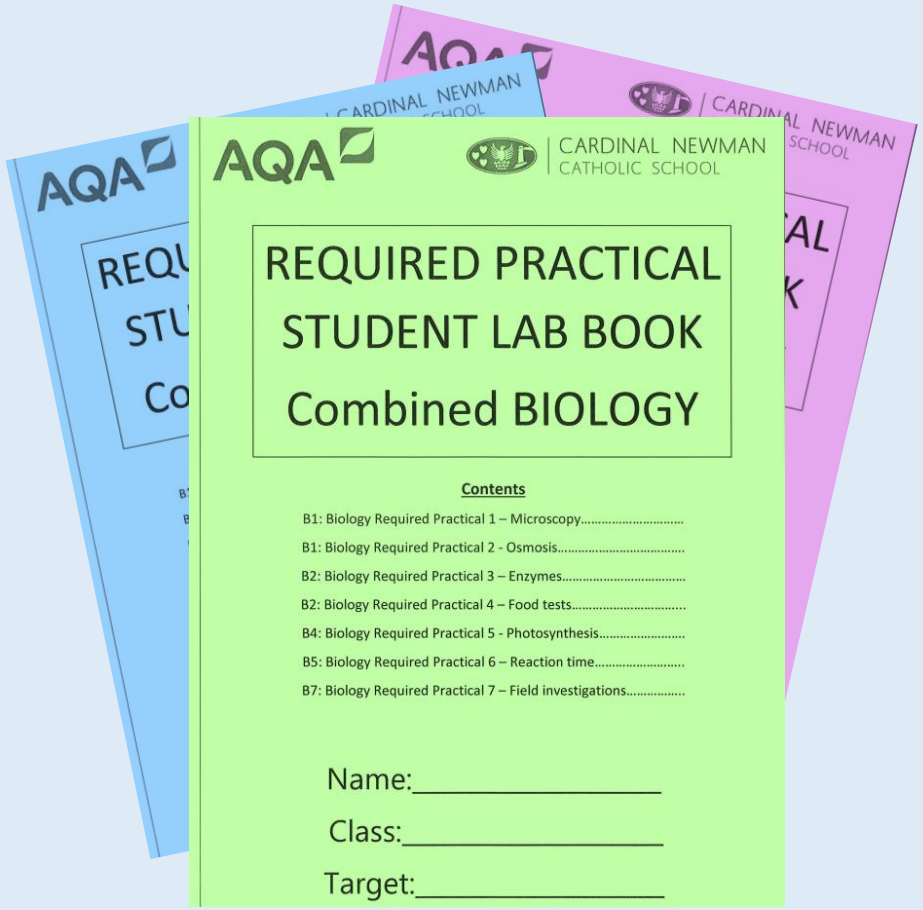
A student is asked to prepare a microscope slide to show the contents of cells from onion skin and animal tissue.



Describe how the student should carry this out, include the equipment that should be used.

1. Cut out a thin layer of an onion and using forceps peel off a thin layer from the top (skin) of the onion.
2. Place thin layer on a slide and add a few drops of iodine solution.
3. Use forceps to flatten layer on the slide and carefully lower coverslip avoiding air bubbles.
4. Place slide on the stage of the microscope.
5. Select the lowest magnification.
6. Using coarse focusing knob, move stage to the highest position.
7. Lower the stage and adjust the fine focusing knob to make the image much clearer.
8. Select a higher objective lens and repeat steps 6 and 7.

(Total 6 marks)



