



**NORTHGATE**

*High School*

# **Year 11 Revision Advice Evening**

Wednesday, 31<sup>st</sup> January 2024

# Programme

- Revision tips
- Revision advice from our students
- Maths, English and Science
- Coping with exam anxiety
- Further advice from our students







# Tip 1: Start early – produce a realistic weekly revision timetable












## Plan ahead



- Start early to cut down on stress
- Make a revision timetable and commit to it

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
<b>Subject or Topic A</b> Session 1: Test and reflect						
Take a Break for 5 minutes 						
<b>Subject or Topic A</b> Session 2: Revise and Summarise						
Take a Longer Break  						
<b>Subject or Topic B</b> Session 1: Test and reflect						
Take a Break for 5 minutes 						
<b>Subject or Topic B</b> Session 2: Revise and Summarise						

# Tip 2: Take regular breaks and avoid distractions

<b>Session 1</b>	1. Choose a topic from your checklist 	2. Set the timer for 25 minutes 	3. Test yourself using the methods on page 3 	4. Stop when the timer is up 	5. Reflect – make a note of what you struggled with 
<b>Take a Break for 5 minutes</b> 					
<b>Session 2</b>	1. Revisit what you struggled with from Session 1 	2. Set the timer for 25 minutes 	3. Summarise what you need to learn 	4. Stop when the timer is up 	5. Take a longer break 



Students waste **20%** of 'revision time' through distractions such as mobile phones or background noise



Before you start using this plan, you'll need to make sure you have all of the resources in place: Flashcards, mindmap or summary diagrams, exam questions.

# Tip 3: Start with a test then focus on your weak areas

## Test yourself

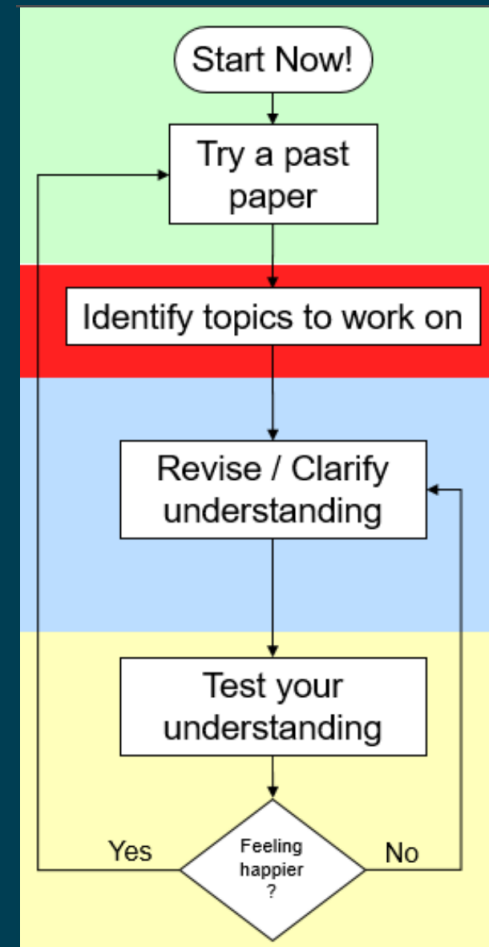


- Use flashcards – use the red, amber, green method
- Recreate information from memory
- Use past paper questions and markschemes
- Ask friends or family to test you verbally

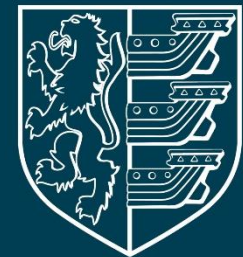
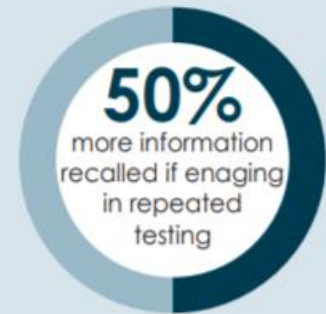
## Reflect on progress



- Make a note of what you struggled with or where you made mistakes
- Decide on what you need to do to improve
- Summarise the key points
- Ask your teacher for help if you need it



Students who engage in repeated testing recall **50%** more





# Tip 4: Use effective revision techniques

## Test yourself



- Use flashcards – use the red, amber, green method
- Recreate information from memory
- Use past paper questions and markschemes
- Ask friends or family to test you verbally

## Flash cards

Do not spend a long time making flashcards. If you do, make sure they only contain the really important things you need to remember. E.g. Definitions, quotes, formulae.

They are only useful for memorisation if you use them regularly to test your knowledge.

### Red Amber Green Technique

THE RED BOX

THE AMBER BOX

THE GREEN BOX

## Blank Page Retrieval

- Put away your class materials and write or sketch everything you know about a topic. Mind mapping is a very good way to do this.
- Then, check your class materials for accuracy and important points you missed.
- Write in the information you missed using a different colour pen.



## Past paper Questions

- Use a section from a relevant past paper, or relevant practice questions that could come up in the assessment.
- When you have finished make sure you use a mark scheme or an assessment checklist to identify gaps in your knowledge.
- Aim to recreate the conditions that you'll sit the assessment in e.g. you might ask someone at home to time you.



# Tip 5: Revisit previous learning

We start to forget information over time unless that information is actively reviewed time and time again. If students take time to revisit key information then the effects of forgetting are decreased. Ideally, important information should be revisited 24 hours after first learning. This will reduce the rate of memory loss. It should then be revisited again regularly.

## Typical Forgetting Curve for Newly Learned Information



**WARNING:** If we do not revisit information, it is likely to disappear from our memory. Cramming for revision does not work. It overloads our memory and leads to limited understanding.

# To sum up ...

## As with most things in life, there are ways to make life easy for yourself when studying for exams

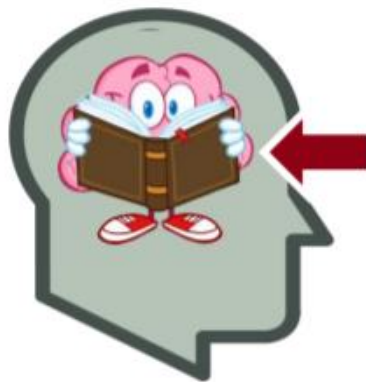
### The long way

- Feels like less effort when you're studying
- Works eventually, but very slow process – a lot of unnecessary study time

### The smart way

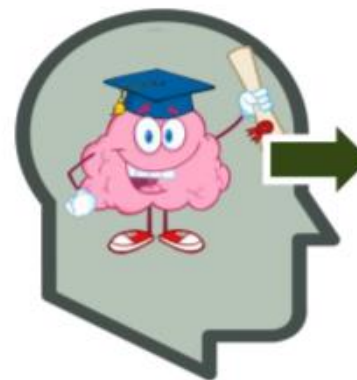
- Feels like more effort when you're studying
- BUT gets you better results, much faster

