Power to Perform

Year 11 Evening for Parents

Countesthorpe Academy

Respect / Resilience / Success


CLASS OF
2026


1
2
3
4
5
6
7

The impact of your child's attendance

This is what really happened to **our** Year 11s in 2025

100% attendance:

These students achieved the best grades

90-95% attendance:

Knock off 0.6 of a grade in every subject

80-90% attendance:

Knock off 1 grade in every subject

Less than 80% attendance:

Knock off two grades in every subject

Punctuality

Arrive at school by 8:40am

Registers taken at 8:45am

Arrival to school after 9:15am

= U Code

10 U codes in a 10 week period = LA Penalty Fine

Year 11 Rhythm of the Year (2025-26)

Autumn Term	Spring Term	Summer Term
1st September: **Anti-regression testing**	6th January onwards: **Targeted support and intervention continues**	April, May, June: **Walking Talking Mocks, intensive revision days, hot tips sessions.**
w/b 13th October: **Latest data sent to parents**	23rd February: **Second round of PPEs in selected subjects.**	May: **Public Examinations begin and last until the end of June.**
28th October: **Targeted assemblies**	w/b: 23rd March: **Latest data sent to parents**	Date TBC: **Leaving Assembly**
3rd November: **Pre-Public Examinations (for two weeks)**	23rd March: **Targeted intervention using latest information from PPEs.**	Date TBC: **Year 11 Prom**
6th November: **Sixth Form Open Evening**	23rd March: **Parents' Evening**	
11th December: **Parents' Evening and PPE Results Day**	30th March: **Easter Holiday. Revision sessions. Exact dates TBC.**	
11th December: **PPE follow up and targeted interventions**		

Aspire: Let's Learn – Year 11 Tutoring Programme

📚 Supporting Year 11 Success

- We are delighted to invite your child to take part in our free Aspire: Let's Learn Tutoring Programme at Countesthorpe Academy, which will initially run for 4 weeks.
- 🗓️ Starts: Saturday 1st November
  ⏰ Time: 10:00am – 12:00pm
  📍 Location: Hive Centre, Countesthorpe Academy
  👩‍🏫 Tutors: Our high-achieving Sixth Form students, supported by senior staff

🌟 **What's on Offer?**

- Small-group and one-to-one tutoring in English and Maths, focused, personalised support to prepare for GCSEs and a relaxed and friendly environment
- Research shows that small group and one-to-one tutoring can significantly boost progress – often helping students secure at least one grade higher at GCSE.

💡

Hive Sixth Form and support for next steps

Autumn Term – Building Aspirations and Making Applications

- **Sixth Form for the Day**
- **Open Evening**
- **Taster Events**

Spring Term – Focus on Getting the Grades!

- **Mock interviews**
- **Guidance meetings**
- Conditional Offers

Summer Term – Stepping into Sixth Form

- **Induction Days and Examininations**

Join us at our Open Evening!

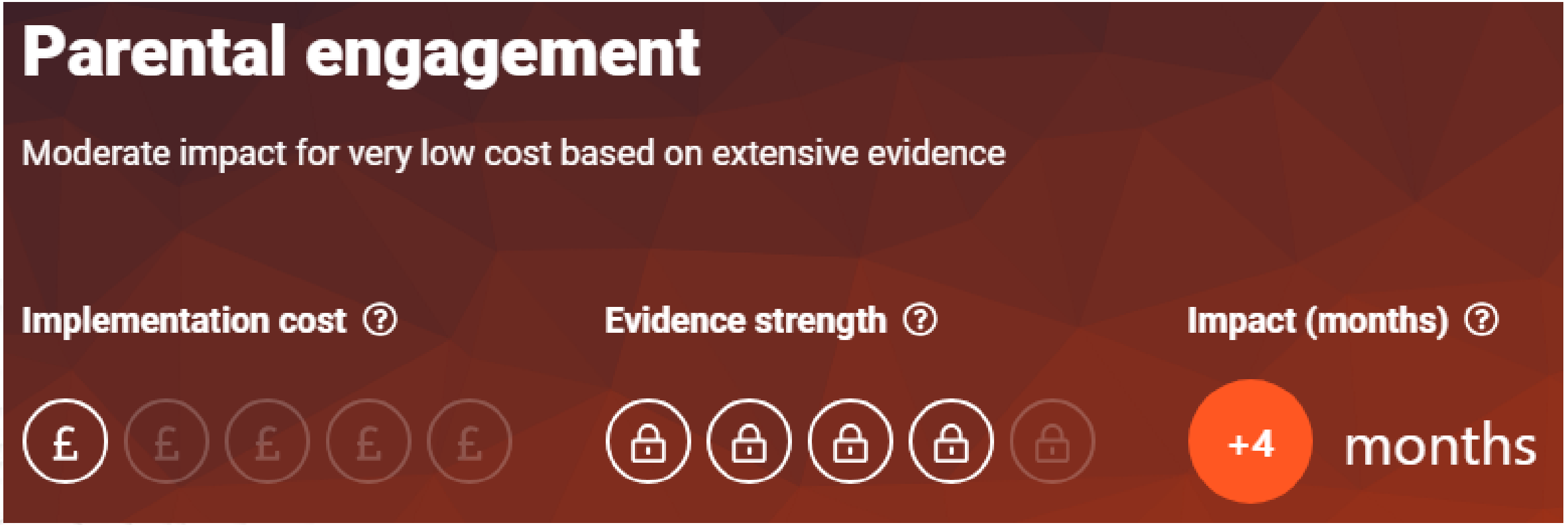
Open evening

Thursday 6th November

4.30-6.30pm

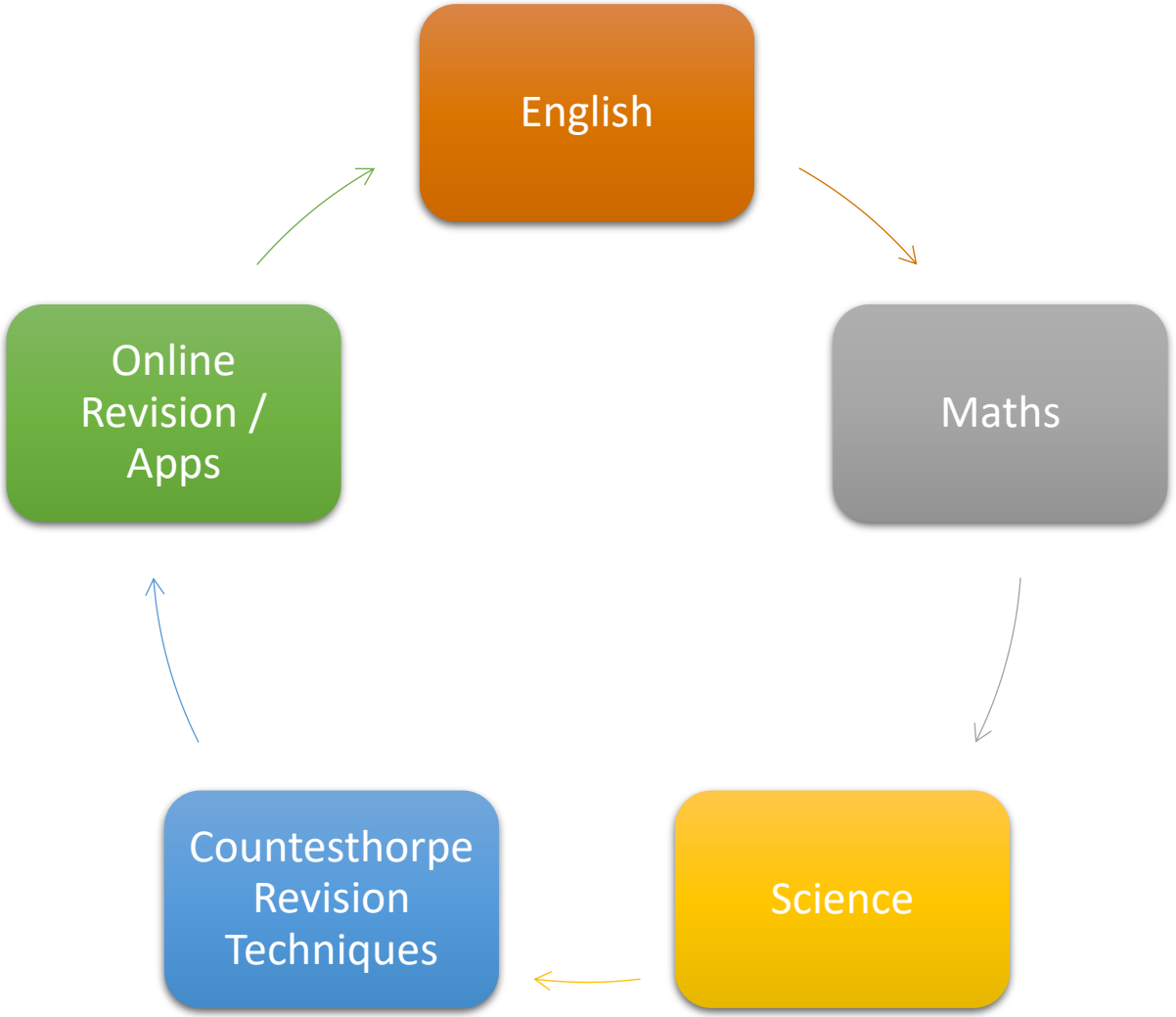

25 DAYS
TO GO

What does the research tell us?



Power to Perform Evening

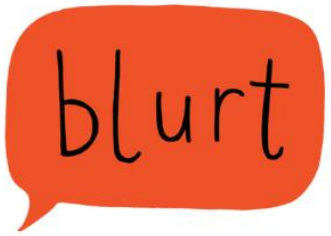
"How can I can help my Year 11 child with…"



Join us at our Open Evening!

How we revise at Countesthorpe Academy

Blurting



It's all about testing yourself repeatedly and it engages active recall to help you remember.

Funnelling

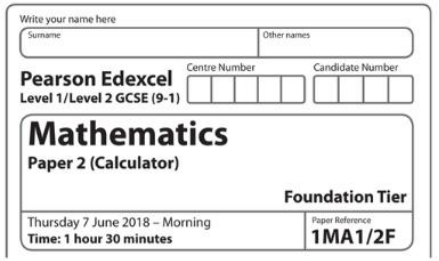
Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

Pomodoro Technique

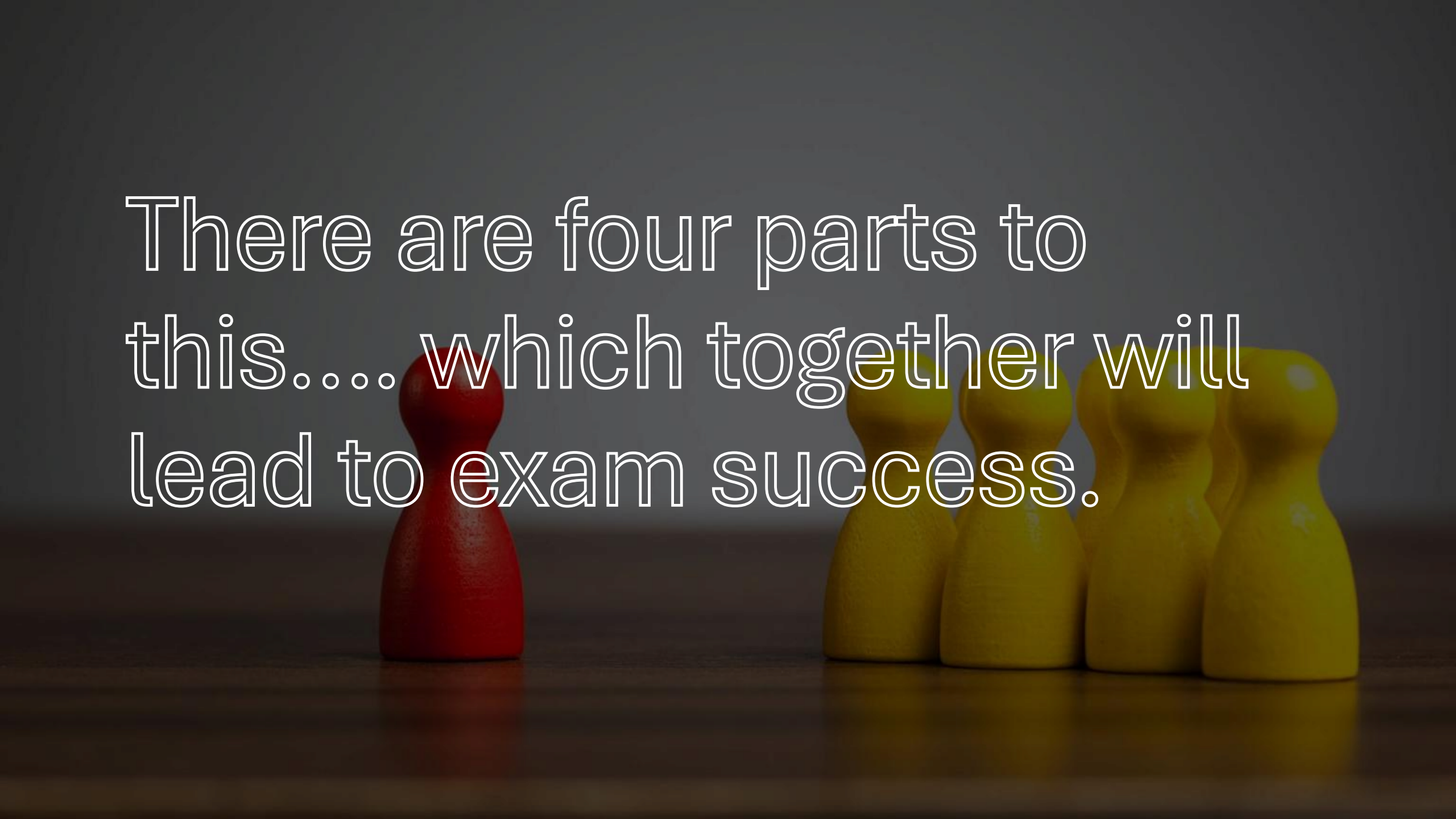
The Pomodoro method follows a basic pattern of 25 minutes of studying followed by a five-minute break, allowing for the perfect blend of study and rest.

Past Papers

Doing practice papers is one of the most important revision techniques. Do as many as you can under exam conditions to get used to the time pressure. Check your answers on the mark scheme.

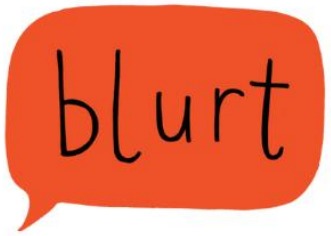

Write your name here
Surname | Other names
Pearson Edexcel
Level 1/Level 2 GCSE (9-1)
Centre Number | Candidate Number
Mathematics
Paper 2 (Calculator)
Foundation Tier
Thursday 7 June 2018 – Morning
Time: 1 hour 30 minutes
Paper Reference
1MA1/2F

How we revise at Countesthorpe Academy


There are four parts to this.... which together will lead to exam success.

How we revise at Countesthorpe Academy

Blurting



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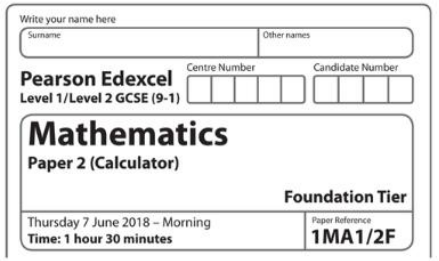
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You and your parents are going to receive a guide to explain the four methods...

This is what it looks like...

How we revise at...

Countesthorpe Academy

This is going to help the important things stick in your head, and that's what revision is all about.

Start with blurting.

Blurting

It's all about testing yourself repeatedly and it engages active recall to help you remember.

1. Open your book, revision guide or cue cards and make sure you understand everything you're reviewing.

2. Put it away so you can't see it. Grab paper and a pen. Write down everything you remembered from your notes.

3. Now get out your book, revision guide, cue cards and check to see what you have written. In a different colour add anything you missed. Correct your mistakes.

Use the Pomodoro Technique to manage your time and work effectively.

Pomodoro Technique

The perfect blend of study and rest.

1. Choose a task e.g. blurting, funnelling or working on a past paper.
2. Set a timer for 25 minutes
3. Work on a task up to the timer.
4. Take a short break (5 minutes)
5. Every 4 Pomodoros, take a longer break.

Improve your knowledge with funnelling then test your knowledge with Past Papers. Find out your knowledge gaps…. and repeat.

Funnelling is similar to blurting but helps you edit your notes very quickly.

Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

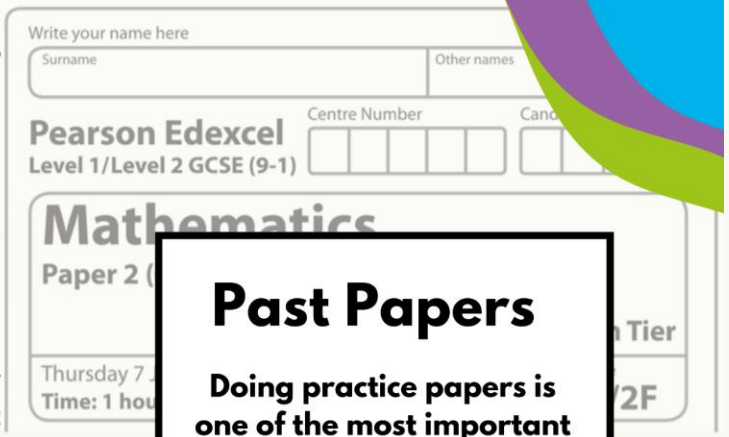
1.Write down everything about a topic – use sentences, bullets or diagrams.

2.Take one sheet of paper and, from memory, write it out again. Max one page.

3.Look at your work and try to identify the most important thing. Take a post-it or flashcard and write down the most important information from memory.

4.That's the key thing but you'll want more detail for the exam, so next, take one sheet of paper again and write as much as you can remember. Compare it to your original notes in step two, add in anything you missed in a different colour.

5.Now do step one again, this time from memory and compare it to the original step one, add in what's missing in a different colour.



Past Papers

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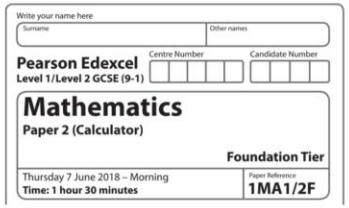
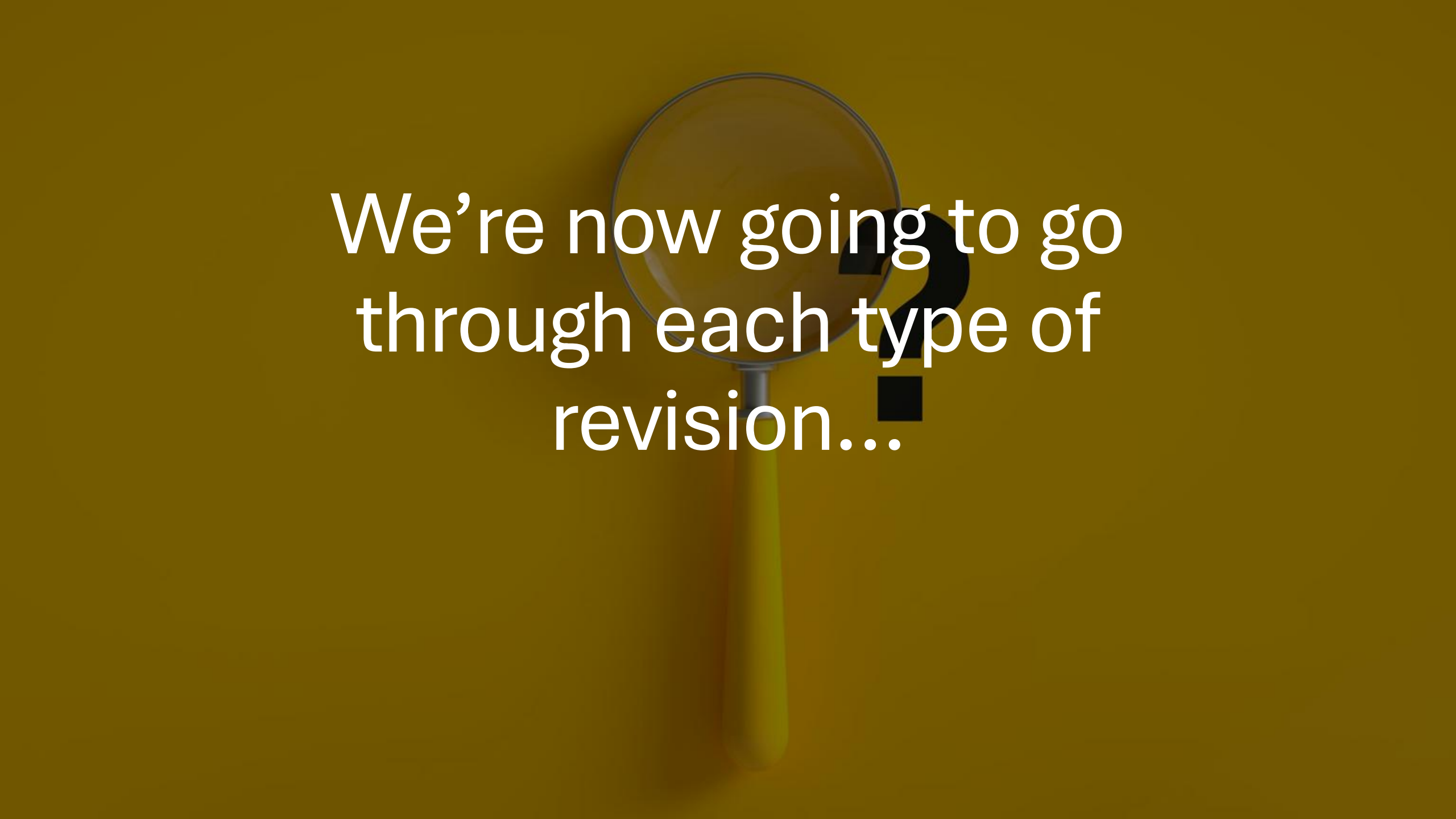


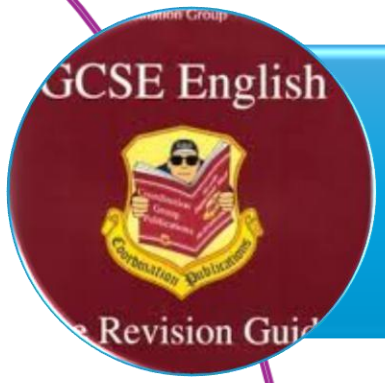

We’re now going to go through each type of revision…

1. Blurting

This is all about testing yourself repeatedly and it engages active recall to help you remember.

This is a technique that's currently blowing up on **TikTok**. It literally means 'blurting out' all the information you know on a topic and trying to get it to stick in your long-term memory.

BIRMINGHAM CITY
University



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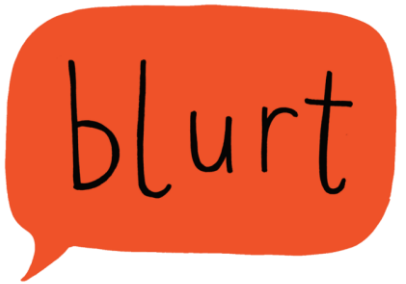

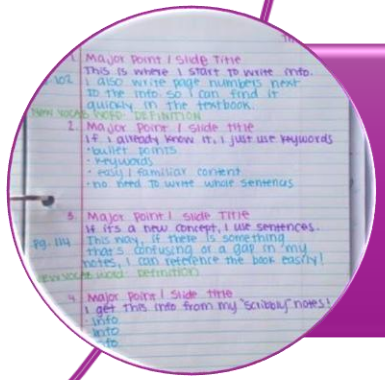

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2. Funnelling

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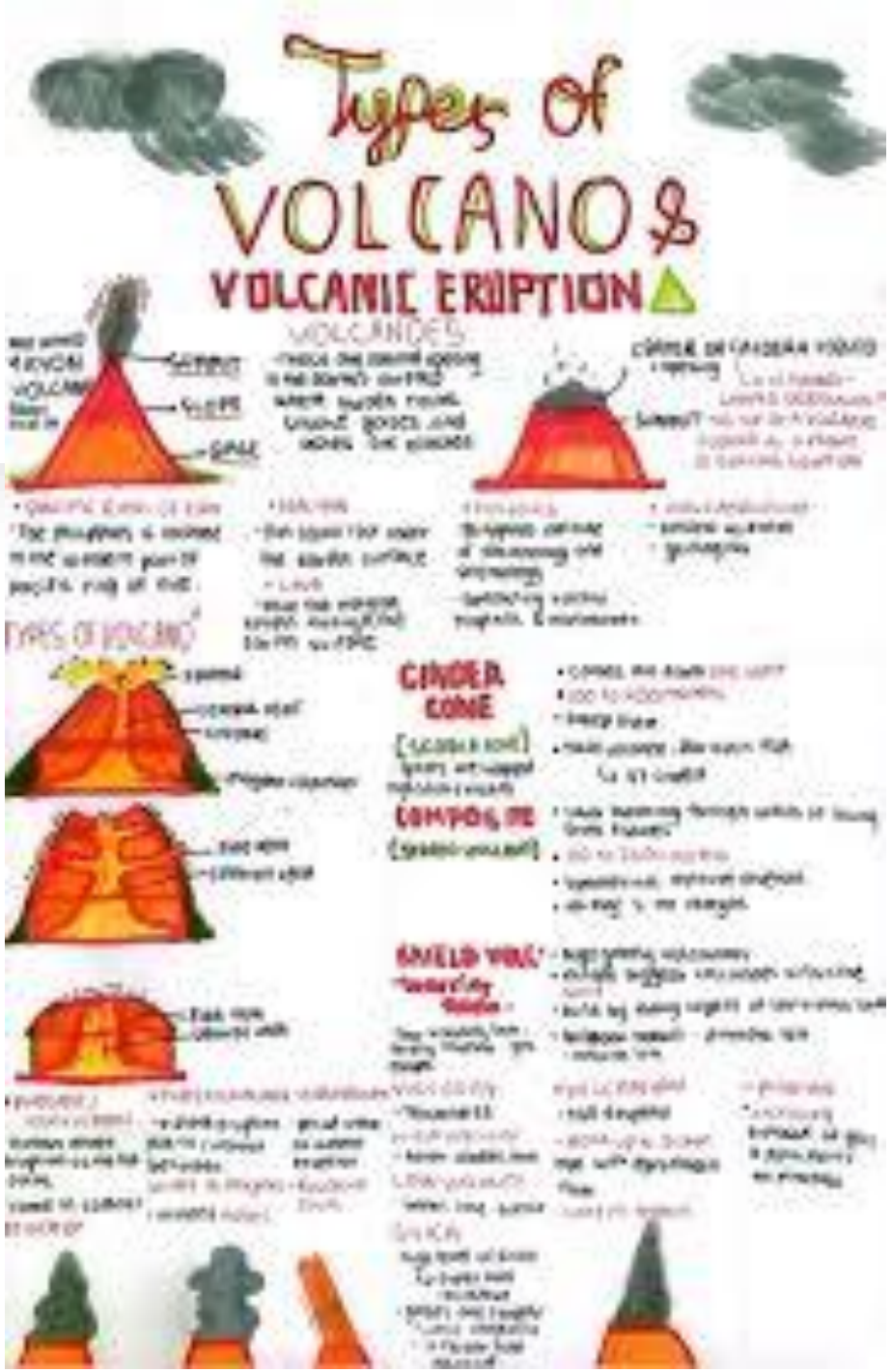
Funnelling is similar to blurting but helps you edit your notes very quickly.

