

PARENT AND CARER RESOURCE PACK

Year 11 Revision Evening

Wednesday 14 October 2026

The key messages, presentations and handouts from the evening, brought together for every Year 11 family.

Start with the short summaries. Then use the linked contents to open English, Maths and the correct Science course. Every page has a return link.

Bookmark the school hub

Exams and Revision is the main source of current exam and revision information.

Open the contents on page 2

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The key messages

Thank you to everyone who attended the evening. These resources are also for families who could not join us. Steady preparation now will help students find and address gaps before their GCSE examinations.

Start with the school hub

[Exams and Revision](#) is the college's central hub for all exam and revision information. Bookmark it and check it through the year. Use it for the current timetables, free organisers, how-to video, revision planner, candidate information and wellbeing resources.

Make revision specific and manageable

Agree a small task such as a quotation set, an angle-facts table or a practical method. Book return visits on different days. Use teacher feedback to prioritise the gaps, while leaving time for homework, other subjects, sleep and breaks.

Remember the knowledge and practise using it

Read and understand a small section, cover the answers, write or draw from memory, then check and correct. Return after a gap. Follow recall with calculations, explanations, essay paragraphs or exam questions that use the knowledge.

Parents can help without being subject experts

Help your child organise the week, start a task and notice improvement. Quiz using the organiser's prompt and answer columns. Ask what they can now remember and which question they will take to their teacher.

Ask for help early

Please contact the subject teacher or tutor if revision is becoming overwhelming or if equipment, internet access or resources are creating a barrier. Protect rest and normal family life. A calm, realistic routine is more useful than pressure to fill every spare hour.

The full subject materials follow the summaries. Science families should choose the Combined or Separate Science section that applies to their child.

Knowledge organisers and planning

The English, Maths and Science organisers set out essential course knowledge. They cover more than the November trials, so follow the teacher's topic priorities and the correct tier or course. They complement exercise books, annotated texts and exam practice.

Look Cover Write Check

1 Look: understand a few related rows. Ask for an explanation if an idea does not make sense.

2 Cover: hide the answers with paper and keep the prompts visible.

3 Write: write or draw what you remember without peeking.

4 Check: compare with the answer, correct errors in another colour and retry after a gap.

Without paper, cover the answer, say it aloud and check. Parents can read the prompt and check the response. Marking or annotating a book may help navigation, but make time to recall the content with the answers hidden.

Book the return visits

Use the planner, a diary, a calendar app or a notebook. Put in exam dates, homework and existing commitments. Name the first small task and schedule later checks at the same time. A return tomorrow, later in the week and again the next week is an example, not a compulsory pattern.

Use the red, amber and green trackers honestly. Give insecure material more attention and check secure material after longer gaps. Mix older and newer topics across the week. Move a missed task rather than abandoning the plan.

Keep the resources available

Teachers use the books in lessons and for homework. Help your child keep them available each day. An optional second copy may help, or keep the paper copy at school and use the free PDFs at home. [Open the organiser downloads and video.](#)

There is no new school-wide fixed quota of revision minutes or a guaranteed number of attempts needed to learn every topic. Use the subject advice, the student's needs and what their recall shows to keep the plan realistic.

Trials and exam preparation

Written trials 24 November to 4 December 2026

The first main written paper is on Tuesday 24 November. Monday 23 November is an INSET day. [Open the current trial timetables](#). Languages speaking and Art or Photography assessments may sit outside the main written window. Use your child's personal timetable, room and seat instructions when issued.

During the written trials, students attend normal lessons in Periods 1-4 when not in an exam. After the afternoon exam or the end of Period 4, follow the college's instructions about going home or using the study room.

Planned preparation for the next paper

The plan is to share a focused task for each subject examined on the next exam day at the start of Period 5, 13:55. The guide is up to an hour per subject, not a minimum and not one shared hour across all subjects. The first packet is planned for Friday 20 November, with a Monday reminder. Follow the final college distribution instructions. These are preparation activities, not clues to exam questions.

Pack equipment the night before

Check spare black pens, a pencil, ruler, eraser, sharpener, protractor (angle measurer), a pair of compasses and a working scientific calculator for papers where it is allowed. Scientific calculators are available to buy from the Finance Office. Use a transparent pencil case and clear, label-free water bottle. Follow the paper and teacher instructions about calculator memory and exam mode.

Read the candidate rules together

[Current JCQ candidate guidance](#) explains exam conduct, assessed work, AI and social media. No watches of any kind, phones, earbuds, smart glasses or unauthorised notes belong in the exam room. Follow storage instructions. Raise a hand if there is a problem during an exam and contact college promptly if your child is ill or late.

For assessed work, ask the subject teacher before using AI or outside help. Acknowledging a prohibited use does not make it allowed. Where permitted, follow the acknowledgement and evidence requirements. Students must submit their own work. Do not request or circulate supposed confidential exam papers.

English session summary

Give both English Language and English Literature regular attention. The department's home-revision sheet and the Language Paper 2 article and tasks follow this page.

English Language

Know the structure of the papers and the marks available. Read fiction openings and discuss description, character, narrative structure, mood and the effect on the reader. Read non-fiction and discuss the writer's viewpoint, a different view and the evidence supporting each.

Use a picture to plan descriptive or narrative writing. Practise planning and writing under time limits: the department suggests 10 minutes to plan followed by 30 minutes to write as a practice task. Develop accuracy, vocabulary and writing stamina.

English Literature

Re-read or listen to the set texts in manageable sections and retell the events. The examinations are closed book. Learn short quotation sets and connect them to characters, themes and context. Explain ideas aloud and compare Power and Conflict poems by theme.

Use the organiser alongside exercise books and annotated set texts. Pupils will receive specific page priorities for Trials 1, including on Edulink. The department welcomes notes, highlighting and additions that help students use the book, followed by recall practice with answers covered.

Try the activity together

The Paper 2 resource contains an attributed newspaper article and reading tasks about language, structure and viewpoint. Its writing task asks students to respond to a statement about social media, fast fashion, repair and recycling. Discuss ideas together, then let the student plan and write their own response.

Keep encouragement specific

Break the work into small chunks and praise effort and progress. Ask your child to justify opinions and explain quotations. Both Language and Literature deserve revision time. Use your child's English teacher for questions about priorities.

[Free English organiser and subject resources](#)

Revising English Language and Literature at home

Knowledge Organiser use

- Your child will be using these in class, and will be set specific pages for test and recall in a week
- A schedule of the pages which are linked to specific tasks and texts for Trials 1 will be given to pupils (and on Edulink)
- Full coverage of the knowledge needed for Trials 1 and 2 and then the final preparation for the GCSE exams
- Knowledge Organisers can be written in, annotated, highlighted and have post-its in – whatever is needed to navigate and use the book effectively!
- This does not replace the use of exercise books or annotated set texts for revision, it is a way of condensing the key knowledge for a solid baseline of revision for Language and Literature; other quotations, contextual information and thematic links can be added.

English Language revision

- Use Knowledge Organiser to revise and test key techniques, differences in text form and tone, and essential literary devices and structures when reading and writing texts.
- Be clear in the structure of the papers, and know the marks available for each task in the reading sections
- Read a variety of opening chapters of fiction books to explore the use of description, character and narrative structure. Ask your child to explain their reaction to the story; how it makes them feel; what intrigues them about the story; what tone or mood is being set?
- Read a range of non-fiction articles either online or get a quality newspaper once a month – the iPaper is one of the best for a balanced approach and a range of shorter editorial (personal opinion) stories, rather than just reported news. Ask your child to give an opinion about the topic and article; ask them for a contrary opinion or alternate point of view; challenge them to think about some solutions for the problem in the article, or how things might be different in the future.
- Use an image or photo to plan a descriptive or narrative text. Use the guidance in the Knowledge Organiser to help plan a secure structure and use a quality thesaurus/online synonyms to help extend vocabulary. Encourage them to use a wide range of descriptive features (and revise these when reading texts)
- Plan and write a text (either fiction or non-fiction) and set a timer – get them to plan for 10 mins and then write for 30 minutes at a time. This mental and physical writing stamina is key to success in the Writing tasks.

English Literature revision

- Re-read the set texts. Use an audio or online version, and have on for a chapter or scene at a time. Ask your child to recap the main events, or re-tell you the story in their own words. Knowing the set texts really well is key, as the exam are 'closed book' – they will not have the text with them in the exam.
- Use the Knowledge Organiser and test your child on one page or a set of quotations or themes for a text; ask them to link the Power and conflict poems by theme, and explain the poet's main ideas and feelings about the theme.
- Use flash cards and test in intense 5/10 minute chunks. Ask them to revise a page of quotes in the Knowledge Organiser and self-test, then test them again an hour later.
- Keep asking them to tell you things out loud! It really helps the analysis of quotations and ideas in Literature to have a physical memory of the discussions, as their essay responses will be helped by having this experience.
- Try to watch versions of the set texts, live plays or video versions. Watch with your child, and ask them how that particular version differs from the written text; which bits have been highlighted, which bits left out?

General advice

- Model reading and discuss a range of topics and opinions – be prepared for some challenging points of view, and challenge them to validate and support their opinions with facts and details.
- Remind your child of the importance of accuracy; give examples in your own lives and work where accuracy is important, and the effectiveness of using clear communication; explore where using more subtle and inferred meanings are important when talking to people. Perhaps explore the consequences of using the *wrong* language at the wrong moment, and how mis-communicating can be either dangerous or ineffective.
- Please remain positive about English, even if it was not your own favourite subject! Ensure that your child understands that Literature is as important for their overall importance as Language as needs an equal amount of revision and practice.
- Praise your child! English is difficult to revise and the amount to cover can feel overwhelming. Break revision into manageable chunks and reward as needed.

I decluttered my house of clothes – I'm happier, calmer and richer

Ruthlessly throwing out hundreds of items has allowed me to finally confront my shopping addiction

October 14, 2026 6:00 am (Updated 6:01 am)

Brits are throwing away 65 per cent more than they were in 2023

[Anniki Sommerville](#) Freelance journalist who writes about parenting, families and the midlife experience for The i Paper

I've always been a clothes horse. Some women love skincare in a big way and will blow £100 on the latest cream. Or scented candles. Or flowers. For me, it's clothes. I buy three items of clothing a month – some new and some on Vinted. I've tried to stop multiple times – too many times to count – but I am definitely a [clothes-buying addict](#).

I'm not alone. We're all on a manic clothes-buying train and we can't get off. A recent survey by British Wool revealed that Brits are throwing away 192 garments per person every year, a 65 per cent increase since 2023. 46 per cent also claimed they'd rather buy fewer, higher-quality pieces than [larger quantities of fast fashion](#), but in reality this isn't happening.

Many of us know that we need to do better. I have two daughters aged 13 and seven, and my 13-year-old, Rae, is passionate about clothes too. She's just entering that phase where clothes become pivotal in terms of building her identity.

We needed to get things under control, or at least a bit more under control than they were. Apart from the sheer horror of realising that you are creating an ecological disaster (we use Vinted often but I worry about all the energy it takes to ship things back and forth), there's also the fact that every drawer in the house is bulging. It's hard to get a cardigan out as there's another cardigan wrapped around it like a toxic knitted boa constrictor. We have a small house, and I'm regularly overwhelmed.

So eventually, in a fit of overstimulation, I tried [decluttering our clothes](#). I spoke to Jenn Jordan, a professional organiser, who helps clients not only declutter but also refrain from buying things they don't need. "You need to be aware of what you already have," she said. "So, if you know that you have 12 pairs of jeans, and six pairs of black trousers, then you can stop buying them. Keep reminding yourself."

I checked Rae's drawers and discovered 20 hoodies. And maybe one or two pairs of decent trousers. How had this happened? My younger daughter Greta was in a similar position; she had 60 tops and three pairs of trousers that fit properly and weren't either gigantic or tiny.

Jordan said to think about the times when you tend to buy clothes that you don't need: "Are you tired? Stressed? Is it scrolling in the middle of the night? If so, leave the stuff in the basket, and you might not feel like buying them in the morning." This is true for me, as I tend to scroll online at night, sometimes waking in the morning to discover that I've ordered something I don't remember buying. Financially, this is a disaster, and it doesn't help you be more strategic about your [clothes consumption](#).

But what about [the decluttering](#) itself? How do you avoid overwhelm? Jordan's advice was to handle it one category at a time, i.e. root through

your skirts, then shirts, then jeans. This would be easy as my girls only seemed to have tops. One morning, we started “Le Grand Declutter”. I’m making it sound like a fun, family thing, but I was doing it whilst Greta played with one of the cats, and Rae hung off the side of her bed texting a friend.

I immediately felt stressed. For a start, in one cupboard there were hundreds of tiny pairs of pants (some so small that I realised they were from when the girls were potty training). *What to do with these? Make them into cat pants perhaps?* I created two bags, one for the local charity shop (good-quality stuff), and one to go into the clothes recycling place at the dump. Then when it came to socks, there were many *sans partners*. Could I make sock puppets? Or sew them all together to make a nice wholesome blanket?

Jordan advised that whilst [you’re decluttering](#) (I did ours over a period of five days), you think about what’s going into the charity bag and make a mental note. “So, when you have a dress in your hand, and are about to buy it, you can think about what you just took to the charity shop.” This helps with breaking the cycle of buying more things you won’t wear.

In my wardrobe, I discovered a worrying fetish for brightly coloured jumpsuits. Was I yearning to be a car mechanic? Or a 80s kids TV presenter? I’d been buying these as they were easy when the kids were little, but now they were too big and no longer my style. There were also lots of blouses, but I kept all of them as I love a blouse, and will probably be buried in one. An investment for the future!

Then, I tackled the jumpers that I’d shoved under the bed, and the cats liked to sleep on. Many were ruined by moths. After I’d cried about a Bella Freud I’d bought years ago on eBay, I made a pile and put the moth-eaten ones to be darned.

Another key learning was [not to declutter](#) when you're feeling stressed. Or had three coffees. Jordan echoed this. "Slow down. Make sure items are really good. 'This will do' is not an option. You are worth things you love."

The decluttering of my wardrobe revealed I also had many tops and hardly any bottoms (a family trait it seems). We all needed new pants in the right sizes. I made a mental note. Then, just when I'd finished five days of decluttering, and had four bags for charity, a friend knocked. She had two bags full of her daughter's old hoodies. Could I tell her to take them away? "Thanks that's very kind," I said, making another mental note never to open the door again.