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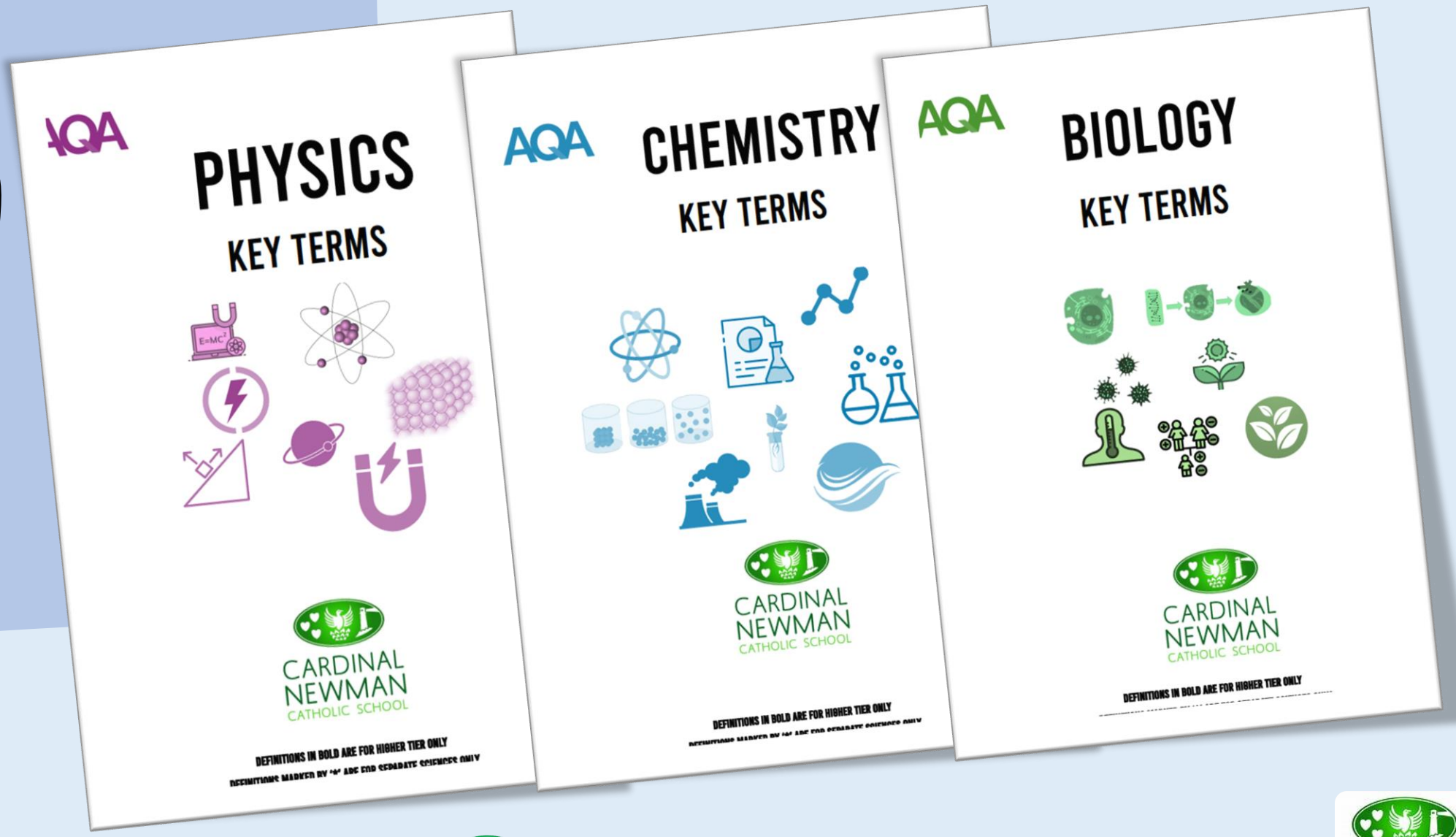
Key Terms