- There are 5 steps….

1. Write down everything about a topic – use sentences, bullets or diagrams.



Funnelling

2. Take one sheet of paper and, from memory, write it out again. Max one page.

Don’t worry that this one is typed. It’s just an example.

Subject: Geography
Topic: Volcanoes

Overview

Volcanoes have created more than80 percentof our planet's surface, laying the foundation that has allowed life to thrive. Their explosive force crafts mountains as well as craters. Lava rivers spread into bleak landscapes.
There are volcanoes on every continent, even Antarctica. Some1,500 volcanoes are still considered potentially activearound the world today;161 of those—over 10 percent—sit within the boundaries of the United States. Some volcanos burst to life in explosive eruptions, like the1991 eruption of Mount Pinatubo, and others burp rivers of lava in what's known as an effusive eruption, like the2018 activity of Hawaii's Kilauea volcano.These differences are all thanks to thechemistrydriving the molten activity. Effusive eruptions are more common when the magma is less viscous, or runny, which allows gas to escape and the magma to flow down the volcano's slopes. Explosive eruptions, however, happen when viscous molten rock traps the gasses, building pressure until it violently breaks free.The majority of volcanoes in the world form along the boundaries of Earth's tectonic plates—massive expanses of our planet's lithosphere that continually shift, bumping into one another. When tectonic plates collide, one often plunges deep below the other inwhat's known as a subduction zone. As the descending landmass sinks deep into the Earth, temperatures and pressures climb, releasing water from the rocks. The water slightly

Funnelling

- 3. Look at your work and try to identify the most important thing. Take a post-it or flashcard and write down the most important information from memory.

Part 3. Summarise the main points and pull out any key terms

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Main points

* There are volcano on every continent. Most volcanos are along tectonic plates. When tectonic plates colide this causes a subduction zone
* Magma is formed which works it way to the surface
* Exposive eruptions (Mount Pinatubo 1991) viscous molton lava traps gasses, building pressure, causing violent explosions
* Effusive eruptions (Kilauea volcano 2018) magma is less viscous, which allows gas to escape and the lava flows down in a river
* Pyroclastic flow (MAGMA) Hot rocks, ash and toxic gas) up to 450 miles an hour - Mount Vesuvius wiped out Pompeii in AD 79

Key words

Tectonic Plates	Magma	Explosive Eruption
Effusive Eruption	Pyroclastic Flow	Vesuvius / Pompeii / AD 79.

Funnelling

4. That's the key thing but you'll want more detail for the exam, so next, take one sheet of paper again and write as much as you can remember. Compare it to your original notes in step two, add in anything you missed in a different colour.

5. Now do step one again, this time from memory and compare it to the original step one, add in what's missing in a different colour.

Part 4. Extra things added in that were missed the first time.

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Key words

Tectonic Plates	Magma	Explosive Eruption
Effusive Eruption	Pyroclastic Flow	Vesuvius / Pompeii / AD 79.

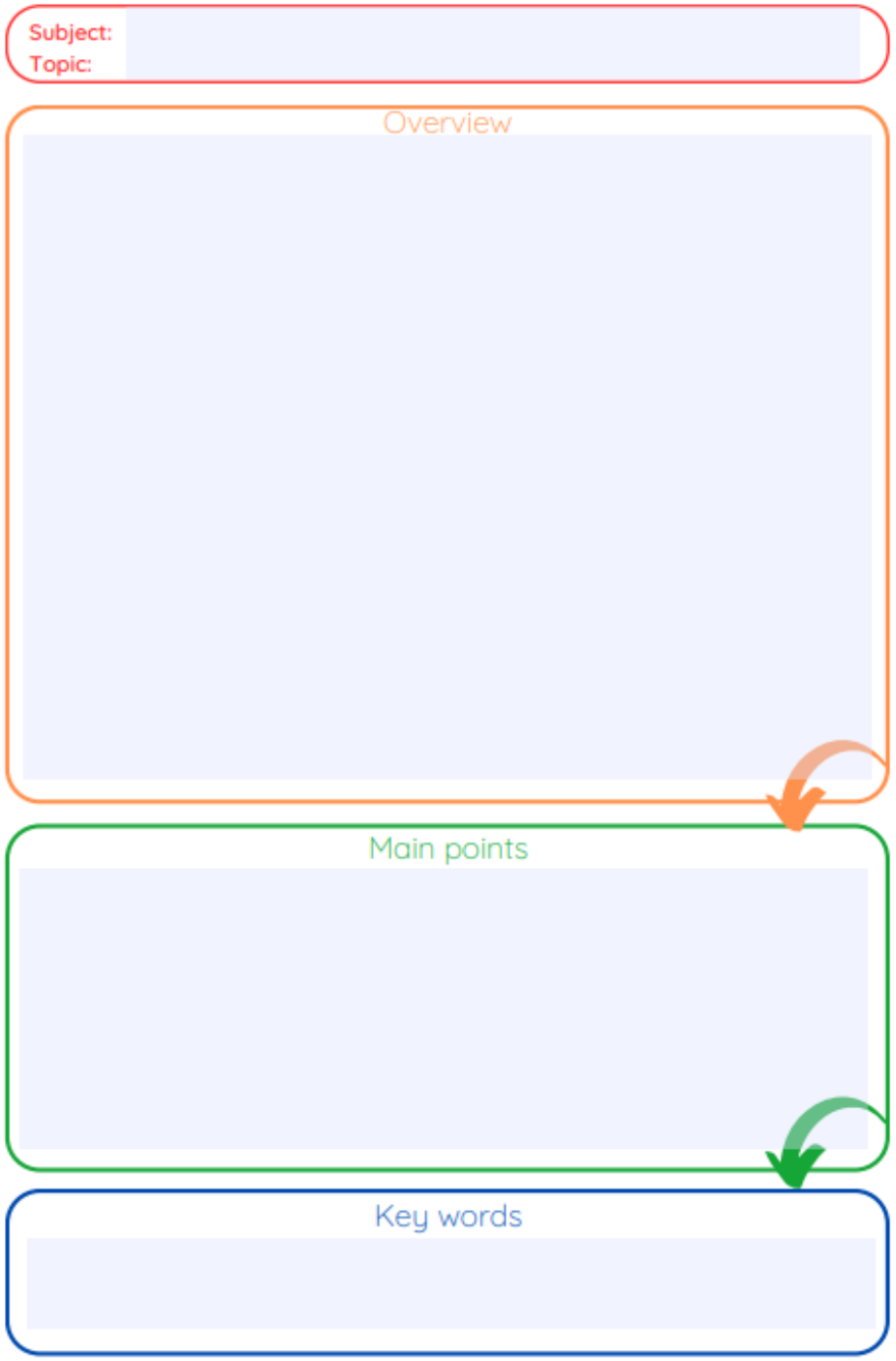
Funnelling

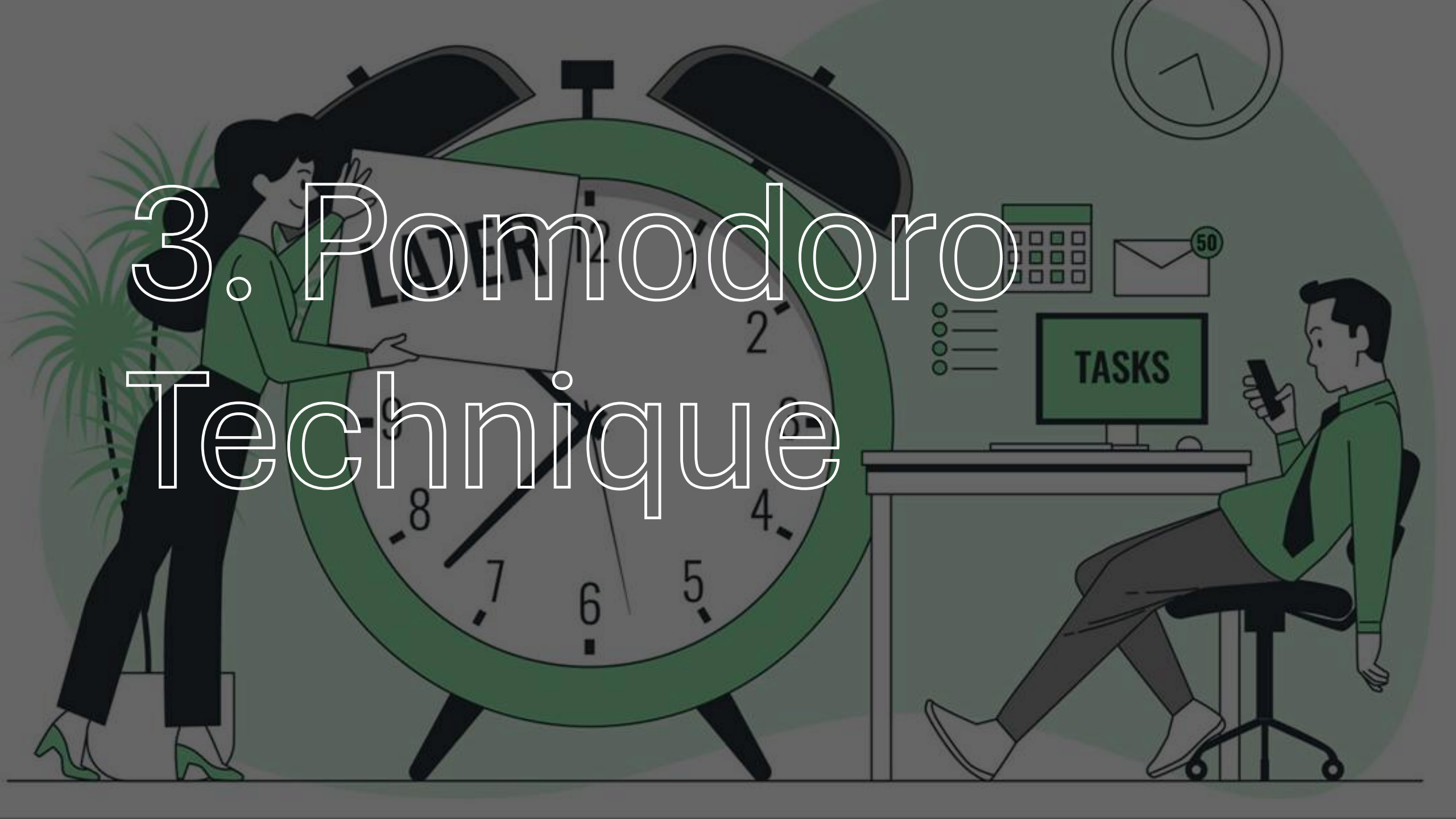
- Awesome work! Think about it: you've now written:

  - the most important thing five times
  - the second most important stuff four times, and
  - the least important stuff twice.

- This is going to help the important things stick in your head, and that's what revision is all about.

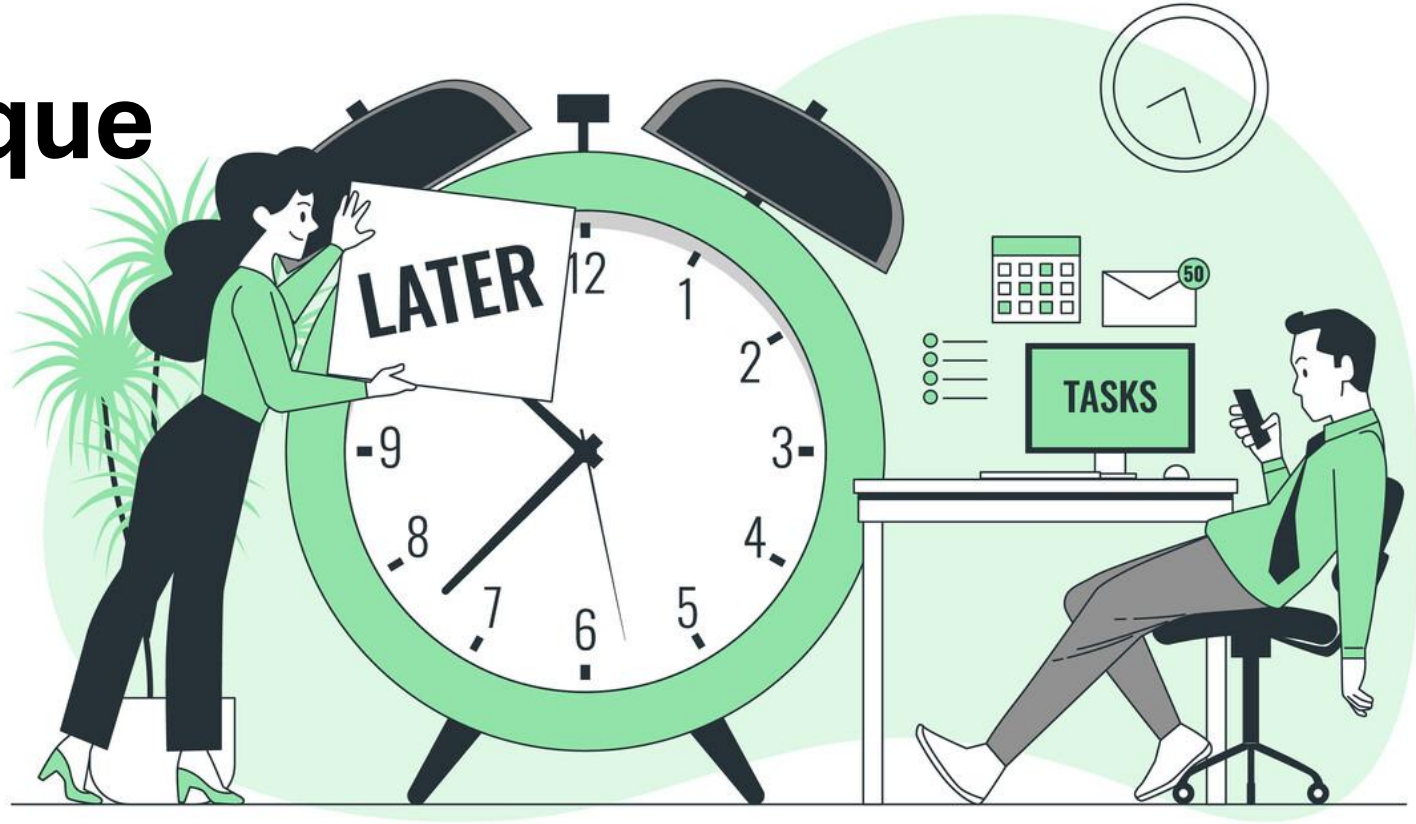
You can use this template to divide up your revision notes:





3. Pomodoro Technique

Pomodoro Technique



- Has anything like this ever happened to you?
- You are working on a task and you suddenly need to do other things - updating your Instagram, replying to a message, eating, anything really- instead of focusing on your current goal.
- You are working on a task and you hear a voice in your head: "Are you sure this is the right thing to do now? Are you sure you are not forgetting something urgent to do? Are you sure there isn't a better way to do that?
- We often find we do this when it comes to revision.

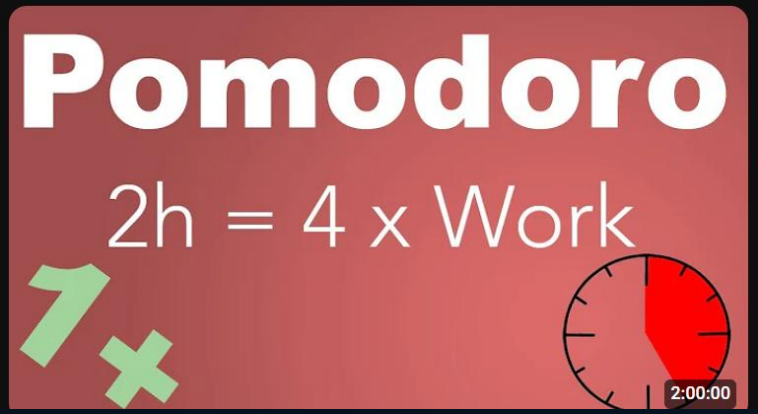
You are not alone! We all face the same problem. We know we should focus on the task in hand, but it feels impossible with so many distractions and demands on our time.

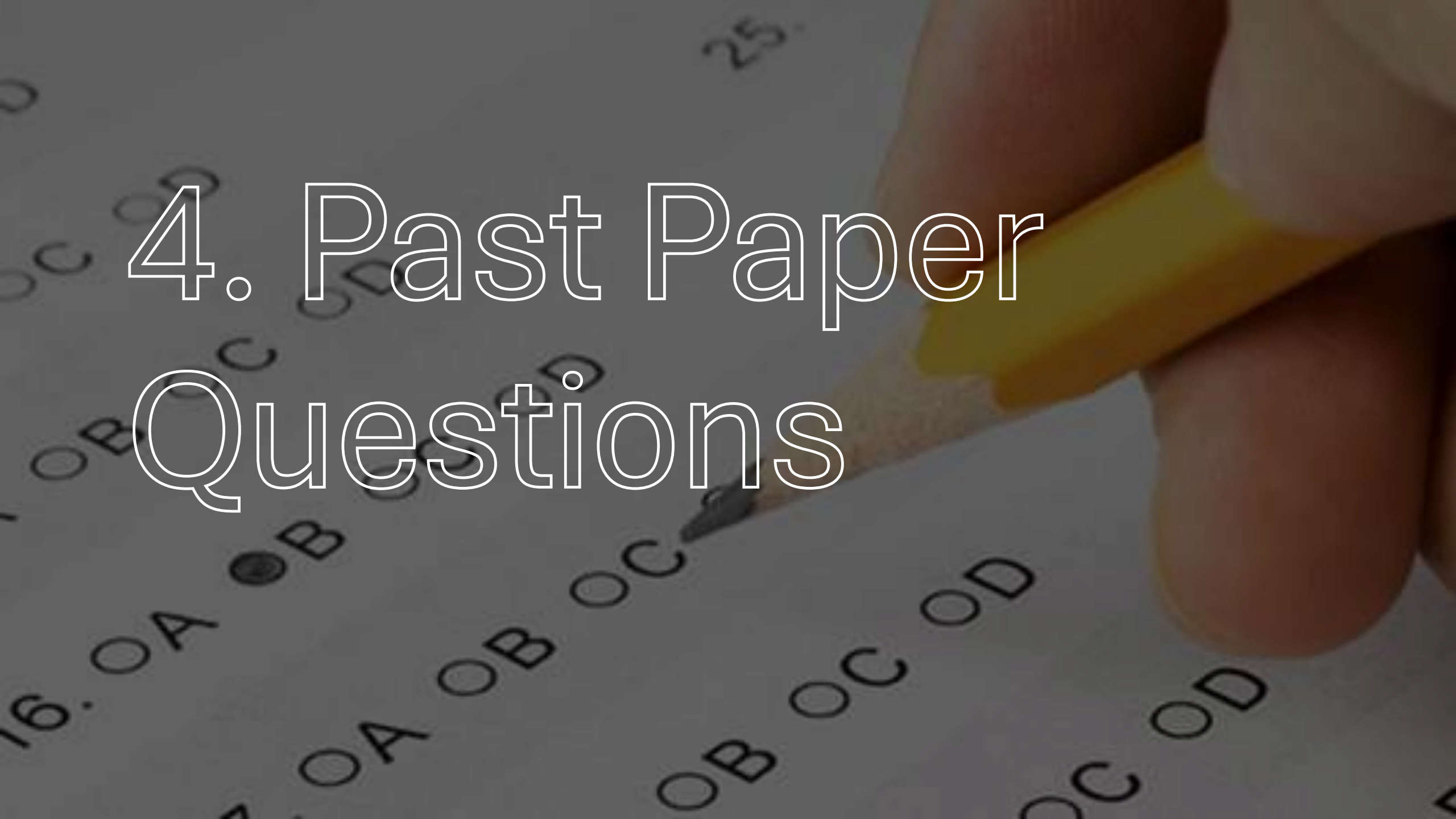
Pomodoro Technique

- The **Pomodoro Technique** helps our brain recognise those tricky moments and learn how to deal with them. It helps focus your revision.

- Choose what you are going to revise and how you are going to do it (e.g. blurting, funnelling, past paper)
  - Set a timer for 25 minutes
  - Work on the task until the timer rings, then put a check on your sheet of paper
  - Take a short break (5 minutes). Use a timer.
  - Every 4 Pomodoro rounds, take a longer break. You'll have then earned it.

There are lots of Pomodoro timers on YouTube
(but a simple timer is just as good e.g. like on your phone)



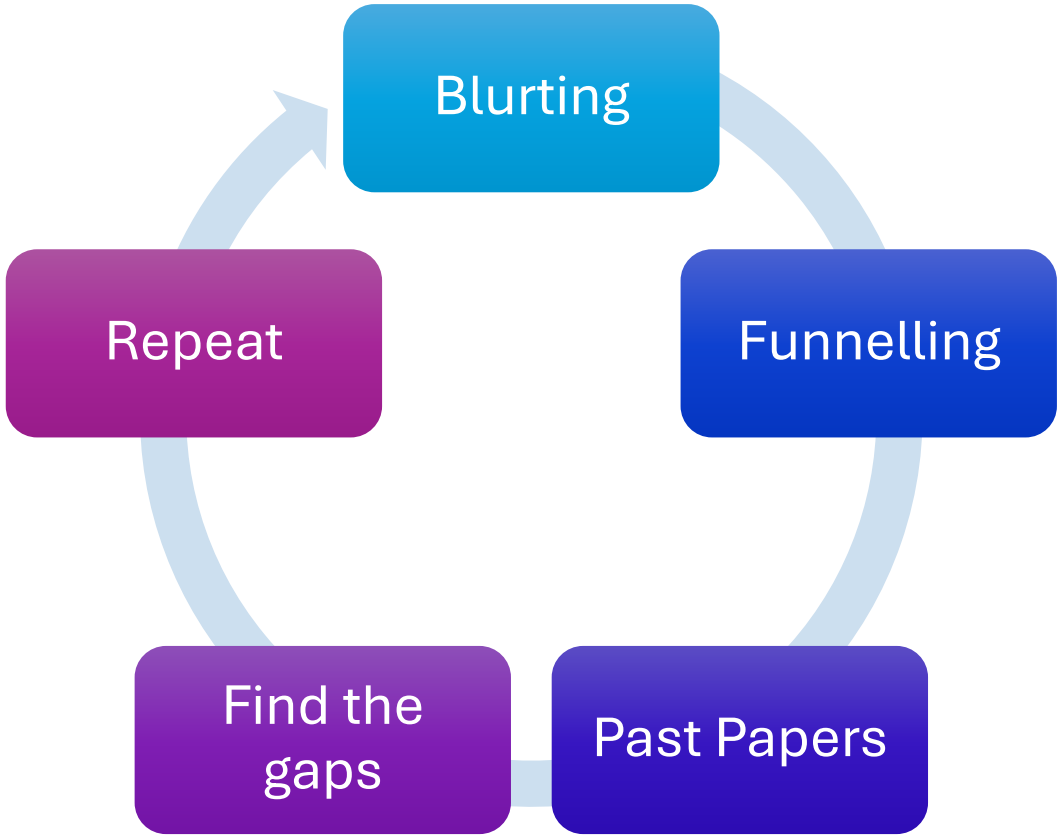


4. Past Paper Questions

Past Paper Questions

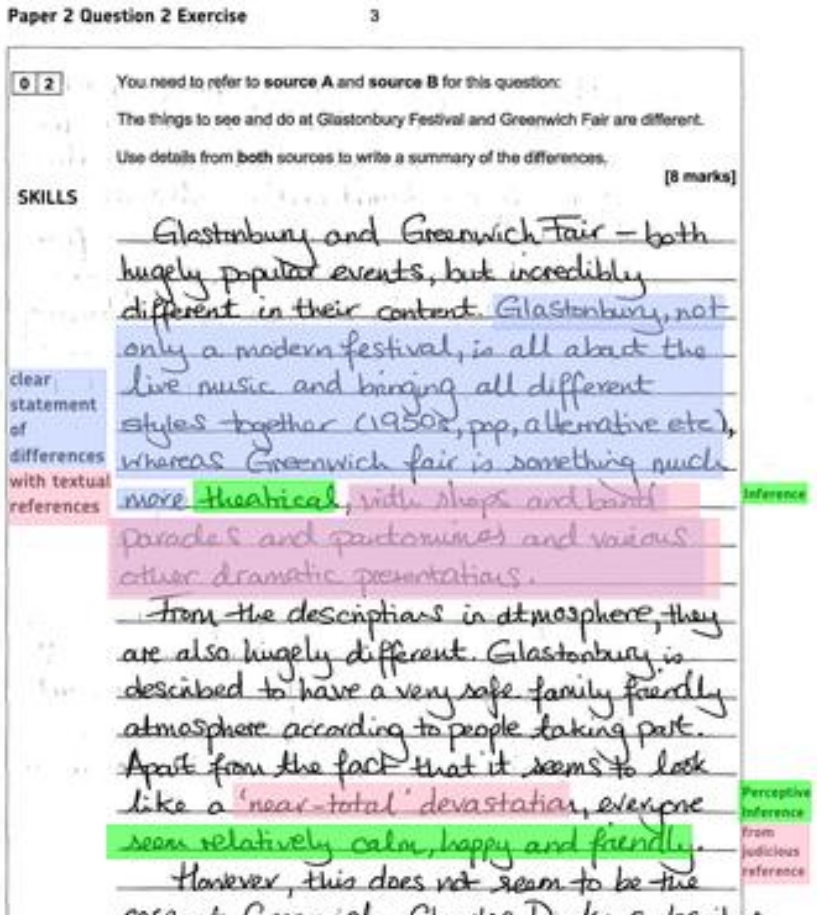
Test your knowledge

- Revision is often a process of memorising facts, dates, formulas and quotes, but the best way to make sure you've retained that information is to **test yourself on it.**
- Answering past papers helps you to work out which topics you know really well and **figure out what gaps you need to focus on**.
- By testing your knowledge you can **check your revision progress** and feel more confident about what you already know.
- If there are gaps in knowledge, go back to blurting and funnelling. **Keep going until you know your stuff.**



Past Paper Strategy

1. Get the past paper from your **Google Classroom**
2. Work out **how long you need** to answer the question(s).
3. Put yourself into **exam conditions** (no notes, no distractions, timer on)
4. **Use the mark scheme afterwards** (Google Classroom) to check your understanding.
5. Make notes and **corrections in a different colour.**
6. Where things were incorrect, go back to your notes / revision guide and complete blurting and funnelling to **fill the gaps**.


Paper 2 Question 2 Exercise 3

0 2 You need to refer to **source A** and **source B** for this question:

The things to see and do at Glastonbury Festival and Greenwich Fair are different.

Use details from **both** sources to write a summary of the differences.

[8 marks]

SKILLS

Glastonbury and Greenwich Fair – both hugely popular events, but incredibly different in their content. Glastonbury, not only a modern festival, is all about the live music and bringing all different styles together (1950s, pop, alternative etc), whereas Greenwich fair is something much more theatrical, with ships and band parades and pantomimes and various other dramatic presentations.