But I have since cleared these final bags of unwanted overconsumption. I now look forward to opening my wardrobe, and have put more old clothes on Vinted, selling six items in one day, and generating a grand total of £100. I'm more aware of the gaps, and of what we all need. It helps the girls get dressed more easily and there's less tension in the morning.

I've discovered items I've not worn for years, and am giving them another whirl. Fashion is cyclical and I'm hoping that I can wear more of [my existing wardrobe](#) and cut back on buying more.

I recently found a quote online that felt apt: "The important thing in life is not what you get, but what you throw out", said Saul Leiter, American painter and photographer. The key, therefore, is not to buy more clothes, but to focus on what you already have. Unless you have no pants, then you must buy them of course.

Revision activities:

Reading

- Identify a range of non-fiction language devices, and explain the effect of these in the text
- Explore the structure of the text: look at topic changes and links, and how the ending is constructed to highlight the central message and connect with the reader
- Identify the perspective (viewpoint) the writer. How do they include counter-argument and balance against their own experiences and ideas.

Writing

- Plan and write a reply to this article, based on the following statement: Social media has been responsible for the rise of fast-fashion. For the sake of everyone, we must do more to repair and recycle.

Maths session summary

Use feedback to identify the next topic

After trials, the Wyvern Assessment Feedback Form (WAFF) identifies strengths and areas for development. Use the linked topic codes and feedback to choose specific learning, practise questions and check what has improved. The older WAFF images in the presentation are illustrative examples.

The weekly practice paper programme

After October half term, Year 11 moves from set Sparx homework to one homework practice paper each week. Sparx remains a resource for learning and help. Teachers mark the papers, address gaps in lessons and model corrections.

Use support when stuck: a worked example, a linked Sparx video, the revision guide, peers, family or the teacher. Show full working. An unanswered question should prompt a request for help or some learning. Make full corrections in green pen and revisit the topic so the next paper benefits from the feedback.

Find appropriate practice

[Sparx Maths](#) offers topic learning through the student account. [Corbettmaths](#) has videos, practice questions and 5-a-day. [Maths Genie](#) and [1st Class Maths](#) provide topic and exam practice. Follow your teacher's advice about level and tier.

Build a support network

Encourage after-school paper workshops offered by the department, bring specific questions and consider a productive peer study group. Speak positively about learning Maths. Sit alongside your child to use a video or example when they need encouragement.

Foundation and Higher organisers are free on the school hub. Revision guides and workbooks can be ordered through ParentMail or the Finance Office. Purchases are optional support: there are free learning resources too.

The presentation and parent handout follow. Practice-paper score targets and sample WAFF grade estimates are examples, not guaranteed or current GCSE grade boundaries.



Wyvern Maths

Year 11 Information Evening



How to help your child revise



- WAFFs (Wyvern Assessment Feedback Forms)
- Revision Links
- Revision Websites
- Knowledge Organisers
- Past Paper Programme
- Revision Guides and Cards



Wyvern assessment Feedback form



After each set of Trials, a WAFF is produced highlighting areas of success and areas for development

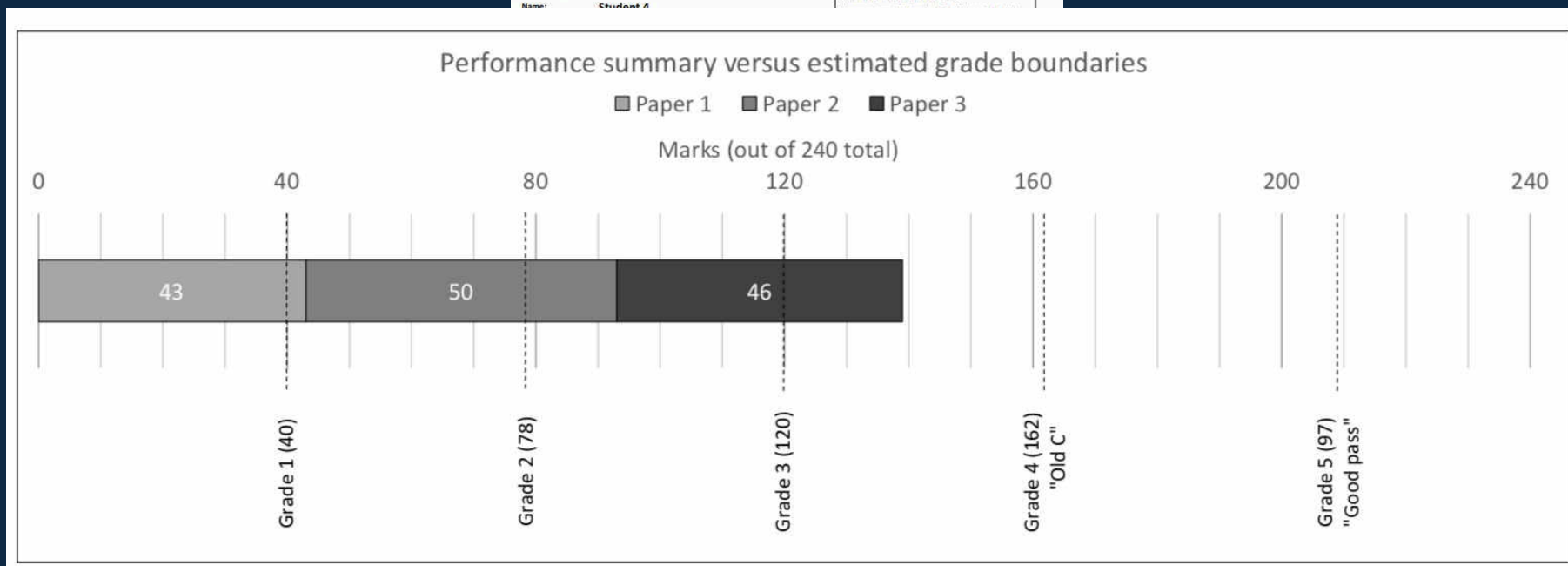
Illustrative WAFF example from 2024-25; use current personal feedback.

WAFFs

Year 11 Christmas Trial Exams 2024-25
GCSE Maths Overall Summary of Performance
Foundation Tier

Student n.o.: 4
Name: Student A

Important information
Students stay in education until they are 18.



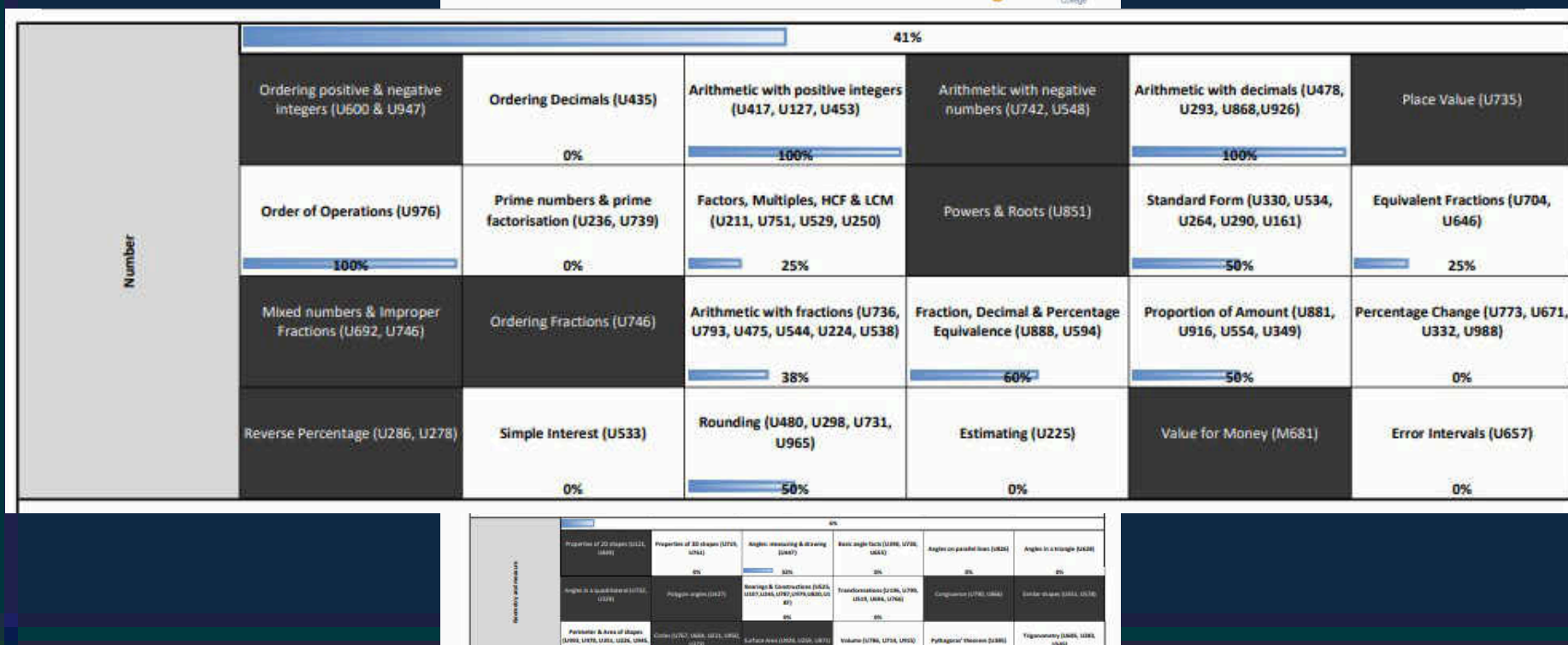
3

1. Leave no blanks; if you can't answer a question this is a 'call to action' to do something to learn it, not an excuse to not do it.
2. Show full workings on all your answers.
3. Attend Foundation PE sessions for additional support. Make sure you've done all the questions you can before the session so you can focus on the questions that you find difficult.
4. If you take Additional Maths, you will be able to use these lessons for additional support. Make sure you've done all the questions you can before the session so you can focus on the questions that you find difficult.
5. Form study groups with friends, online or in person.
6. Make full corrections from answers modelled in class.
7. Use the learning and feedback you get from each paper to improve the next.

Illustrative WAFF example from 2024-25; use current personal feedback.

WAFFs

Year 11 Christmas Trial Exams 2024-25
GCSE Maths - My Strengths and Areas For Development Across the Curriculum



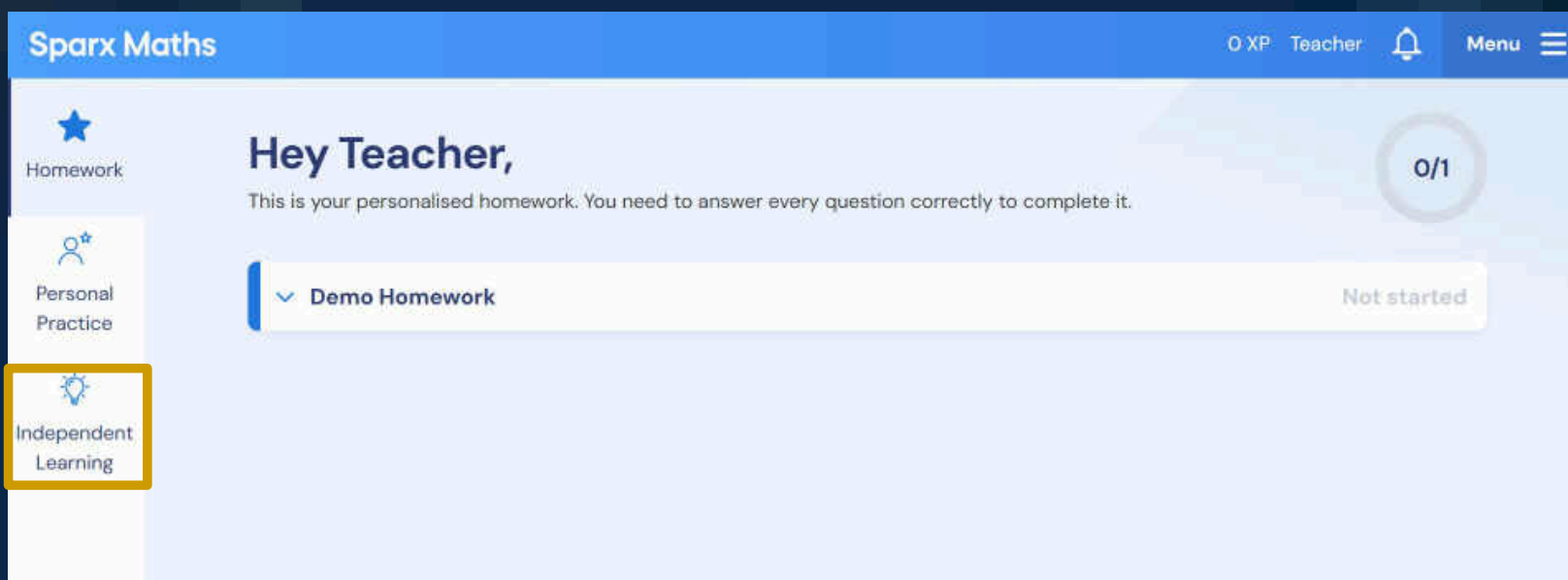
Revision Websites

For each Area of Development there are several websites we

recommend using for revision:

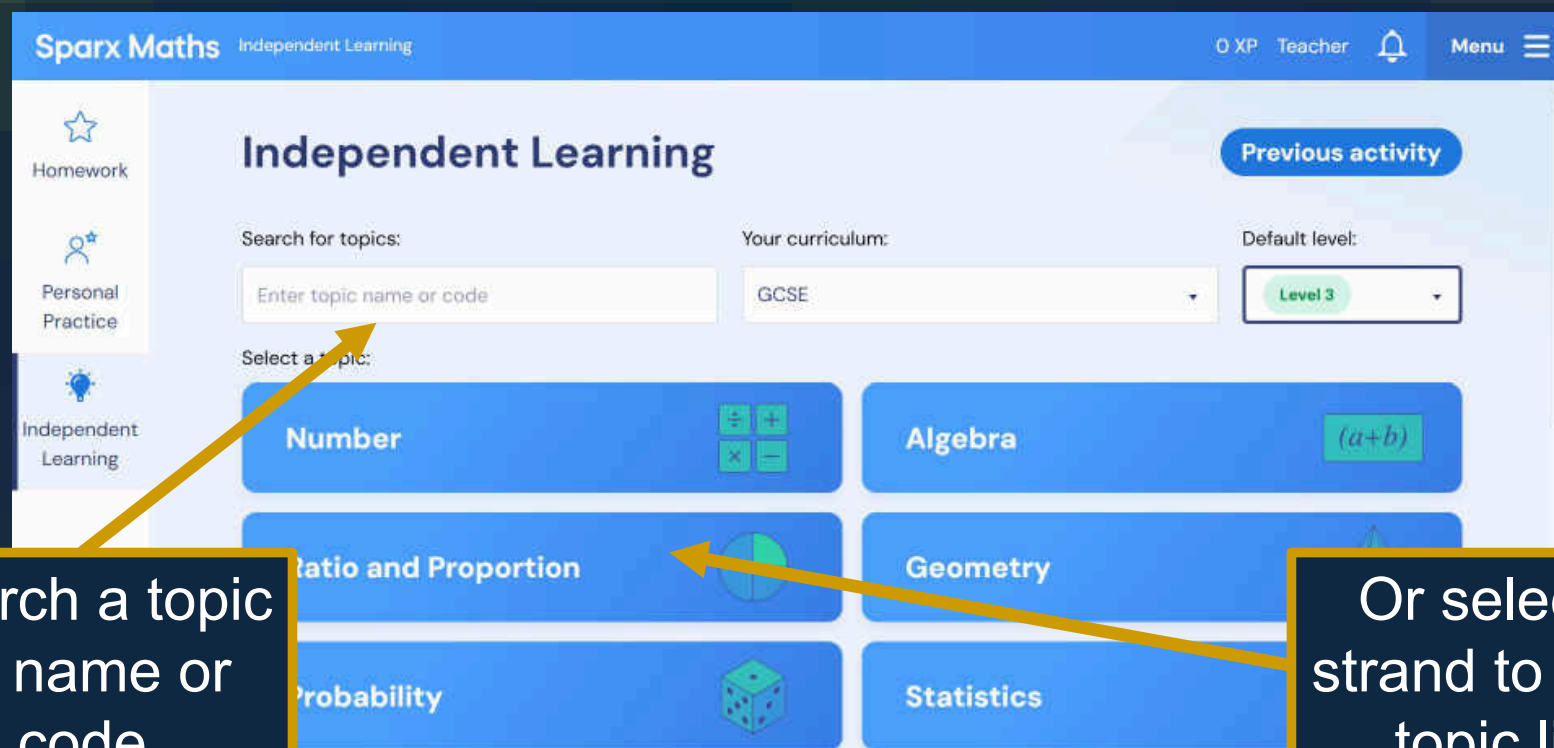
- ❖ Sparx Maths
- ❖ Corbett Maths
- ❖ Maths Genie
- ❖ 1st Class Maths

Sparx Maths



The screenshot shows the Sparx Maths user interface. At the top is a blue header bar with the 'Sparx Maths' logo on the left and user information ('0 XP Teacher') and a 'Menu' button on the right. Below the header, the main content area has a light blue background. On the left side of this area is a vertical sidebar with three options: 'Homework' (with a star icon), 'Personal Practice' (with a person icon), and 'Independent Learning' (with a lightbulb icon). The 'Independent Learning' option is highlighted with a yellow border. The main content area displays a greeting 'Hey Teacher,' followed by the text 'This is your personalised homework. You need to answer every question correctly to complete it.' To the right of this text is a circular progress indicator showing '0/1'. Below the greeting is a yellow box containing a dropdown arrow, the text 'Demo Homework', and the status 'Not started'.

Sparx Maths



Sparx Maths Independent Learning

0 XP Teacher  Menu 

Independent Learning [Previous activity](#)

Search for topics: Enter topic name or code

Your curriculum: GCSE

Default level: Level 3

Select a topic:

Number 

Algebra 

Ratio and Proportion 

Geometry 

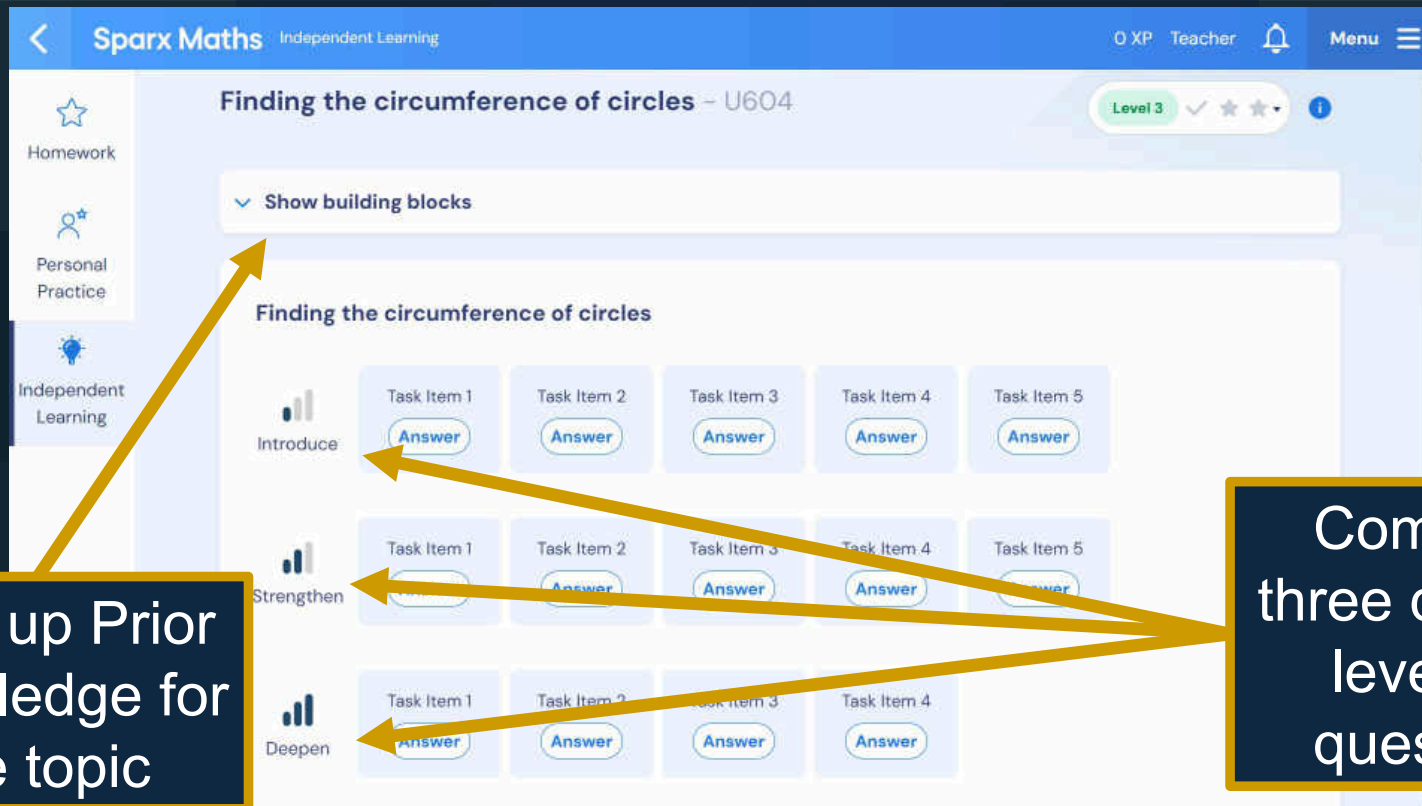
Probability 

Statistics 

Search a topic
by name or
code

Or select a
strand to get a
topic list

Sparx Maths



Sparx Maths Independent Learning

0 XP Teacher Menu

Finding the circumference of circles - U604 Level 3

▼ Show building blocks

Finding the circumference of circles

Introduce

Task Item 1	Task Item 2	Task Item 3	Task Item 4	Task Item 5
Answer	Answer	Answer	Answer	Answer

Strengthen

Task Item 1	Task Item 2	Task Item 3	Task Item 4	Task Item 5
Answer	Answer	Answer	Answer	Answer

Deepen

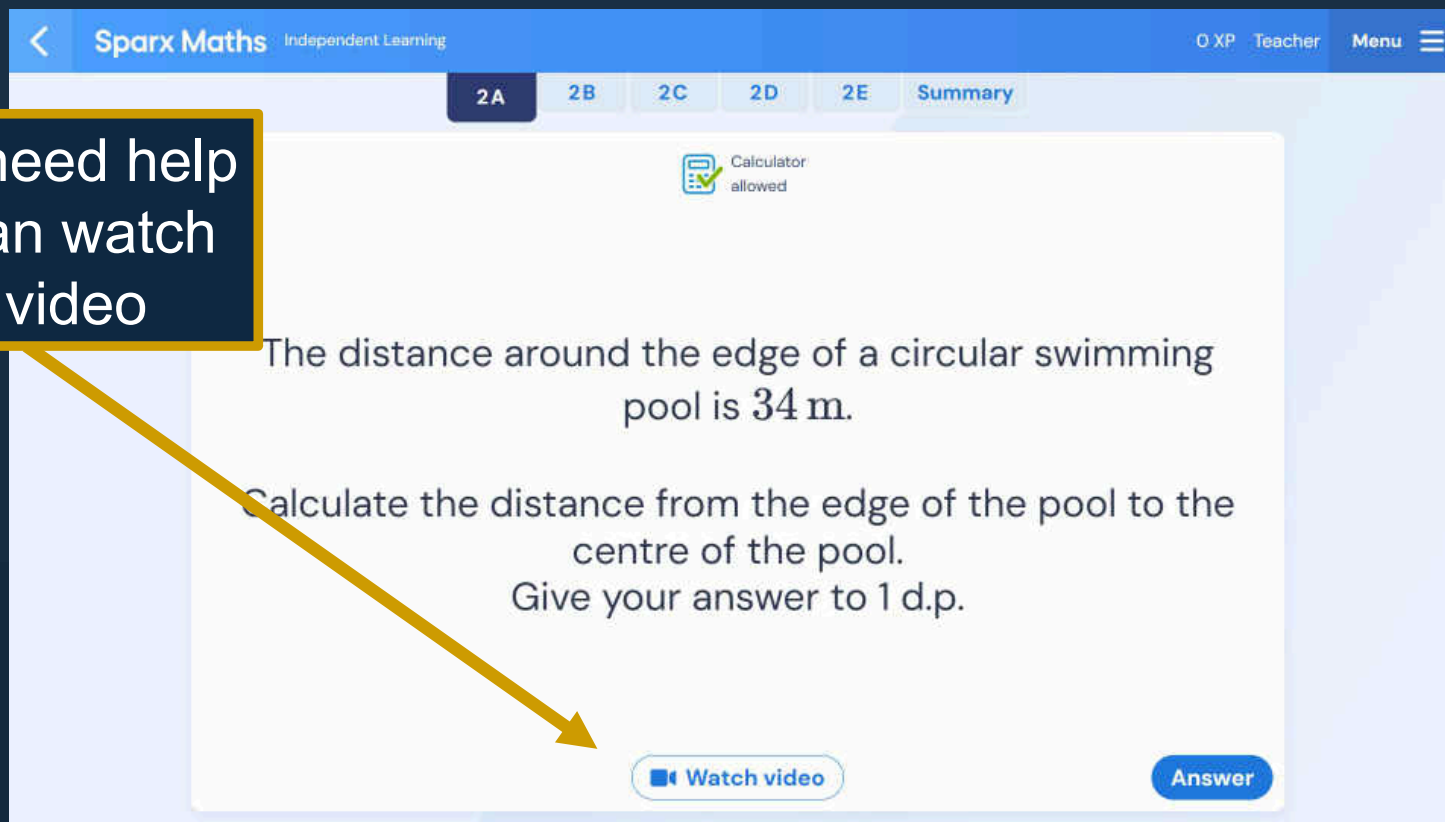
Task Item 1	Task Item 2	Task Item 3	Task Item 4
Answer	Answer	Answer	Answer

Look up Prior Knowledge for the topic

Complete three different levels of questions

Sparx Maths

If you need help
you can watch
the video



The screenshot shows the Sparx Maths interface. At the top, there's a blue header with a back arrow, 'Sparx Maths Independent Learning', '0 XP Teacher', and a 'Menu' button. Below the header, there are tabs for '2A', '2B', '2C', '2D', '2E', and 'Summary'. The '2A' tab is selected. The main content area has a 'Calculator allowed' icon and text. The problem text reads: 'The distance around the edge of a circular swimming pool is 34 m. Calculate the distance from the edge of the pool to the centre of the pool. Give your answer to 1 d.p.' At the bottom of the content area, there are two buttons: 'Watch video' and 'Answer'. A yellow arrow points from the text box on the left to the 'Watch video' button.

Calculator allowed

The distance around the edge of a circular swimming pool is 34 m.

Calculate the distance from the edge of the pool to the centre of the pool.
Give your answer to 1 d.p.

Watch video Answer

Corbett Maths



List of topics
with Questions
and Videos

Corbett Maths

FDP: decimals to percentages [Video 125](#) [Practice Questions](#) [Textbook Exercise](#)

FDP: fractions to percentages [Video 126](#) [Practice Questions](#) [Textbook Exercise](#)

FDP: fractions to decimals [Video 127](#) [Practice Questions](#) [Textbook Exercise](#)

FDP: fractions to decimals (calc) [Video 128](#) [Practice Questions](#) [Textbook Exercise](#)

Topic Videos

GCSE Style Questions

Worksheets based on Topic

Corbett Maths 5-a-day



Corbett Maths 5-a-day

5 Questions every day covering key topics and ideas

13th October [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

14th October [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

15th October [Numeracy](#) [Foundation](#) [Foundation Plus](#) [Higher](#) [Higher Plus](#)

Select the correct tier, if you are unsure ask your teacher

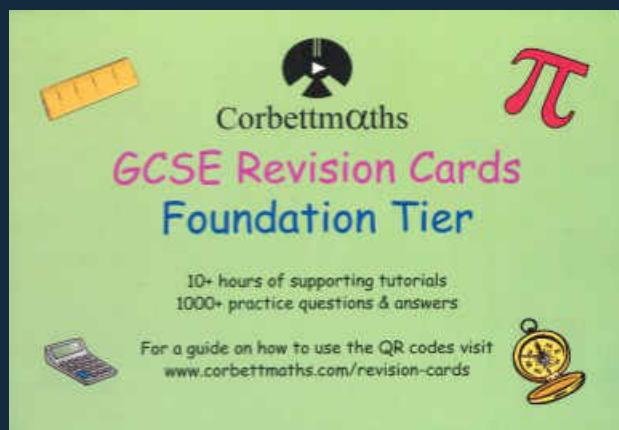
Corbett Maths 5-a-day

13th October	Higher 5-a-day	
Write down the value of $64^{\frac{2}{3}}$	Write down the value of 7^{-3}	CorbettMaths
Carl is making a drink by mixing orange juice and lemonade in the ratio 3 : 5 Carl has 57.5 litres of lemonade and	What is the maximum amount of the drink that Carl can make?	