### Pushing information INTO memory



- Reading
- Making notes
- Highlighting / underlining

### Recall practice: testing yourself



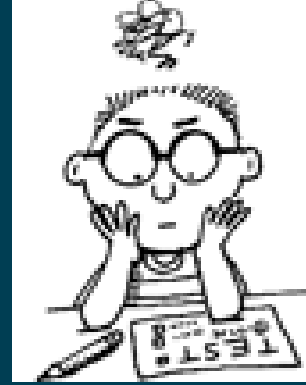
- Flashcards
- Doing test / exam questions without notes
- Summarising topic from memory on blank sheet



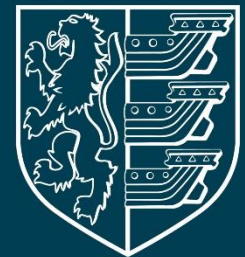
# Students

- How did you get organised?
- What revision techniques worked well for you?
- What resources did you find useful?



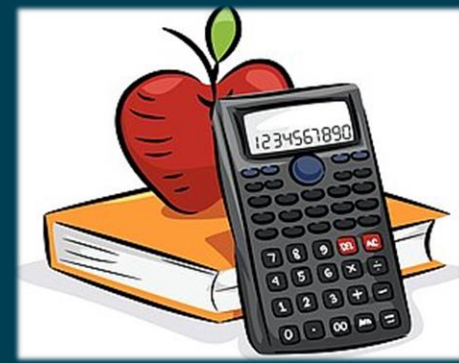


# Revising for Maths, English and Science



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# Maths (OCR)



[northgatemaths.co.uk](http://northgatemaths.co.uk)

Password = pencil

For advice from past Year 12 students:

<https://youtu.be/zevWtSFUv44>



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Start Now!

Try a past paper

Work through a past paper. Use **red pen** to show where you needed **screencast support**.

Identify topics to work on

Make a list of topics to work on based on the red ink parts of your past paper.

Revise / Clarify understanding

Use the various learning resources to revise or clarify each **red topic**.

Test your understanding

Test your revised understanding using the various quizzes, questions and exercises available.

Yes

Feeling happier?

No

## Revision Resources

- Past Papers and Screencasts – via [www.northgatemaths.co.uk](http://www.northgatemaths.co.uk)
  - From Feb-Mar concentrate on OCR J567 (old syllabus), with screencasts, to identify topics to work on
  - From April-June concentrate on OCR J560 (new syllabus), with screencasts, to practise problem-solving skills
- Other exam board papers – e.g. Edexcel 1MA1, AQA 8300
- Past paper attempts – red ink
- Teacher advice & feedback on areas for improvement
- Topic Practice questions and screencasts
  - via [www.northgatemaths.co.uk](http://www.northgatemaths.co.uk)
- My Maths lessons
  - select 'GCSE 9-1 (Eng)' from drop down list on left of page
- Sparx Maths videos ([www.sparxmaths.com](http://www.sparxmaths.com))
- Maths Genie – <http://www.mathsgenie.co.uk/gcse.html>
- Revision Guides (e.g. CGP)
- Your own notes and worked examples
- Your maths teacher
- Maths Genie – <http://www.mathsgenie.co.uk/gcse.html>
- Sparx Independent Learning Tasks
- Revision Guide Workbook or Textbook exercises
- The red ink questions from your past papers

For exam resources, advice and information...

[www.northgatemaths.co.uk](http://www.northgatemaths.co.uk)







# Northgate High School Maths Revision Portal

Tips and Tools to prepare for your exams



**110** **17** **10** ...to make a difference!  
Days Hours Mins

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Papers & Screencasts

Skills checks

Topic Practice

Other Resources

A Level

Welcome to the maths revision portal for Northgate High School students.

Papers and Screencasts

How to revise

Click a button or use the menu above to navigate

Assessment Information

Topic Practice

# J560 (New Syllabus) Higher Past Papers and Screencasts

[Click here if the table is blank](#)

[Link to available Mark Schemes](#)

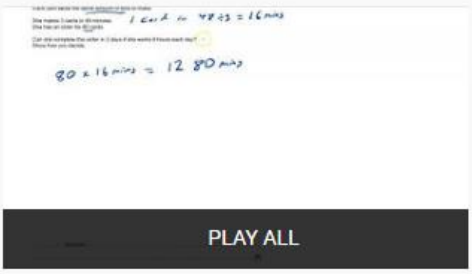
Use the table below to find the past paper and screencasts you need. You can download the past paper as a PDF to print out and you can click on the Play link to go directly to the supporting screencasts on YouTube.

Year	Month	Type	Paper 4 Download	Paper 4 Screencast	Paper 5 Download	Paper 5 Screencast	Paper 6 Download	Paper 6 Screencast
2015	Practice Set 1	Practice	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2016	Practice Set 3	Practice	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2016	Practice Set 2	Practice	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2017	Nov	Past Paper	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2017	June	Past Paper	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2018	Nov	Past paper	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2018	June	Past paper	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2019	June	Past Paper	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>
2019	Nov	Past Paper	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>	<a href="#">Download</a>	<a href="#">Play</a>

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  - Learning
  - Sports



## OCR J560 2019 Nov Paper 4 GCSE maths screencasts


19 videos • 827 views • Last updated on Nov 28, 2020


Unlisted


≡+ ↺ ↻ ⋮


These are best used as support when doing a past paper. If you are unsure when doing the paper, play the screencast, but pause it as soon as you can so that you are doing the maths and not just watching the screencast. If you need to check your answer, just go to the end of the screencast. If you scroll straight to the end and copy it all down, you will get much better at copying, but your maths will not get better! Any mistakes are ours, but many thanks to OCR for allowing me to upload these screencasts.


 Charlie Dawson [SUBSCRIBE](#)


- 


**J560 2019 November paper 4 Q1**  
Charlie Dawson  
1:55
- 


**J560 2019 November paper 4 Q2**  
Charlie Dawson  
2:19
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**J560 2019 November paper 4 Q3**  
Charlie Dawson  
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**J560 2019 November paper 4 Q4**  
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5:12
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**J560 2019 November paper 4 Q5**  
Charlie Dawson  
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**J560 2019 November paper 4 Q6**  
Charlie Dawson  
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**J560 2019 November paper 4 Q7**  
Charlie Dawson  
4:02
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**J560 2019 November paper 4 Q8**  
Charlie Dawson  
3:00
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**J560 2019 November paper 4 Q9**  
Charlie Dawson

# Maths Advice

- Students must resist the urge to use the screencasts to just copy answers.
- They should be used as an **aid** to prompt prior learning.
- The students need to be **doing** the Maths, **not copying** the Maths, as this will develop the deeper learning.
- There is a screencast on how to use screencasts on the How to Revise page of the website.