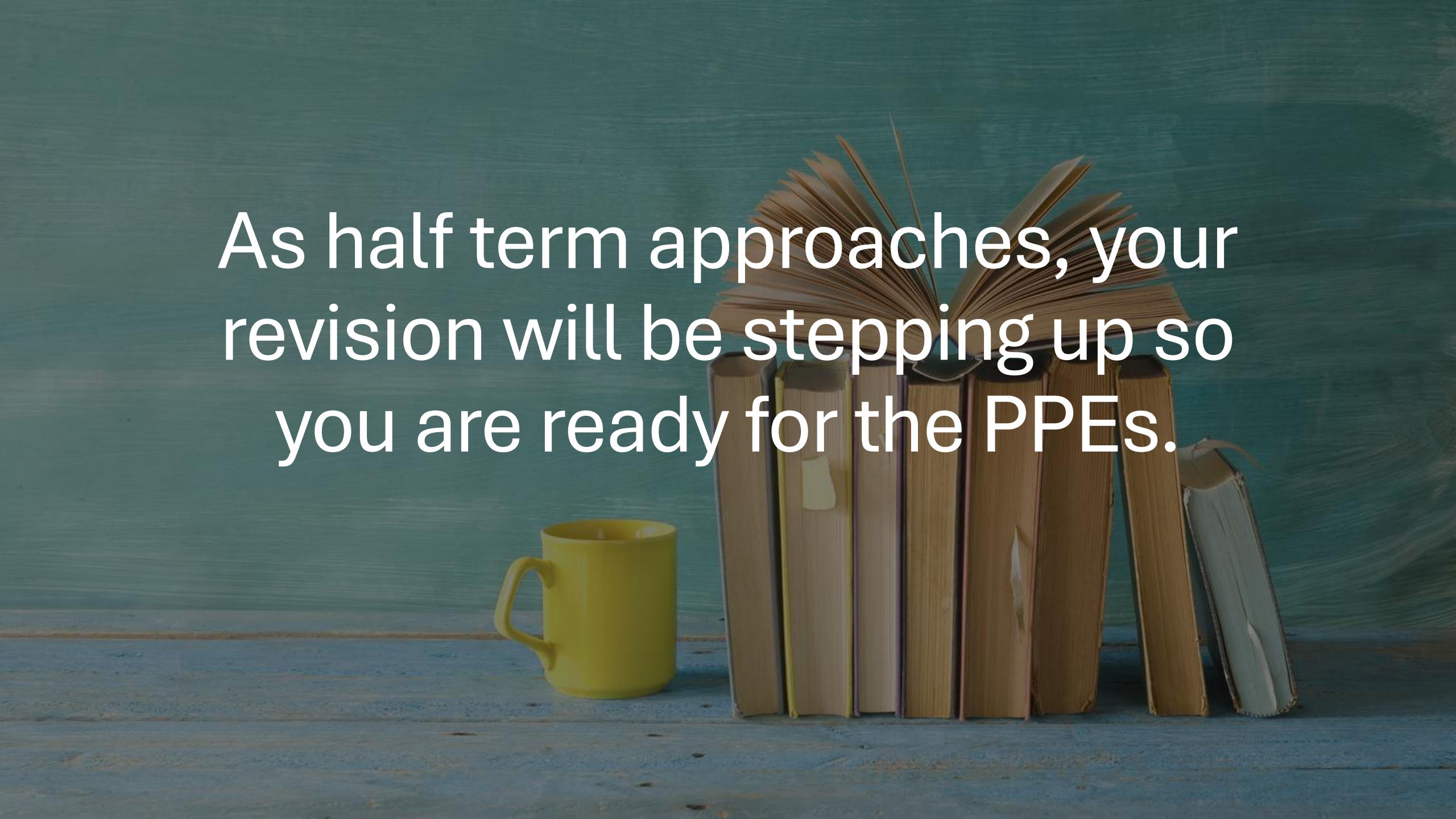
clear statement of differences with textual references

Inference

From the descriptions in atmosphere, they are also hugely different. Glastonbury is described to have a very safe family friendly atmosphere according to people taking part. Apart from the fact that it seems to look like a 'near-total' devastation, everyone seem relatively calm, happy and friendly.

Perceptive inference from judicious reference

However, this does not seem to be the


As half term approaches, your revision will be stepping up so you are ready for the PPEs.

2024 OCTOBER

S	M	T	W	T	F	S
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	TODAY 15	16	17	18	19
20	21	22	Half Term Holiday 23	24	25	26
27	28	29	30	31	1st Nov	2
3	PPEs begin 4	5	6	7	8	9

CHALLENGES *OF THE MONTH*

- [ ] Master the blurting, funnelling and Pomodoro techniques.
- [ ] Ensure you know where all your revision resources are.
- [ ] Develop use of past papers using the three pen approach

Blurting

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Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

Pomodoro Technique

The Pomodoro method follows a basic pattern of 25 minutes of studying followed by a five-minute break, allowing for the perfect blend of study and rest.

CHALLENGES *OF THE MONTH*

- [x] Master the blurting, funnelling and Pomodoro techniques.
- [ ] Ensure you know where all your revision resources are.
- [ ] Develop use of past papers using the three pen approach

Ensure you know where all your revision resources can be found

- You should be familiar with some of these resources already.

SENECA
Free interactive content to keep students engaged

Quizzing and revision

sparx

Online maths revision and testing

Educake

Quizzes and homework in a range of subjects

Google Classroom

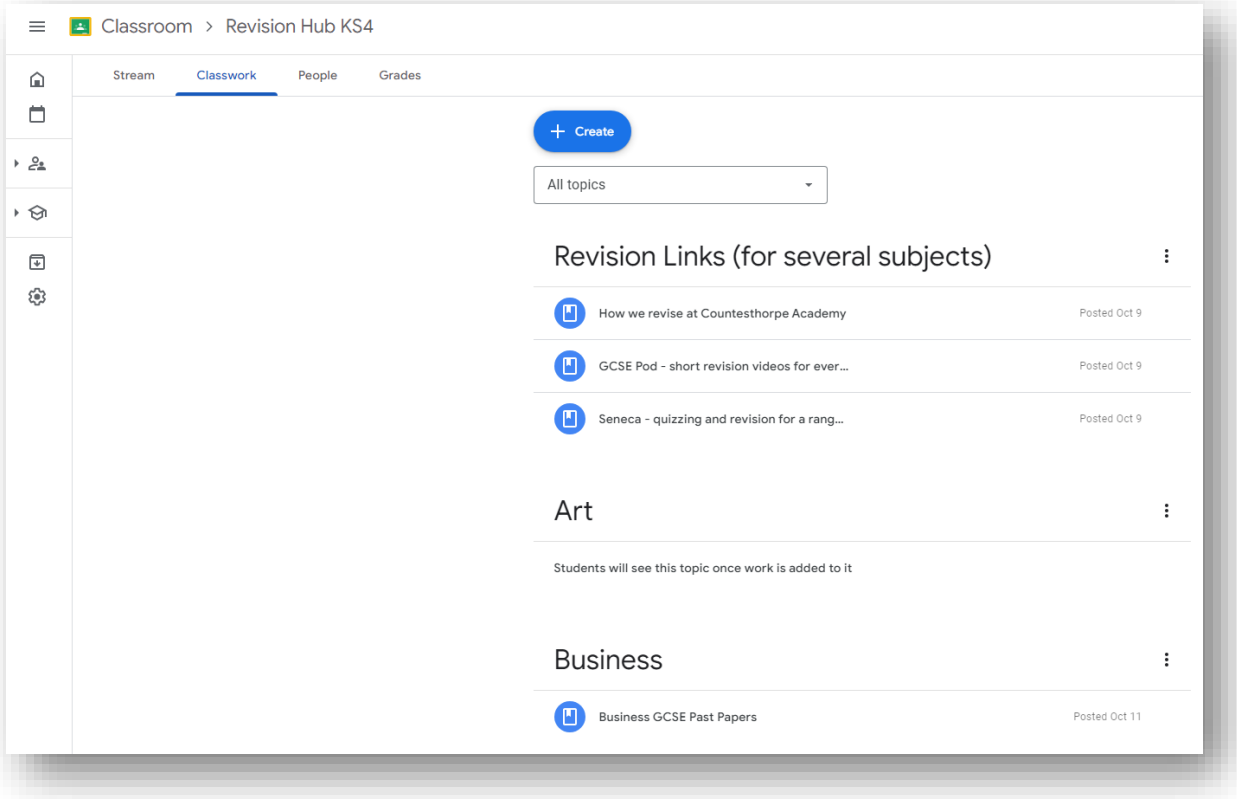
Your own revision resources

CHALLENGES *OF THE MONTH*

- [x] Master the blurting, funnelling and Pomodoro techniques.
- [x] Ensure you know where all your revision resources are.
- [ ] Develop use of past papers using the three pen approach

Revision Hub (KS4)

- Your teachers are also making all past papers available to you in one place: The Google Classroom called Revision Hub (KS4).
- Log on. Make sure you can find where the resources are stored.



CHALLENGES *OF THE MONTH*

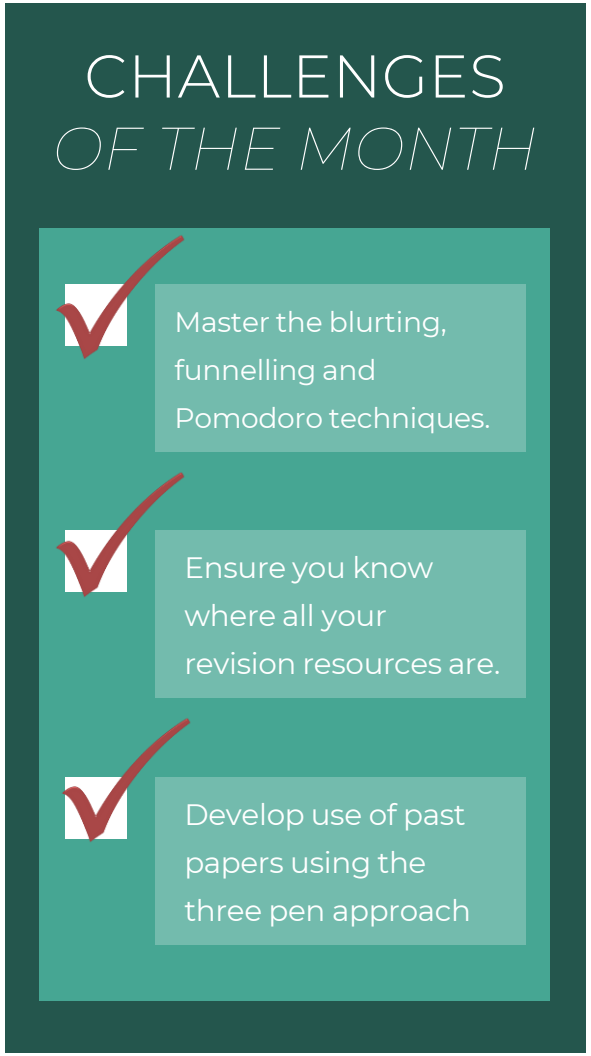
- [x] Master the blurting, funnelling and Pomodoro techniques.
- [x] Ensure you know where all your revision resources are.
- [ ] Develop use of past papers using the three pen approach

Go to your Google Classroom

Past Papers using the three pen approach

- Once you have completed your blurting and funnelling whilst managing your time with the Pomodoro technique you will want to test yourself using Past Papers.
- They are available in the Google Classroom: Revision Hub (KS4).
- We can make Past Paper completion more effective using to the three pen approach.

- It will:
  - Help you self reflect on answers
  - Improve your technique
  - Get your higher marks



Go to your Google Classroom

Past Papers using the three pen approach
(You will need to have downloaded a past paper)

1. **Black pen**, no notes, no help. Not necessarily under timed conditions. This will identify what you feel confident about and what you're less sure of.

2. **Purple pen**. Using text books, notes, revision guides but not the markscheme, switch to purple and annotate (improve answers). This identifies what you can work out with some prompting but is not yet secure in your long term memory.

3. Green pen. These are your final corrections, made using the mark scheme (that you can see in Google Classrooms). This is what you likely struggled with most, even with textbook / revision guides. These are the most urgent areas to go back and revise. Start the cycle of blurting and funnelling again.

CHALLENGES *OF THE MONTH*

- ✓ Master the blurting, funnelling and Pomodoro techniques.
- ✓ Ensure you know where all your revision resources are.
- ✓ Develop use of past papers using the three pen approach

Go to your Google Classroom

Past Papers using the three pen approach
(You will need to have downloaded a past paper)

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what you likely struggled with most, even with textbook / revision guides. These are the most urgent areas to go back and revise. Start the cycle of blurting and funnelling again.

You should now find a past paper question (or several questions) from any subject and give this a go.

CHALLENGES *OF THE MONTH*

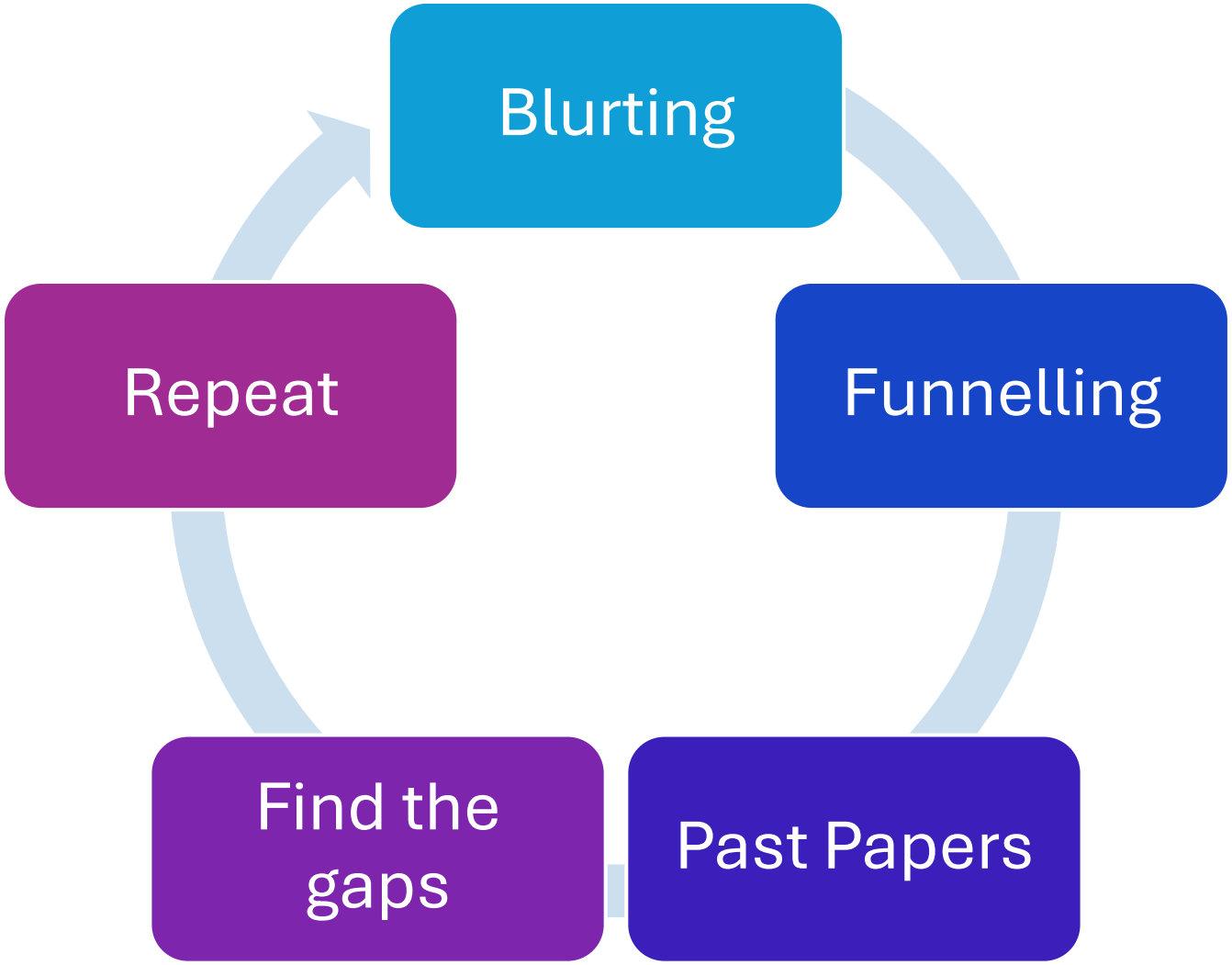
Master the blurting, funnelling and Pomodoro techniques.

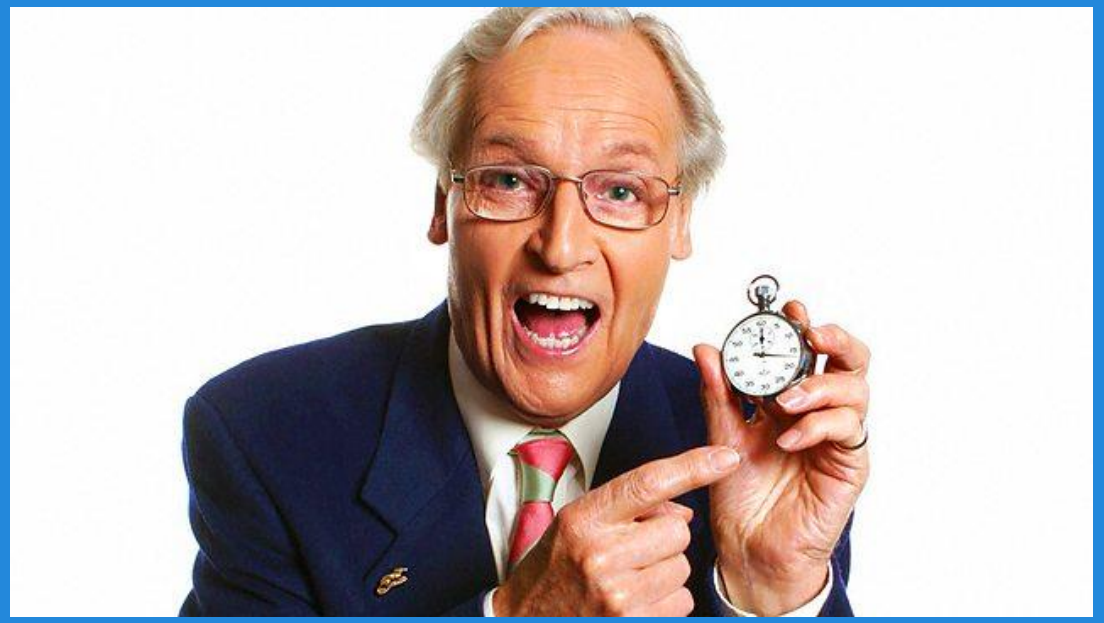
Ensure you know where all your revision resources are.

Develop use of past papers using the three pen approach

Go to your Google Classroom

The Revision Cycle...



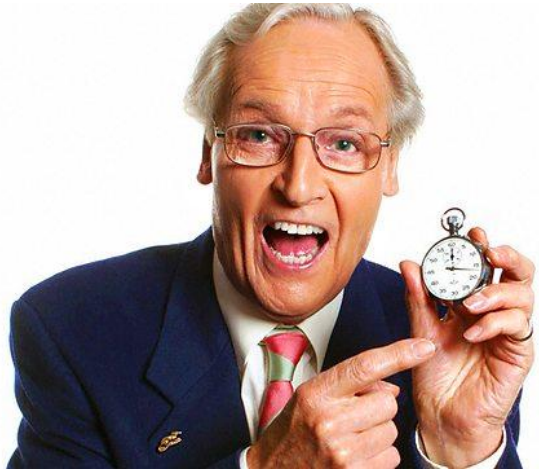


Just a minute

Revision

Rules

- No hesitation
- No repetition
- No deviation



1 point per correct challenge

2 bonus points for reaching the end of the minute.

Fitness testing & training

- No hesitation
- No repetition
- No deviation

Influences on physical activity

- No hesitation
- No repetition
- No deviation

Balanced diet

- No hesitation
- No repetition
- No deviation

Drugs in sport

- No hesitation
- No repetition
- No deviation

The skeletal system

- No hesitation
- No repetition
- No deviation

Tips on how to support your child in GCSE English – Language and Literature

Communication Faculty

What to expect: what we are doing in Y11 English and what you can expect to see in the coming months

- Frequent practice of exam type questions and teacher modelling to provide scaffolded framework supporting student progress.
- November PPE Paper 2 Language (non-fiction) and Literature Paper 1: Macbeth and A Christmas Carol.
- After school interventions and Crew interventions to support students below target or aspiring for higher grades before both PPEs and final exams.
- Connect activities at the start of all Year 11 lessons revising essential knowledge –retrieval and low stakes testing.
- Writing Fridays – department initiative to boost narrative and non-fiction writing skills.
- Robust feedback and personal checklists after both sets of mock exams/all assessments to identify student gaps in knowledge and allow opportunities to upgrade.
- Regular Literature and Language formative assessment homework set on Educake for all classes.
- Vocabulary extension activities and mats as this is deemed an important indicator of attainment in this summer's Examiner's Report.
- Regular opportunities for extended writing to build writing resilience.

Key Actions for English Year 11

- ❑ Purchase ***all*** English Literature set texts.
- ❑ Ensure all poems in the Anthology are annotated.
- ❑ Be equipped with purple pen and highlighter.
- ❑ ***Ensure homework is completed***.
- ❑ ***Familiarity with set texts***- revise and reread.
- ❑ Encourage your child to read quality **fiction** and **non-fiction** to help improve technical accuracy and widen their vocabulary.
- ❑ ***Investigate different apps and websites*** - BBC Bitesize, Sparknotes, Mr Bruff on YouTube and the GCSE Podcasts.
- ❑ ***Theatre Performances in school*** - *A Christmas Carol* and *Narrative Writing workshop.*
- ❑ ***Watch filmed versions of the texts*** *with your child – Macbeth, A Christmas Carol, An Inspector Calls.*
- ❑ **Purchase study guides** to increase their knowledge bases.
  E.g. CGP Revision guides and cards.

November PPE 2025

AQA Literature Paper 1

- 1 hour 45 mins. Shakespeare and 19th Century Novel.
- **Section A:** 20% - one exploding extract essay question on 'Macbeth' [30 marks + 4 for AO4]
- **Section B:** 20% - one exploding extract question on 'A Christmas Carol' [30 marks

Eduqas Language Component 2

- 2 hours. (non-fiction)
- **Section A:** 30% - Read two non-fiction texts/extracts (one C19th and one C21st) and answer six questions.
- **Section B:** 30% - Transactional/Persuasive Writing. Two compulsory writing tasks. e.g. letter, article, talk, speech, report, review.

March PPE 2026

AQA Literature Paper 2

- 2 hours 15 mins. Modern Drama & Poetry.
- **Section A:** 20% - One whole-text essay on 'An Inspector Calls' (choice of two questions) [30 marks + 4 for AO4]
- **Section B:** 20% - One comparative essay on AQA Poetry Anthology (one given poem) [30 marks]
- **Section C:** 20% - i) Single poem analysis essay [24 marks] ii) Comparative question with AO2 focus [8 marks]

Eduqas Language Component 1

- 1 hour 45 mins. (fiction)
- **Section A:** 20% - Read and answer five questions on the extract.
- **Section B:** 20% - Narrative writing. One task picked from a choice of four titles.

Year 11 English Revision Countdown to GCSEs 2025

SAMPLE summer 2025

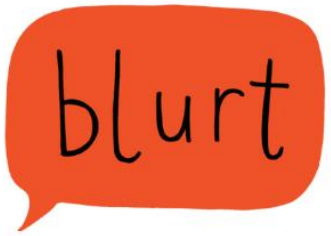
Dates	Topic		Writing Friday
HALF TERM			
24-28 Feb	Literature Retrieval Connect ACC Clock Unseen Poetry		Transactional
3-7 March	Literature Retrieval Connect ACC Clock Unseen Poetry		Transactional
10-14 March	Literature Retrieval Connect ACC Clock Unseen Poetry Assessment (Mon) Language C1B Narrative Writing		Transactional
17-21 March	Literature Retrieval Connect AIC Clock Macbeth		C1 Unseen Fiction and homework
24-28 March	Literature Retrieval Connect AIC Clock A Christmas Carol		Narrative
31 Mar – 4 April	Literature Retrieval Connect AIC Clock C2 Language Unseen Non-Fiction		Narrative
7-11 April	Literature Retrieval Anthology Poetry		Narrative
EASTER			
29 April-3 May	Literature Retrieval An Inspector Calls		Unseen Poetry
5 -9 May	Literature Retrieval Macbeth / A Christmas Carol		Unseen Poetry
12-16 May	Literature Retrieval Anthology An Inspector Calls	**EXAM**: Mon 12th May 8:50am AQA Literature Paper 1 (Macbeth/ACC)	C1 Unseen Fiction
19-23 May	C1 Language: Unseen Fiction C2 Language: Unseen Non-Fiction	**EXAM**: Tues 20th May 8:50am AQA Literature Paper 2 (AIC/Anthology/Unseen Poetry) **EXAM**: Fri 23rd May 8:50am Eng. Language Component 1	Transactional
HALF TERM			
2-6 June	C2 Language Unseen Non-Fiction Transactional Writing	**EXAM**: Fri 6th June Eduqas Language Component 2 -Non-fiction	

ENGLISH FOCUS FIVE PLEDGE

1) Connect activity ‘clock’ retrieval practice for AIC and ACC literature text.
2) Regular assessments in both literature and language with teacher feedback.
3) Countdown revision programme of all Language and Literature units begins after February PPE.
4) Explicitly teaching whole school revision strategies in lessons – especially mind-maps and cue cards (funnelling).
5) Weekly Educake formative assessment homework.

How we revise at Countesthorpe Academy

Blurting



It's all about testing yourself repeatedly and it engages active recall to help you remember.

Funnelling

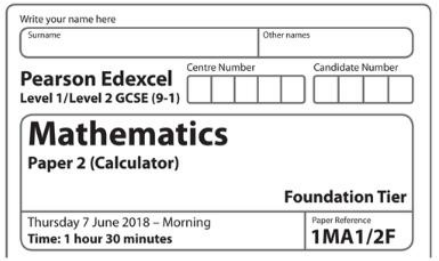
Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

Pomodoro Technique

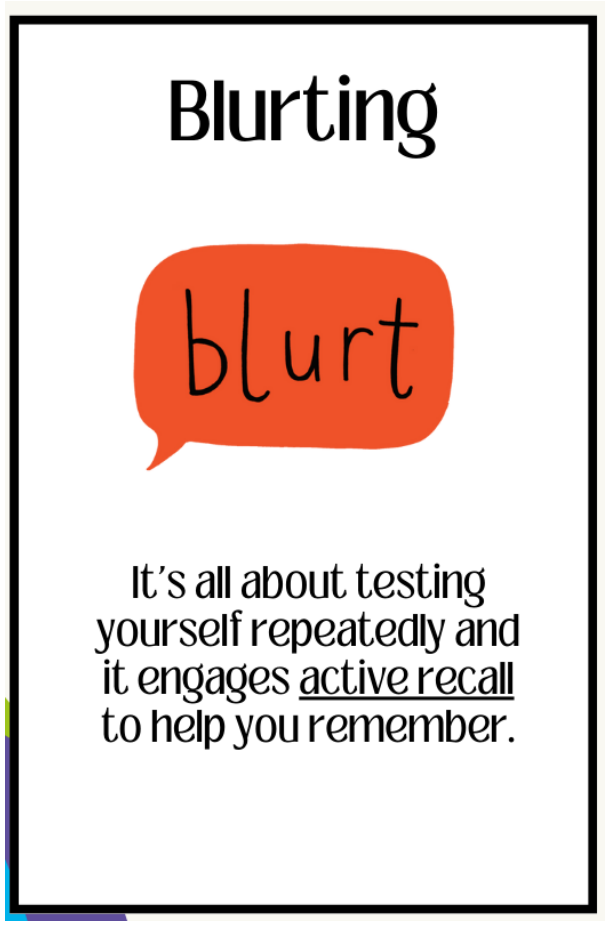
The Pomodoro method follows a basic pattern of 25 minutes of studying followed by a five-minute break, allowing for the perfect blend of study and rest.