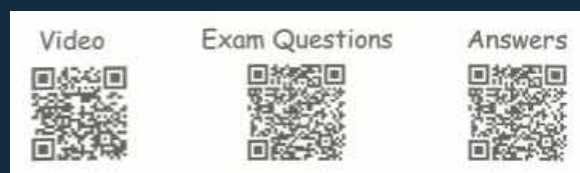
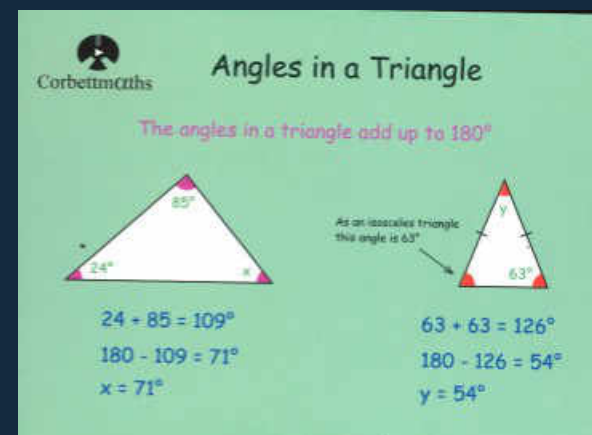
Corbett Maths

Revision cards

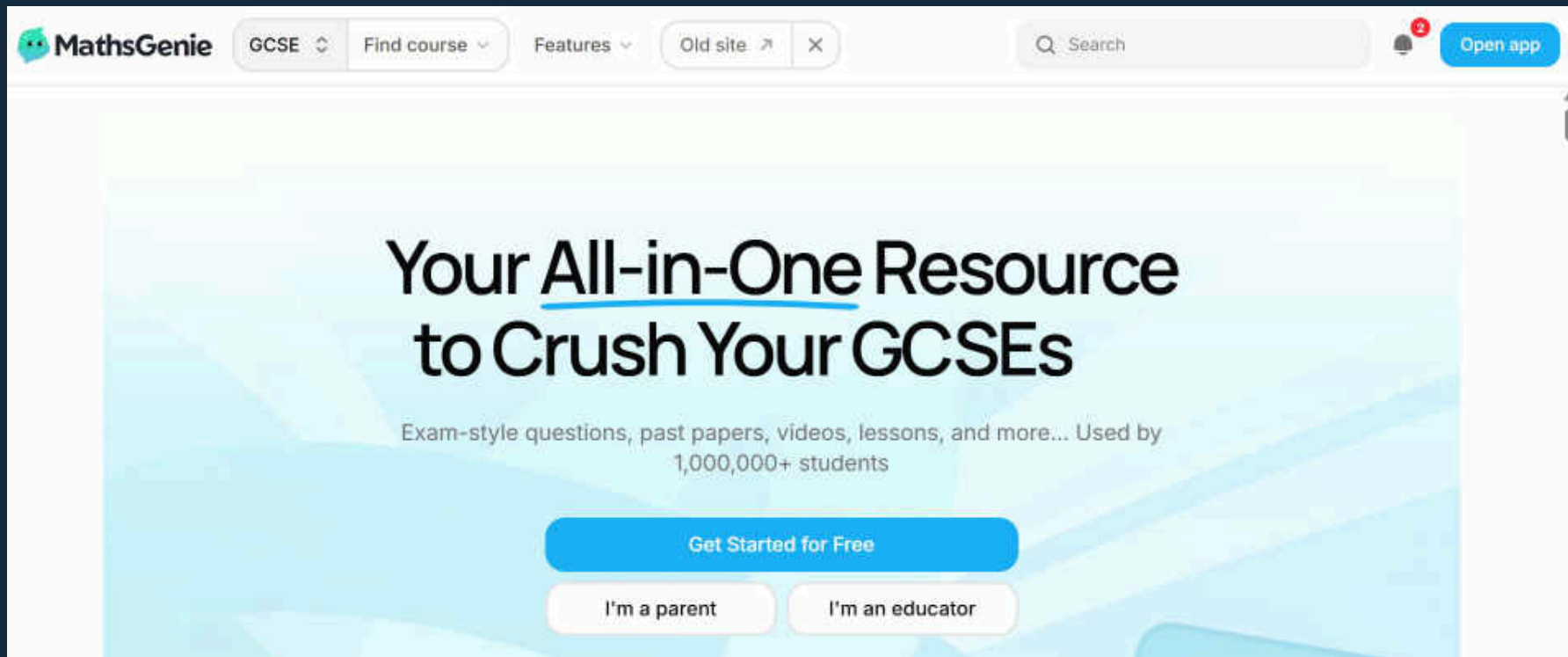
Revision cards are available to order from Corbett Maths



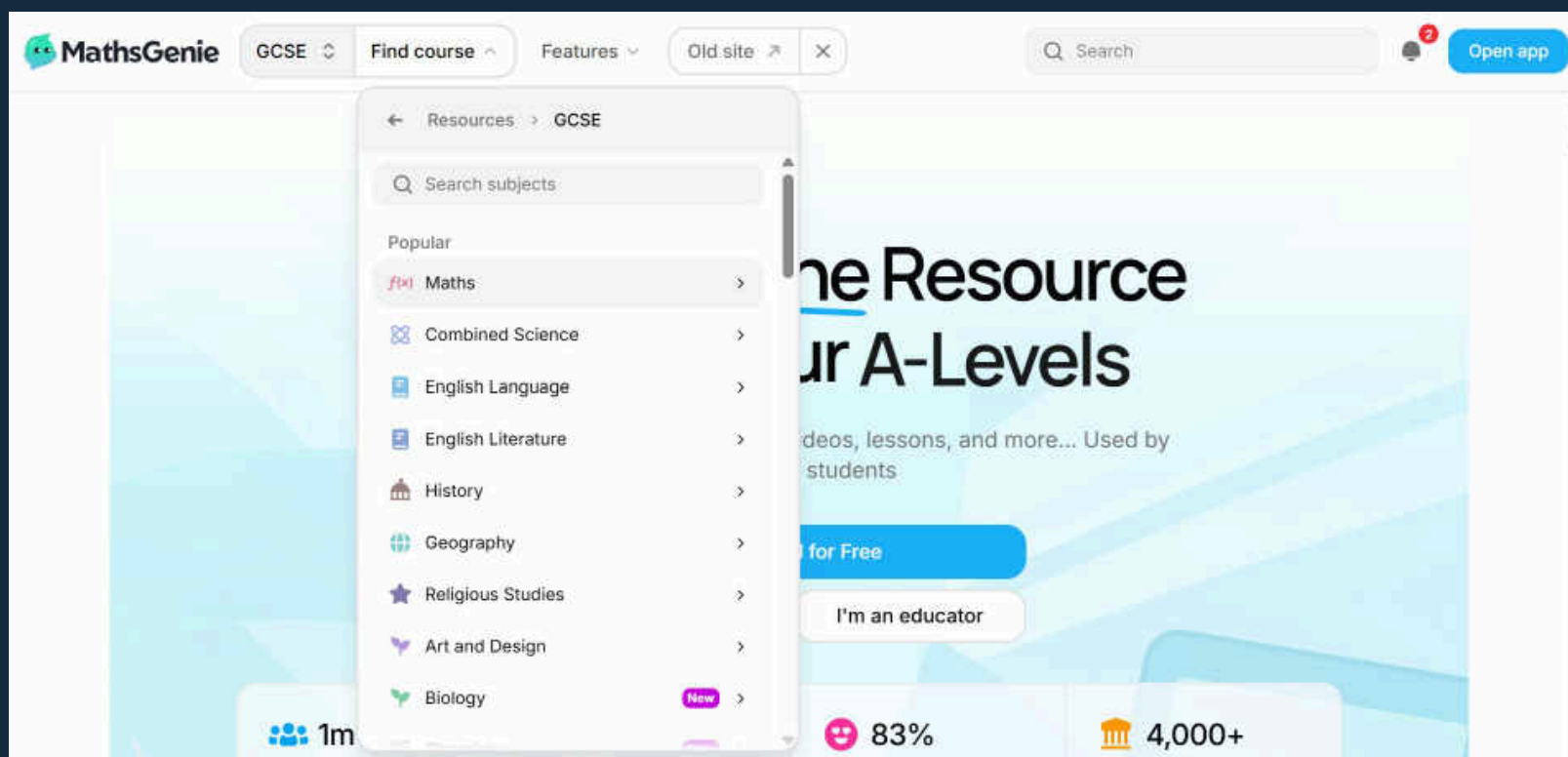
Each card contains key facts and examples with QR codes to videos, questions and solutions on the back