# English Language (AQA)

- Use the language **past papers** provided
  - Ask your teachers
- Always work to teacher-taught **timings** per question.
- Learn the key **techniques** for each reading-style question.
- Practise lots of **plans** for the writing sections.
- Work on **openings/endings** and creating a carefully-structured written answer



# English Literature (AQA)

Try using **flashcards** ...

- **On one side:**

- Put the **quotation** you need to learn.

- **On the other side:**

- **Who** said it?

- **When?**

- **How** is it said?

- Language devices

- **Why** is it important?

- How does it connect to the message of the play/novel/poem?








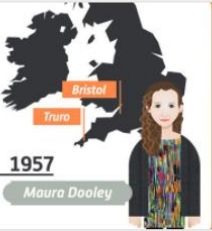



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<p><b>Captain John</b></p>  <p><b>Augusta Maria Byron</b></p>	<p>When We Two Parted by Lord Byron [AQA]</p> <p>Last visited: 2 years ago</p>	<p><b>Unifying spirit</b></p>  <p><b>Pantheism</b></p>	<p>Love's Philosophy by Percy...</p>	<p>Acted out the <b>Battle of Troy</b></p> <p>Educated at home</p> 	<p>Porphyria's Lover by Robert...</p>
<p><b>Laudanum</b></p> 	<p>Sonnet 29 - 'I think of...</p> <p>Last visited: a minute ago</p>	<p><b>Thomas Hardy</b></p>  <p><b>Famous novelist</b></p>	<p>Neutral Tones by Thomas Hardy [AQA]</p>	<p><b>1957</b></p>  <p><b>Maura Dooley</b></p>	<p>Letters From Yorkshire by Maura...</p>
 <p><b>Chose wives on how useful they could be</b></p> <p><b>Skills useful on farm</b></p>	<p>The Farmer's Bride by Charlotte...</p>	 <p><b>Nicholas Blake</b></p>	<p>Walking Away by Cecil Day Lewis [AQA]</p>	<p><b>Charles Causley</b></p>  <p><b>Launceston, Cornwall, 1917</b></p>	<p>Eden Rock by Charles Causley [AQA]</p>



# Mr Bruff - Youtube



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## AQA English Language Playlists



AQA English Language Paper 1

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## GCSE Poetry: Choose Your Cluster



AQA 'Power and Conflict' Poetry

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AQA 'Love and Relationships' Poetry

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Edexcel 'Conflict' Poetry

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Edexcel 'Relationships' Poetry

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Edexcel 'Time and Place' Poetry

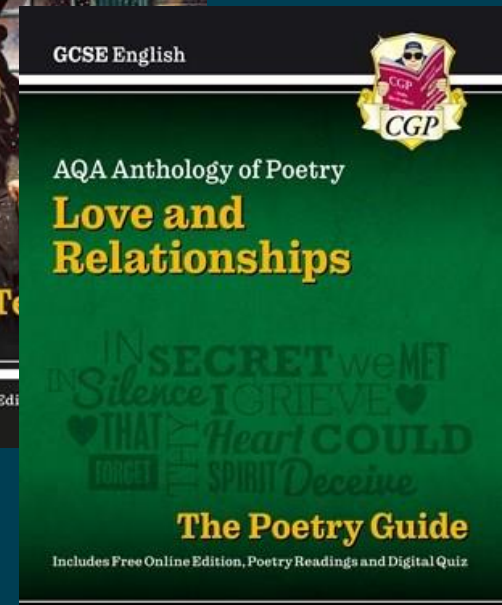
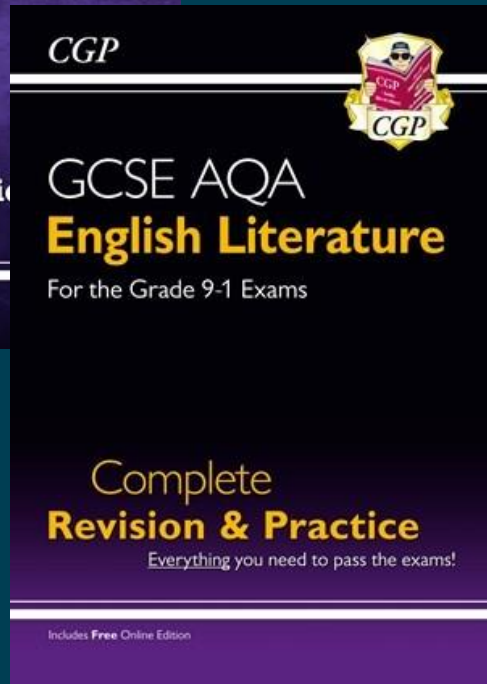
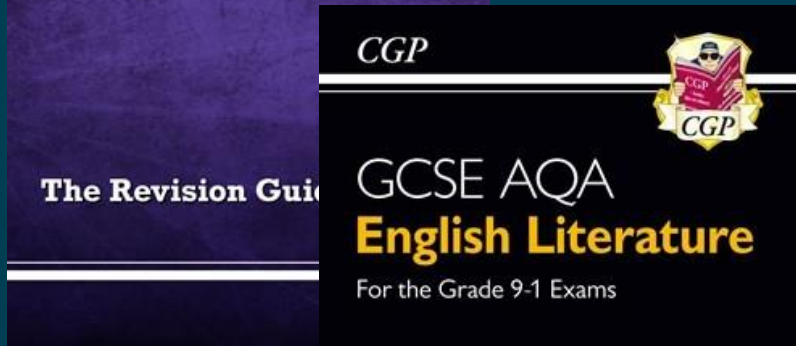
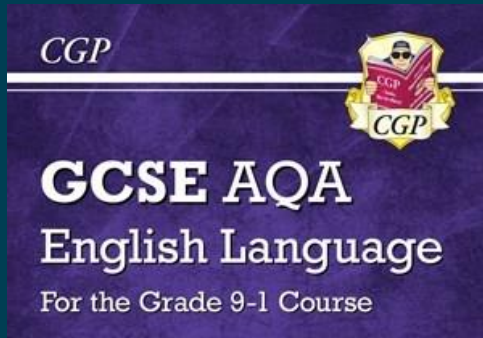
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OCR 'Love & Relationships' Poetry

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# English Revision Guides



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## AQA GCSE English Revision

### Paper 1 – Shakespeare and the 19th-century Novel

Section A:  
**Macbeth**

Section A:  
**Romeo and Juliet**

Section B:  
**The Strange Case of Dr Jekyll and Mr Hyde**

Section B:  
**A Christmas Carol**

### Paper 2 – Modern Texts and Poetry

Section A:  
**An Inspector Calls**

Section B:  
**Poetry: Love and Relationships**

Section B:  
**Poetry: Power and Conflict**

Section C:  
**Unseen Poetry**

# Macbeth

## Notes

- [Brief Overview](#)
- [Context](#)
- [Glossary of Key Terms](#)
- [Key Terms Flashcards](#)