Past Papers

Doing practice papers is one of the most important revision techniques. Do as many as you can under exam conditions to get used to the time pressure. Check your answers on the mark scheme.


Write your name here
Surname | Other names
Pearson Edexcel
Level 1/Level 2 GCSE (9-1)
Centre Number | Candidate Number
Mathematics
Paper 2 (Calculator)
Foundation Tier
Thursday 7 June 2018 – Morning
Time: 1 hour 30 minutes
Paper Reference
1MA1/2F

Blurting is very effective in English. It helps to give confidence as students see how much they know!



Students need to write down as much as they remember, as quickly as they can, on a specific topic. Here are some useful areas to blurt on!

A Christmas Carol –quotes and vocabulary

- Scrooge's character at the start of the novel
- Scrooge's transformed character at the end
- The Cratchits
- Attitudes to Christmas
- The ghosts
- The structure of the novel and use of motif

An Inspector Calls –quotes and vocabulary

- Mr Birling
- Mrs Birling
- Sheila
- Gerald
- Eric
- The Inspector
- Messages about society including context
- Dramatic structure and techniques

Poetry Anthology–quotes and context

- Five quotes for each poem
- Setting and time
- Message about power and conflict
- Links to other poems

Macbeth–quotes and vocabulary

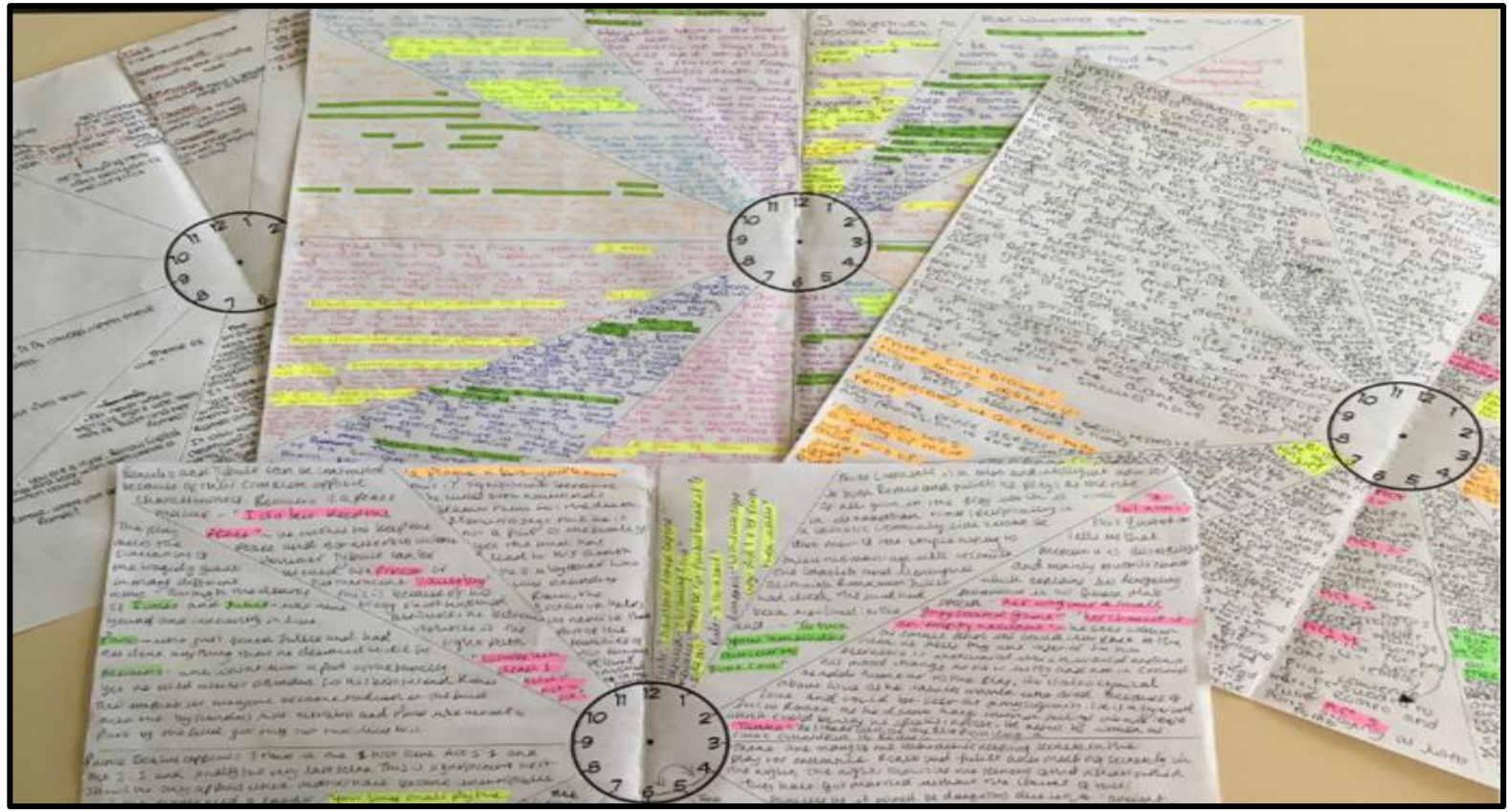
- Ambition
- Guilt
- How Macbeth changes
- Presentation of Lady Macbeth
- The influence of the supernatural
- The play's structure and motifs

Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

We condense our notes using a range of strategies:

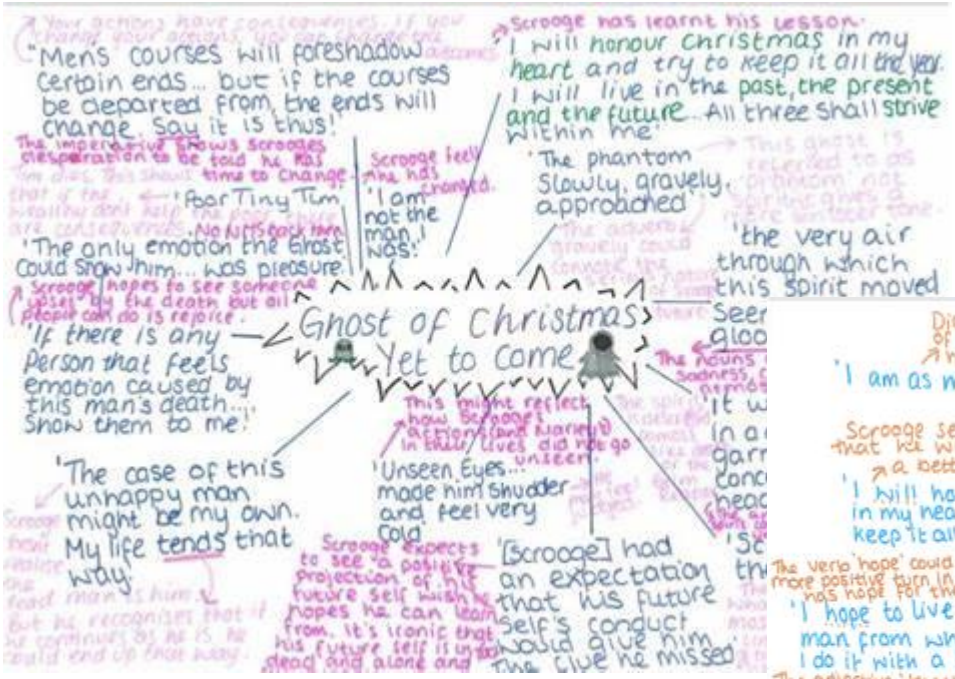
1) We will complete revision clocks as our connect activity in lessons for A Christmas Carol and An Inspector Calls – 5 minute recall

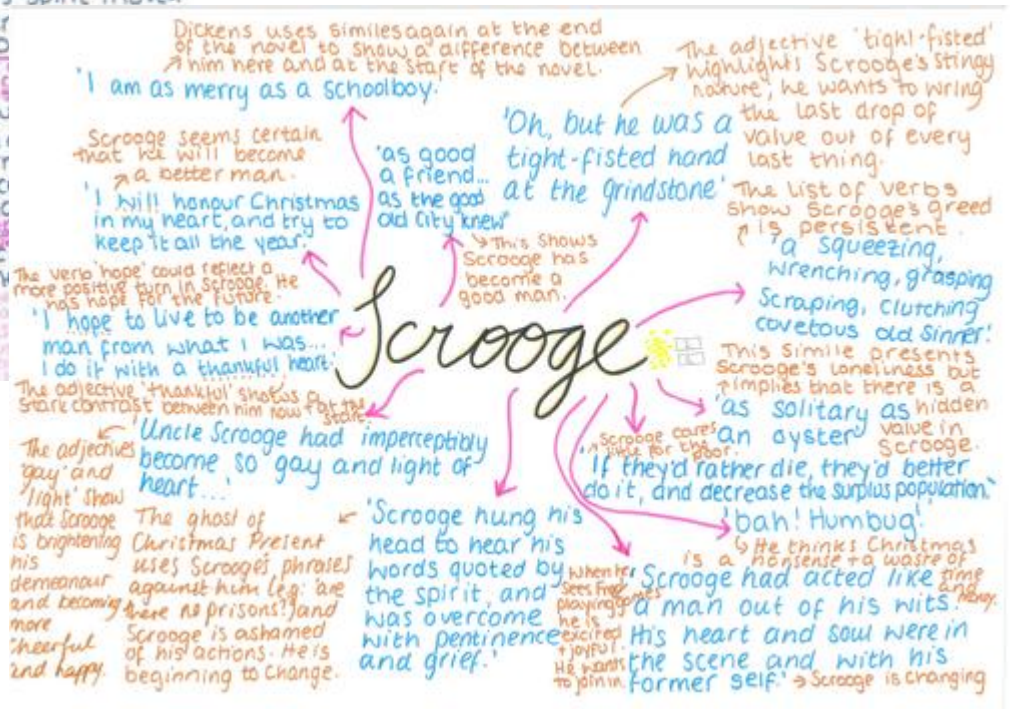


Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

2) Mind-maps are used extensively to organise essay structures and recall of quotes/ideas





Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

3) Anthology Poetry Revision sheets will be set for homework

Poetry Anthology Revision: Power and Conflict

Poem and Poet:

Five Key Quotes

Quote	Meaning and poetic technique

Place and time written about

What is the message about power or conflict?

Poems that link well

Poem	Link

Anthology Revision Sheet –post to Google classroom

Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.

4) Cue cards/ flashcards are very effective – the process of creation and reading/re-reading

1.5: 53 LM

Come, thick night, and pall thee in the dunnest smoke of hell

@UKStudyNotes

- imperative: come → power
- night connotes evil → link to 'spirits' & witches
  - LM has bad intentions, is cold 'dashed the brains out'
- noun 'smoke' connotes sight obstruction: M can't see the manipulation/influence of LM
  - reinforces 'night' → can't see
- juxtaposition: heaven & hell. Portray two possible outcomes, which they end up in depends on actions
  - religion → christianity
- 'night' 'smoke' → people can't see her evil intentions as she hides it 'play the humble host' → act
  - she's a woman so people expect her to be innocent

1: 3: 37 Witches

"The charm's wound up"

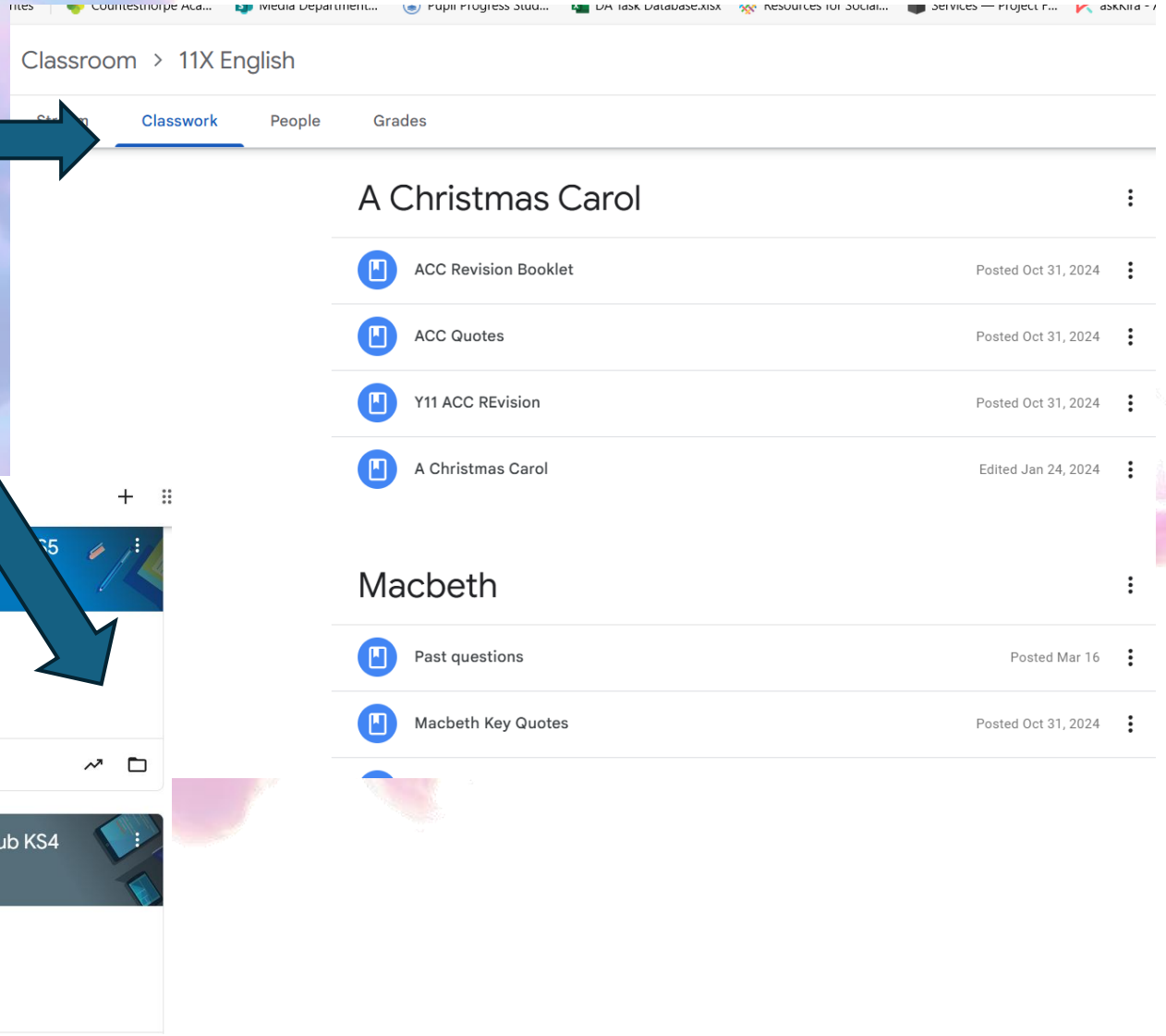
@UKStudyNotes

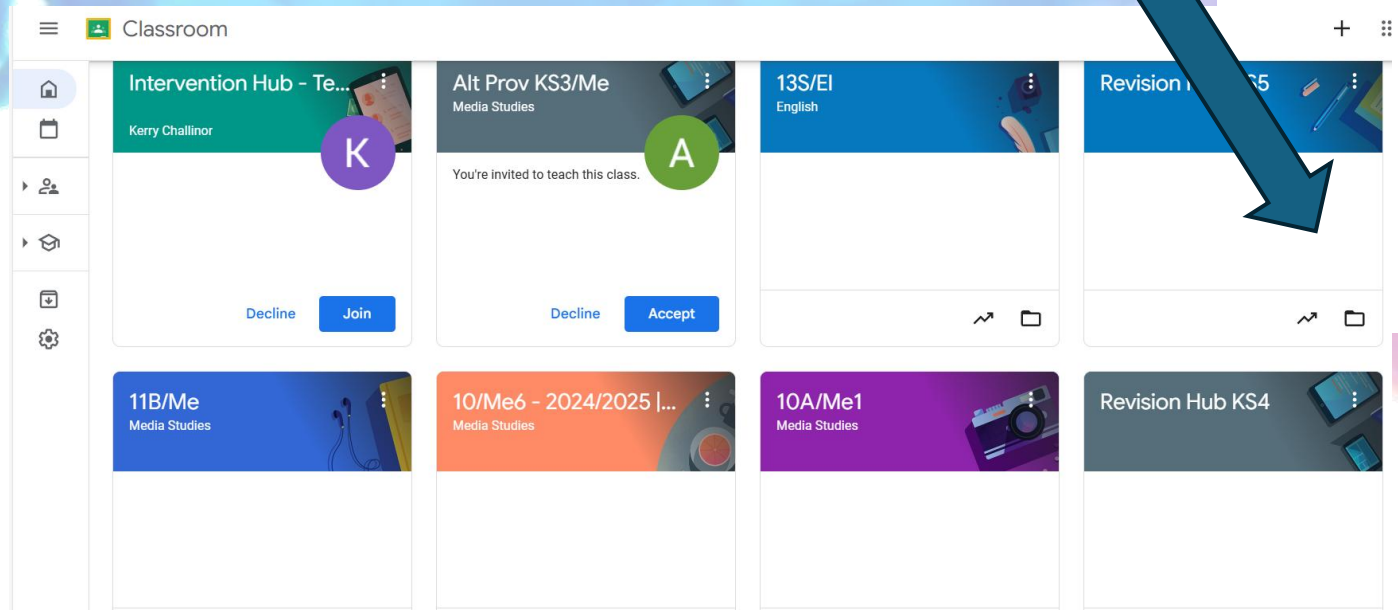
- metaphor: fate is predetermined
  - their magic has set up a clockwork mechanism in which Macbeth would appear to have no choice or free will, audience may sympathise & blame witches for regicide as they were believed to be evil and demonic
- 'charm' connotes magic & spells. heightens idea of spells from rhyming couplets - witches only characters that consistently talk in them
  - witches using power for bad → regicide. Women were powerless & proves it's the right choice as they corrupt w/power

Where to look for resources and online revision

Google Classroom

Each class has their own classroom plus a central Revision Hub with all past papers





Where to look for resources and online revision

Educake

Weekly homework

Every text covered

Language paper practice

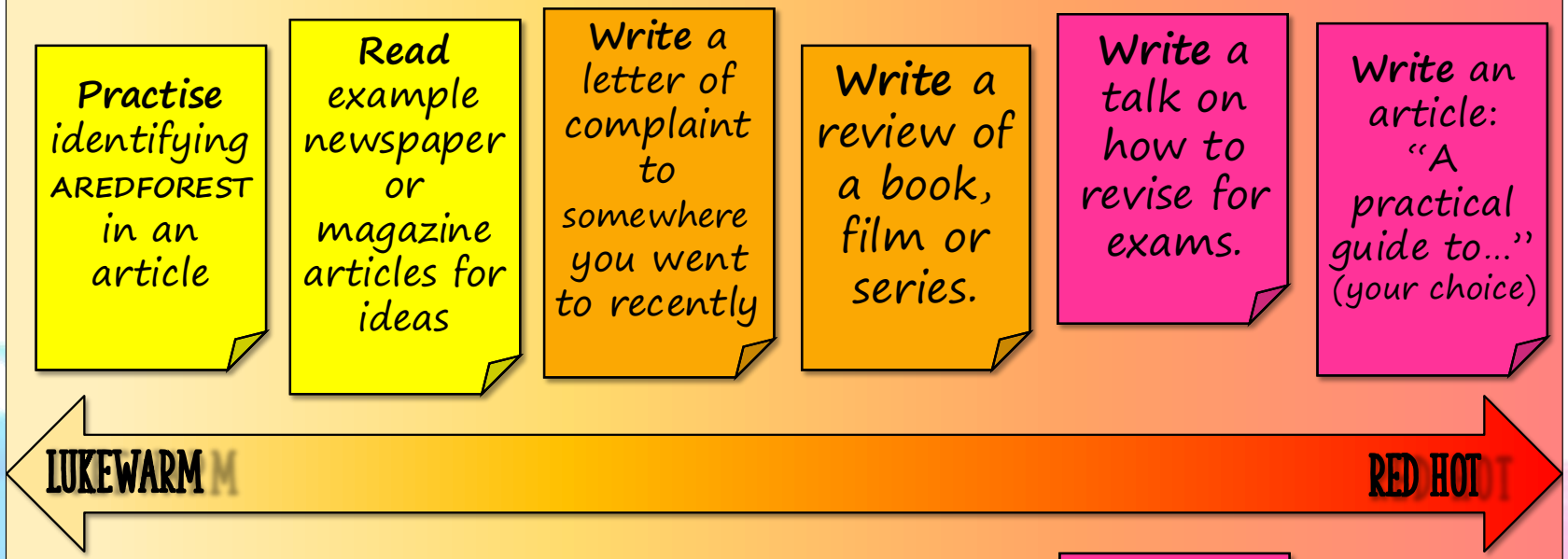
Narrative and transactional writing techniques

Independent revision

3 – Choose the Topics

Topic	Topic Detail	Specification Point
Plot: Stave One (A Christmas Carol)		
Plot: Stave Two (A Christmas Carol)		
Plot: Stave Three (A Christmas Carol)		
Plot: Stave Four (A Christmas Carol)		
Plot: Stave Five (A Christmas Carol)		
Characters: Ebenezer Scrooge (A Christmas Carol)		
Characters:The Cratchits (A Christmas Carol)		
Characters: The Ghosts (A Christmas Carol)		
Characters: Fred, Fezziwig & Belle (A Christmas Carol)		
Themes: Christmas (A Christmas Carol)		
Themes: Social Inequality (A Christmas Carol)		
Themes: Redemption (A Christmas Carol)		
Context (A Christmas Carol)		

HOW HOT IS MY ENGLISH LANGUAGE REVISON?



Practise identifying AREDFOREST in an article

Read example newspaper or magazine articles for ideas

Write a letter of complaint to somewhere you went to recently

Write a review of a book, film or series.

Write a talk on how to revise for exams.

Write an article: "A practical guide to..." (your choice)

Revise narrative / prose **terminology**

Learn **spellings** for key words / common errors

Revise the rules for using different types of **punctuation**

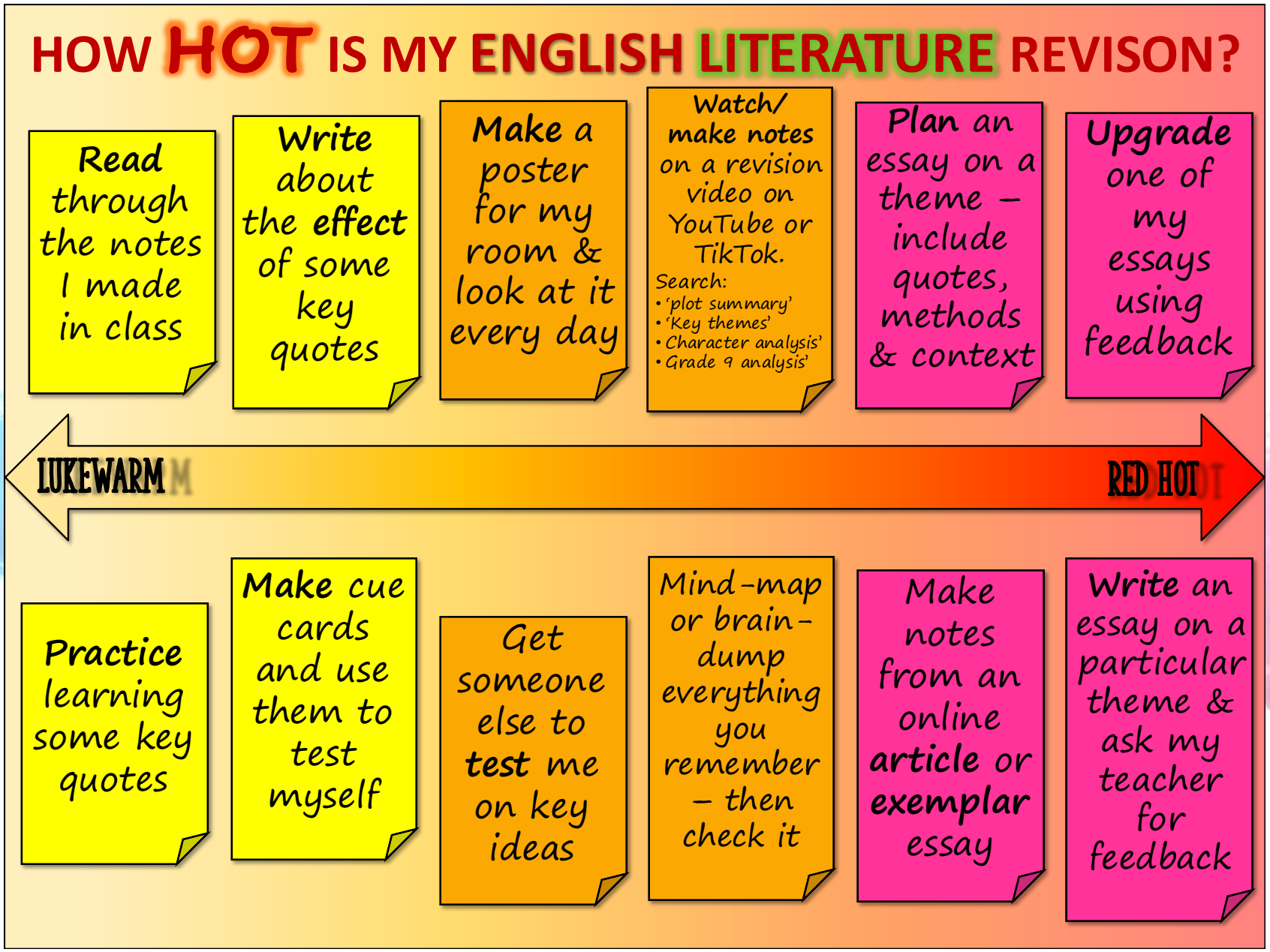
Complete a sample **Section A** (reading) paper for C1 or C2

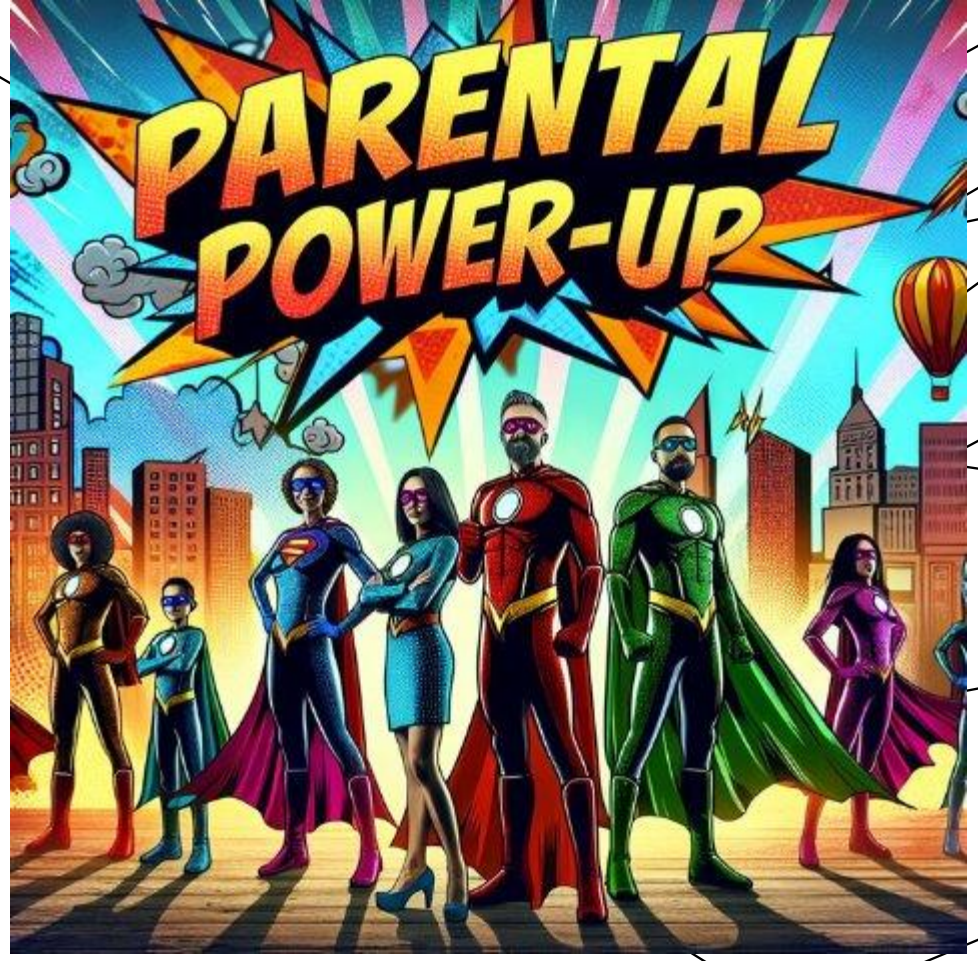
Write a paragraph describing what's around you. Use:

- 5 senses
- imagery

Write a short story and ask your teacher for feedback

HOW HOT IS MY ENGLISH LITERATURE REVISON?