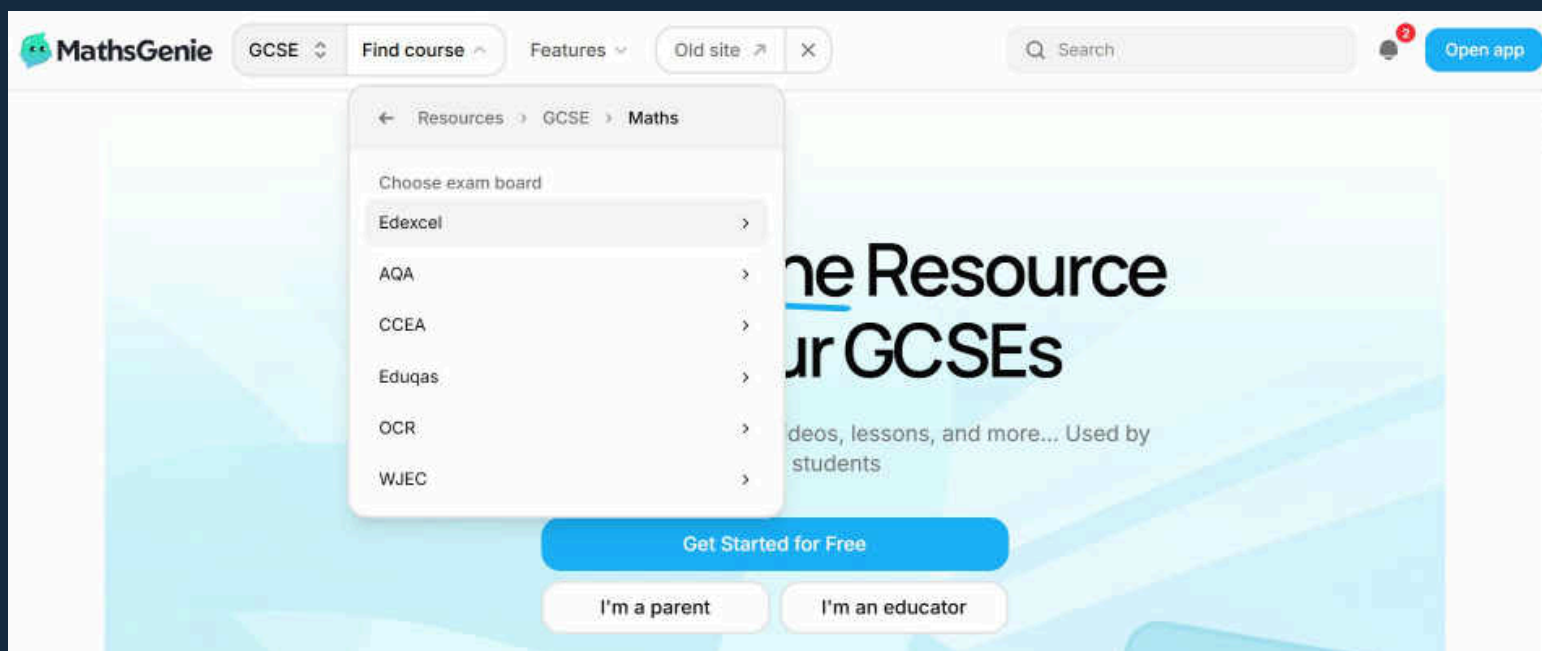
Maths Genie



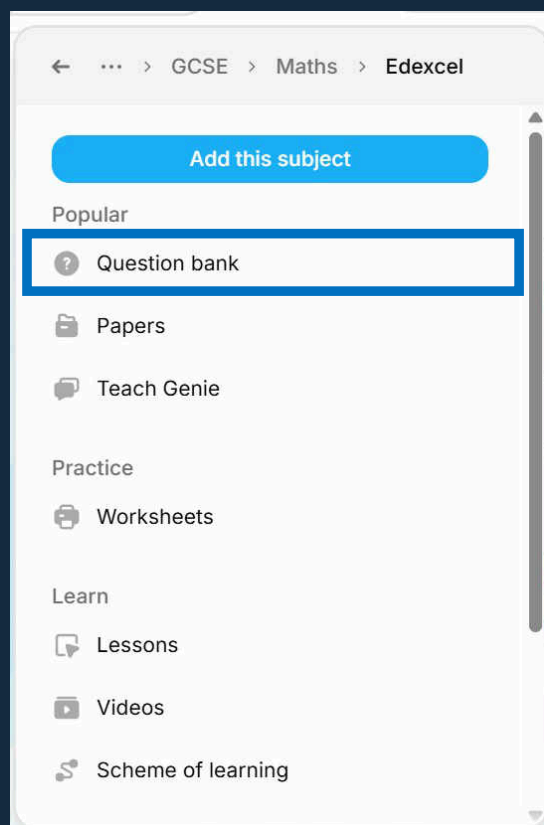
Maths Genie



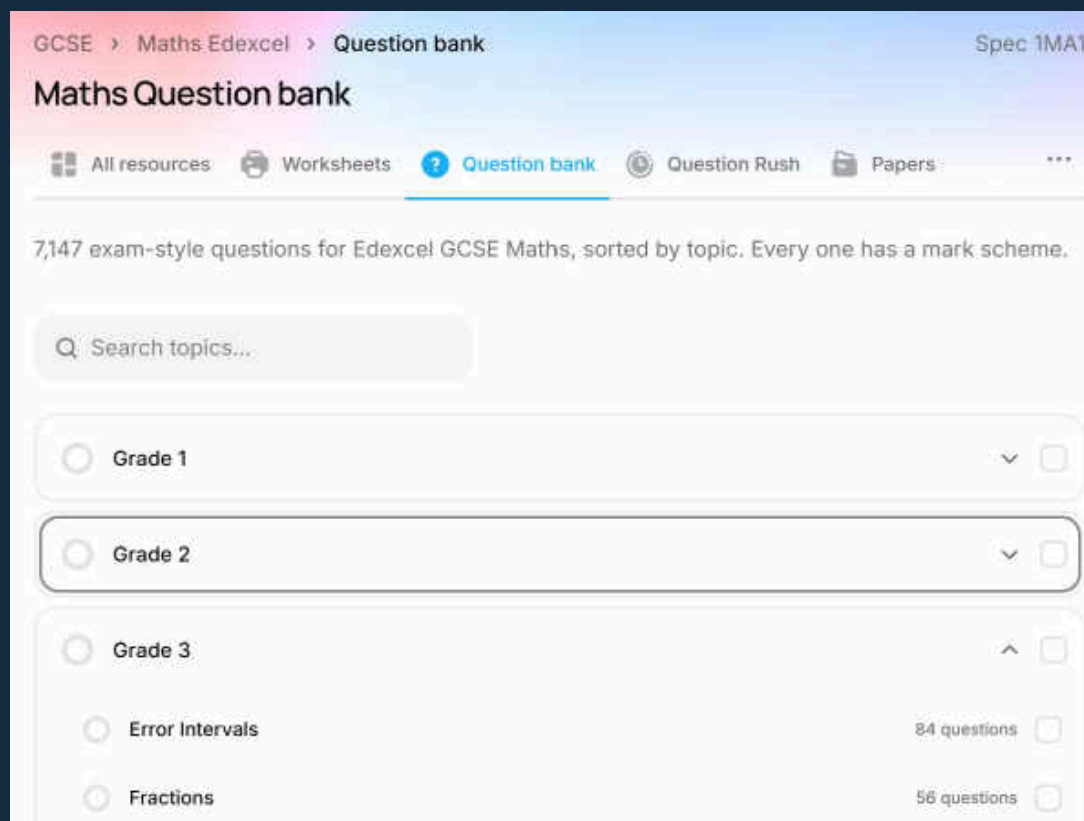
Maths Genie



Maths Genie



Maths Genie



The screenshot shows the Maths Genie website interface. At the top, there is a breadcrumb trail: GCSE > Maths Edexcel > Question bank. The page title is "Maths Question bank". Below the title, there is a navigation bar with tabs: All resources, Worksheets, Question bank (selected), Question Rush, and Papers. A description states: "7,147 exam-style questions for Edexcel GCSE Maths, sorted by topic. Every one has a mark scheme." Below this is a search bar labeled "Search topics...". There are three main sections for selecting a grade: Grade 1, Grade 2 (selected), and Grade 3. Under Grade 3, there are two sub-sections: Error Intervals (84 questions) and Fractions (56 questions).

Maths Genie

Choose your difficulty

Fractions

Medium Hard

< 1 2 3 4 5 6 7 8 9 10 11 ... >

Question 1   44% 

Work out $\frac{1}{10} + \frac{3}{5}$ [2]

Write your answer here...

Video walkthrough

Work out $\frac{1}{10} + \frac{3}{5}$

[View solution](#)

Markscheme

Maths Genie

If you need help

Videos

Video walkthrough

Work out $\frac{1}{10} + \frac{6}{10}$

DO NOT WRITE IN THIS AREA

IN THIS AREA

(2)

(Total for this question is 2 marks)

Markschemes

Markscheme

Use of common denominator: $\frac{1}{10} + \frac{6}{10}$

M1

Final answer: $\frac{7}{10}$

A1

Walkthroughs

Walkthrough

Step 1: Match the denominators

Fractions can be added once their denominators are the same. Use 10 as the common denominator because $5 \times 2 = 10$.

Step 2: Convert three fifths

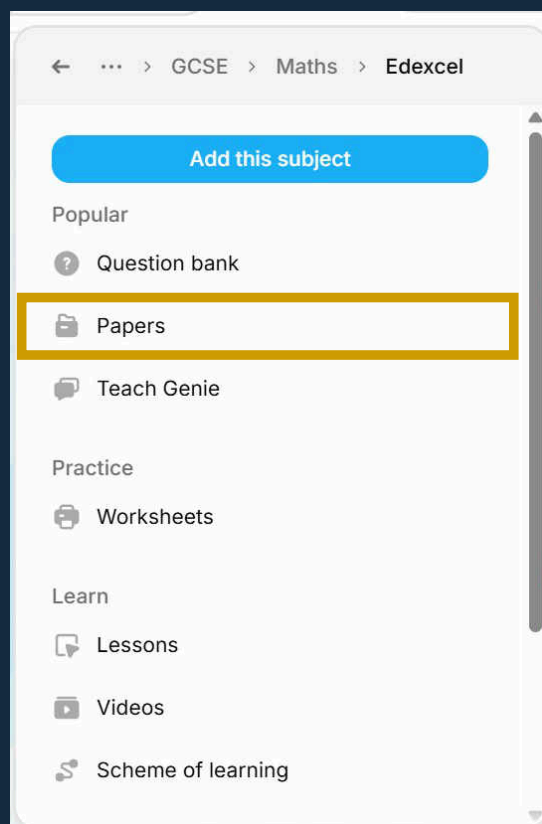
Multiply the numerator and denominator by the same number, so the fraction keeps the same value. Reaching one tenth plus six tenths uses a common denominator and earns M1.

$$\begin{array}{c}
 3 \\
 \hline
 5 \\
 \times 2 \\
 \hline
 6 \\
 \hline
 10 \\
 \times 2 \\
 \hline
 12 \\
 \hline
 10 \\
 \hline
 10 \\
 \hline
 10
 \end{array}$$

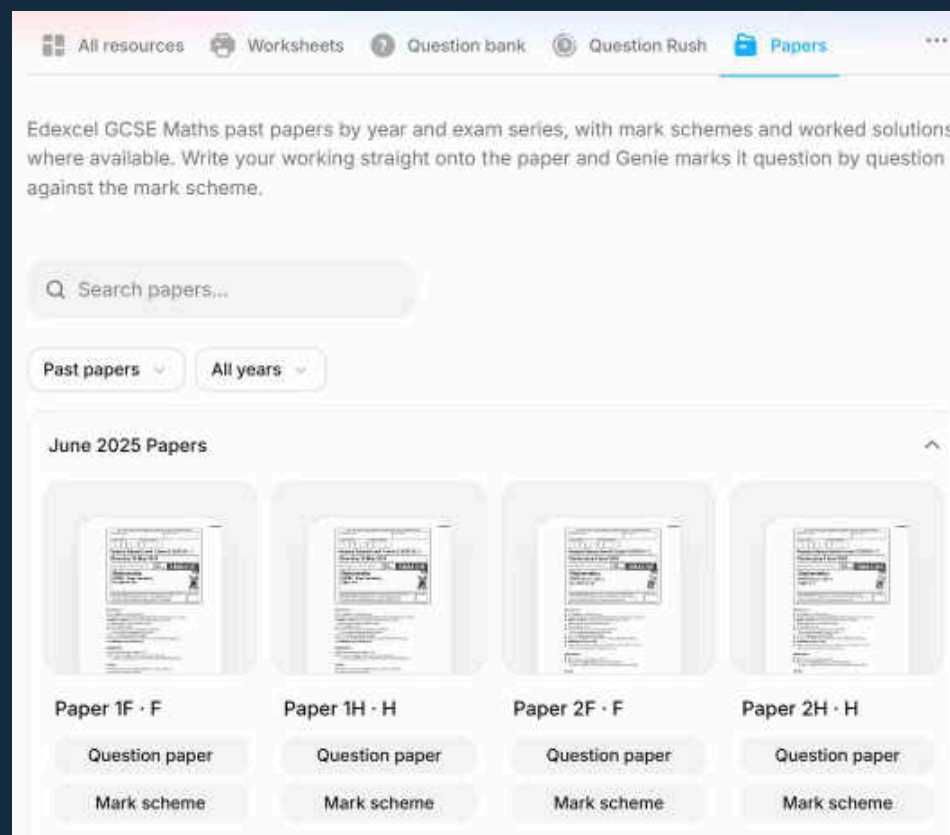
Next step >

Show all steps

Maths Genie



Maths Genie



[All resources](#)
[Worksheets](#)
[Question bank](#)
[Question Rush](#)
[Papers](#)

Edexcel GCSE Maths past papers by year and exam series, with mark schemes and worked solutions where available. Write your working straight onto the paper and Genie marks it question by question against the mark scheme.

[Past papers](#)
[All years](#)

June 2025 Papers

Paper 1F · F	Paper 1H · H	Paper 2F · F	Paper 2H · H
Question paper	Question paper	Question paper	Question paper
Mark scheme	Mark scheme	Mark scheme	Mark scheme

Maths Genie

Write your
answers:
Freehand or Type

Answer ALL questions.
Write your answers in the spaces provided.
You must write down all the stages in your working.

highest common factor (HCF) of 54 and 120

1 + Mark answer

DO NOT WRITE IN THIS AREA

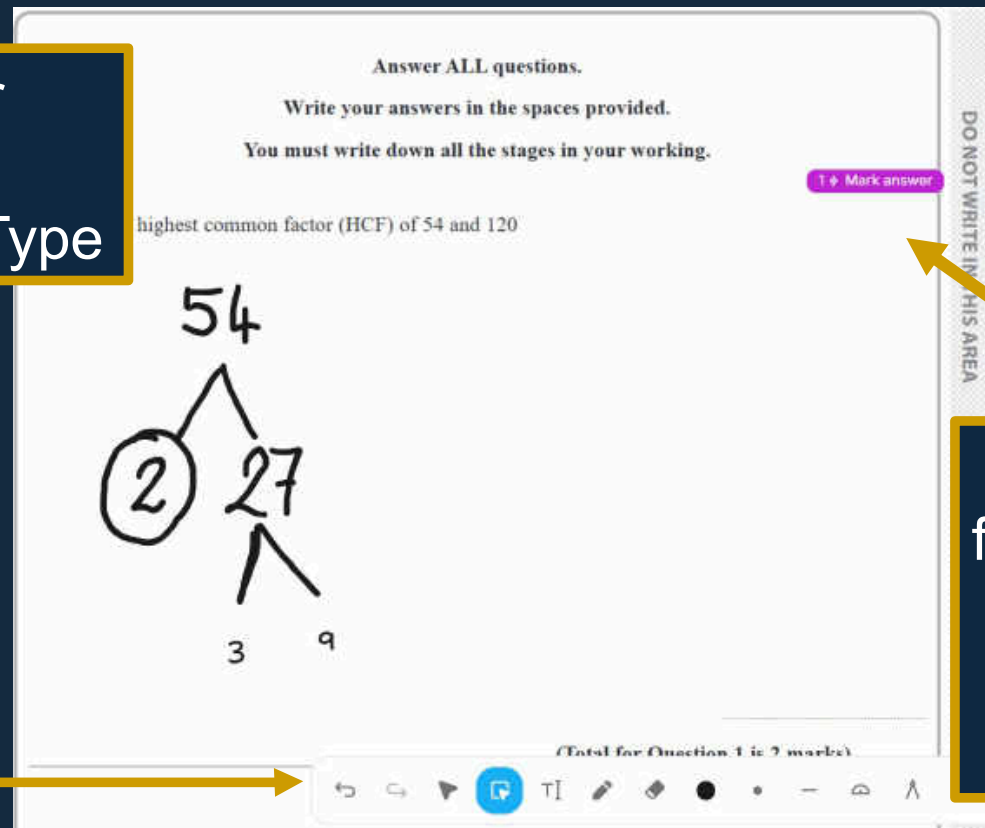


54

2 27

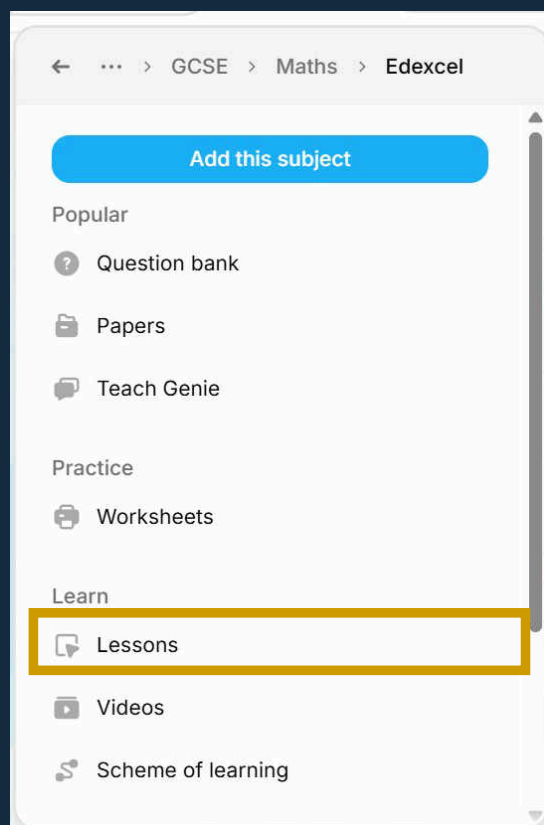
3 9

(Total for Question 1 is 2 marks)



Once you
finish mark the
question or
view the
markscheme

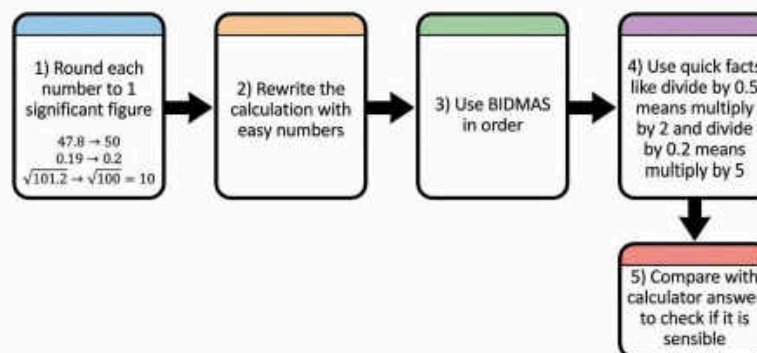
Maths Genie



Maths Genie

Recap a topic with an online lesson

What estimating means



An estimate is close to the exact answer, but not exact, and an approximation is the rounded or simplified value you use. In GCSE questions, you usually round each number to 1 significant figure unless another easy value is clearly better.