## Exam Prep

- [Guide to Paper 1 - AQA English Literature GCSE](#)
- [Guide to Paper 1](#)
- [How to plan and write a top mark essay - English Literature GCSE](#)
- [How to plan and write a top mark essay](#)

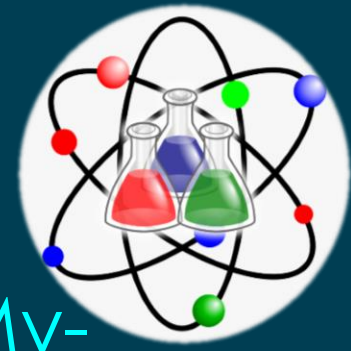
## Character Profiles

- [Banquo](#)
- [Lady Macbeth \(Brief\)](#)
- [Macbeth \(Brief\)](#)
- [Macduff](#)
- [The Witches](#)

## Themes

- [Abuse of Power and Kingship](#)
- [Ambition](#)
- [Appearance vs Reality](#)
- [Gender](#)
- [Guilt, Innocence and Paranoia](#)

# Sciences (AQA)



- **Test** (using exam paper questions, [My-GCSEScience.com](https://www.my-gcse-science.com) quizzes and criteria sheets).
- **Diagnose** 'weak areas'.
- **Address** weak areas (using the revision guides, videos and the Learning Portal resources).
- Don't forget the **required practicals**, the other **practical skills** and the **maths skills**.





# Criteria Sheets

## Topic 4. Bioenergetics – Criteria sheet

### 4.1 Photosynthesis

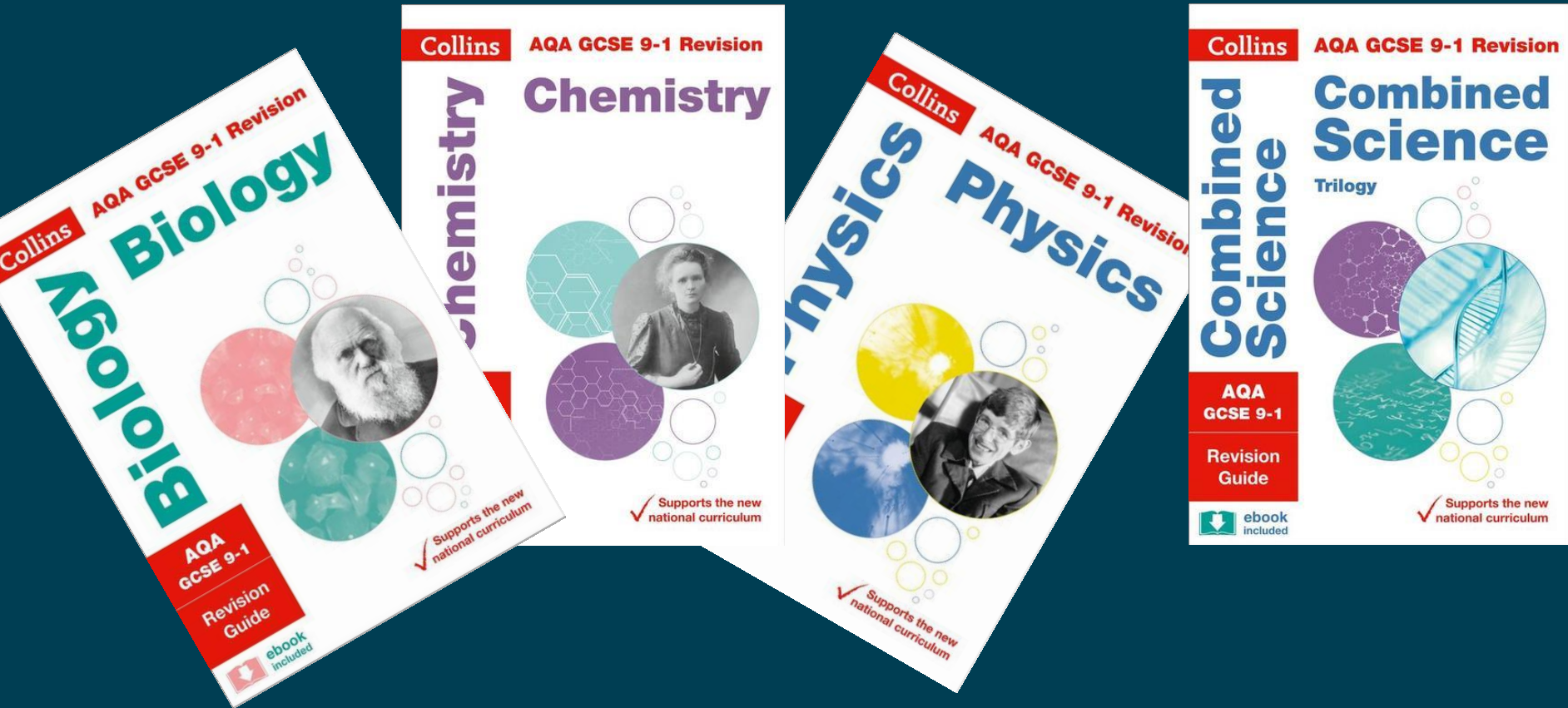
#### Photosynthetic reaction - p.42

Specification Content	☹	☺	☺
Photosynthesis is represented by the equation:  $\text{carbon dioxide} + \text{water} \xrightarrow{\text{light}} \text{glucose} + \text{oxygen}$			
Recognise the chemical symbols: $\text{CO}_2$ , $\text{H}_2\text{O}$ , $\text{O}_2$ and $\text{C}_6\text{H}_{12}\text{O}_6$ .			
Describe photosynthesis as an endothermic reaction in which energy is transferred from the environment to the chloroplasts by light.			

#### Rate of photosynthesis - p.42-43

Specification Content	☹	☺	☺
Explain the effects of temperature, light intensity, carbon dioxide concentration, and the amount of chlorophyll on the rate of photosynthesis.			
Be able to:			
• measure and calculate rates of photosynthesis			
• extract and interpret graphs of photosynthesis rate involving one limiting factor			
• plot and draw appropriate graphs selecting appropriate scale for axes			
• translate information between graphical and numeric form.			
(HT only) These factors interact and any one of them may be the factor that limits photosynthesis.			
(HT only) Students should be able to explain graphs of photosynthesis rate involving two or three factors and decide which is the limiting factor.			
(HT only) Students should understand and use inverse proportion - the inverse square law and light intensity in the context of photosynthesis.			
(HT only) Limiting factors are important in the economics of enhancing the conditions in greenhouses to gain the maximum rate of photosynthesis while still maintaining profit.			
(HT only) W5 1.4 Use data to relate limiting factors to the cost effectiveness of adding heat, light or carbon dioxide to greenhouses.			
RPA 6 Investigate the effect of light intensity on the rate of photosynthesis using an aquatic organism such as pondweed.			