Tips on how to support your child with GCSE Maths Revision

Welcome

1. **Introduction and purpose**
2. **Key insights and Common pitfalls**
3. **Effective revision strategies**

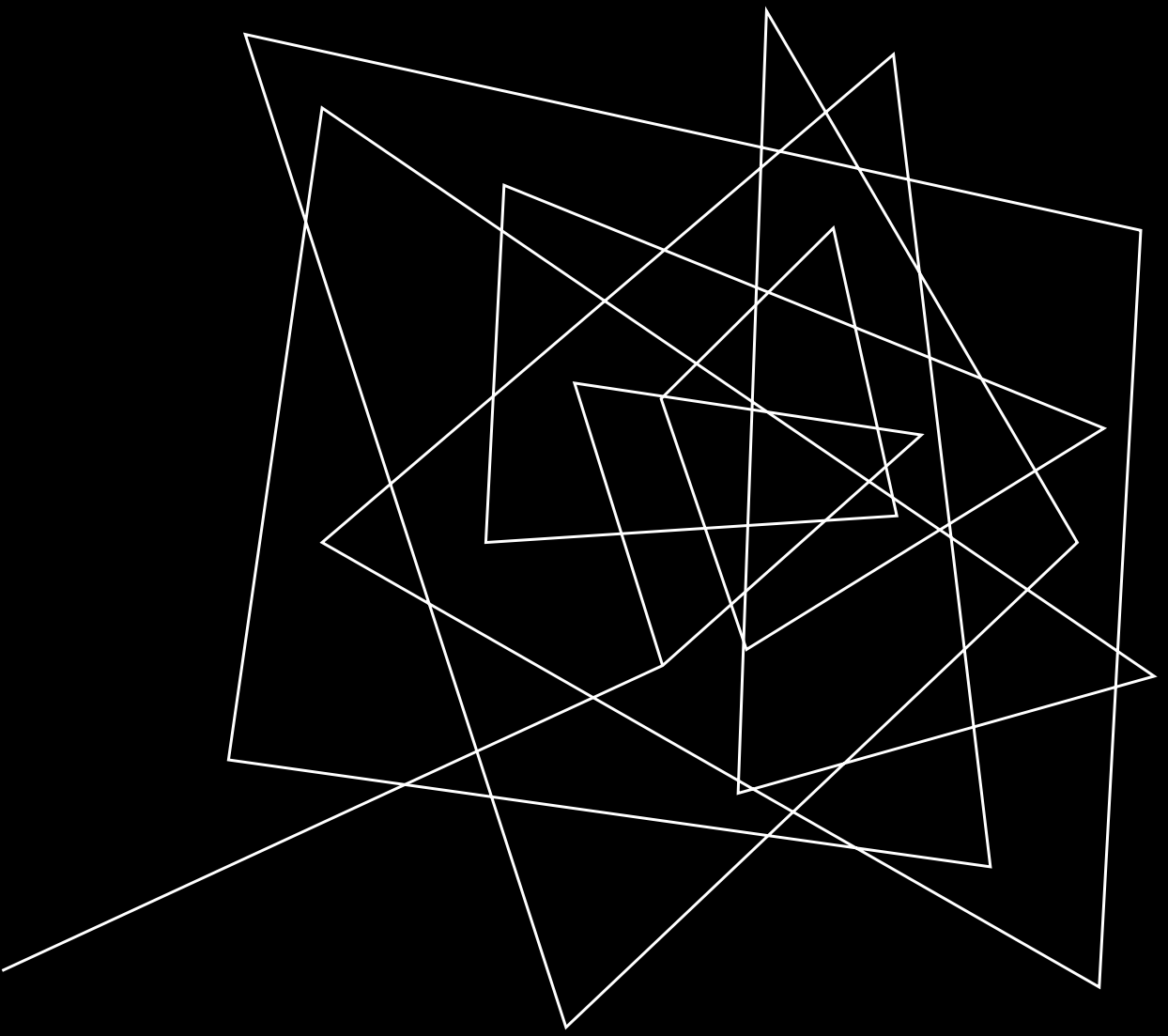
1. INTRODUCTION & PURPOSE

Reinforce the advice given to students in our lessons

Build confidence in parents so they feel they can support this

Work together to encourage students to take responsibility for their own learning

By sharing key insights, common pitfalls and good revision techniques



2. KEY INSIGHTS AND COMMON PITFALLS

“Revising for MATHS IS DIFFERENT”

Key insights

Emphasis on understanding rather than memorising.

Importance of communicating your work

Use of calculator

Common pitfalls

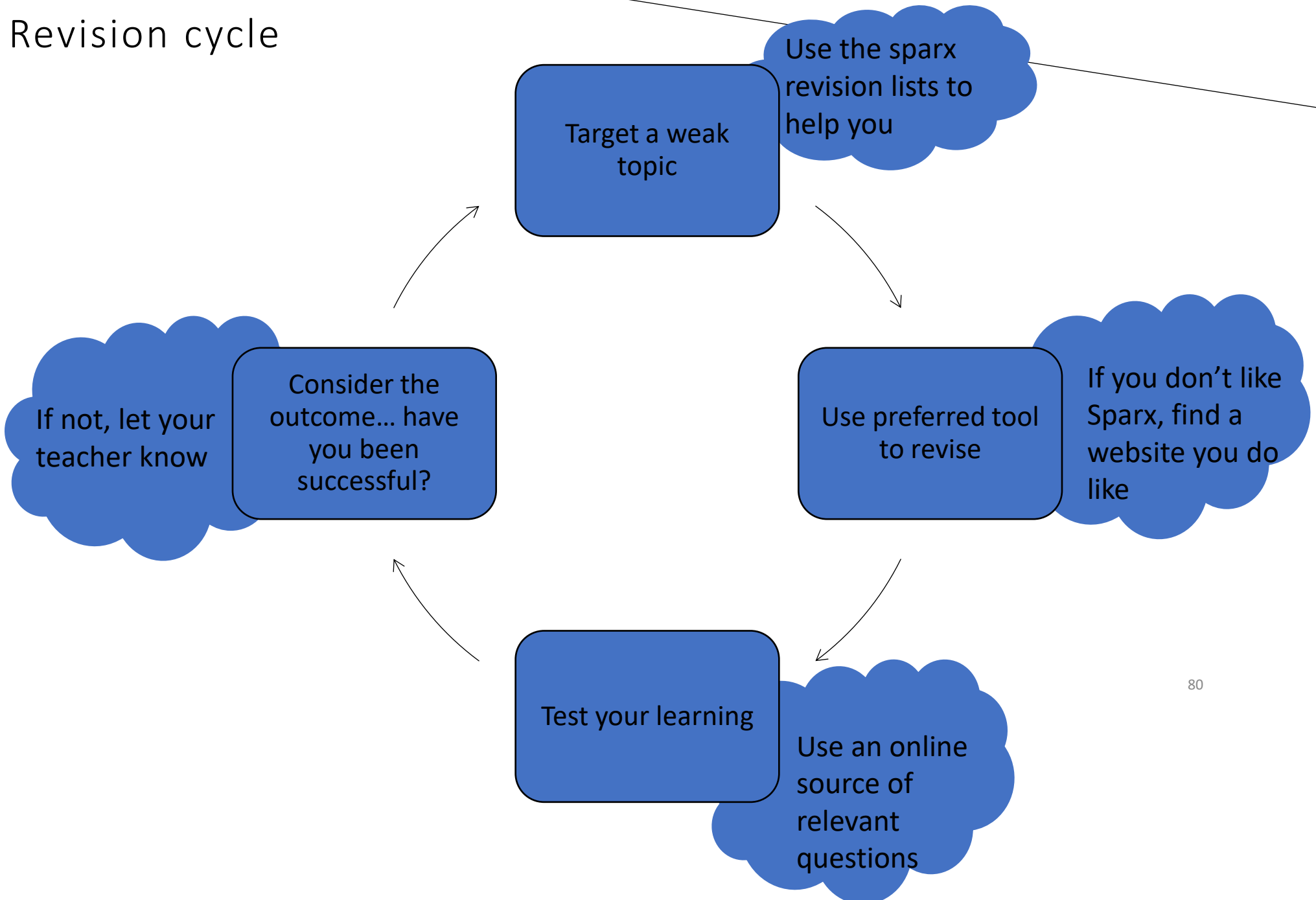
Students revising by reading rather than by doing

Completing lots of past papers without making progress

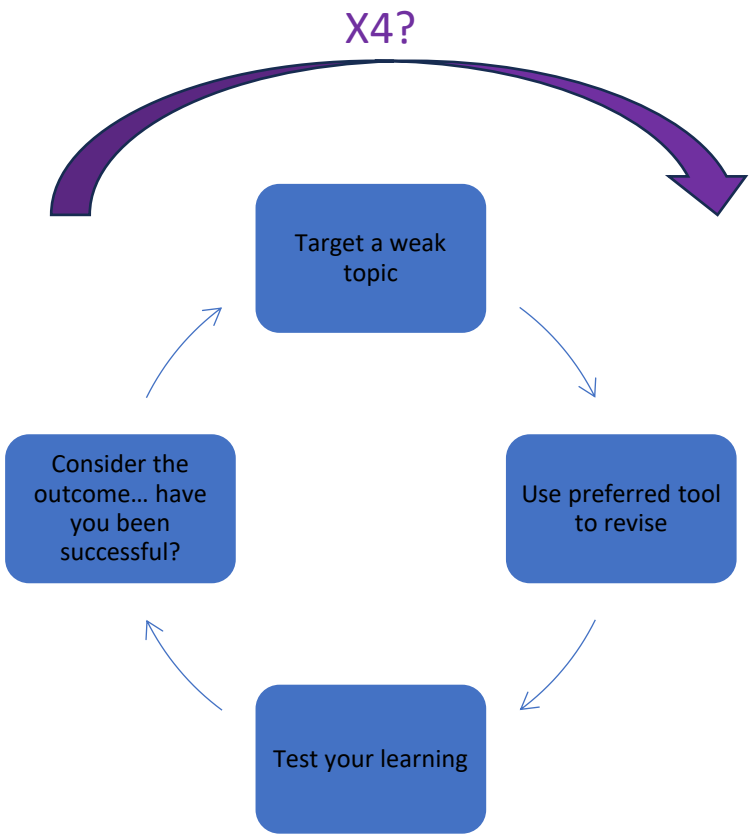
Unfamiliar calculator

3. Effective revision strategies

MATHS Revision cycle



How DO past papers Fit IN?



Complete a past paper after a set number of rounds around the cycle (eg 4)

Work under timed exam conditions (2hrs 15 mins) without any access to help/support

only use calculator for paper 2

Aim for a better score than the previous past paper…only possible if you mark and grade each paper you try!

TOP TIP: WHEN THE TIME ENDS, CONTINUE WORKING IN A DIFFERENT COLOUR PEN. THIS WAY YOU CAN SEE WHAT YOU ARE MATHEMATICALLY CAPABLE OF VS. WHAT YOU CAN DO IN THE ALLOTED TIME.
Goal: squeeze down the amount of work in that 2nd colour next time

Final tips & takeaways

The 3 main bits

- Follow the revision cycle
- Mix it up with regular past papers
- Get to know your calculator and the correct equipment

GCSE Maths Revision Checklist - Foundation

Unit		Unit / Topic	Complete
1		**Integers and place value**	
	a	Types of number	
		Use and order positive and negative numbers	U947
		Use inequality symbols	U600
		Four operations using positive and negative numbers	U417 U127 U453
		Round numbers to nearest 10, 100, 1000 and use rounding for estimation	U480
	b	**Decimals**	
		Use decimals and place value	U435
		Compare and order decimal numbers	U435
		Four operations using decimal numbers	U478 U293 U868
		Round to nearest whole number, decimal place & significant figures	U266 U731 U965
		Use one calculation to check another	U225
	c	**Indices, powers and roots**	
		Find squares and cubes	U851
		Use index notation including negative powers	U985 U694
		Use laws of indices to multiply and divide numbers in index form	U235
		Order of operations including powers and brackets	U976
		Use of calculator	U626
	d	**Factors, multiples and primes**	
		Identify factors, multiples and prime numbers	U211 U236
		Find prime factorisation of a number (& write in index form)	U739
		Find common factors & highest common factor	U529
		Find LCM of two (or three) numbers	U751 U250
2		**Algebra: the basics**	
	a	Write an expression	U613
		Collect like terms	U105
		Simplify expressions	U105
		Use index laws	U662
	b	**Expanding and factorising single brackets**	
		Expand single brackets	U179
		Simplify expressions using squares and cubes	U179
		Factorise expressions	U365
	c	**Expressions and substitution into formulae**	
		Substitute into expressions involving brackets & powers	U201
		Substitute into a formula (& word formula)	U585 U144
3		**Tables**	
	a	Sort and classify data (inc tally charts)	U653 U120
		Extract data from lists and tables (inc timetables)	U981 U312
		Identify mode from a list / table	U260 U909
		Charts and graphs	
		Know which chart or diagram to use for different data sets	
	b	Draw and interpret bar charts (inc dual & composite)	U363 U557
		Draw and interpret line graphs (vertical & time-series)	U193 U590
		Draw and interpret frequency polygons	U840
		Draw and interpret pictograms	U506
		Draw and interpret stem and leaf diagrams	U200 U909
		Pie charts	
	c	Draw and use pie charts	U508
		Find mode & total frequency from a pie chart	U172
		Compare two pie charts	U520
		Scatter graphs	
	d	Draw and use scatter graphs & lines of best fit	U199 U277 U128
		Identify outliers & correlation	

Unit		Unit / Topic	Complete
4		**Fractions**	
	a	Equivalent fractions including simplifying & comparing	U704 U746
		Express one amount as a fraction of another	U163
		Convert between mixed numbers and improper fractions	U692
		Four operations using fractions	U736 U475 U544
		Find a fraction of an amount	U881 U916
	b	**Fractions, decimals and percentages**	
		Use fraction to decimal conversions	U888 U550
		Recognise terminating & recurring decimals	U868
	c	**Percentages**	
		Convert between fractions, decimals & percentages	U888
		Order & compare fractions, decimals & percentages	U594
		Write one amount as a percentage of another	U925
		Calculate percentage of an amount	U554
		Calculate percentage increase/decrease	U278
		Use decimals to find quantities (multiplier methods)	U349
		Increase / decrease an amount by a percentage	U773 U671
5		**Equations**	
	a	Use function machines	
		Solve equations (inc brackets and unknowns on both sides)	U755 U325 U870
		Rearrange simple equations	U556
		Set up & solve equations to solve problems	U599
	b	**Inequalities**	
		On a number line	U509
		Listing numbers that satisfy an inequality	U509
		Solving inequalities and show the solution on a number line	U759
		Error intervals due to rounding & truncation	U657 U301
6		**Sequences**	
	c	Continue sequences inc from pictures	U680 U213
		Find the nth term	U498 U978
		Use nth term rule to generate or continue a sequence	U498
	a	**Properties of shapes, parallel lines and angle facts**	
		Measure and draw lines, angles, 2D & 3D shapes	U102 U447
		Identify and name 2D shapes and their properties	U121
		Identify parallel and perpendicular lines	U121
		Use angle facts - around a point, straight line, vertically opposite etc	U390 U730 U
		Use angle properties of parallel lines	U826
	b	**Interior and exterior angles of polygons**	
		Use sum of interior angles for irregular & regular polygons	U628 U732
		Use sum of exterior angles for regular polygons	U427
7	a	**Statistics and sampling**	
		Understand bias	U162
	b	**The averages**	
		Use various charts & diagrams in relation to averages	U854
		Calculate the mean, mode, median and range from a list	U526 U260 U456 U
		Median, mean and range from a table (discrete data)	U569
		Modal class, median and estimate of the mean from grouped data	U877
8		**Perimeter and area**	
	a	Convert between metric measures	U388
		Read scales	U257
		Time	U902
		Perimeter of 2D shapes	U226 U351
		Area of 2 D shapes	U343
		Area of compound shapes	U970 U575
		Surface area of prisms & simple compound forms	U259

GCSE Maths Revision Checklist - Foundation

Unit		Unit / Topic	Complete
8	b	**3D forms and volume**	
		Identify and name 3D forms and their properties	U719
		Volume of a cuboid	U786
		Volume of a prism	U174
		Volume of a composite forms	U543
9		**Real-life graphs**	
	a	Use coordinates in all four quadrants	U789
		Midpoints of a line segment	U933
		Conversion graphs	U638 U610
		Fixed cost and cost per unit graphs	U638
		Distance / time and Velocity/ time graphs	U403 U914 U937 U562
	b	**Straight-line graphs**	
		Draw, use and interpret (inc gradient) straight line graphs	U741
		Identify parallel lines	U377
		Find the equation of a line (including from a graph)	U315 U477 U848
10		**Transformations I: translations, rotations & reflections**	
	a	Transform and describe translations	U196
		Transform and describe rotations	U696
		Transform and describe reflections	U799
	b	**Transformations II: enlargements and combinations**	
		Transform and describe enlargements	U519
		Transform shapes using a combination of transformations	U766
		Describe transformations when using multiple transformations	U766
11		**Ratio**	
	a	Write ratios in their simplest form (including in context)	U687
		Share a quantity in a given ratio (including 3-part ratios)	U577
		Use a ratio to find one quantity when another is known	U753
		Compare ratios	
		Write ratio in the form 1:n or n:1	U687
		Write a ratio as a fraction and vice versa	U176
	b	**Proportion**	
		Use direct & inverse proportion (and recognise graphically)	U721 U357 U238
		Best value	U721
		Recipes	
		Currency conversions	U610
12		**Right-angled triangles: Pythagoras and trigonometry**	
		Pythagoras' Theorem	U385
		Trigonometry - sin, cos and tan	U605 U283 U545
		Know exact trig values	U627
13		**Probability I**	
	a	Probability scale	U803 U408
		Listing outcomes	
		Two-way tables & Frequency Trees	U104 U280
		Use 1-p	U683
	b	**Probability II**	
		Relative frequency	U580
		Sample space diagrams	U104
		Venn diagrams & set notation	U748 U296
		Probability tree diagrams	U558

Unit		Unit / Topic	Complete
14		**Multiplicative reasoning**	
		Use compound measures: Pressure, Density & Speed	U842 U527 U1
		Percentage profit / loss	U278
		Reverse percentages	U286
		Simple interest	U533
		Compound interest & growth	U332
		Depreciation & decay	U988
		Rates of pay	U256
15	a	**Plans and elevations**	
		3D shape names and properties	U719
		Sketch 3D forms	U761
		Draw plans and elevations of shapes	U743
		Draw a 3D form given its plan and elevations	U743
	b	**Constructions, loci and bearings**	
		Standard constructions	U187 U787 U245 U9
		Find regions satisfying a combination of loci	U820
		Use maps and scale drawings	U257
		Bearings	U525 U107
16	a	**Quadratic equations: expanding and factorising**	
		Expand double brackets	U768
		Factorise quadratic expressions	U898
		Solve quadratic equations	U960
	b	**Quadratic equations: graphs**	
		Plot quadratic graphs	U989
		Find solutions, intercepts & turning points of a quadratic graph	U667 U601
17		**Circles, cylinders, cones and spheres**	
		Name parts of a circle	U767
		Recall & use formula for area and circumference of a circle	U604 U950
		Arcs and sectors	U221 U373
		Surface area & volume of a cylinder	U464 U915
		Spheres, pyramids, cones and composite solids.	U871 U523 U893 U116 U
18	a	**Fractions and reciprocals**	
		Four operations with mixed number fractions	U793 U475 U6
		Reciprocal of an integer, decimal or fractions	
	b	**Indices and standard form**	
		Index laws to simplify & calculate the value of an expression	U662 U985
		Convert between ordinary numbers and standard form	U330 U534
		Work with the four operations in standard form	U290 U264
		Use a calculator with indices and standard form	U161
19	a	**Similarity and congruence in 2D**	
		Use congruence criteria for triangles (SSS, SAS, ASA and RHS); identify similar shapes	U790 U866 U551
		Identify scale factors and find missing lengths in similar shapes	U578
	b	**Vectors**	
		Understand and use column notation including drawing them	U632
		Identify parallel column vectors	U660
		Calculate using column vectors	U903 U564
20		**Rearranging equations, graphs of cubic and reciprocal functions and simultaneous equations**	
		Know the terms equation, identity, expression etc	
		Change the subject of a formula	U556
		Answer simple "show that" questions.	U887
		Use inverse proportion involving graphs	U238
		Recognise and sketch cubic functions	U980
		Recognise and sketch reciprocal functions	U593
		Solve simultaneous equations algebraically and graphically	U836 U760

GCSE Maths Revision Checklist - Higher

Unit		Unit / Topic	Complete
1		**Calculations, checking and rounding**	U417 U478 U735 U127 U293 U453 U868
	a	Four operations with decimals and whole numbers	
		Use one calculation to find the answer to another	
		Product rule	U369
		Rounding & estimation	U480 U298 U731 U965 U225
	b	**Indices, roots, reciprocals and hierarchy of operations**	
		Use index notation including fractional and negative powers	U851 U985 U772
		Order of operations	U976
	c	**Factors, multiples and primes**	
		Identify factors, multiples and prime numbers	U211 U236
		Find prime factorisation of a number (& write in index form)	U739
		Find common factors & highest common factors	U751 U529
		Find LCM of two (or three) numbers	U250
	d	**Standard form and surds**	
		Index laws to simplify & calculate the value of an expression	U662 U201
		Convert between ordinary numbers and standard form	U330 U534
		Work with the four operations in standard form	U264 U290
		Use a calculator with indices and standard form	U161
		Simplify surd expressions	U338 U633 U872 U499
2		**Algebra: the basics**	
	a	Write an expression	U613
		Collect like terms	U613
		Simplify expressions	U105
		Use index laws	U662
		Expand single & double brackets	U179 U768
		Factorise single brackets	U365
		Factorise quadratic expressions	U178 U858
		Factorise quadratic expressions using difference of two squares	U963
	b	**Setting up, rearranging and solving equations**	
		Set up expressions and equations	U613 U599
		Substitute into expressions, equations and formulae	U201 U585 U144
		Solve linear equations and inequalities	U325 U870 U505 U738 U337
		Change the subject of a formula	U556
		Iteration	U434 U168
	c	**Sequences**	
		Continue sequences inc from pictures	U213
		Find the nth term	U498 U978
		Use nth term rule to generate or continue a sequence	U530
		Find the nth term of a quadratic sequence	U206
		Distinguish between arithmetic and geometric sequences	
		Recognise and use simple geometric progressions	
		Find term to term rule of a geometric sequence, including negative, fraction and decimal terms	U680
3		**Averages and range**	
	a	Use various charts & diagrams in relation to averages	U717
		Two way tables	U981
		Calculate the mean, mode, median and range from a list	U526 U456 U260 U291
		Median, mean and range from a table (discrete data)	U569
		Modal class, median and estimate of the mean from grouped data	U877
		Draw and interpret stem and leaf diagrams	U200 U909
	b	**Representing and interpreting data**	
		Know which chart or diagram to use for different data sets	U717
		Draw and interpret bar charts (inc dual & composite)	U363 U557
		Draw and interpret line graphs (vertical & time-series)	U590 U193
		Draw and use pie charts	U508 U172
		Find mode & total frequency from a pie chart	U854
		Compare two pie charts	U854
		Produce and interpret histograms	U185 U814 U983
		Compare distributions	U520
	c	**Scatter graphs**	
		Draw and use scatter graphs & lines of best fit	U199 U128

Unit		Unit / Topic	Complete
4		**Fractions**	
	a	Equivalent fractions including simplifying & comparing	U646 U746
		Express one amount as a fraction of another	U163
		Convert between mixed numbers and improper fractions	U692
		Four operations using fractions	U736 U475 U544
		Find a fraction of an amount	U881 U916
		Convert between recurring decimals to fractions and vice versa	U689 U550
	b	**Percentages**	
		Use fraction to decimal conversions	U888
		Recognise terminating & recurring decimals	U550
		Convert between fractions, decimals & percentages	U888
		Order & compare fractions, decimals & percentages	U594
		Write one amount as a percentage of another	U925
		Calculate percentage of an amount	U554
		Calculate percentage increase/decrease	U278
		Use decimals to find quantities (multiplier methods)	U349
		Increase / decrease an amount by a percentage	U773 U671
		Reverse percentages	U286
	c	**Ratio and proportion**	
		Write ratios in their simplest form (including in context)	U687
		Share a quantity in a given ratio (including 3-part ratios)	U577 U595
		Use a ratio to find one quantity when another is known	U753
		Compare ratios	U865
		Write ratio in the form 1:n or n:1	
		Write a ratio as a fraction and vice versa	U176
		Write a ratio as a linear function	
		Use direct & inverse proportion (and recognise graphically)	U238 U721 U357
		Recipes	
		Currency conversions	U610
5		**Polygons, angles and parallel lines**	
	a	Measure and draw lines, angles, 2D & 3D shapes	U447
		Identify and name 2D shapes and their properties	U121
		Identify parallel and perpendicular lines	U121
		Use angle facts - around a point, straight line, vertically opposite etc	U390 U730 U655
		Use angle properties of parallel lines	U826
		Use sum of interior angles for irregular & regular polygons	U427
		Use sum of exterior angles for regular polygons	U427
		Use the side/angle properties of compound shapes made up of triangles, lines and quadrilaterals	U329
	b	**Pythagoras' Theorem and trigonometry**	
		Pythagoras' Theorem	U385
		Trigonometry - sin, cos and tan	U545 U283 U170
		Know exact trig values	U319
6		**Graphs: the basics and real-life graphs**	
	a	Use coordinates in all four quadrants	U789
		Conversion graphs	U638 U610 U862
		Fixed cost and cost per unit graphs	U256 U862
		Distance / time and Velocity/ time graphs	U403 U937
		Midpoints of a line segment	U933
		Calculate the length of a line segment	U889
	b	**Linear graphs and coordinate geometry**	
		Draw, use and interpret (inc gradient) straight line graphs	U741
		Find the equation of a line through two points	U848
		Find the equation of a line (including from a graph)	U315 U477
		Identify parallel and perpendicular lines	U377
		Generate equations of parallel and perpendicular lines	U377 U898
	c	**Quadratic, cubic and other graphs**	
		Plot quadratic graphs	U989
		Find solutions, intercepts & turning points of a quadratic graph	U601 U667 U769
		Recognise and sketch cubic functions	U980
		Recognise and sketch reciprocal functions	U593