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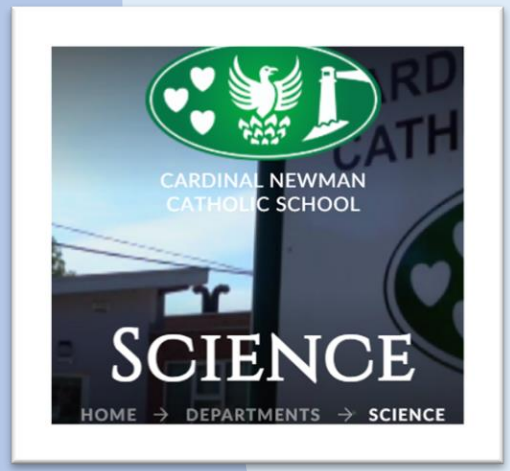
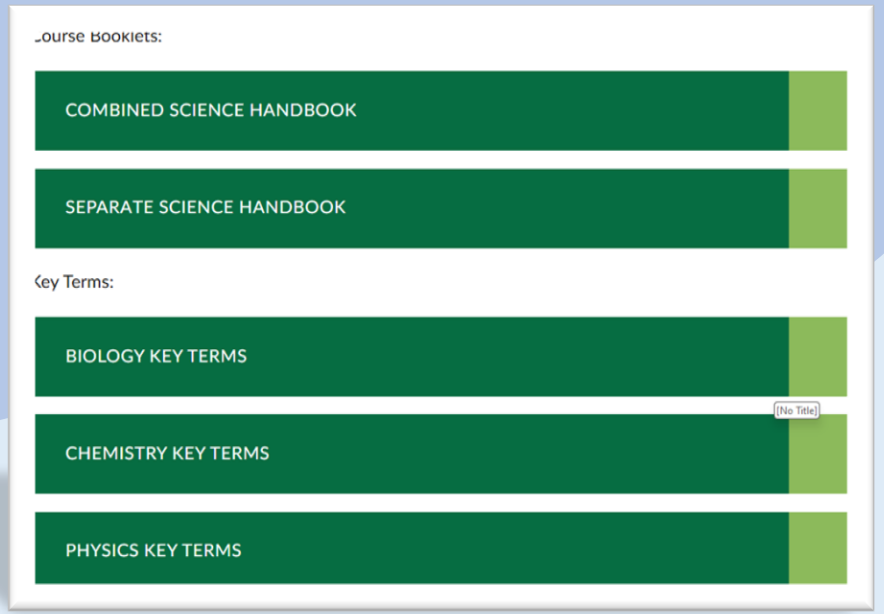
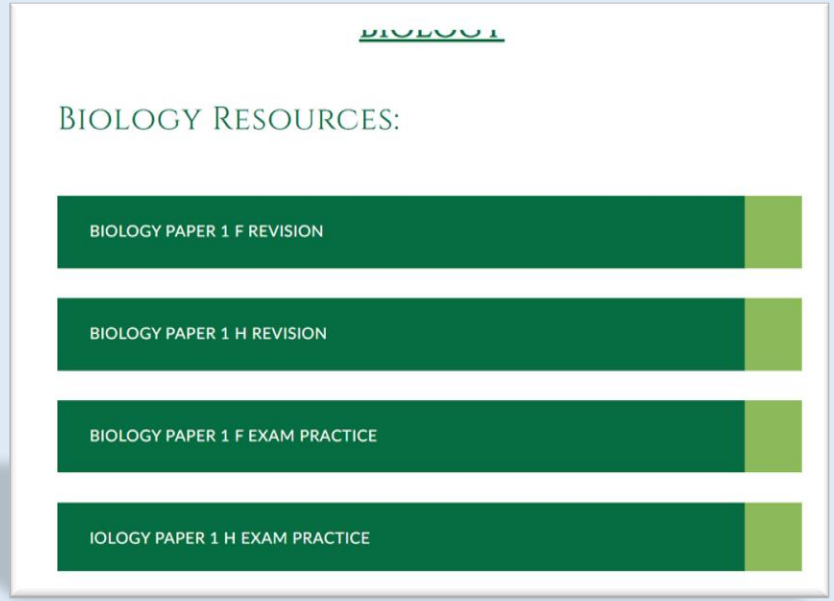
LEARNING OUTCOME: **To understand how to revise science. Where to revise from?**

Cardinal Newman website (links to topic videos, exam questions and mark schemes)
[Cardinal Newman Catholic School - Science]





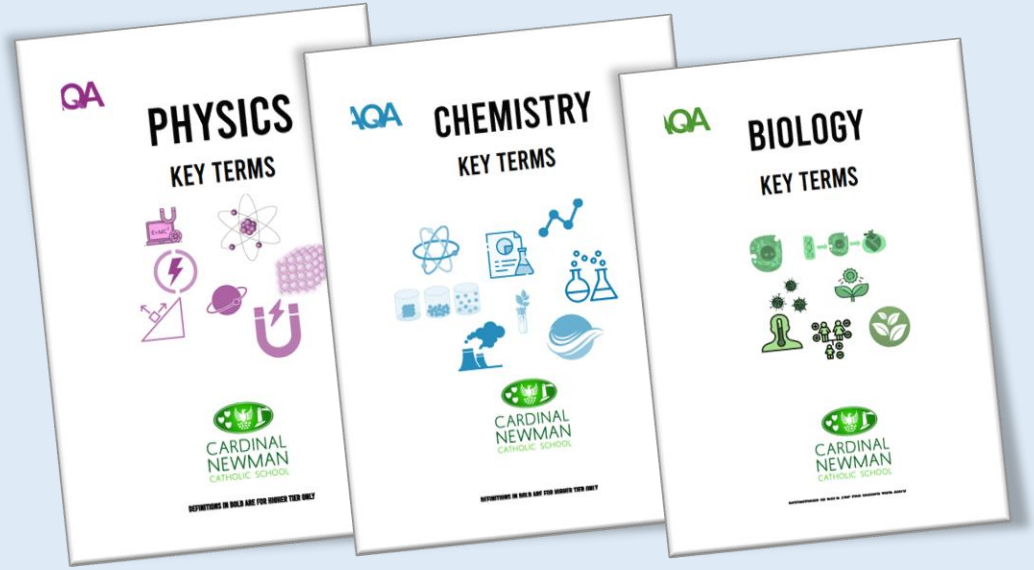


2 **Use the school website for revision**

LEARNING OUTCOME: **To understand how to revise science. Where to revise from?**

Other websites and resources:

- **Key word booklets** – write and rewrite definitions
- **BBC Bitesize** – AQA Biology, Chemistry and physics for separate science
- **BBC Bitesize** - AQA combined science for Trilogy
- **Your exercise books**
- **Your revision guide**
- **Pitstops** you have already completed
- **Educake and Seneca**
- **FreeSciencelessons.com** &
- **Primrose Kitten** videos on YouTube



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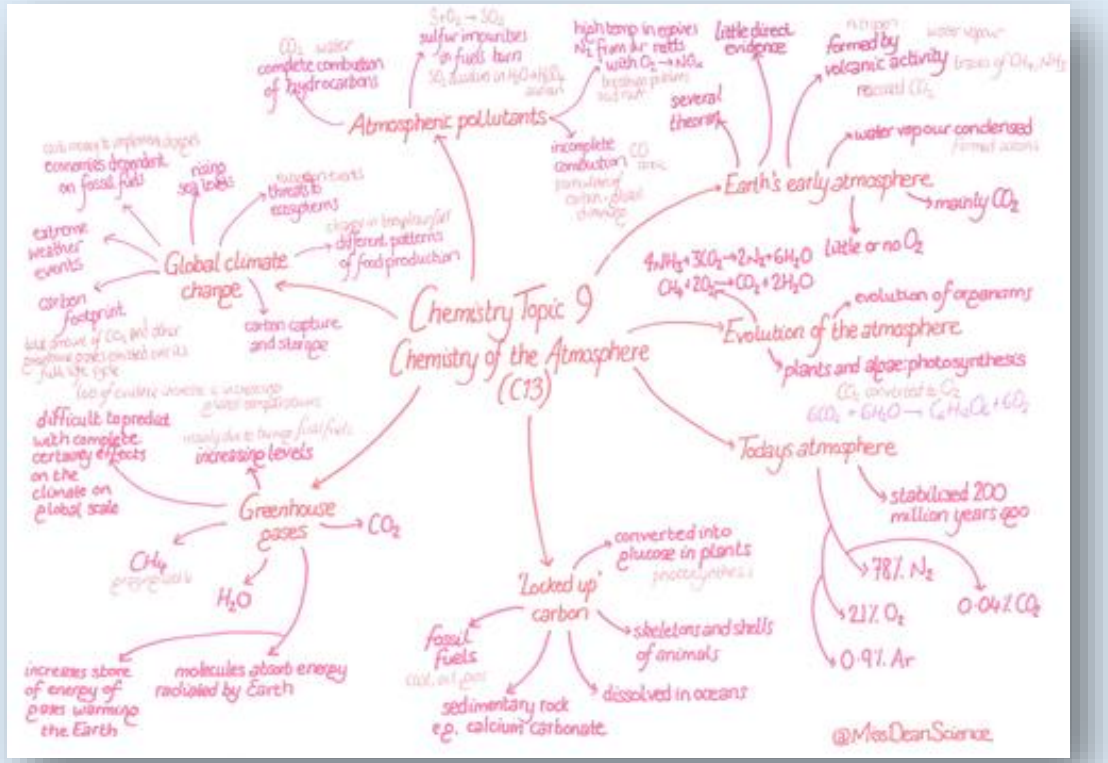
LEARNING OUTCOME: How can I revise science

1. Watching videos might help you to hear and see things explained in a slightly different way. Watch a **revision video** and create a **detailed mind map** using the school website:
2. https://www.cncs.school/page/?title=Science&pid=17
3. You can then search and watch more videos on the topics in your assessment.
4. **BBC Bitesize** GCSE - England - BBC Bitesize
5. Make **revision cards** with information on one side and questions on the back to test yourself.
6. Complete quizzes on **BBC Bitesize, Educake & Seneca**.
7. Complete the **questions in your revision guide** and mark them using the **mark schemes** in the back of the book.
8. Complete **exam questions** from the school website using your **mind maps and notes**, and then **self-assess them**



3 **How do I revise?**

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