# Revision Guides



# The Learning Portal



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1. Criteria Sheets

September 13, 2022

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2. Exam Questions by Topic

October 18, 2018

NHS\Administrator



3. Exam Papers - Whole

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NHS\Administrator



4. Required Practicals

October 18, 2018

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5. Revision Planners

September 12, 2022

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6. Specifications

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7. Maths in Science

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8. Independence Tasks

October 18, 2018

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9. Revision by Topic
















October 18, 2018

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[\\_Learning Portal](#) > [Science](#) > [2. GCSE Revision](#) > [2. Exam Questions by Topic](#) > [Combined Science](#) > [Biology](#) > **Topic 1 - Cell Biology**

 Name ▾	Modified ▾	Modified By ▾	Shared With ▾	Shared With De... ▾
 Combined Biology, Topic 1, Level 1 - Mark Schemes.pdf	October 31, 2018	D Elmer		
 Combined Biology, Topic 1, Level 1 - Questions.pdf	October 31, 2018	D Elmer		
 Combined Biology, Topic 1, Level 2 - Mark Schemes.pdf	October 31, 2018	D Elmer		
 Combined Biology, Topic 1, Level 2 - Questions.pdf	October 31, 2018	D Elmer		
 Combined Biology, Topic 1, Level 3 - Mark Schemes.pdf	October 31, 2018	D Elmer		
 Combined Biology, Topic 1, Level 3 - Questions.pdf	October 31, 2018	D Elmer		



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 Chromatography 1..mp4	October 30, 2018	D Elmer
 Chromatography 2..mp4	October 30, 2018	D Elmer
 Electrolysis 1.mp4	October 30, 2018	D Elmer
 Electrolysis 2.mp4	October 30, 2018	D Elmer
 Identifying Ions 1 - Triple Only.mp4	October 30, 2018	D Elmer
 Identifying Ions 2 - Triple Only.mp4	October 30, 2018	D Elmer
 Making Salts 1.mp4	October 30, 2018	D Elmer
 Making Salts 2.mp4	October 30, 2018	D Elmer
 Neutralisation 1 - Triple Only.mp4	October 30, 2018	D Elmer
 Neutralisation 2 - Triple Only.mp4	October 30, 2018	D Elmer
 Rates of Reaction 1.mp4	October 30, 2018	D Elmer
 Rates of Reaction 2.mp4	October 30, 2018	D Elmer
 Temperature Changes 1.mp4	October 30, 2018	D Elmer
 Temperature Changes 2.mp4	October 30, 2018	D Elmer

# Chemistry

## Triple and Combined Science

### Water Purification

Analysis and purification of water samples from different sources, including pH, dissolved solids and distillation.

#### Method

##### Testing for pH

- Remove a small sample of the sea water.
- Test using universal indicator solution or universal indicator paper.
- Compare the colour to a colour chart.
- Repeat for spring water and rain water.

##### Testing for dissolved solids

- Weigh a watch glass and fill it with 4 cm<sup>3</sup> of sea water.
- Heat over a beaker of boiling water.
- When all the water has evaporated from the watch glass, reweigh it.
- Subtract the initial mass to find the mass of the dissolved solids.
- Repeat with the other water samples.

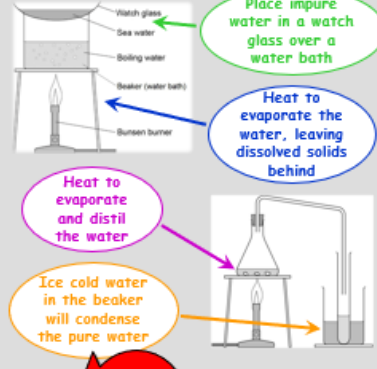
##### Distillation

- Pour some of the sea water sample into a conical flask.
- Place on a tripod over a Bunsen burner.
- Attach a delivery tube to the top, going to a test tube in a beaker of ice-cold water.
- Heat the conical flask to boil the sea water.
- The water molecules will evaporate off and then condense inside the test tube.
- Ensure that the end of the delivery tube does not go under the water being collected.

##### Checking for purity after distillation

- Repeat the dissolved solids test and the pH test with the distilled water and compare the result to those collected before.

#### The set-up



Check out some videos here

#### Analysing Data

Water Sample	pH	Mass (g)		
		Watch Glass	Watch Glass + Dissolved Solids	Dissolved Solids
Sea	8.1	30.23	30.38	0.15
Spring	6.5	30.23	30.24	0.01
Rain	5.5	30.23	30.23	0.00
Distilled	7.0	30.23	30.23	0.00

#### pH test results

- Sea water is slightly **alkaline**. This is due to **carbonates** dissolved in the water.
- Rain water is naturally **acidic** due to carbon dioxide dissolving in it to form **carbonic acid**.
- Spring water **varies**, depending on the source it is collected from and the **rocks** and **soil** it has run through.
- Distilled water has **nothing** dissolved in it, so has a pH of 7 - **neutral**.

#### Dissolved solids results

- Sea water has lots of dissolved **salts**, which are left behind when the **water** has **evaporated** away.
- Spring water has **more** dissolved solids than rain water because it has run through the **ground** and will have dissolved some solids on the way.
- Distilled water will have **no** dissolved solids - they are **left behind** during distillation because they **don't** evaporate.

#### Potable water

- Distilled water will be **pure**. It will contain **no solids or dissolved substances**. It is therefore safe to drink (potable).
- Potable water can still contain **some** dissolved substances, but must have **low enough** levels of **microbes** and dissolved **salts** to be **safe to drink**.

#### Limitations and Sources of Error

- Any water droplets left in/on the watch glass will affect the mass recorded and cause inaccurate results.
- If the impure water is heated too rapidly, it will **boil over** and send impure water through the delivery tube. This will **contaminate** the product.
- If the end of the delivery tube goes under the water being collected, **suck-back** will occur when the heat source is removed (as the gases contract).

#### Improvements

- Dry** the watch glass carefully on the bottom and ensure that all the water has **evaporated** before reweighing.
- Use an **electric heater** to heat the impure water **gently** to ensure that it does not boil **over** or **remove** the Bunsen burner when bubbles become too vigorous.
- Using a more complex **condenser** means that the end of the delivery tube can be suspended higher above the collection vessel.

# Physics

## Triple and Combined Science

### Density

Use appropriate apparatus to make and record the measurements needed to determine the densities of regular and irregular solid objects and liquids.