GCSE Maths Revision Checklist - Higher

Unit		Unit / Topic	Complete
7		**Perimeter, area and circles**	
	a	Convert between metric measures	U338 U468 U248
		Read scales	U102
		Perimeter of 2D shapes	U934 U351
		Area of 2 D shapes and compound shapes	U863 U575 U265
		Name parts of a circle	U767
		Recall & use formula for area and circumference of a circle	U950 U604
		Arcs and sectors	U221 U373
		3D forms and volume, cylinders, cones and spheres	
		Identify and name 3D forms and their properties	U719 U761
	b	Volume of a cuboid	U786
		Volume of a prism	U174
		Volume of a composite forms	U543 U426
		Surface area of prisms & simple compound forms	U929 U142 U259
		Surface area & volume of a cylinder	U915 U464
		Spheres, pyramids, cones, frustums and composite solids.	U871 U523 U334
	c	**Accuracy and bounds**	
		Calculate the upper & lower bounds of numbers	U657
		Calculate the upper & lower bounds of an expression	U587
		Use error intervals (inc truncation)	U301
8		**Transformations**	
	a	Transform and describe translations, rotations & reflections	U196 U696 U799
		Transform and describe enlargements inc fractional and negative SF	U519 U134
		Transform shapes using a combination of transformations	U766
		Describe transformations when using multiple transformations	U766
		Describe the changes & invariance achieved by combinations of transformations	
		Constructions, loci and bearings	
		Draw plans and elevations of shapes	U743
	b	Draw a 3D form given its plan and elevations	U743
		Use maps, scale drawings & bearings	U257 U525 U107
		Standard constructions	U678 U187 U787 U245 U979
		Find regions satisfying a combination of loci	U820
		Find and describe regions satisfying a combination of loci, including in 3D	
		Use constructions to solve loci problems including with bearings	
9		**Solving quadratic and simultaneous equations**	
	a	Set up and solve quadratic equations	U960 U601
		Completing the square	U589
		Quadratic Formula	U665
		Solve simultaneous equations algebraically and graphically (linear/linear)	U760 U757 U836
		Solve simultaneous equations algebraically and graphically (linear/quadratic)	U547 U875
		Solve simultaneous equations algebraically and graphically (linear/circle)	U567
	b	**Inequalities**	
		On a number line	U509
		Listing numbers that satisfy an inequality	U509
		Solving inequalities and show the solution on a number line	U759, U738, U145
		Represent and interpret inequalities graphically	U747 U133
10		**Probability**	
		Probability scale	U803 U408
		Listing outcomes	U369
		Two-way tables	U104
		Frequency trees	U280
		Use 1-p	U683
		Relative frequency	U166
		Sample space diagrams	U104
		Venn diagrams & set notation	U476 U748 U899
		Probability tree diagrams	U558 U729 U806
11		**Multiplicative reasoning**	
		Best value	
		Use compound measures: Pressure, Density & Speed	U527 U151 U910
		Percentage profit / loss	U278
		Reverse percentages	U286
		Simple interest	U533

Unit		Unit / Topic	Complete
12		**Similarity and congruence in 2D and 3D**	
		Use congruence criteria for triangles (SSS, SAS, ASA and RHS);	U790 U866
		Use formal geometric proof involving similarity & congruence	U887
		Identify similar shapes	U551
		Identify scale factors and find missing lengths in similar shapes	U578
		Use length, area and volume scale factors	U110 U630
		Area and surface area of frustums	U334 U350
13	a	**Graphs of trigonometric functions**	
		Recognise, sketch and interpret graphs of the trigonometric functions	U450
		Exact trig values	U627 U319
		Transforming graphical functions	U598 U487 U455
	b	**Further trigonometry**	
		Formula for area of a triangle	U592
		Sine rule in 2D and 3D	U952
		Cosine rule in 2D and 3D	U591
		Pythagoras Theorem in 3D	U385
14	a	**Collecting data**	
		Types of data	U322
		Bias and eliminating bias	U162
	b	**Cumulative frequency, box plots and histograms**	
		Construct & interpret cumulative frequency tables/graphs	U182
		Median, quartiles & interquartile range from cumulative diagrams	U642
		Construct & interpret box plots	U879
		Median, quartiles & interquartile range from box plots	U837
		Construct & histograms	U185 U814
		Estimate the mean and median from a histogram	U983 U267
15		**Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics**	
		Sketch quadratics	U989
		Identify roots, turning points and intercepts of quadratic graphs	U667
		Completing the square	U589 U769
		Expand the product of more than two linear expressions	U606
		Sketch cubics	U980
		Solve simultaneous equations graphically	U675 U269
		Solve and represent quadratic inequalities	U133
16	a	**Circle theorems**	
		Parts of a circle	U767
		Prove, recall and apply circle theorems	U251 U489 U130 U459 U807
	b	**Circle geometry**	
		Recognise and construct the graph of a circle	U567
		Find the equation of a tangent to a circle	U567
17		**Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof**	
		Rationalise the denominator involving surds	U707 U281
		Simplify, multiply and divide algebraic fractions	U437 U292 U457 U824
		Change the subject of a complex formula	U556
		Algebraic Proof	U582
		Functions & function notation	U837
		Inverse functions	U996
		Composite functions	U448 U895
18		**Vectors and geometric proof**	
		Understand represent and use vector notation, including column notation	U632 U903 U564
		Find the length of a vector	
		Calculate the resultant of a vector	
		Geometric problems in 2D where vectors are divided in a given ratio.	U781
		Geometrical proofs to prove points are collinear & vectors/lines are parallel	U560
19	a	**Reciprocal and exponential graphs; Gradient and area under graphs**	
		Recognise, sketch and interpret reciprocal graphs	U593
		Calculate and interpret the area under a curve	U882
		Calculate and interpret gradient of a tangent to a curve	U800

GCSE Mathematics Foundation Tier

Number · Algebra · Ratio, proportion and rates of change · Geometry & measures · Probability · Statistics

Here is pretty much all the Foundation Tier content we could fit onto an A3 sheet of paper, including all the formulae you are required to know for GCSE. An → points to an illustrative example. The codes refer to the DfE subject content. Pin this to a wall, keep it on your desk, carry it in your bag, make notes on it (sorry, don't take it into the examination)...

BIDMAS N3

...or BODMAS. Use the correct order of operations; take care when using a calculator.

- **B**rackets
- **I**ndices (or p**O**owers)
- **D**ivision and **M**ultiplication
- **A**ddition and **S**ubtraction

Types of number N4

Integer: a "whole" number
Factors; the divisors of an integer
→ Factors of 12 are 1, 2, 3, 4, 6, 12
Multiples; a "times table" for an integer (will continue indefinitely)
→ Multiples of 12 are 12, 24, 36 ...
Prime number: an integer which has exactly two factors (1 and the number itself). Note: 1 is not a prime number.

HCF, LCM N4

Highest **C**ommon **F**actor (HCF)
→ Factors of 6 are **1**, 2, 3, **6**
Factors of 9 are 1, 3, **9**
HCF of 6 and 9 is **3**
Lowest **C**ommon **M**ultiple (LCM)
→ Multiples of 6 are 6, 12, 18, 24, ...
Multiples of 9 are 9, 18, 27, 36, ...
LCM of 6 and 9 is **18**

Prime factors N4

Write a number as a product of its prime factors; use indices for repeated factors:

→ $720 = 5 \times 3^2 \times 2^4$

Powers and roots N6, N7

Special indices: for any value a:

$a^1 = a$

$a^{-n} = \frac{1}{a^n}$

→ $3^{-4} = \frac{1}{3^4} = \frac{1}{81}$

Calculating with fractions N8

Adding or subtracting fractions; use a common denominator...

→ $\frac{4}{5} - \frac{1}{5} = \frac{12}{15} - \frac{5}{15} = \frac{7}{15}$

Multiplying fractions; multiply numerators and denominators...

→ $\frac{4}{7} \times \frac{2}{3} = \frac{8}{21}$

Dividing fractions; "flip" the second fraction, then multiply...

→ $\frac{2}{7} \div \frac{5}{6} = \frac{2}{7} \times \frac{6}{5} = \frac{12}{35}$

Fractions, decimals N10

Fraction is numerator ÷ denominator

→ $\frac{5}{8} = 5 \div 8 = 0.625$

Use place values to change decimals to fractions. Simplify where possible.

→ $0.45 = \frac{45}{100} = \frac{9}{20}$

Learn the most frequently used ones:

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{3}{4}$
0.5	0.25	0.1	0.2	0.75

Surds N8

Look for the biggest square number factor of the number:

→ $\sqrt{80} = \sqrt{16} \times \sqrt{5} = 4\sqrt{5}$

Standard form N9

Standard form numbers are of the form $a \times 10^n$ where $1 \leq a < 10$ and n is an integer.

Standard units N13

1 tonne = 1000 kilograms
1 kilogram = 1000 grams

1 kilometre = 1000 metres
1 metre = 100 centimetres
= 1000 millimetres
1 centimetre = 10 millimetres

1 day = 24 hours
1 hour = 60 minutes = 3600 seconds
1 minute = 60 seconds

Rounding N15

Truncate the number, then use a "decider digit" to round up or down. Decimal places: use the decimal point

→ 162.3681 to 2dp;
162.36 | 81 = 162.37 to 2dp

Significant figures: use the first non-zero digit.

→ 162.3681 to 2sf;
16| 2.3681 = 160 to 2sf

→ 0.007 039 to 3sf;
0.007 03 | 9 = 0.007 04 to 3sf

Error intervals N15

Find the range of numbers that will round to a given value:

→ $x = 5.83$ (2 decimal places)
$5.825 \leq x < 5.835$

→ $y = 46$ (2 significant figures)
$45.5 \leq y < 46.5$

Note use of ≤ and <, and that the last significant figure of each is 5

Algebraic notation A1

$ab = a \times b$
$3y = y + y + y$
$a^2 = a \times a$
$a^3 = a \times a \times a$
$a^2b = a \times a \times b$
$\frac{a}{b} = a \div b$

Equations and identities A3

An equation is true for some particular value of x

→ $2x + 1 = 7$ is true if $x = 3$
...but an identity is true for every value of x

→ $(x + a)^2 \equiv x^2 + 2ax + a^2$
(note the use of the symbol ≡)

Laws of indices A4

For any value a:

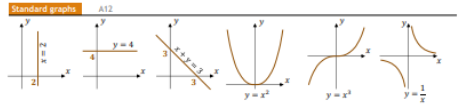
$a^x \times a^y = a^{x+y}$

$\frac{a^x}{a^y} = a^{x-y}$

$(a^x)^y = a^{xy}$

→ $\left(\frac{2ac}{p^2q}\right)^3 = \frac{8a^3c^3}{p^6q^3} = \frac{8a^3}{p^6}$ or $8aq^3p^{-6}$

Standard graphs A12



y = mx + c A9

Equation of straight line $y = mx + c$
m is the gradient; c is the y intercept:

→ **Find the equation of the line that joins (0 , 3) to (2 , 11)**
Find its gradient...

$$\frac{11-3}{2-0} = \frac{8}{2} = 4$$

...and its y intercept...
Passes through (0 , 3), so $c = 3$
Equation is $y = 4x + 3$

Parallel lines: gradients are equal; **→ $y = 2x + 3$ and $y = 2x - 5$ both have gradient 2 so are parallel.**

Expanding brackets A4

$p(q + r) = pq + pr$

→ $5(x - 2)y = 5x - 10y$

$(x + a)(x + b) = x^2 + ax + bx + ab$

→ $(2x - 3)(x + 5)$
$= 2x^2 - 3x + 10x - 15$
$= 2x^2 + 7x - 15$

Reverse of expanding is factorising - putting an expression into brackets.

Quadratics A18

Solve a quadratic by factorising.

→ **Solve $x^2 - 8x + 15 = 0$**
Put into brackets (taking care with any negative numbers)...
$(x - 3)(x - 5) = 0$
...then either $x - 3 = 0$ or $x - 5 = 0$
so that $x = 3$ or $x = 5$.

Difference of two squares A4

$a^2 - b^2 = (a + b)(a - b)$

→ $x^2 - 25 = (x + 5)(x - 5)$

Simultaneous equations A19

→ **Solve** $\begin{cases} 2x + 3y = 11 \\ 3x - 5y = 7 \end{cases}$

Multiply to match a term in x or y

$\begin{cases} 10x + 15y = 55 \\ 9x - 15y = 21 \end{cases}$

Add or subtract to cancel...

$19x = 76$, so $x = 4$

Finally, substitute and solve...

$2 \times 4 + 3y = 11$, so $y = 1$

Rearrange a formula A5

The subject of a formula is the term on its own. Use rules that "balance" the formula to change its subject

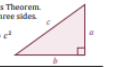
→ **Make x the subject of**
$2x + 3y = z$
Here, subtract $3y$ from both sides...
$2x = z - 3y$
...then divide both sides by 2

$$x = \frac{z - 3y}{2}$$

Right angled triangles G20, G22

Pythagoras Theorem.
Links all three sides.
No angles.

$a^2 + b^2 = c^2$



Trigonometry.
Links two sides and one angle.
SOH | CAH | TOA

$\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$

Use "2ndF" or "SHIFT" key to find a missing angle

The longest side of any right angled triangle is the hypotenuse; check that your answer is consistent with this.

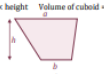
Special values of sin, cos, tan
Learn (or be able to find without a calculator)...

θ°	$\sin\theta^\circ$	$\cos\theta^\circ$	$\tan\theta^\circ$
0	0	1	1
30	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{3}}$
45	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{2}}{2}$	1
60	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\sqrt{3}$
90	1	0	

Areas and volumes G16, G17, G18, G23

Area of triangle $= \frac{1}{2} \times$ base $\times$ height

Volume of cuboid = length × width × height



Area of trapezium $= \frac{1}{2}(a + b) \times h$

Circumference of circle $= \pi \times D$
Area of circle $= \pi \times r^2$

Arc length $= \frac{\theta}{360^\circ} \times \pi \times D$

Volume of cylinder $= \pi r^2 \times$ height

Area of sector $= \frac{\theta}{360^\circ} \times \pi \times r^2$

Volume of prism = area of cross section × length

Transformations G7, G8

Reflection
- Line of reflection

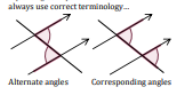
Rotation
- Centre of rotation
- Angle of rotation
- Clockwise or anticlockwise

Enlargement
- Centre of enlargement
- Scale factor (if SF < 1 the shape will get smaller).

Translation
- Vector

Angle facts G3

Equal angles in parallel lines: always use correct terminology...



Alternate angles

Corresponding angles

Angles on a straight line total 180°

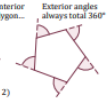
Angles in a full turn total 360°

Interior angles in a triangle total 180°

Use this for the interior angles of any polygon...

...or $180° \times (n - 2)$

Exterior angles always total 360°



Sequences A24, A25

Triangular numbers:

1st	2nd	3rd	4th	5th
1	3	6	10	15

Square numbers ($n^2 = n \times n$):

1^2	2^2	3^2	4^2	5^2
1	4	9	16	25

Cube numbers ($n^3 = n \times n \times n$):

1^3	2^3	3^3	4^3	5^3
1	8	27	64	125

nth term of an arithmetic (linear) sequence is $an + d$

→ **nth term of 5, 8, 11, 14, ... is $3n+2$ (always increases by 3**
first term is $3 \times 1 + 2 = 5$)
Geometric sequence; multiply each term by a constant ratio
→ **3, 6, 12, 24, ... (ratio is 2)**
Fibonacci sequence; make the next term by adding the previous two ...
→ **2, 4, 6, 10, 16, 26, 42, ...**

Probability P8, P9

$p = \frac{\text{n(equally likely favourable outcomes)}}{\text{n(equally likely possible outcomes)}}$

$p = 0$	impossible
$0 < p < 0.5$	unlikely
$p = 0.5$	evens
$0.5 < p < 1$	likely
$p = 1$	certain

Probability rules P8, P9

Multiply for independent events

→ **P(6 on dice and H on coin)**

$$\frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$$

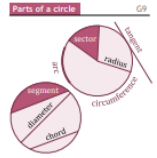
Add for mutually exclusive events

→ **P(5 or 6 on dice)**

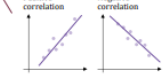
$$\frac{1}{6} + \frac{1}{6} = \frac{2}{6}$$

Apply these rules to tree diagrams.

Parts of a circle G9



Correlation S6



Division using ratio R5

Use a ratio for unequal sharing

→ **Divide £480 in the ratio 7 : 5**
7 + 5 = 12, then £480 ÷ 12 = £40
7 × £40 = £280, 5 × £40 = £200
(check: £280 + £200 = £480 ✓)

Ratio and fractions R8

Link between ratios and fractions

→ **Boys to girls in ratio 2 : 3**
$\frac{2}{5}$ are boys, $\frac{3}{5}$ are girls.

Percentages R9

y percent of $x = \frac{y}{100} \times x$

→ **Increase £58 by 26%.**
$\frac{26}{100} \times £58 = £15.08$
£58 + £15.08 = £73.08

y as a percentage of $x = \frac{y}{x} \times 100\%$

→ **The population of a town increases from 3500 to 4620**
Find the percentage increase.
$\frac{1120}{3500} \times 100\% = 32\%$

Note: fraction $= \frac{\text{increase}}{\text{original}}$

Learn the most frequently used ones:

$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{5}$	$\frac{1}{100}$
50%	25%	10%	20%	1%

Speed, distance, time R11

$\text{Speed} = \frac{\text{distance}}{\text{time}}$

→ **A car travels 90 miles in 1 hour, 30 minutes. Find its average speed.**
90 miles ÷ 1.5 hours = 60 mph

Averages S4

Mode: most frequently occurring
Median: put the data in numerical order, then choose the middle one
Mean $= \frac{\text{total of items of data}}{\text{number of items of data}}$

Surds N8

Look for the biggest square number factor of the number:

→ $\sqrt{80} = \sqrt{16} \times \sqrt{5} = 4\sqrt{5}$

Rationalise the denominator N8

Multiply the numerator and denominator by an expression that makes the denominator an integer:

→ $\frac{4}{\sqrt{7}} = \frac{4 \times \sqrt{7}}{\sqrt{7} \times \sqrt{7}} = \frac{4\sqrt{7}}{7}$

→ $\frac{2}{4 + \sqrt{5}}$

$= \frac{2}{4 + \sqrt{5}} \times \frac{4 - \sqrt{5}}{4 - \sqrt{5}} = \frac{2(4 - \sqrt{5})}{11}$

Standard form N9

Standard form numbers are of the form $a \times 10^n$, where $1 \leq a < 10$ and n is an integer.

Recurring decimals N10

Make a recurring decimal a fraction:

→ $n = 0.236$
(two digits are in the recurring pattern, so multiply by 100)
$100n = 23.6$
(this is the same as 23.636)
$99n = 23.636 - 0.236 = 23.4$

$$n = \frac{23.4}{99} = \frac{234}{990} = \frac{13}{55}$$

Error intervals N15

Find the range of numbers that will round to a given value:

→ $x = 5.83$ (2 decimal places)
$5.825 \leq x < 5.835$

→ $y = 46$ (2 significant figures)
$45.5 \leq y < 46.5$

Note use of ≤ and <, and that the last significant figure of each is 5

Equations and identities A3

An equation is true for some particular value of x

→ $2x + 1 = 7$ is true if $x = 3$
...but an identity is true for every value of x

→ $(x + a)^2 \equiv x^2 + 2ax + a^2$
(note the use of the symbol ≡)

Iteration A20

You will be given the formula to use:

→ **Solve $x^2 + 6x + 4 = 0$ by using the iteration $x_{n+1} = \sqrt[3]{6x_n - 4}$**
Start with $x_1 = -2.8$

$x_2 = \sqrt[3]{6 \times (-2.8) - 4} = -2.750\ldots$

$x_3 = \sqrt[3]{6 \times (-2.750\ldots) - 4} = \ldots$

Repeat until you know the solution, or you do as many as the question says.

Percentages: multipliers R9, R16

Percentage increase or decrease; use a multiplier (powers for repetition)

→ **Initially there were 20 000 fish in a lake. The number decreases by 15% each year. Estimate the number of fish after 6 years.**
$20\,000 \times 0.85^6 = 7500$ (2sf)

Formula for compound interest

Total accrued $= P\left(1 + \frac{r}{100}\right)^n$

→ **I invest £600 at 3% compound interest. What is my account worth after 5 years?**

$£600 \times \left(1 + \frac{3}{100}\right)^5 = £695.56$

Direct & inverse proportion R10

y is directly proportional to x:
$y = kx$ for a constant k

→ **b is directly proportional to a^2**
$a = 6$ when $b = 90$ Find b if $a = 8$
$b = ka^2$ $a = 6$ and $b = 90$ for k
$90 = k \times 6^2$ so $k = 2.5$, $b = 2.5a^2$
$b = 2.5 \times 8^2 = 160$

y is inversely proportional to x

$yx = k$ or $y = \frac{k}{x}$ for a constant k

Probability rules P8, P9

Multiply for independent events

→ **P(6 on dice and H on coin)**

$$\frac{1}{6} \times \frac{1}{2} = \frac{1}{12}$$

Add for mutually exclusive events

→ **P(5 or 6 on dice)**

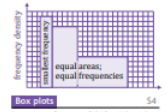
$$\frac{1}{6} + \frac{1}{6} = \frac{2}{6}$$

Apply these rules to tree diagrams.

In general...
$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$
$P(A \text{ and } B) = P(A \text{ given } B) \times P(B)$

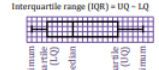
Histograms S3

Frequency = frequency density multiplied by class width. This means that bars with the same frequency have the same area.



Box plots S4

Interquartile range (IQR) = UQ − LQ



GCSE Mathematics Higher Tier

Number · Algebra · Ratio, proportion and rates of change · Geometry & measures · Probability · Statistics

Here is pretty much all the Higher Tier content we could fit onto an A3 sheet of paper, including all the formulae you are required to know for GCSE. An → points to an illustrative example. The codes refer to the DfE subject content. Pin this to a wall, keep it on your desk, carry it in your bag, make notes on it (sorry, don't take it into the examination)...

Listing strategies N5

Product rule for counting:
→ 4 × 3 × 2 × 1 = 24 ways to arrange the letters P, I, X and L

Powers and roots N6, N7

Special indices: for any value a:

$a^0 = 1$

$a^{-n} = \frac{1}{a^n}$

$a^{\left(\frac{1}{n}\right)} = \sqrt[n]{a^p}$

→ $3^{-4} = \frac{1}{3^4} = \frac{1}{81}$

→ $8^{\left(\frac{1}{3}\right)} = \sqrt[3]{8^2} = 4$

Surds N8

Look for the biggest square number factor of the number:

→ $\sqrt{80} = \sqrt{16} \times 5 = 4\sqrt{5}$

Rationalise the denominator N8

Multiply the numerator and denominator by an expression that makes the denominator an integer:

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...but an identity is true for every value of x

→ $(x + a)^2 \equiv x^2 + 2ax + a^2$
(note the use of the symbol ≡)

Laws of indices A4

For any value a:

$a^x \times a^y = a^{x+y}$

$\frac{a^x}{a^y} = a^{x-y}$

$(a^x)^y = a^{xy}$

→ $\left(\frac{2ac}{p^2q}\right)^3 = \frac{8a^3c^3}{p^6q^3} = \frac{8a^3}{p^6}$ or $8aq^3p^{-6}$

Difference of two squares A4

$a^2 - b^2 = (a + b)(a - b)$

→ $x^2 - 25 = (x + 5)(x - 5)$

Rearrange a formula A5

The subject of a formula is the term on its own. Rearrange to

→ **Make x the subject of**
$2x + ay = y - bx$
$2x + bx = y - ay$
$x(2 + b) = y - ay$

$$x = \frac{y - ay}{2 + b}$$

Functions A7

Combining functions:
$fg(x) = f(g(x))$

→ **If $f(x) = x + 3$ and $g(x) = x^2$**
$fg(x) = x^2 + 3$
$gf(x) = (x + 3)^2$

The inverse of f is f^{-1}

→ **If $f(x) = 2x + 5$ then**

$$f^{-1}(x) = \frac{x - 5}{2}$$

y = mx + c A9

Equation of straight line $y = mx + c$
m is the gradient; c is the y intercept:

→ **Find the equation of the line that joins (0 , 3) to (2 , 11)**
Find its gradient...

$$\frac{11-3}{2-0} = \frac{8}{2} = 4$$

...and its y intercept...
Passes through (0 , 3), so $c = 3$
Equation is $y = 4x + 3$

Parallel lines: gradients are equal; perpendicular lines: gradients are "negative reciprocals".

→ **$y = 2x + 3$ and $y = 2x - 5$ are parallel to each other; $y = 2x + 3$ and $y = -\frac{1}{2}x + 3$ are perpendicular**

Transformations of curves A13

Starting with the curve $y = f(x)$:

Translate $\begin{pmatrix} 0 \\ a \end{pmatrix}$ for $y = f(x) + a$

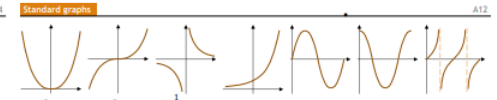
Translate $\begin{pmatrix} -a \\ 0 \end{pmatrix}$ for $y = f(x + a)$

Reflect in x axis for $y = -f(x)$
Reflect y axis for $y = f(-x)$

Velocity - time graph A15

Gradient = acceleration (you may need to draw a tangent to the curve at a point to find the gradient);
Area under curve = distance travelled.

Standard graphs A12



Quadratics A11, A18

If a quadratic equation cannot be factorised, use the formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

→ **Solve $2x^2 + 3x - 7 = 0$**

$x = \frac{-3 - \sqrt{9 - (-56)}}{2 \times 2} = -2.73$

or $x = \frac{-3 + \sqrt{9 - (-56)}}{2 \times 2} = 1.23$

Complete the square to find the turning point of a quadratic graph.

→ **$y = x^2 - 6x + 2$**
$y = (x - 3)^2 - 9 + 2$
$y = (x - 3)^2 - 7$
Turning point is at (3 , −7)

Equation of a circle A16

$x^2 + y^2 = r^2$ is a circle with centre (0 , 0) and radius r.

→ **$x^2 + y^2 = 25$ has centre (0 , 0) and radius 5**

Simultaneous equations A19

One linear, one quadratic;

→ **Solve** $\begin{cases} x + 3y = 10 \\ x^2 + y^2 = 20 \end{cases}$

Rearrange the linear, and substitute into the quadratic

$x = 10 - 3y$
so $(10 - 3y)^2 + y^2 = 20$
Expand and solve the quadratic
$100 - 60y + 9y^2 + y^2 = 20$
$10y^2 - 60y + 80 = 0$
$y = 2$ or $y = 4$

Finally, substitute into the linear and solve, pairing values...
$x + 3 \times 2 = 10$ so $(x , y) = (4 , 2)$
$x + 3 \times 4 = 10$ so $(x , y) = (-2 , 4)$

Sequences A24, A25

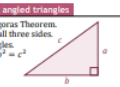
nth term of an arithmetic (linear) sequence is $bn + c$

→ **nth term of 5, 8, 11, 14, ... is $3n+2$ (always increases by 3**
first term is $3 \times 1 + 2 = 5$)
nth term of a quadratic sequence is $an^2 + bn + c$
→ **First three terms of $n^2 + 3n - 1$ are 3, 9, 17, ...**
Geometric sequence; multiply each term by a constant ratio
→ **3, 6, 12, 24, ... (ratio is 2)**
Fibonacci sequence; make the next term by adding the previous two ...
→ **2, 4, 6, 10, 16, 26, 42, ...**

Right angled triangles G20

Pythagoras Theorem.
Links all three sides.
No angles.