Maths Genie online lessons

[Maths Genie](#) offers topic practice, exam questions, videos, notes and online lessons.

Recap a topic

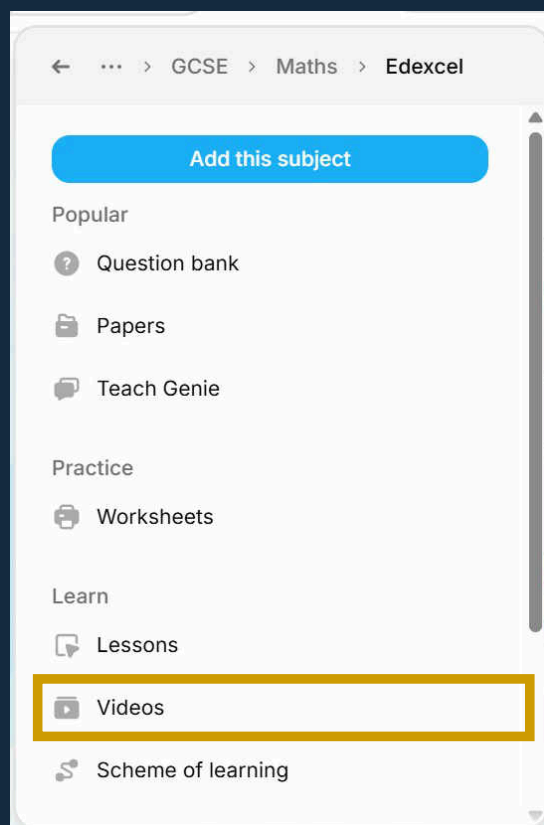
Choose the relevant GCSE topic or lesson. Read the explanation and examples or watch the supporting video. Work through the practice questions and check the answers.

Choose help for the part that is difficult

Use a video or worked example if the method is unclear. Use the mark scheme or walkthrough to check an exam question. Then try a similar question independently.

The neighbouring presentation pages show the website menus and worked examples. Ask your teacher which topic, level or tier to use.

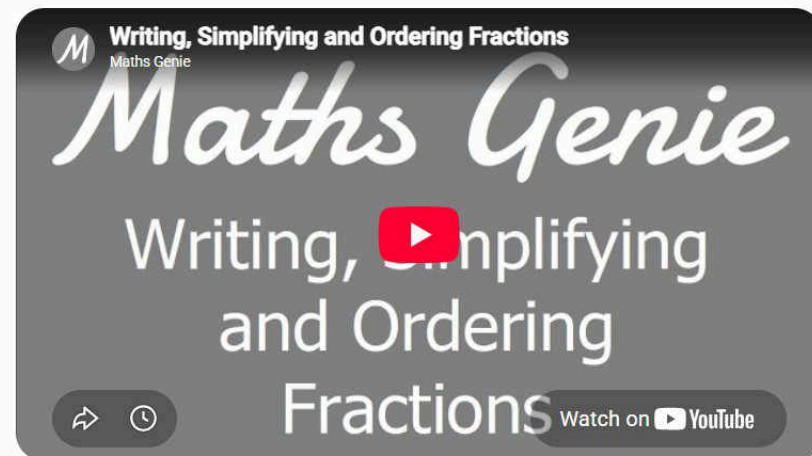
Maths Genie



Maths Genie

Videos and Notes available

Writing, Simplifying and Ordering Fractions



With practise questions

Practise questions

1 of 2

A box contains 16 crayons. Of these, 7 are purple.
What fraction of the crayons are purple?

A $\frac{7}{16}$

B $\frac{16}{7}$

C $\frac{7}{9}$

D $\frac{9}{16}$

1st class maths

**GCSE Revision
(Edexcel)**

**GCSE Revision
(AQA)**

**GCSE Past Papers
(all boards)**

**GCSE Topic
Frequency Analysis**

**Level 2 Further Maths
Revision**

**Level 2 Further Maths
Past Papers**

A-Level Revision

**A-Level Past Papers
(all boards)**

**Practice Papers
(The ones I make)**



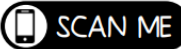
Buy Me a Coffee

1st class maths

Prioritise your revision with grade levels and frequency of appearance

Topic	Video Explanation	Exam Questions	Solutions	Grade	Past Series Appearance*
Algebraic Fractions (Equations)				8+	64%
Algebraic Fractions (Simplifying)				8+	91%
Algebraic Proof				8+	73%
Circle Theorem Proofs				8+	9%
Completing the Square (Tricky ones!)				8+	64%
Equation of a Tangent to a Circle				8+	45%

1st class maths



Algebraic Fractions (Equations)

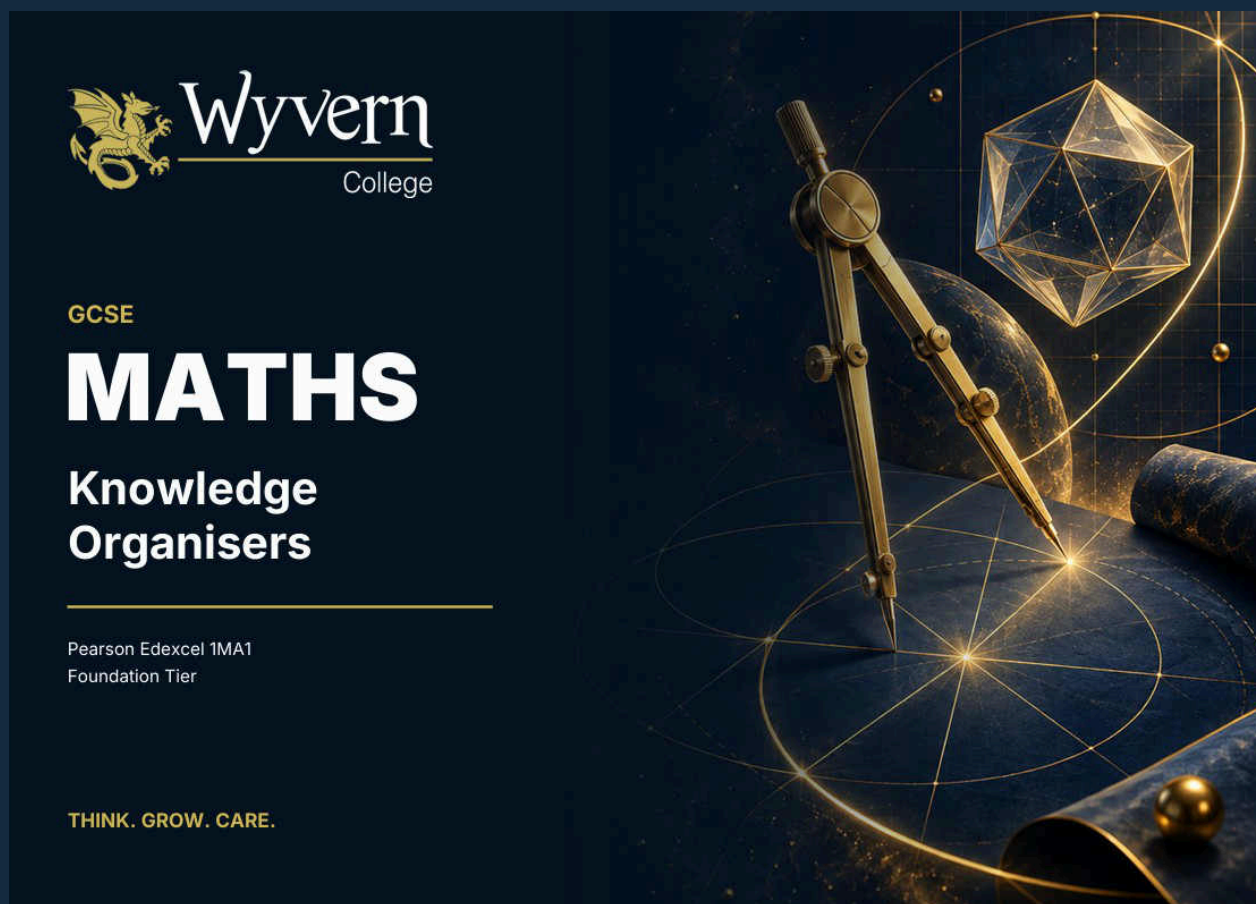


← **REVISE THIS TOPIC**

CHECK YOUR ANSWERS →

1 Solve $\frac{x+9}{5} + \frac{x+2}{4} = 5$

Knowledge Organisers



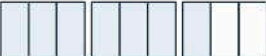
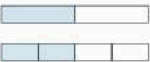
Knowledge Organisers

F03 | Fractions and percentages

Edexcel 1MA1 | Foundation Tier | Prompt + Recall Answer | Unit Page 1 of 2

MY RETRIEVAL PRACTICE

R	A	G	Home	School	Date	R	A	G	Home	School	Date
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Fraction facts		Fraction facts		Fraction facts	
F03.01 Numerator	The top number of a fraction. $\frac{\text{Numerator}}{\text{Denominator}}$ $\frac{a}{b}$	F03.06 Improper fraction	For positive fractions, the numerator is at least the denominator. E.g. $\frac{7}{3} > 1$; $\frac{4}{4} = 1$ is also improper.	F03.10 Adding: different denominators	Use the LCM of the denominators. Multiply the top and bottom of each fraction by the same number to make this denominator; then add the numerators. E.g. $\frac{1}{3} + \frac{1}{4}$. LCM of 3 and 4 is 12. $\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}$ $\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$ $\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$
F03.02 Denominator	The bottom number of a fraction; it cannot be zero. $\frac{a}{\text{Denominator}}$ $\frac{a}{b}$	F03.07 Mixed number	A whole-number part plus a proper fraction.  $2\frac{1}{3} = \frac{7}{3}$ E.g. $2\frac{1}{3} = 2 + \frac{1}{3} = \frac{7}{3}$	F03.11 Subtracting: common denominator	With a common non-zero denominator: $\frac{a}{b} - \frac{c}{b} = \frac{a-c}{b}$ E.g. $\frac{6}{7} - \frac{2}{7} = \frac{6-2}{7} = \frac{4}{7}$
F03.03 Equivalent fractions	Fractions with the same value. $\frac{a}{b} = \frac{ka}{kb}$ for $k \neq 0$.  Same proportion shaded. $\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$	F03.08 Fraction of an amount	Divide by the denominator (bottom), then multiply by the numerator (top): $\frac{a}{b}$ of Q is $(Q \div b) \times a$. E.g. $\frac{2}{5}$ of 40  One part: $40 \div 5 = 8$. Two parts: $8 \times 2 = 16$.	F03.12 Subtracting: different denominators	Use the LCM of the denominators. Multiply the top and bottom of each fraction by the same number to make this denominator; then subtract the numerators. E.g. $\frac{3}{4} - \frac{1}{6}$. LCM of 4 and 6 is 12. $\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$ $\frac{1}{6} = \frac{1 \times 2}{6 \times 2} = \frac{2}{12}$ $\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$
F03.04 Simplest form	Numerator and denominator have no common positive factor greater than 1. E.g. $\frac{18}{24} = \frac{18 \div 6}{24 \div 6} = \frac{3}{4}$	F03.09 Adding: common denominator	With a common non-zero denominator: $\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$ E.g. $\frac{2}{7} + \frac{3}{7} = \frac{2+3}{7} = \frac{5}{7}$	F03.13 Fraction as division	$\frac{a}{b} = a \div b$. The denominator must not be zero. E.g. $\frac{3}{8} = 3 \div 8 = 0.375$.
F03.05 Proper fraction	For positive fractions, the numerator is smaller than the denominator. E.g. $\frac{3}{5} < 1$ because $3 < 5$.			F03.14 Terminating decimal	A decimal with finitely many digits after the decimal point. E.g. $0.125 = \frac{1}{8}$ terminates.