Volume should be determined from the dimensions of regularly shaped objects and by a displacement technique for irregularly shaped objects.

#### Method

##### Testing regular solid objects

- Use a ruler to measure the object's **length, width and height** to the nearest millimetre (mm). **Convert** into metres (m).
- Calculate the object's volume in m<sup>3</sup>.
- Use an electronic balance to record the mass of the object to the nearest gram (g).
- Convert** mass into kilograms (kg).
- Calculate **density** in kg/m<sup>3</sup>.

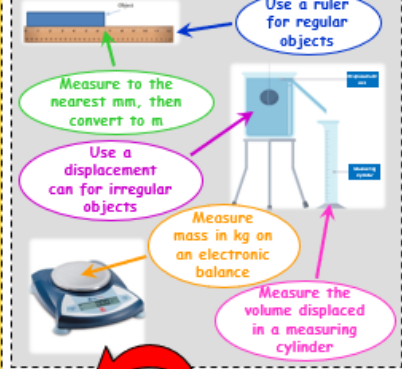
##### Testing irregular solid objects

- Measure the object's **mass** using an electronic balance, in g. **Convert** to kg.
- Fill a displacement can with water, stand it on a tripod and allow the water to drain until no more comes out of the spout.
- Place a measuring cylinder under the spout.
- Lower the object into the displacement can (this can be done using a piece of cotton).
- Water will be displaced out of the spout into the measuring cylinder.
- Record the **volume** of water displaced (the object's volume) in cm<sup>3</sup>. **Convert** to m<sup>3</sup>.
- Use the data to calculate density.

##### Testing liquids

- Measure the **volume** of some of the liquid in a measuring cylinder in cm<sup>3</sup>. **Convert** to m<sup>3</sup>.
- Place an empty beaker on an electronic balance and record its mass in g.
- Pour the liquid into the beaker.
- Record the new mass in g.
- Subtract** the empty beaker mass to calculate the liquid's mass. **Convert** to kg.

#### The set-up



Check out some videos here

#### Analysing Data

Regular object	Size measurements (m)			Volume (m <sup>3</sup> )	Mass (kg)	Density (kg/m <sup>3</sup> )
	Length	Width	Height			
1	0.107	0.067	0.049	0.000351	0.943	2,684
2	0.058	0.048	0.034	0.000095	0.682	7,205
3	0.081	0.065	0.030	0.000158	1.406	8,902

#### Outcomes

- For the regular solid objects:
  - Compare the calculated densities to values for 'known' substances.
  - In this example, object 1 is **closest to aluminium**, object 2 is **zinc** and object 3 is **copper**.
- For the irregular solid objects and for liquids:
  - Density is calculated in exactly the same way from the mass and volume measurements.
  - Density is usually calculated in **kg/m<sup>3</sup>**, but can sometimes be calculated in **g/cm<sup>3</sup>**.

Known substances	Density (kg/m <sup>3</sup> )
Aluminium	2,720
Titanium	4,500
Zinc	7,135
Copper	8,940
Lead	11,340
Gold	19,320

#### Converting Lengths and Masses

- There are 1,000 mm in 1 m.  
So, 81 mm =  $\frac{81}{1,000}$  = 0.081 m
- There are 1,000 g in 1 kg.  
So, 1,416 g =  $\frac{1,416}{1,000}$  = 1.416 kg

#### Density

- Density =  $\frac{\text{mass}}{\text{volume}}$
- That's  $\rho = \frac{m}{V}$
- e.g.  $\rho = \frac{1,416 \text{ kg}}{0.000158 \text{ m}^3}$  = 8,962 kg/m<sup>3</sup>

#### Volume

- Multiply all sides together.  
e.g.  $0.081 \times 0.065 \times 0.010$  = 0.000158 m<sup>3</sup>
- Also, 1,000,000 cm<sup>3</sup> are in 1 m<sup>3</sup>.
- So, divide by 1,000,000 if you need to convert from cm<sup>3</sup> to m<sup>3</sup>.

#### Limitations and Sources of Error

- Larger measuring cylinders have a lower **resolution**, leading to more **uncertainty** in the volume measurement.
- Viewing the measuring cylinder incorrectly can lead to inaccurate volume measurements.
- For irregular objects, the volume recorded will be inaccurate if the object does not completely submerge.

#### Improvements

- Use the **smallest** measuring cylinder possible for the volume being measured, to **maximise resolution**.
- Always view the measuring cylinder at **eye level** and read the volume from the **bottom** of the **meniscus**.
- For objects less dense than water, use a thin needle to push the object **below** the surface of the water.

# My-GCSEScience.com



- Helps to **organise** revision by showing progress in every section.
- Red, amber, green used to **diagnose** weak areas.
- Videos, multiple choice quizzes and exam questions.



# Paper 1

## 1. Atomic structure



✓ Atoms, elements, compounds, mixtures →

✓ Separating mixtures →

– Scientific models of the atom →

✓ Atomic Structure →

– Relative Atomic Mass →

✓ Electronic Structure →

✓ The Periodic Table →

✓ Group 0 – The Noble Gases →

✓ Group 1 – The Alkali Metals →

✓ Group 7 – Halogens →

○ Transition elements →

### Multiple Choice Quiz

Answer these questions to show you've understood the topic. The result is linked to the Progress Tracker. Score an amber for most questions correct, or a green for all correct.

- 1 Where are the transition elements found in the periodic table?
  - In the centre
  - On the left
  - At the top
  - On the right
- 2 Which of the following statements about transition elements is correct?
  - They are metals that form positive ions
  - They are non-metals that form negative ions
  - They are non-metals that form positive ions
  - They are metals that form negative ions
- 3 Which of the following is not a property of the transition elements?
  - They are strong
  - They have high melting points
  - They form coloured compounds
  - They are very reactive
- 4 Which copper ion is present in copper(II) sulfate?
  - $\text{Cu}^{2-}$
  - $\text{Cu}^{2+}$
  - $\text{Cu}^+$
  - $\text{Cu}^-$

CHECK YOUR ANSWERS

### Exam-style Questions

This is the type of question you will see in the exam itself. Print it out for serious exam practice. Try it yourself first, before you check the mark scheme!