$a^2 + b^2 = c^2$

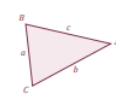


Trigonometry.
Links two sides and one angle.
SOH | CAH | TOA

$\sin\theta = \frac{opp}{hyp}$ $\cos\theta = \frac{adj}{hyp}$ $\tan\theta = \frac{opp}{adj}$

The longest side of any right angled triangle is the hypotenuse; check that your answer is consistent with this.

Advanced trigonometry G21, G22



A is opposite *a*
B is opposite *b*
C is opposite *c*

Sine Rule
Use if you are given an angle-side pair

Missing side: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

Missing angle: $\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$

Cosine Rule
Use if you can't use the sine rule

Missing side: $a^2 = b^2 + c^2 - 2bc\cos A$

Missing angle: $\cos A = \frac{b^2 + c^2 - a^2}{2bc}$

Special values of sin, cos, tan
Learn (or be able to find without a calculator)...

θ°	$\sin\theta^\circ$	$\cos\theta^\circ$	$\tan\theta^\circ$
0	0	1	1
30	$\frac{1}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{1}{\sqrt{3}}$
45	$\frac{1}{\sqrt{2}}$	$\frac{1}{\sqrt{2}}$	1
60	$\frac{\sqrt{3}}{2}$	$\frac{1}{2}$	$\sqrt{3}$
90	1	0	

Circle theorems G10

Angle in a semicircle is 90°

Angle at the centre is double the angle at the circumference

Angles in the same segment are equal

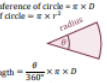
Opposite angles in a cyclic quadrilateral total 180°

Alternate segment theorem

Tangent and radius are perpendicular

Areas and volumes G16, G17, G18, G23

Circumference of circle $= \pi \times D$
Area of circle $= \pi \times r^2$



Area of triangle $= \frac{1}{2}ab\sin C$

Area of trapezium $= \frac{1}{2}(a + b) \times h$

Arc length $= \frac{\theta}{360^\circ} \times \pi \times D$

Area of sector $= \frac{\theta}{360^\circ} \times \pi \times r^2$

Volume of prism = area of cross section × length

Volume of frustum is difference between the volumes of two cones

Transformations G7, G8

Reflection
- Line of reflection

Rotation
- Centre of rotation
- Angle of rotation
- Clockwise or anticlockwise

Enlargement
- Centre of enlargement
- Scale factor (if −1 < SF < 1 the shape will get smaller).

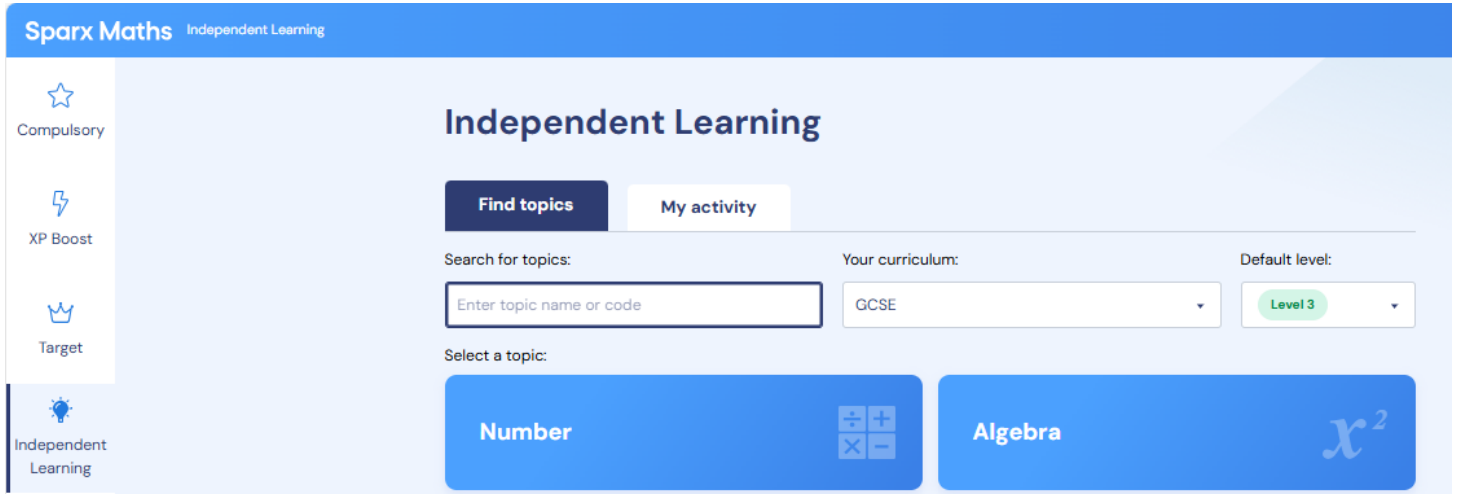
Translation
- Vector

Similar shapes G19

Ratios in similar shapes and solids:

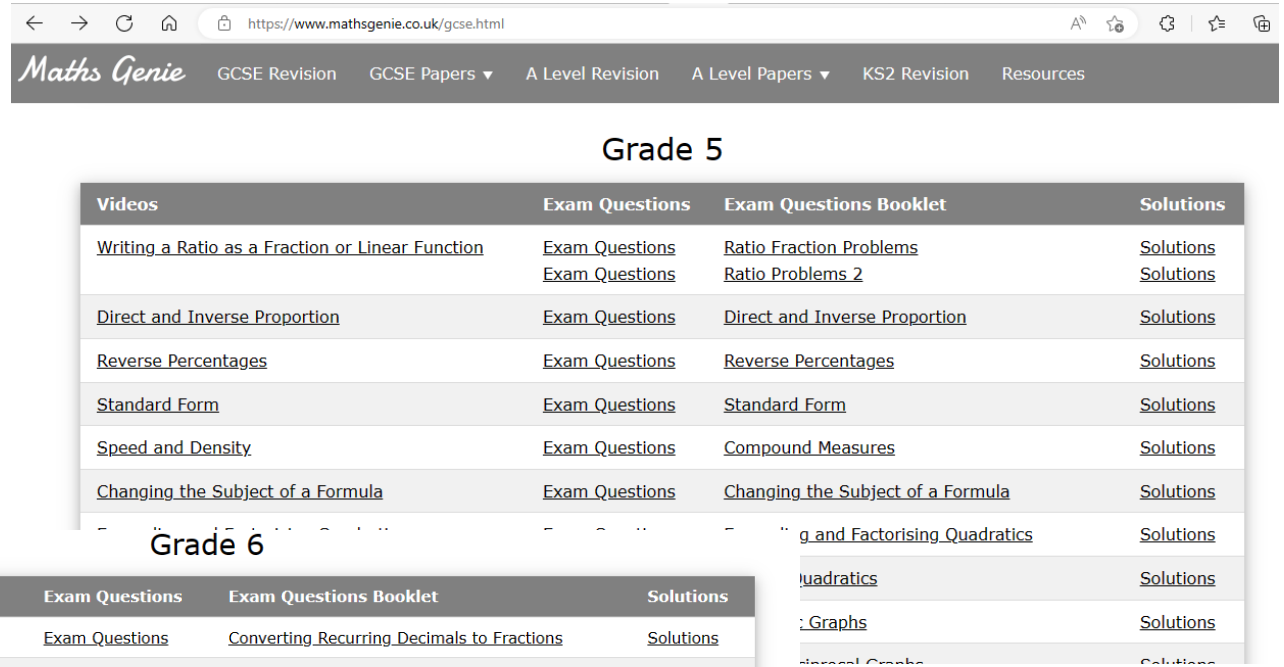
• Length/perimeter	$1:n$	$a:b$
• Area	$1:n^2$	$a^2:b^2$
• Volume	$1:n^3$	$a^3:b^3$

Useful websites



Maths Genie – GCSE revision (videos/exam questions/solutions (watch video/make a revision card of key info (Funnelling)/ then practise exam questions and mark these)

- You should be doing at least 2 hours a week at home (in 1-hour slots)
- **Higher Students** – start with Grade 5 and above
- **Foundation Students** – Focus on Grade 5 and below
- Keep a note of what you have revised from your checklist (from Satchel:One)
- You have 6 weeks until the exam so start now to ensure success



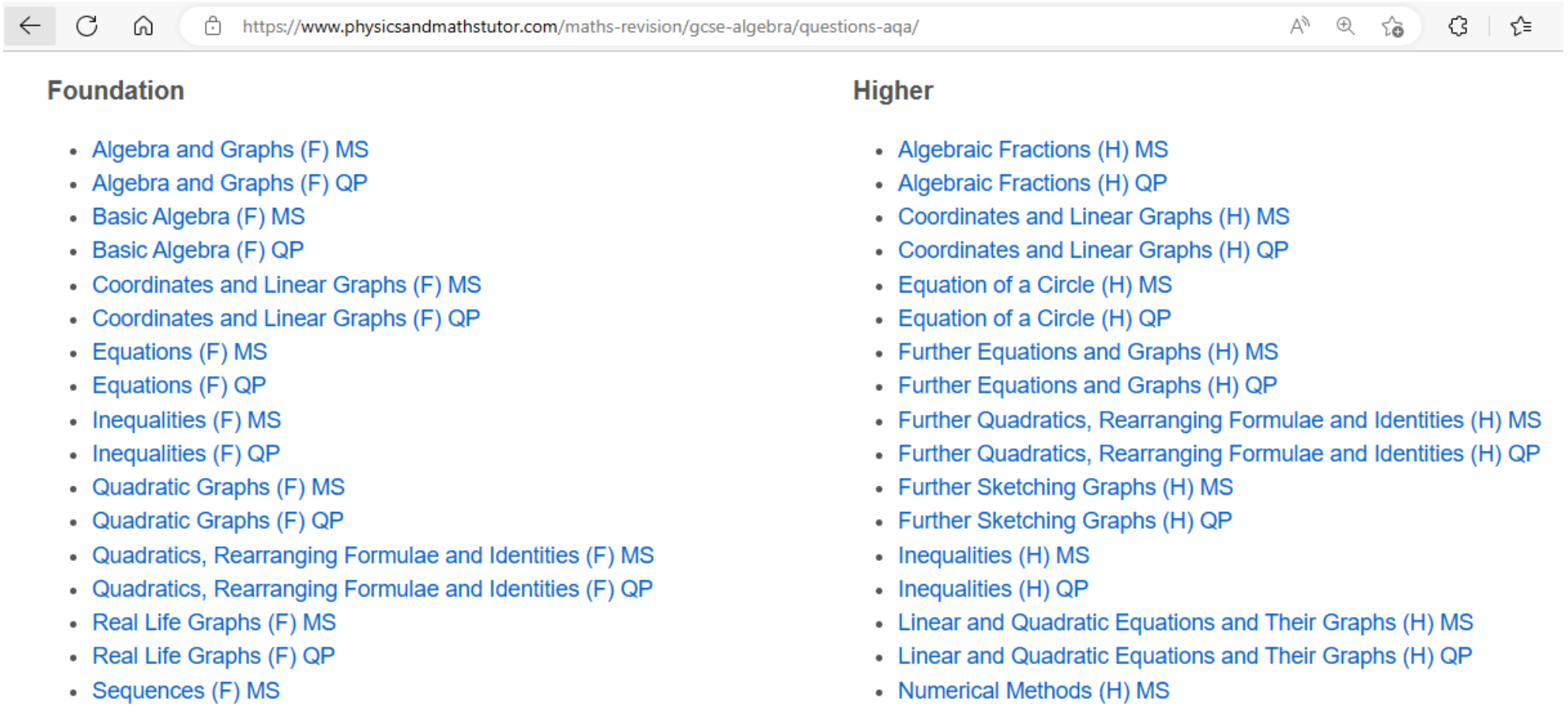
Grade 5

Videos	Exam Questions	Exam Questions Booklet	Solutions
Writing a Ratio as a Fraction or Linear Function	Exam Questions Exam Questions	Ratio Fraction Problems Ratio Problems 2	Solutions Solutions
Direct and Inverse Proportion	Exam Questions	Direct and Inverse Proportion	Solutions
Reverse Percentages	Exam Questions	Reverse Percentages	Solutions
Standard Form	Exam Questions	Standard Form	Solutions
Speed and Density	Exam Questions	Compound Measures	Solutions
Changing the Subject of a Formula	Exam Questions	Changing the Subject of a Formula	Solutions
		g and Factorising Quadratics	Solutions
		uadratics	Solutions
		: Graphs	Solutions
			Solutions

Grade 6

Videos	Exam Questions	Exam Questions Booklet	Solutions
Recurring Decimals to Fractions	Exam Questions	Converting Recurring Decimals to Fractions	Solutions
Fractional and Negative Indices	Exam Questions	Fractional and Negative Indices	Solutions
The Product Rule for Counting	Exam Questions	The Product Rule for Counting	Solutions
Repeated Percentage Change	Exam Questions	Repeated Percentage Change	Solutions
Expanding Triple Brackets	Exam Questions	Expanding Triple Brackets	Solutions
Parallel and Perpendicular Lines	Exam Questions	Parallel and Perpendicular Lines	Solutions
Inequalities on Graphs		Inequalities on Graphs	Solutions
Similar Shapes (Area and Volume)	Exam Questions	Similar Shapes (Area and Volume)	Solutions
Enlarging with Negative Scale Factors		Enlarging with Negative Scale Factors	Solutions
Circle Theorems	Exam Questions	Circle Theorems	Solutions
Cumulative Frequency		Cumulative Frequency	Solutions

Physics and Maths Tutor - any exam board is fine



How is Eduqas GCSE Maths Different from Other Boards?

Eduqas' GCSE in Mathematics is very similar to the qualification offered by the other major exam boards. It's a 9-1 GCSE fully regulated by Ofqual, and the content of the qualification is also very similar.

However, our approach to assessment sets us apart. Unlike other exam boards,

Eduqas requires learners to sit just two exam papers instead of three – one calculator, one non-calculator. Each exam lasts 2 hours and 15 minutes, and each paper has equal weighting towards the final grade.

This reduces the overall number of exams learners must prepare for and sit.

The EverLearner

Sparx Science

duolingo

Sparx Maths

Seneca Learning

gcsepod
education on demand

What Apps can be used to help revision?

Educake

Sparx Learning

Sparx Maths

Personalised Practice: Tasks are tailored to your level, helping you focus on areas you need to improve.

Support Videos: Clear explanations for every topic to help you revise independently.

Bookwork Checks: Encourages writing out answers to strengthen understanding.

Times Table Boost: Regular practice to improve speed and accuracy.

Revision That Sticks: Uses techniques like spaced repetition to help you remember more for longer.

Sparx Science

Weekly Homework: Designed to match your lessons and help you review key topics.

Smart Questions: Helps you think like a scientist and understand concepts deeply.

Instant Help: Every question comes with support to guide you if you're stuck.

Track Your Progress: See how you're improving and what to focus on next.

Exam Ready: Covers all major GCSE topics with practice that builds confidence.

Sparx Science

📚 English Literature

- **Text-Specific Quizzes**: Covers major GCSE texts like *Macbeth*, *An Inspector Calls*, *A Christmas Carol*, and poetry anthologies.
- **Focus on Key Skills**: Questions help with understanding plot, character, themes, and context.
- **Knowledge Recall**: Regular quizzes reinforce quotations, literary devices, and analysis.
- **Spaced Practice**: Helps keep texts fresh over time, avoiding last-minute cramming.
- **Confidence Building**: Familiarity with texts improves exam readiness and analytical writing.

✍️ English Language

- **Paper-Specific Practice**:
  - *Paper 1*: Fiction reading and creative writing.
  - *Paper 2*: Non-fiction reading and writing to present a viewpoint.
- **Model Responses**: Helps students understand what strong answers look like.
- **Skills Development**: Includes spelling, punctuation, grammar, proofreading, and vocabulary.
- **Instant Feedback**: Students learn from mistakes immediately and can retry quizzes.

Educake

🎯 General Benefits

- **Auto-Marked Quizzes**: Saves time and gives quick results.
- **Personalised Learning**: Students can quiz themselves or complete teacher-set tasks.
- **Progress Tracking**: Helps students and teachers identify strengths and areas to improve.

🎨 Design & Technology

- Covers key topics like materials, systems, and sustainability.
- Uses interactive content (GIFs, quizzes, podcasts) to make learning engaging.
- Helps students revise faster with spaced repetition and exam-board-aligned content.

💻 IT & Computer Science

- Supports topics such as networks, cybersecurity, and programming.
- Offers gamified quizzes and podcasts to simplify complex ideas.
- Provides instant feedback and tracks progress to help students focus on areas for improvement.

Seneca Learning

🕊️ Religious Education (RE)

•Covers major world religions and ethical themes.
•Includes videos, animations, and quizzes to explain beliefs and practices.
•Reinforces understanding through varied formats and exam-board-specific content.

The EverLearner

- Exam-board specific content for CNAT Sport Studies and Sport Science.
- Interactive revision tools including mock exams, model answers, and infographics.
- Flexible learning: Students can revise at their own pace, anytime.
- Live sessions: Focused on key topics like injuries, training, and media in sport.
- Confidence building: Low-stakes quizzes and structured note-taking help reinforce learning.
- Teacher support: Automated homework, analytics, and personalised assignments reduce workload and improve outcomes.

Revision Hub KS4

Customize

Meet

Generate link

Class code

kcfgc2t

Upcoming

No work due soon

Announce something to your class

Thomas Kilsby posted a new material: 3.3 Water
Apr 18

Thomas Kilsby posted a new material: 3.4 Desertification
Apr 18

Thomas Kilsby posted a new material: 3.1 and 3.2 Ecosystems
Apr 18

COMPETITION

Year 11 Parent Update

- Weekly revision challenge using the apps below.
- Each week we choose a different app and track usage. Dates below.
- Weekly Amazon Voucher prize for top user and most improved user.
- If your child wins, you get a prize too!

03/10/25	10/10/25	17/10/25	24/10/25
Sparx Maths	gcsepod education on demand	Educake	SENECA

Sparx Science

31/10/25

Why are Apps a good tool for revision?

Seneca Learning

Sparx Science

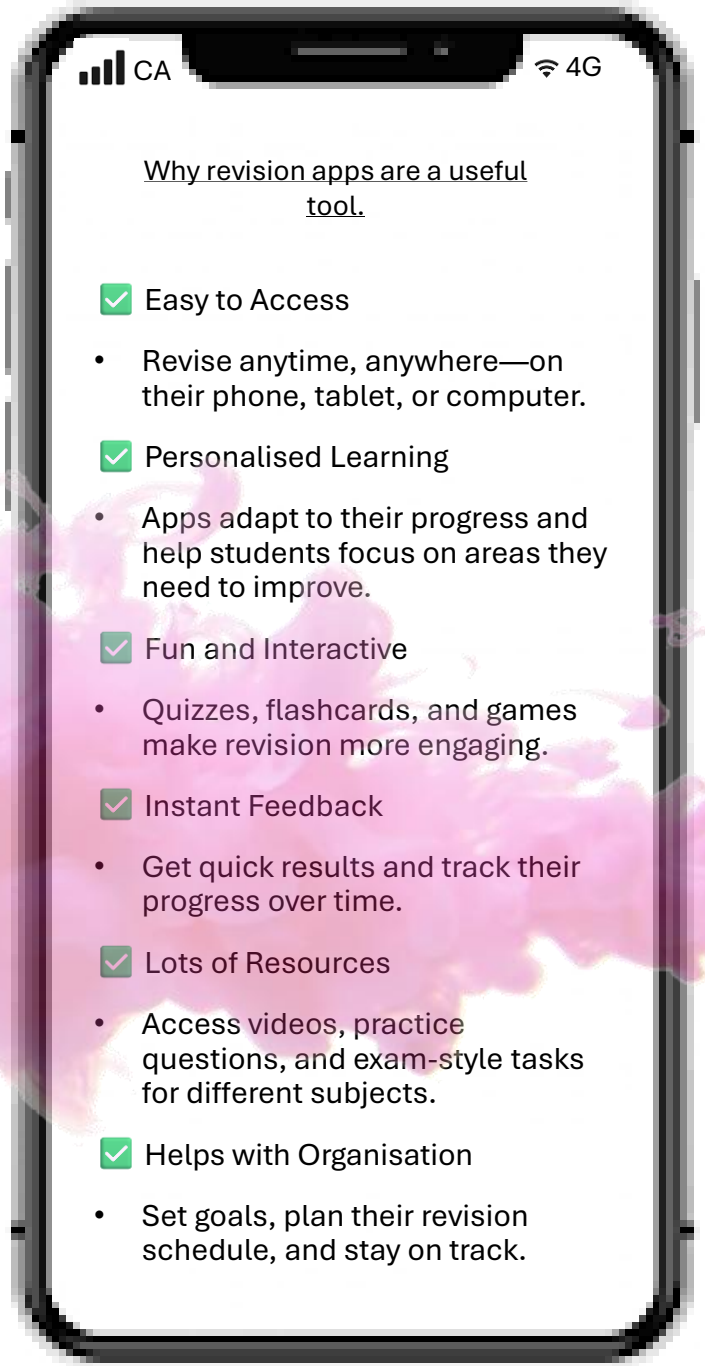
Sparx Maths

The EverLearner

gcsepod
education on demand

Educake

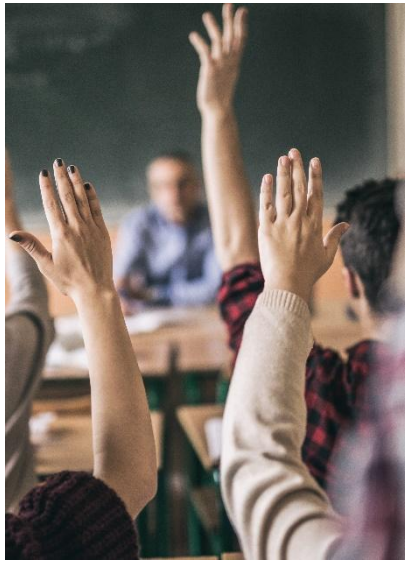
duolingo



Science

Science revision programme

- Learn
- Practice
- Check



PPE Science Assessment

Revision

September 2025-November 2025

Develop Resilience

Show Respect

Achieve Success

Science revision programme at home

PPE planning

November PPEs

Paper 1 for Triple and Trilogy course

Biology

B1 Cells
B2 Organisation
B3 Infection and response
B4Bioenergetics

Chemistry

C1 Atoms and Periodic table
C2 Structure and bonding
C3Chemical Quantities
C4 Chemical Changes
C5 Energy Changes

Physics

P1 Energy
P2 Electricity
P3 Particle Model of matter
P4 Radioactivity

February PPEs

Paper 2 for Triple and Trilogy course

Biology

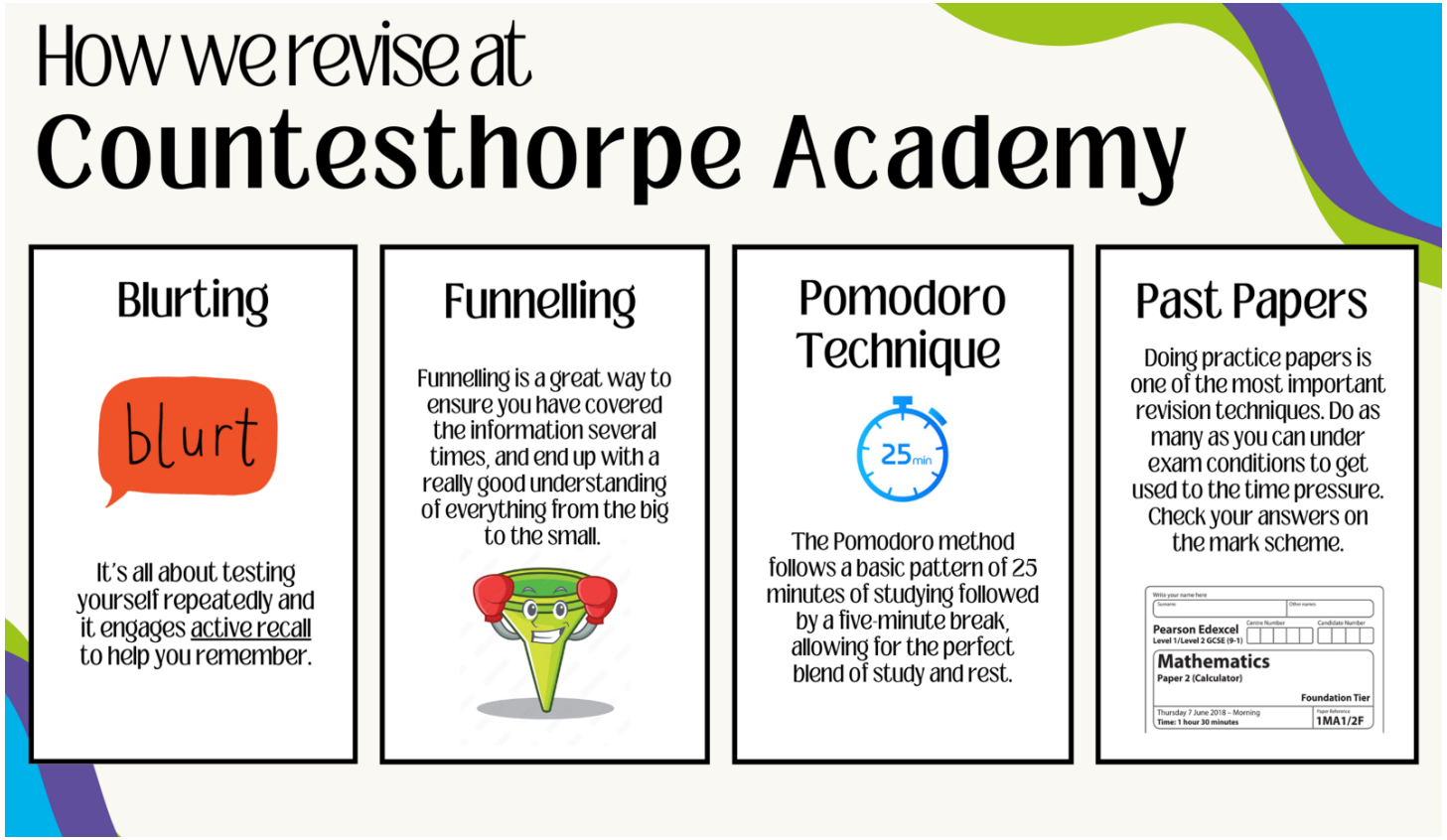
B5 Coordination and control
B6 Genetics
B7 Variation and evolution
B8 Ecology

Chemistry

C6 Rates of reaction
C7 Hydrocarbons
C8 Chemical Analysis
C9 The Atmosphere
C10 Sustainable development

Physics

P5 Forces and motion
P6 Waves
P7 Electromagnetism
P8 Space – Triple Only

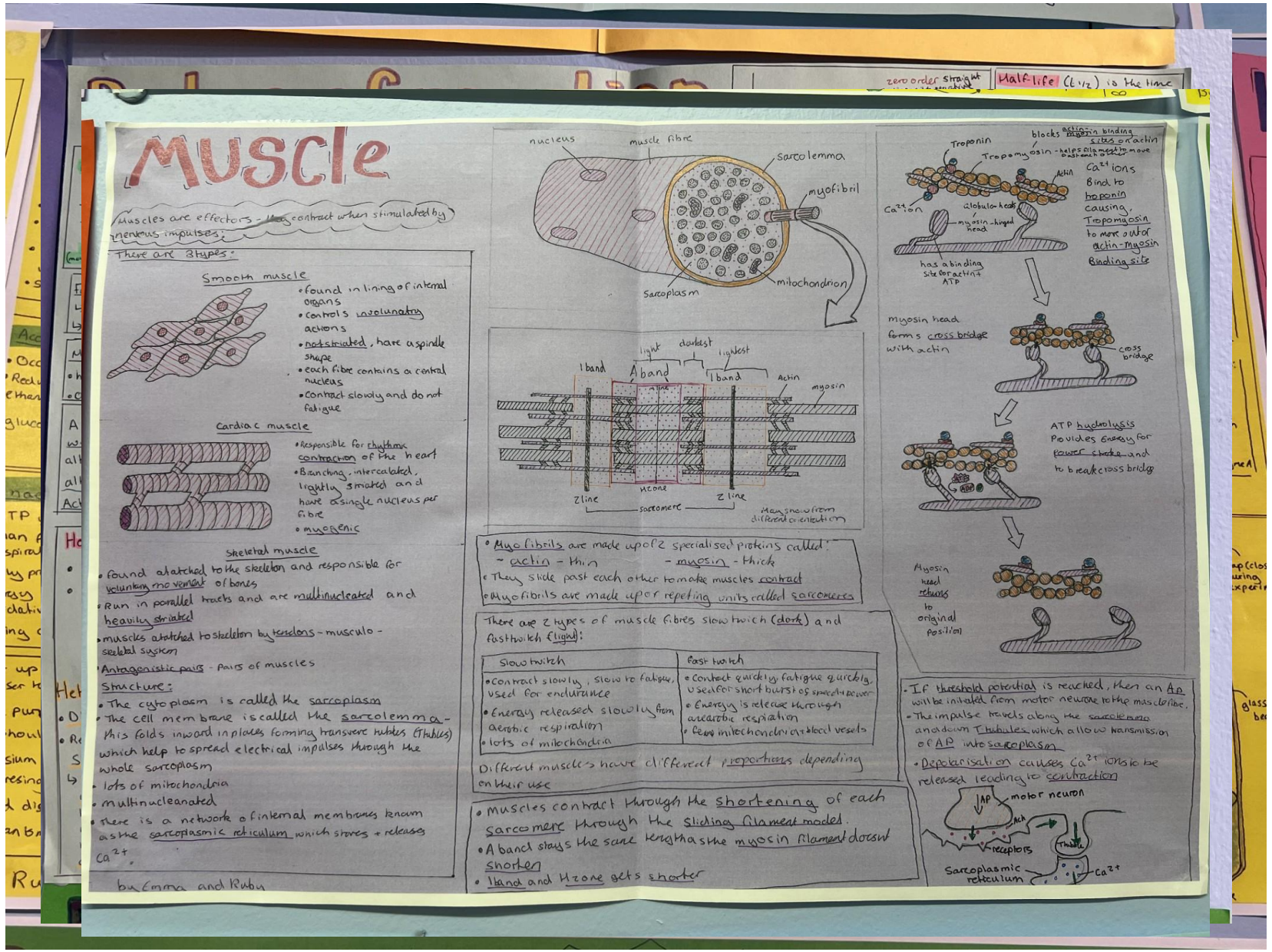


How can I support my child with revision?