Knowledge Organisers

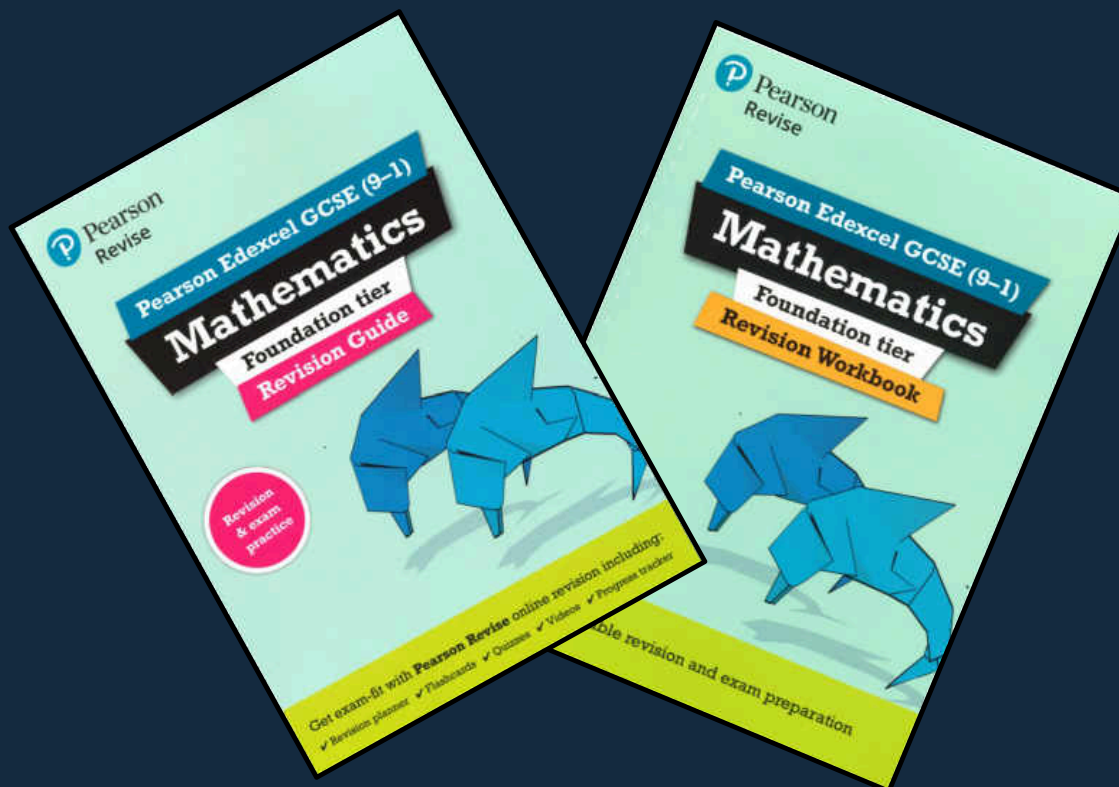
F03 Fractions and percentages 14 items Booklet page 22							
Quiz		Answers		Mixed quiz		Mixed answers	
Reverse quiz		Reverse answers		Reverse mixed quiz		Reverse mixed answers	
PROMPT / TERM	RECALL / EXPLAIN	PROMPT / TERM	RECALL / EXPLAIN	PROMPT / TERM	RECALL / EXPLAIN	PROMPT / TERM	RECALL / EXPLAIN
F03.01 Numerator		F03.07 Mixed number		F03.11 Subtracting: common denominator			
F03.02 Denominator							
F03.03 Equivalent fractions		F03.08 Fraction of an amount		F03.12 Subtracting: different denominators			
F03.04 Simplest form		F03.09 Adding: common denominator					
F03.05 Proper fraction		F03.10 Adding: different denominators		F03.13 Fraction as division			
F03.06 Improper fraction				F03.14 Terminating decimal			

Knowledge Organisers

PROMPT / TERM	KNOWLEDGE / ANSWER	PROMPT / TERM	KNOWLEDGE / ANSWER	PROMPT / TERM	KNOWLEDGE / ANSWER
F03.01 Numerator	The top number of a fraction. Enlarge diagram	F03.07 Mixed number	A whole-number part plus a proper fraction. Enlarge diagram E.g. $2\frac{1}{3} = 2 + \frac{1}{3} = \frac{7}{3}$.	F03.11 Subtracting: common denominator	With a common non-zero denominator: $\frac{a}{b} - \frac{c}{b} = \frac{a-c}{b}$. E.g. $\frac{6}{7} - \frac{2}{7} = \frac{6-2}{7} = \frac{4}{7}$.
F03.02 Denominator	The bottom number of a fraction; it cannot be zero. Enlarge diagram	F03.08 Fraction of an amount	Divide by the denominator (bottom), then multiply by the numerator (top): $\frac{a}{b}$ of Q is $(Q \div b) \times a$. Enlarge diagram	F03.12 Subtracting: different denominators	Use the LCM of the denominators. Multiply the top and bottom of each fraction by the same number to make this denominator; then subtract the numerators. E.g. $\frac{3}{4} - \frac{1}{6}$. LCM of 4 and 6 is 12. $\frac{3}{4} = \frac{3 \times 3}{4 \times 3} = \frac{9}{12}$ $\frac{1}{6} = \frac{1 \times 2}{6 \times 2} = \frac{2}{12}$ $\frac{9}{12} - \frac{2}{12} = \frac{7}{12}$.
F03.03 Equivalent fractions	Fractions with the same value: $\frac{a}{b} = \frac{ka}{kb}$ for $k \neq 0$. Enlarge diagram $\frac{1}{2} = \frac{1 \times 2}{2 \times 2} = \frac{2}{4}$.	F03.09 Adding: common denominator	With a common non-zero denominator: $\frac{a}{b} + \frac{c}{b} = \frac{a+c}{b}$. E.g. $\frac{2}{7} + \frac{3}{7} = \frac{2+3}{7} = \frac{5}{7}$.	F03.13 Fraction as division	$\frac{a}{b} = a \div b$. The denominator must not be zero. E.g. $\frac{3}{8} = 3 \div 8 = 0.375$.
F03.04 Simplest form	Numerator and denominator have no common positive factor greater than 1. E.g. $\frac{18}{24} = \frac{18 \div 6}{24 \div 6} = \frac{3}{4}$.	F03.10 Adding: different denominators	Use the LCM of the denominators. Multiply the top and bottom of each fraction by the same number to make this denominator; then add the numerators. E.g. $\frac{1}{3} + \frac{1}{4}$. LCM of 3 and 4 is 12. $\frac{1}{3} = \frac{1 \times 4}{3 \times 4} = \frac{4}{12}$ $\frac{1}{4} = \frac{1 \times 3}{4 \times 3} = \frac{3}{12}$ $\frac{4}{12} + \frac{3}{12} = \frac{7}{12}$.	F03.14 Terminating decimal	A decimal with finitely many digits after the decimal point. E.g. $0.125 = \frac{1}{8}$ terminates.
F03.05 Proper fraction	For positive fractions, the numerator is smaller than the denominator. E.g. $\frac{3}{5} < 1$ because $3 < 5$.				
F03.06 Improper fraction	For positive fractions, the numerator is at least the denominator. E.g. $\frac{7}{3} > 1$; $\frac{4}{4} = 1$ is also improper.				

Revision Guides & Workbooks

Guides and Workbooks are available for both Foundation and Higher Students



Revision guides are available to order from Parentmail and the Finance Office

Revision Guides & Workbooks

The revision guide has notes and worked examples, while the workbook contains questions to complete.

Had a look ☐ Nearly there ☐ Nailed it! ☐ **ALGEBRA**

Using algebra

You can sometimes use the information given in a question to write an equation. You might need to choose a letter to represent an unknown quantity you are trying to find.

Worked example

Here are three number cards.

Each card has a whole number written on the back. The number on card B is twice the number on card A. The number on card C is five more than the number on card A. The sum of the numbers on all three cards is 37. Work out the number on each card. (4 marks)

$A + B + C = 37$
 $A + 2A + A + 5 = 37$ ($\because B = 2A$ and $C = A + 5$)
 $4A + 5 = 37$ ($\because$)
 $4A = 32$ ($\because$)
 $A = 8$
 $B = 2 \times 8 = 16$ $C = 8 + 5 = 13$

True or false?

You might need to substitute values into an algebraic statement to show that it is false. You only need to find one counter-example to show that a statement is false.

Try some different values of n and write down all your working. You should know the prime numbers up to 20.

Worked example

n is a whole number. Super says that $2n^2 + 3$ is always a prime number. Give an example to show that he is wrong. (3 marks)

$n = 1$: $2(1)^2 + 3 = 2 \times 1 + 3 = 5$ Prime
 $n = 2$: $2(2)^2 + 3 = 2 \times 4 + 3 = 11$ Prime
 $n = 3$: $2(3)^2 + 3 = 2 \times 9 + 3 = 21 = 3 \times 7$ Not prime

Now try this

1. These two rectangles have the same perimeter. (4 marks)

2. Jill says that the expression $n^2 + 4n + 3$, where n is an integer, is never a multiple of 7. Give an example to show that Jill is wrong. (3 marks)

Had a go ☐ Nearly there ☐ Nailed it! ☐ **ALGEBRA**

Using algebra

1. Tom plants some rhubarb seeds in his allotment. He plants 7 rows of these seeds. In each row there are x seeds. A few months later he finds insects have eaten 9 seeds. After this he has 96 rhubarb plants left in total. (1 mark)

(a) Write down an equation using this information.

$7x - 9 = 96$

(b) Work out the value of x . (2 marks)

2. The diagram shows a triangular playground. The total perimeter of the playground is 34 m. Work out the value of x . (3 marks)

$(x - 2)m$ $(x + 5)m$ $(2x - 1)m$

$(x - 2) + (x + 5) + (2x - 1) = 34$

$x = \dots$

3. The diagram shows two rectangular gardens. All the measurements are in metres. (3 marks)

$3x - 2$ $2x + 1$

$2x + 3$ $2x + 6$

Both gardens have the same perimeter. Work out the width and height of garden A.

4. A square has side length $2x$ cm. An equilateral triangle has side length $(2x + 4)$ cm. The perimeter of the square is equal to the perimeter of the equilateral triangle. Work out the value of x . (3 marks)

$x = \dots$

The weekly Maths paper programme

After October half term, Year 11 students move from set Sparx homework to one homework practice paper each week. Sparx remains available to support learning.

Complete the paper with support

Students use their support network, the linked topic clips and worked examples to learn what they need. These homework papers are learning resources.

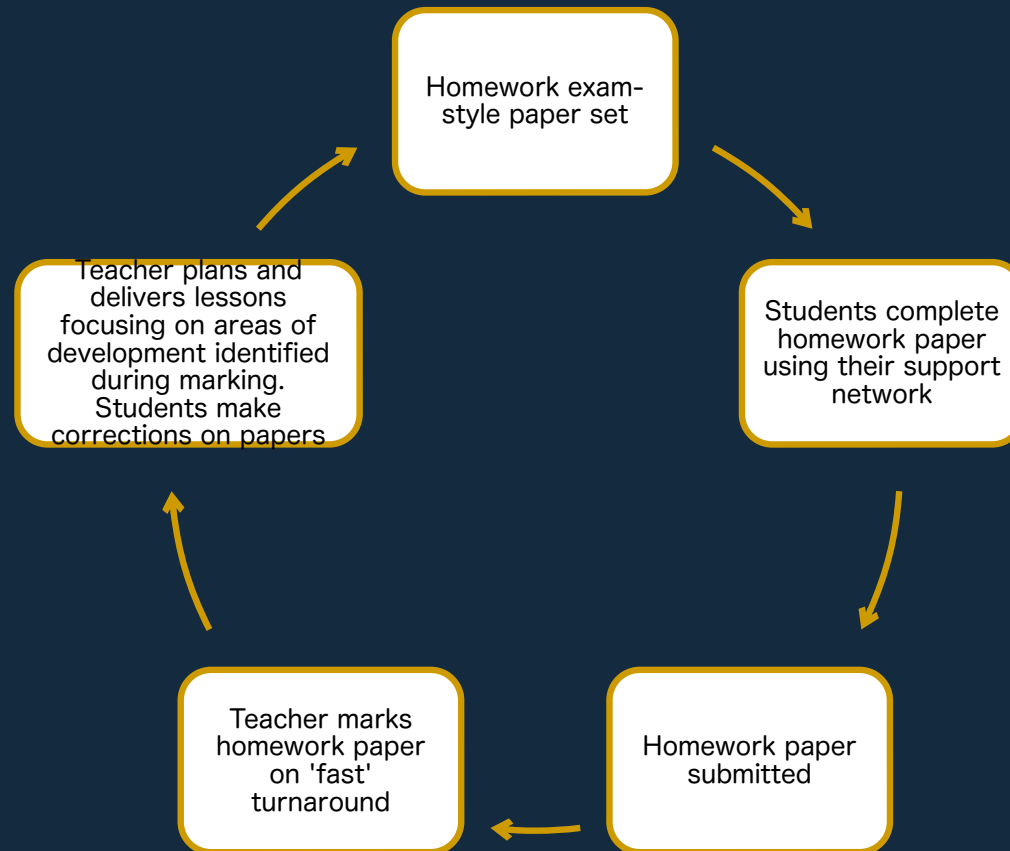
Use the feedback

The teacher marks the paper and identifies areas for development. Lessons address those gaps and students make corrections. Use what you learn from one paper to improve the next.

Build the habits needed for exams

Paper practice helps students select a strategy, solve problems, show clear working and develop confidence. Use the topic links to practise a weakness between papers.

Past Paper Programme



Past Paper Programme

Working on exam-style papers builds:

- Ability to select the right strategies at the right time
- Ability to problem solve
- Exam technique
- Student confidence for exams

Past Paper Programme

Each question is linked to a topic and Sparx clip

Questions	Question Title	Score	Sparx Clip Number	9-1 GCSE Maths Homework
1	Linear sequences (nth term)	1	2	November 2020
2	Multiplying mixed numbers	1	3	
3	Recognize quadratic, cubic and reciprocal graphs	1	2	
4	Congruent triangles	1	1	
5	Percentage profit	1	3	1 H
6	Multi-step angle problems	1	5	
7	Interpret stem-and-leaf diagrams	1	3	
8	Pressure, volume of a prism	1	3	
9	Compare numbers in standard form	1	2	Non-Calculator
10	Harder problems involving ratios	1	3	Name
11a	Order of operations	1	2	Class
11b	Index form (powers of unit fractions)	1	2	Due Date
11c	Manipulating powers	1	2	
12a	Cumulative frequency tables	1	1	
12b	Draw a cumulative frequency diagram	1	2	
12c	Interpret a cumulative frequency diagram	1	3	
13	Density of a mixture	1	3	

Getting the most from your papers
- These are LEARNING resources, not tests. Use all the resources you have

Getting the most from Maths papers

Homework papers are learning resources. Use the available help to learn a method and then practise using it.

When a question is difficult

Use the linked Sparx topic, revision guide, teacher support or an after-school paper workshop. A blank answer should prompt an action to learn or ask for help. Form a productive study group with friends if that helps.

Show full working

Write the method and intermediate steps. Working can earn credit and helps the teacher identify where a mistake has happened.

Make and use corrections

After marking, record the question scores in the paper's feedback table. Make full corrections from answers modelled in class. For a question that did not earn full marks, revisit the listed topic and its Sparx clip.

Carry the learning into the next paper

When a similar question appears later, use the method and feedback from the earlier paper. Corrected papers are revision resources to keep and return to.

Illustrative practice-paper targets; official GCSE grade boundaries vary.

Grade boundaries

FOUNDATION

GRADE 5	65
GRADE 4	55
GRADE 3	41
GRADE 2	28
GRADE 1	14
UNGRADED	Below 14

HIGHER

GRADE 9	75
GRADE 8	65
GRADE 7	55
GRADE 6	45
GRADE 5	35
GRADE 4	25
GRADE 3	15
UNGRADED	Below 15

PRACTICE THE GRADE YOU WANT TO ACHIEVE

Support network

Sparx Maths

- Trials feedback sheets linked to Sparx
- Weekly homework papers linked to Sparx

After-school homework paper workshops

- One per week offered to all students with PRIDE scores of 4 +
- Work with teacher and peers collaboratively on homework papers
- Come to with specific questions to work on

Support network

Where students should turn when they get stuck

Peer and parent support

- Parental support on papers
- Parental support on Sparx
- Peer study groups- online or in person

Optional additional resources

- Revision guides & Workbooks- Finance Office
- Private tutoring- we can make recommendations and are happy to work with private tutors
- Additional math's classes (if applicable)

Supporting Maths at home 1

Speak positively about learning

Sit alongside your child and be willing to work through an example together. Encourage them to seek help and try again rather than treating difficulty as a fixed limit on their ability.