QUESTION



MARK SCHEME

# Cognito



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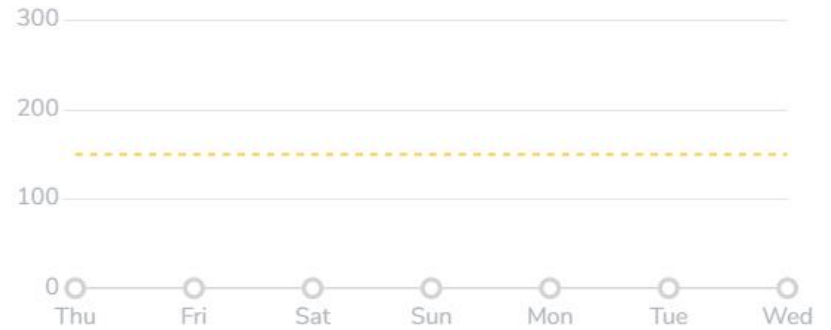
Daily Goal 150 XP ▾



0 / 150 XP

Current Streak: 0 days

Daily Goal Tracker



Biology

GCSE Biology - AQA Higher Triple [\(change\)](#)



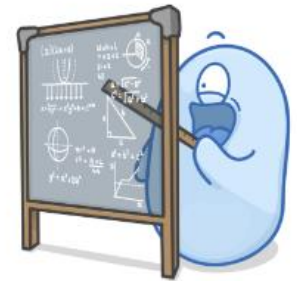
Chemistry

No Course Selected [\(select\)](#)



Physics

No Course Selected [\(select\)](#)



Maths

No Course Selected [\(select\)](#)

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## Videos

GCSE Chemistry, Physics & Biology

### Biology Paper 1



Cell Biology

Organisation

Infection and Response

Bioenergetics

Required Practicals

### Chemistry Paper 1



Atomic Structure and the Periodic Table

Structure and Bonding

Quantitative Chemistry

Chemical Changes

Energy Changes

Required Practicals

### Physics Paper 1



Energy

Electricity

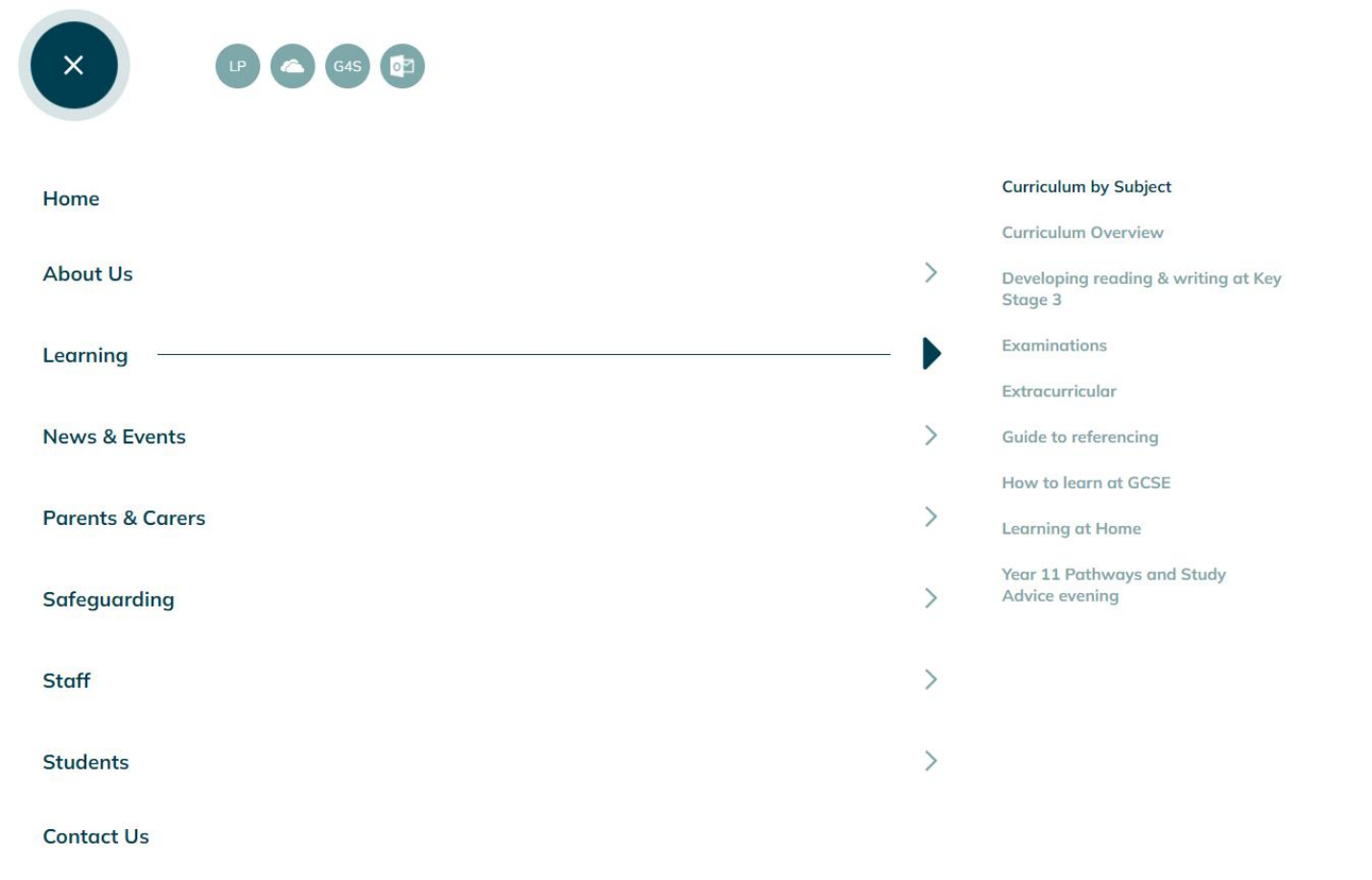
Particle Model of Matter

Atomic Structure and Radioactivity

Required Practicals

# Options Subjects

- Information and advice can be found on the school website: [Learning > Curriculum by Subject](#)



The screenshot shows a navigation menu on a school website. At the top left is a circular close button with an 'X'. Below it are four small circular icons: 'LP', a cloud, 'G4S', and a camera. The main menu items are: Home, About Us, Learning (highlighted with a horizontal line and a dark blue triangle), News & Events, Parents & Carers, Safeguarding, Staff, Students, and Contact Us. To the right of the menu is a list of links under the heading 'Curriculum by Subject': Curriculum Overview, Developing reading & writing at Key Stage 3, Examinations, Extracurricular, Guide to referencing, How to learn at GCSE, Learning at Home, and Year 11 Pathways and Study Advice evening. Each link is preceded by a right-pointing chevron.



# Geography

Key Stage 4



## Revision Advice

A subject specific guide featuring key content, recommended resources and the specifications we cover in that particular subject can be downloaded below:

[GEOGRAPHY REVISION ADVICE](#)

## How Can Parents Help?

### 1. Check that your son/daughter is making full use of all the resources and support available:

We have worked hard to provide resources that will help with revision. Please check that your son/daughter is using these resources.