Blurting

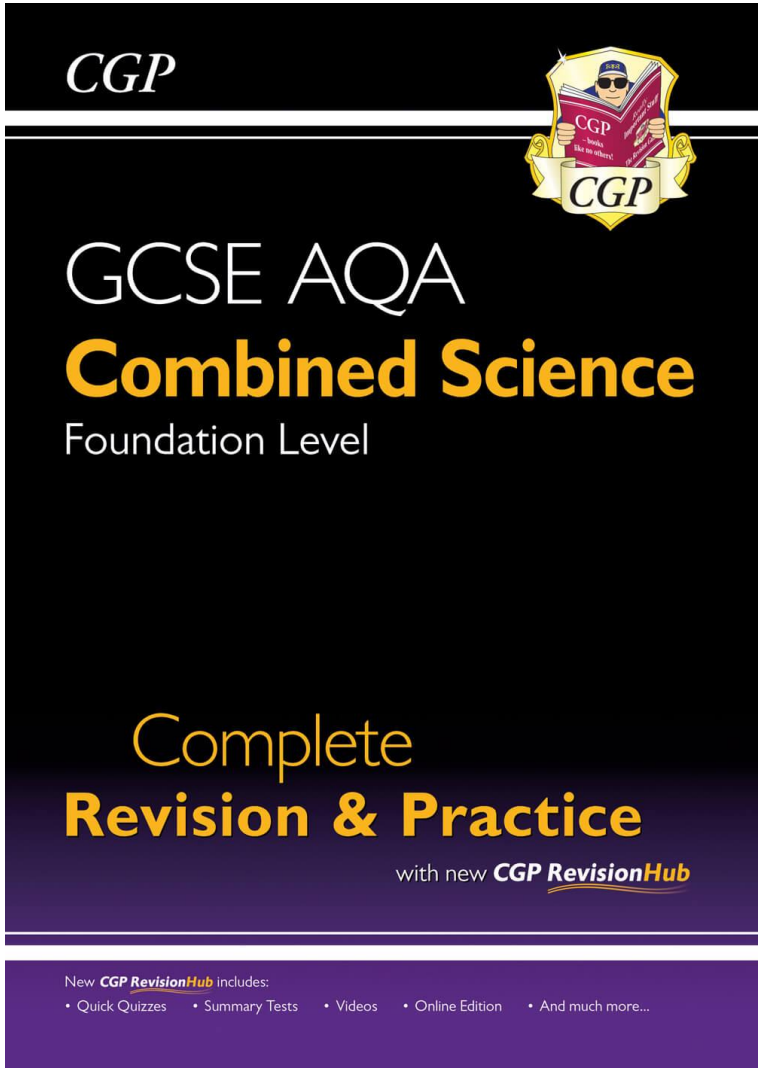
blurt

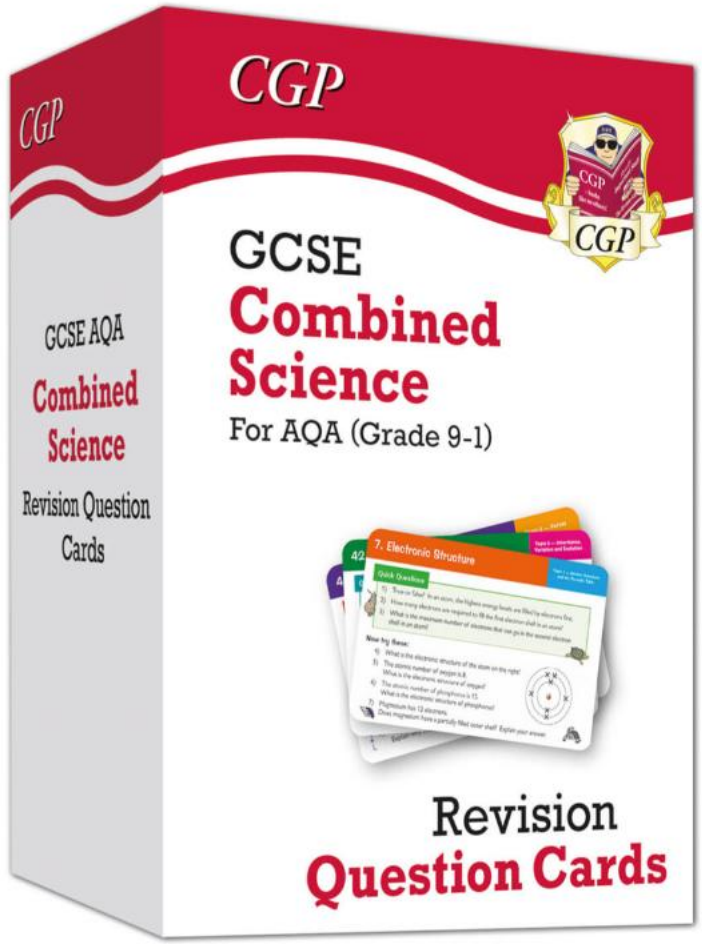
It's all about testing yourself repeatedly and it engages <u>active recall</u> to help you remember.



Funnelling

Funnelling is a great way to ensure you have covered the information several times, and end up with a really good understanding of everything from the big to the small.





ON-Line resource banks

Sparkx Science– computer assesed and teacher monitored

→

Physics and maths tutor – key word cards, mindmaps, topic questions and answers

→

GCSE pod – revision materials and practice questions

Walk through of exam papers

Useful to see and practice exam technique and understand what questions ask

GCSE Combined Science: Trilogy 8464

Specification | Planning resources | Teaching resources | **Assessment resources** | Key dates

Hide filters

1 2 3 4

Relevance

Items per page 10

Search resources

Showing 474 results

Resource Type

- Centre Declaration Forms (4)
- Examiner Reports (51)
- Examiners Reports (12)
- Grade Descriptors (1)
- Mark Schemes (86)
- Notes and Guidance (4)

WEB

Using our assessment tools to plan and teach

/resources/assess/using-our-assessment-tools

Add to favourites

Chemistry - Question paper (Higher) : Paper 1 Chemistry - June 2019

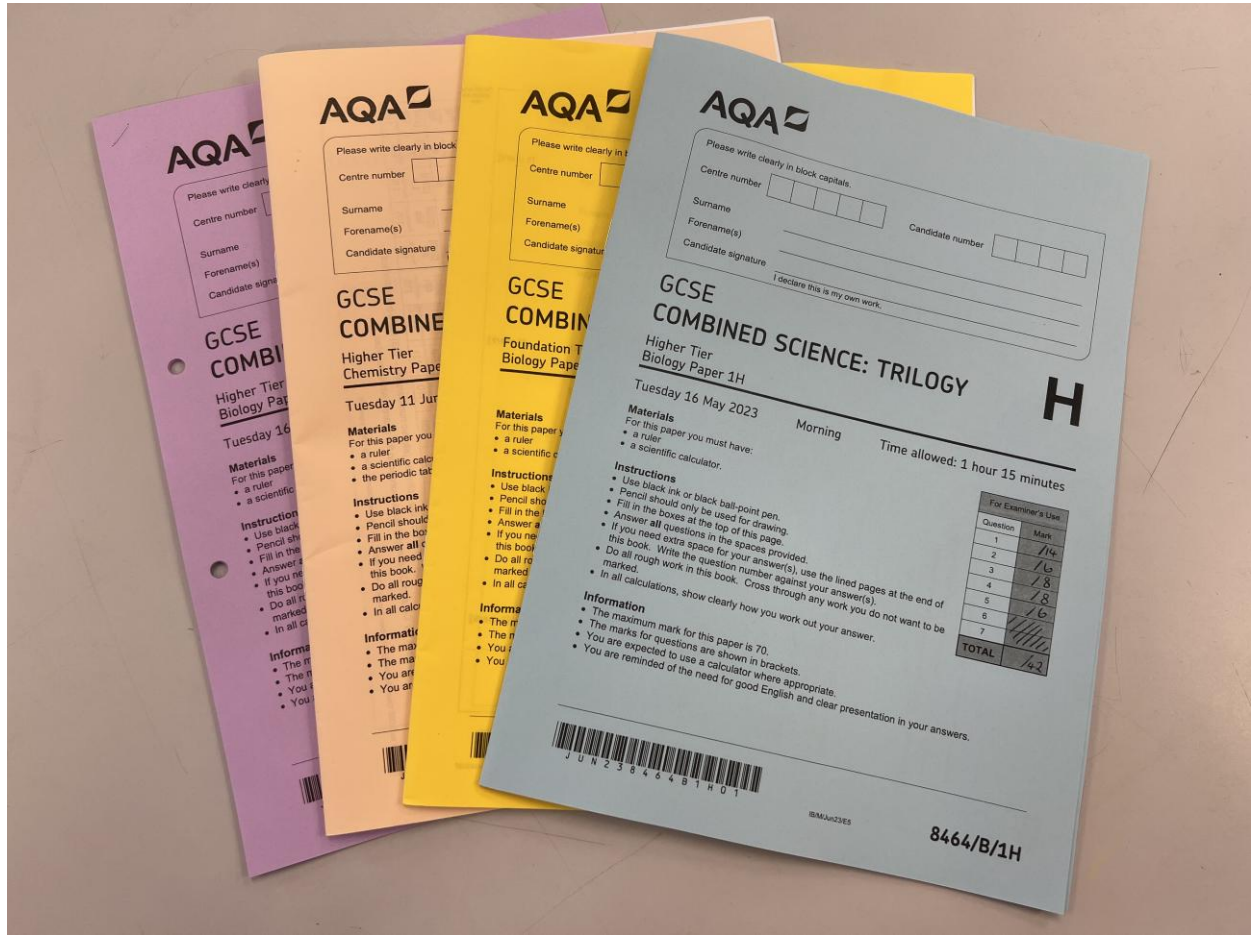
Published 07 Jan 2021 | 1.1 MB | PDF

Add to favourites

Chemistry - Mark scheme (Higher) : Paper 2 Chemistry - June 2023

Published 07 Dec 2024 | 355.94 KB | PDF

Add to favourites

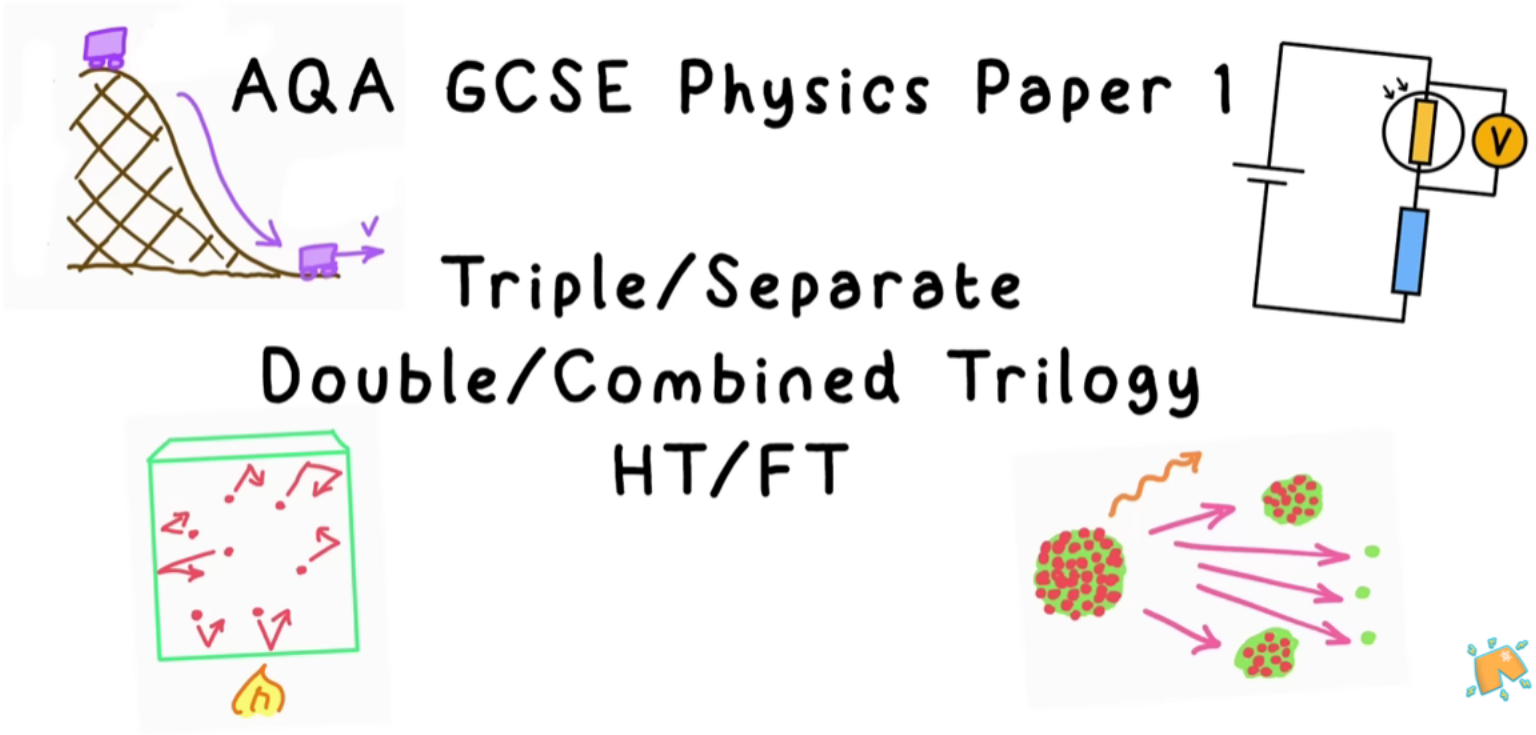


Exam practice

Use the mark scheme

Time yourself

Exam walkthroughs



Watchable by clcc.college.

All of AQA PHYSICS Paper 1 in 40 minutes - GCSE Science Revision

Science Shorts
316K subscribers

Subscribe

11K | Share | Download | Clip

Exam Timetable

24.2.25	Completion of units C9 and C10				
3.3.25	Upgrading PPEs with standardised resources available on Google classroom				
10.3.25					
17.3.25					
24.3.25	Maths lesson (P1 Energy), workbooks and skill development in class to align before revision programme starts		Upload revision resources Google classroom (paper 1 and 2) Set first X2 half-paper exam Qs for MONDAY 31st		
31.3.25	BIO EXAM QS1 AHA	CHEM EXAM QS1 CFR	P1 KFO	B1 AHA	P2 KFO ISSUE QUESTIONS
7.4.25	PHYS EXAM QS1 KFO	B2 AHA	C1 CFR	B3 AHA	C2 CFR ISSUE BIO2 Q5
Easter Holiday					
28.4.25	BIO EXAM QS2 AHA	C3 CFR	P3 KFO	B4 AHA	P4 KFO ISSUE CHEM Q5
5.5.25	Bank holiday	B5 AHA	CHM EXAM QS2 CFR	C4 first half AHA	C4 CFR ISSUE PHYS QS2
12.5.25	AHA Bio workbook and ques	Biology Paper 1	PHYS EXAM QS2 KFO	AHA C5	KFO Chem exam questions
19.5.25	Chemistry Paper 1	PHYSICS AHA	PHYSICS REVISION CFR	Physics Paper 1	*Uploaded remaining paper 2 resources including past*

2025 – Revised Trilogy Science

	Lesson 3	Lesson 4	Lesson 5
		Chemistry PPE	
	Physics PPE		
C10			
ardised resources available on Google classroom			
workbooks n class to ogramme	Upload revision resources Google classroom (paper 1 and 2) Set first X2 half-paper exam Qs for MONDAY 31st		
M	P1 KFO	B1 AHA	P2 KFO ISSUE QUESTIONS
	C1 CFR	B3 AHA	C2 CFR ISSUE BIO2 Q5
	P3 KFO	B4 AHA	P4 KFO ISSUE CHEM Q5
	CHM EXAM QS2 CFR	C4 first half AHA	C4 CFR ISSUE PHYS QS2
	PHYS EXAM QS2 KFO	AHA C5	KFO Chem exam questions
HA	PHYSICS REVISION CFR	Physics Paper 1	*Uploaded remaining paper 2 resources including past papers 2022/23*

ur revision programme shared on Google classroom
ision questions to support you.
available for you to use on your Google classroom.

JEM Physics

Stream Classwork People Grades

Create

All topics

Success in scie

Maths in scienc

Year 11 Revisio

Revision Hub KS4

Stream Classwork People Grades

Students will see this topic once work is added to it

Science

GCSE Science past papers and mark sch... Posted Oct 14, 2024

GCSE Science past pape...
Google Drive Folder

View material

Countesthorpe Academy

Sparx Learning

Year 11 PPE Revision Competition

Over the next three weeks there will be **many more questions** on Sparx to help you prepare for your PPEs.

The **top two** students every week in **every year 11 class** will get a **PRIZE**.

The prizes will be for:

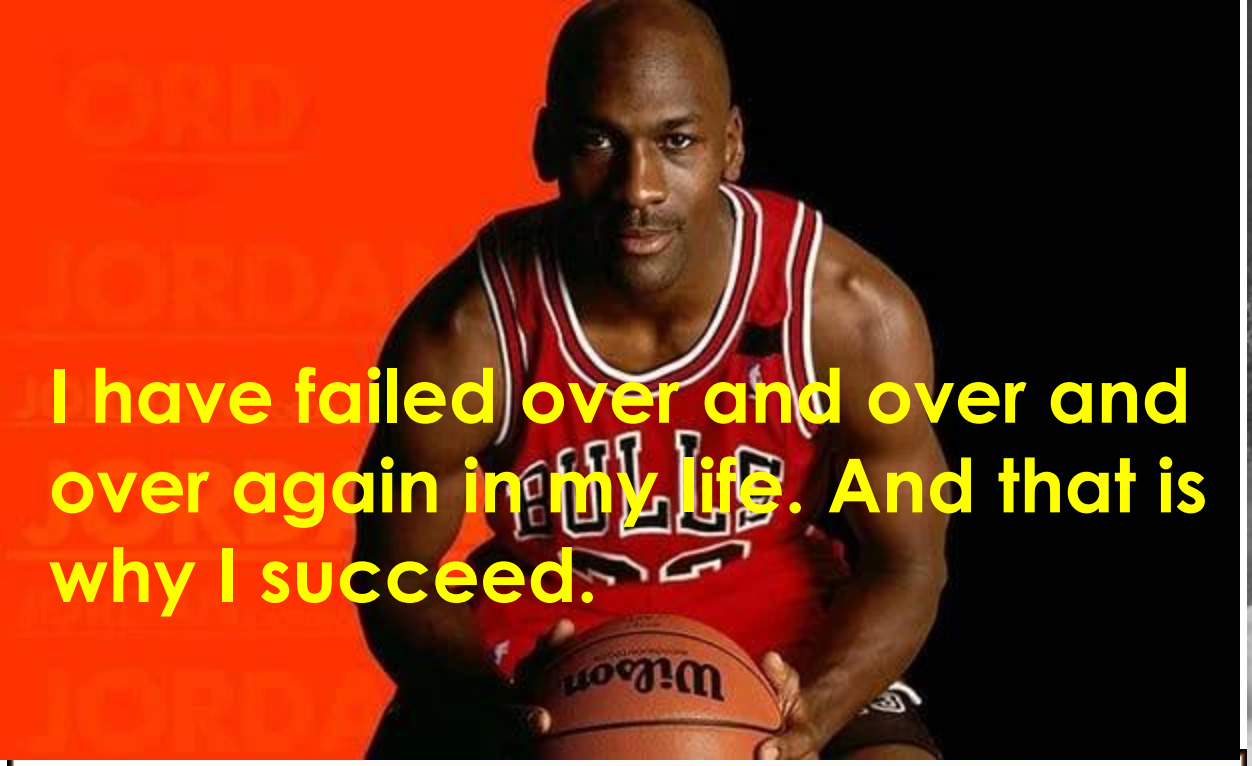
1. Who does the most
2. Who improves by the most
3. And an Amazon voucher for the overall winner each week!

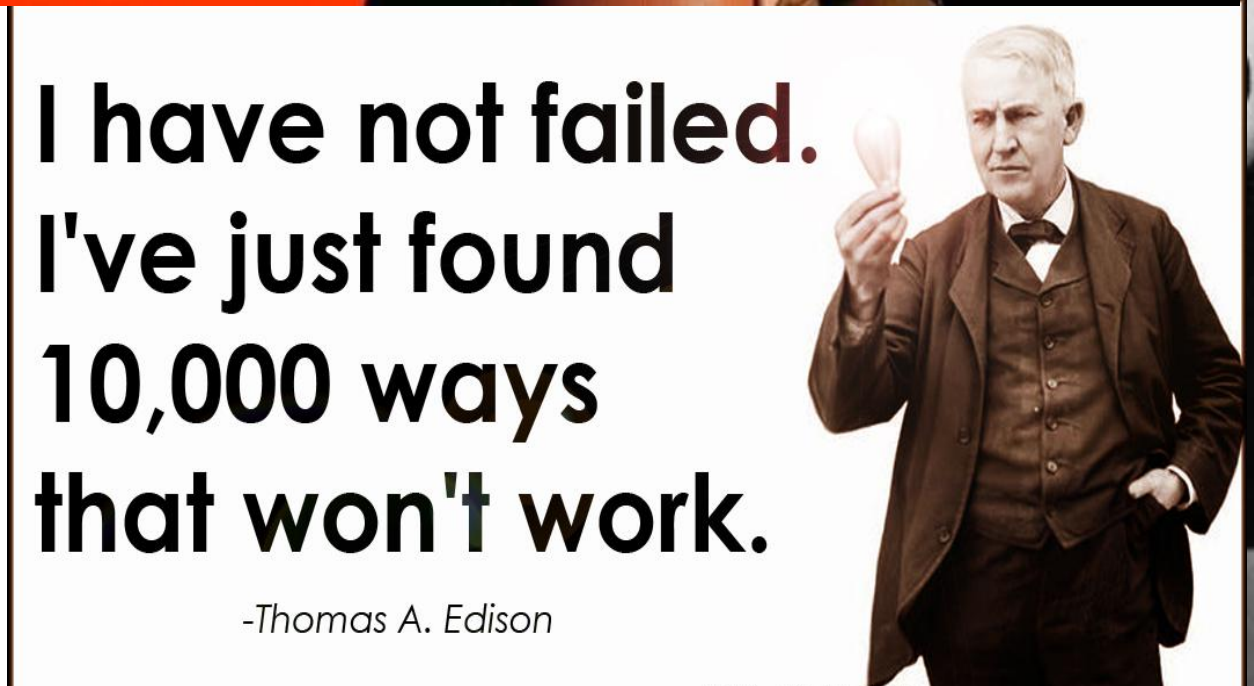
There will also be a **PRIZE DRAW** after the PPE results come in:

If you achieve **Grade 4-** You will be entered for **one** prize draw

If you achieve a **Grade 5** – You will be entered for **two** prize draws

If you achieve a **Grade 7** – You will be entered for **three** prize draws


I have failed over and over and over again in my life. And that is why I succeed.


I have not failed.
I've just found
10,000 ways
that won't work.
-Thomas A. Edison


We must have perseverance and above all confidence in ourselves. We must believe that we are gifted for something and that this thing must be attained.
MARIE CURIE


Be the best you can be
SUCCESS

Electronics – useful or distracting?



Parenting a stressful teenager

What you might see…

Student	Parent response
Shouting, outbursts of emotion	Listening – understanding that this is a stressful time and the outburst isn't personal. Try to engage in why they feel cross, sad, emotional. Let them know you are there for them and this time will pass
Reluctance to work at home Or working endlessly!	Set boundaries and rewards – one hour of revision = time out at the weekend, set up a revision plan so both of you know how long they work for and when they can finish
Poor sleeping habits	Help them to settle into a routine, not to late to bed because they are up working or gaming!
Changes of mood and behaviour, excessive worrying, becoming a recluse	Be open to listen to worries or concerns from your child. Remind them that although their exams are important, they don't define them and all they can do is their best.

Headspace

A meditation app that acts as a personal guide to health and happiness

Mindshift

A free app designed to help teens and young adults cope with anxiety.

MoodGym

An online cognitive behaviour therapy program for depression and anxiety

Superbetter

Helps build resilience - the ability to stay strong, motivated and optimistic even in the face of difficult obstacles

Happify

Turns the latest innovations in the science of happiness into activities and games that help you lead a more fulfilling life.

Smiling Mind

A meditation program developed by psychologists and educators to help bring mindfulness into your life

Calm Harm

An app that helps young people manage the urge to self-harm.

Calm

Meditation techniques to aid with stress and sleep.


Be the best you can be
SUCCESS