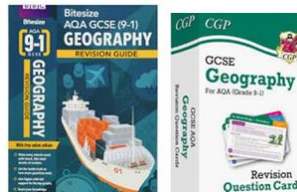
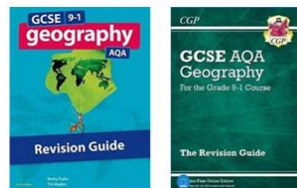
- Are they using the revision materials (including past papers) that are on the Learning Portal in the 'Geography AQA GCSE Revision Folder'?
- Are they using the revision checklists and knowledge organisers that they have been given?
- Are they being proactive in asking for help?
- Do they have their class workbooks to hand? If they have misplaced these completed ones can be downloaded from the 'Geography AQA Revision Folder'.

### 2. Check that your son/daughter is using effective revision strategies:

It is crucial that pupils follow the advice they have been given on preparing themselves for their examinations. Simply reading through notes is not enough. The **key tips for success in Geography** are:

- **Regular self-testing** – encourage your son/daughter to test their knowledge. Recalling what they have learned will help to embed key knowledge into their memory which in turn will make it easier for them to recall it in the exam. The CGP revision guide and knowledge organisers that they have been given will help them with this. They could always teach you about a key topic from the revision checklist or you could ask them questions about specific topics or case studies. Blank page retrieval exercises also work well.
- **Practice answering exam questions** – learning Geographical content on its own is not enough to secure a good GCSE grade. Examiners are looking for students to apply their knowledge to a variety of different question types. Some of these will be low tariff questions involving data interpretation, calculations and data completion while others will be higher tariff and will require extended writing. We have spent a lot of time in class working on these, but we **strongly suggest** that your son/daughter uses past papers questions as a central part of their revision. Their class teacher will mark and provide feedback on any questions they complete.

# GCSE Geography AQA



## What Do I Need To Revise?

### **PAPER 1: Living with the Physical Environment**

35% of the final GCSE: 1 ½ hour examination

#### **Section A: The Challenge Of Natural Hazards**

*Tectonic hazards, tropical storms, extreme weather, climate change*

#### **Section B: The Living World**

*Ecosystems, tropical rainforests, hot desert environments*

#### **Section C: Physical Landscapes Of The UK**

*Coastal landscapes, river landscapes*

### **PAPER 2: Challenges in the Human Environment**

35% of the final GCSE: 1 ½ hour examination

#### **Section A: Urban Issues & Challenges**

*Patterns of urban growth, cities in the developing & developed world*

#### **Section B: The Changing Economic World**

*The development gap, development in Nigeria, UKs changing economy*

#### **Section C: The Challenge of Resource Management**

*Global distribution of resources, UK resource challenges, food resources*

### **PAPER 3: Geographical Applications**

30% of the final GCSE: 1 ¼ hour examination






#### **Section A: Issue Evaluation**

*Questions based on topic in the pre-release resource*

#### **Section B: Fieldwork**

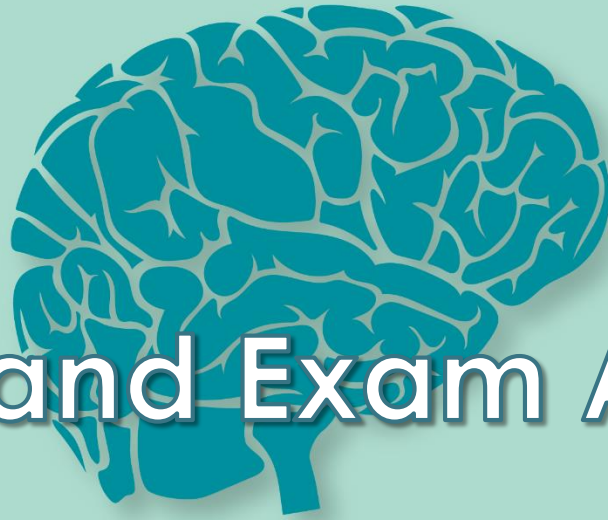
*Questions on human and physical fieldwork undertaken*

## What Can I Do To Improve?

Resource	Study Skill	What to do
Checklists, Mind Maps & Flashcards	 	Use the revision mind maps and checklists you have been given to identify your strong and weak areas (see <b>GCSE Geography Revision folder</b> if you have misplaced these) Spend at least one hour per week revising weak areas.  It would be a good idea to use knowledge tests/notes from lessons/information from revision guides and resources in the <b>GCSE Geography Revision folder</b> to create flashcards – particularly for your case studies.
Past Papers		Look back through your book and write out the exam questions you have answered, use the feedback given (especially any model answers) to improve on these. Look at sample and past papers in the <b>GCSE Geography Revision folder</b> .
BBC GCSE Bitesize		GCSE Bitesize AQA Geography is a great place to start: <a href="https://www.bbc.co.uk/bitesize/examspecs/zy3ptyc">https://www.bbc.co.uk/bitesize/examspecs/zy3ptyc</a>  Cool Geography is also an excellent resource: <a href="http://www.coolgeography.co.uk/gcse/revision_zone.php">http://www.coolgeography.co.uk/gcse/revision_zone.php</a>
Microsoft Stream		Many of the GCSE topics have been screen casted and can be accessed through the school's Microsoft Stream account. The links to these are in a word document in the 'Geography AQA GCSE Revision Folder' in the Geography Folder on the school's Learning Portal.



# Stress and Exam Anxiety



- **Irrational beliefs**

“If I don't pass, my family will think I'm useless.”

- **Irrational demands**

“I have to get at least grade 7 in everything, or I've failed.”

- **Catastrophic predictions**

“I'll fail no matter what I do. There's no point.”



# Exam Anxiety Is....

Experienced **by many students.**

**Made more manageable** by:

- following a plan and developing good study habits (we tend to become anxious when we feel we have too much to do in too little time)
- aiming to be the best YOU can be (not comparing yourself to others)



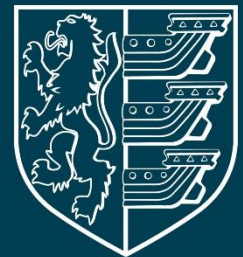
**NORTHGATE**  
High School

# Stress-busting tips

- **Believe in yourself:** If you prepare properly, you should be fine.
- **Aim to do your best:** It's not about being perfect. Doing your best will help avoid regrets.
- **Take steps to overcome problems:** Check any subject issues with your teachers.
- **Don't keep things bottled up:** Talk to others (friends, parents, teachers).
- **Take regular breaks where you can 'switch off':** Build things you enjoy doing into your weekly plan.

# Students

- How did you manage the workload and keep a balance?
- How did you combat stress and anxiety?
- What did your parents/carers do to help?





# Final tips

- Tackle each week one at a time – focus on the **here and now** and plan how to meet your key targets.
- Prepare yourself as well as you can for every exam – **that starts now**.
- Work as a **partnership**  
- student - school – parent.



**Good Luck Year 11!**