Useful prompts from the session include:

Stuck on your homework paper? Let us use Sparx Maths together and see if we can work it out.

You may need more than one attempt. Try the question again tomorrow.

Notice the effort, the correction and the improvement.

The aim is to build confidence and persistence while using good explanations and practice. Contact the teacher if the method still does not make sense.

Supporting Maths at home 2

Help your child use the weekly paper

Check whether there are unanswered questions and ask what help they have tried. Encourage them to use the linked Sparx videos on topics they found difficult.

Have they used a similar question on a previous corrected paper?

Have they shown full working, with attention to the marks available?

Would an after-school homework-paper workshop help?

Have they made full corrections in green pen from the class feedback?

You can support these checks without knowing how to solve every question yourself. Bring an unresolved question to the teacher.

Supporting Maths at home 3

Use personalised topic practice

Agree a regular time for independent topic learning. Use areas for development from the trial feedback form and the weekly papers to choose the Sparx videos and quizzes.

Sit alongside your child when they need encouragement to start. Help them find the topic code or worked example, then let them practise and check their own attempt.

Record what is improving and what remains difficult so that the next task targets the right gap.

Supporting Maths at home 4

Use a support network

Encourage the homework-paper workshops offered by the department and help your child bring specific questions. A family member may be able to sit alongside them or help them access a useful explanation.

Students can also arrange a productive peer study group, online or in person, to discuss methods and questions. They should still understand the working they write.

If you are considering a private tutor, the department welcomes contact about recommendations and collaboration. Paid tutoring is an optional choice, alongside the resources and school support described in the session.

Supporting Maths at home 5

Work with your child's teacher

The Maths department welcomes collaboration and regular contact. Ask about the next topic priority, an unresolved question or the most appropriate support.

Use your child's current Maths teacher contact through the college. The parent handout includes the departmental work addresses supplied for the evening.

Keep returning to the [Exams and Revision hub](#) for the current college information and free Foundation or Higher knowledge organiser.

For more information



For more information



For more information

Curriculum Subjects

To exit full screen, press and hold **[Esc]**

Welcome to our Curriculum Subject Area.

On the following pages you will be able to find useful information about some of our curriculum subjects. This might include homework guides, suggested resources and tips for supporting your children.

MATHEMATICS - RESOURCES AND LINKS



RELIGIOUS EDUCATION - GCSE RESOURCES



SCIENCE RESOURCES WEBSITE



For more information

Maths Revision

[REVISION IN MATHS](#)[PAST PAPER PROGRAMME](#)

Assessment for Maths

[HOW TO USE YOUR AFL SHEETS](#)[SUMMATIVE ASSESSMENTS](#)[END OF UNIT ASSESSMENTS](#)

GCSE Maths Revision Checklist - Foundation

Unit	Unit / Topic	Complete
1	Integers and place value Types of number Use and order positive and negative numbers Use inequality symbols Four operations using positive and negative numbers Round numbers to nearest 10, 100, 1000 and use rounding for estimation	
	Decimals Use decimals and place value Compare and order decimal numbers Four operations using decimal numbers Round to nearest whole number, decimal place & significant figures Use one calculation to check another	
	Indices, powers and roots Find squares and cubes Use index notation including negative powers Use laws of indices to multiply and divide numbers in index form Order of operations including powers and brackets Use of calculator	
	Factors, multiples and primes Identify factors, multiples and prime numbers Find prime factorisation of a number (& write in index form) Find common factors & highest common factor Find LCM of two (or three) numbers	
2	Algebra: the basics Write an expression Collect like terms Simplify expressions Use index laws	
	Expanding and factorising single brackets Expand single brackets Simplify expressions using squares and cubes Factorise expressions	
	Expressions and substitution into formulae Substitute into expressions involving brackets & powers Substitute into a formula (& word formula)	
3	Tables Sort and classify data (inc tally charts) Extract data from lists and tables (inc timetables) Identify mode from a list / table	
	Charts and graphs Know which chart or diagram to use for different data sets Draw and interpret bar charts (inc dual & composite) Draw and interpret line graphs (vertical & time-series) Draw and interpret frequency polygons Draw and interpret pictograms Draw and interpret stem and leaf diagrams	
	Pie charts Draw and use pie charts Find mode & total frequency from a pie chart Compare two pie charts	
	Scatter graphs Draw and use scatter graphs & lines of best fit Identify outliers & correlation	

Unit	Unit / Topic	Complete
4	Fractions Equivalent fractions including simplifying & comparing Express one amount as a fraction of another Convert between mixed numbers and improper fractions Four operations using fractions Find a fraction of an amount	
	Fractions, decimals and percentages Use fraction to decimal conversions Recognise terminating & recurring decimals	
	Percentages Convert between fractions, decimals & percentages Order & compare fractions, decimals & percentages Write one amount as a percentage of another Calculate percentage of an amount Calculate percentage increase/decrease Use decimals to find quantities (multiplier methods) Increase / decrease an amount by a percentage	
5	Equations Use function machines Solve equations (inc brackets and unknowns on both sides) Rearrange simple equations Set up & solve equations to solve problems	
	Inequalities On a number line Listing numbers that satisfy an inequality Solving inequalities and show the solution on a number line Error intervals due to rounding & truncation	
	Sequences Continue sequences inc from pictures Find the nth term Use nth term rule to generate or continue a sequence	
6	Properties of shapes, parallel lines and angle facts Measure and draw lines, angles, 2D & 3D shapes Identify and name 2D shapes and their properties Identify parallel and perpendicular lines Use angle facts - around a point, straight line, vertically opposite etc Use angle properties of parallel lines	
	Interior and exterior angles of polygons Use sum of interior angles for irregular & regular polygons Use sum of exterior angles for regular polygons	
7	Statistics and sampling Understand bias	
	The averages Use various charts & diagrams in relation to averages Calculate the mean, mode, median and range from a list Median, mean and range from a table (discrete data) Modal class, median and estimate of the mean from grouped data	
8	Perimeter and area Convert between metric measures Read scales Time Perimeter of 2D shapes Area of 2 D shapes Area of compound shapes Surface area of prisms & simple compound forms	



GCSE Maths Revision Checklist - Foundation

Unit	Unit / Topic	Complete
8	3D forms and volume Identify and name 3D forms and their properties Volume of a cuboid Volume of a prism Volume of a composite forms	
	Real-life graphs Use coordinates in all four quadrants Midpoints of a line segment Conversion graphs Fixed cost and cost per unit graphs Distance / time and Velocity/ time graphs	
9	Straight-line graphs Draw, use and interpret (inc gradient) straight line graphs Identify parallel lines Find the equation of a line (including from a graph)	
	Transformations I: translations, rotations & reflections Transform and describe translations Transform and describe rotations Transform and describe reflections	
10	Transformations II: enlargements and combinations Transform and describe enlargements Transform shapes using a combination of transformations Describe transformations when using multiple transformations	
	Ratio Write ratios in their simplest form (including in context) Share a quantity in a given ratio (including 3-part ratios) Use a ratio to find one quantity when another is known Compare ratios Write ratio in the form 1:n or n:1 Write a ratio as a fraction and vice versa	
11	Proportion Use direct & inverse proportion (and recognise graphically) Best value Recipes Currency conversions	
	Right-angled triangles: Pythagoras and trigonometry Pythagoras' Theorem Trigonometry - sin, cos and tan Know exact trig values	
13	Probability I Probability scale Listing outcomes Two-way tables & Frequency Trees Use 1-p	
	Probability II Relative frequency Sample space diagrams Venn diagrams & set notation Probability tree diagrams	

Unit	Unit / Topic	Complete
14	Multiplicative reasoning Use compound measures: Pressure, Density & Speed Percentage profit / loss Reverse percentages Simple interest Compound interest & growth Depreciation & decay Rates of pay	
	Plans and elevations 3D shape names and properties Sketch 3D forms Draw plans and elevations of shapes Draw a 3D form given its plan and elevations	
15	Constructions, loci and bearings Standard constructions Find regions satisfying a combination of loci Use maps and scale drawings Bearings	
	Quadratic equations: expanding and factorising Expand double brackets Factorise quadratic expressions Solve quadratic equations	
16	Quadratic equations: graphs Plot quadratic graphs Find solutions, intercepts & turning points of a quadratic graph	
	Circles, cylinders, cones and spheres Name parts of a circle Recall & use formula for area and circumference of a circle Arcs and sectors Surface area & volume of a cylinder Spheres, pyramids, cones and composite solids	
18	Fractions and reciprocals Four operations with mixed number fractions Reciprocal of an integer, decimal or fractions	
	Indices and standard form Index laws to simplify & calculate the value of an expression Convert between ordinary numbers and standard form Work with the four operations in standard form Use a calculator with indices and standard form	
19	Similarity and congruence in 2D Use congruence criteria for triangles (SSS, SAS, ASA and RHS); Identify similar shapes Identify scale factors and find missing lengths in similar shapes	
	Vectors Understand and use column notation including drawing them Identify parallel column vectors Calculate using column vectors	
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 Answer simple "show that" questions Use inverse proportion involving graphs Recognise and sketch cubic functions Recognise and sketch reciprocal functions Solve simultaneous equations algebraically and graphically	



GCSE Maths Revision Checklist - Higher

Unit	Unit / Topic	Complete
1	Calculations, checking and rounding Four operations with decimals and whole numbers Use one calculation to find the answer to another Product rule Rounding & estimation	
	Indices, roots, reciprocals and hierarchy of operations Use index notation including fractional and negative powers Order of operations	
	Factors, multiples and primes Identify factors, multiples and prime numbers Find prime factorisation of a number (& write in index form) Find common factors & highest common factors Find LCM of two (or three) numbers	
	Standard form and surds Index laws to simplify & calculate the value of an expression Convert between ordinary numbers and standard form Work with the four operations in standard form Use a calculator with indices and standard form Simplify surd expressions	
2	Algebra: the basics Write an expression Collect like terms Simplify expressions Use index laws Expand single & double brackets Factorise single brackets Factorise quadratic expressions Factorise quadratic expressions using difference of two squares	
	Setting up, rearranging and solving equations Set up expressions and equations Substitute into expressions, equations and formulae Solve linear equations and inequalities Change the subject of a formula Iteration	
	Sequences Continue sequences inc from pictures Find the nth term Use nth term rule to generate or continue a sequence Find the nth term of a quadratic sequence 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	
3	Averages and range Use various charts & diagrams in relation to averages Two way tables Calculate the mean, mode, median and range from a list Median, mean and range from a table (discrete data) Modal class, median and estimate of the mean from grouped data Draw and interpret stem and leaf diagrams	
	Representing and interpreting data Know which chart or diagram to use for different data sets Draw and interpret bar charts (inc dual & composite) Draw and interpret line graphs (vertical & time-series) Draw and use pie charts Find mode & total frequency from a pie chart Compare two pie charts Produce and interpret histograms Compare distributions	
	Scatter graphs Draw and use scatter graphs & lines of best fit Identify outliers & correlation	

Unit	Unit / Topic	Complete
a	Fractions Equivalent fractions including simplifying & comparing Express one amount as a fraction of another Convert between mixed numbers and improper fractions Four operations using fractions Find a fraction of an amount Convert between recurring decimals to fractions and vice versa	
	Percentages Use fraction to decimal conversions Recognise terminating & recurring decimals Convert between fractions, decimals & percentages Order & compare fractions, decimals & percentages Write one amount as a percentage of another Calculate percentage of an amount Calculate percentage increase/decrease Use decimals to find quantities (multiplier methods) Increase / decrease an amount by a percentage Reverse percentages	
c	Ratio and proportion Write ratios in their simplest form (including in context) Share a quantity in a given ratio (including 3-part ratios) Use a ratio to find one quantity when another is known Compare ratios Write ratio in the form 1:n or n:1 Write a ratio as a fraction and vice versa Write a ratio as a linear function Use direct & inverse proportion (and recognise graphically) Recipes Currency conversions	
	Polygons, angles and parallel lines Measure and draw lines, angles, 2D & 3D shapes Identify and name 2D shapes and their properties Identify parallel and perpendicular lines Use angle facts - around a point, straight line, vertically opposite etc Use angle properties of parallel lines Use sum of interior angles for irregular & regular polygons Use sum of exterior angles for regular polygons Use the side/angle properties of compound shapes made up of triangles, lines and quadrilaterals	
b	Pythagoras' Theorem and trigonometry Pythagoras' Theorem Trigonometry - sin, cos and tan Know exact trig values	
	Graphs: the basics and real-life graphs Use coordinates in all four quadrants Conversion graphs Fixed cost and cost per unit graphs Distance / time and Velocity / time graphs Midpoints of a line segment Calculate the length of a line segment	
6	Linear graphs and coordinate geometry Draw, use and interpret (inc gradient) straight line graphs Find the equation of a line through two points Find the equation of a line (including from a graph) Identify parallel and perpendicular lines Generate equations of parallel and perpendicular lines	
	Quadratic, cubic and other graphs Plot quadratic graphs Find solutions, intercepts & turning points of a quadratic graph Recognise and sketch cubic functions Recognise and sketch reciprocal functions Draw circles, centre the origin, equation $x^2 + y^2 = r^2$	



GCSE Maths Revision Checklist - Higher

Unit	Unit / Topic	Complete
7	Perimeter, area and circles Convert between metric measures Read scales Perimeter of 2D shapes Area of 2D shapes and compound shapes Name parts of a circle Recall & use formula for area and circumference of a circle Arcs and sectors	
	3D forms and volume, cylinders, cones and spheres Identify and name 3D forms and their properties Volume of a cuboid Volume of a prism Volume of a composite forms Surface area of prisms & simple compound forms Surface area & volume of a cylinder Spheres, pyramids, cones, frustums and composite solids.	
	Accuracy and bounds Calculate the upper & lower bounds of numbers Calculate the upper & lower bounds of an expression Use error intervals (inc truncation)	
8	Transformations Transform and describe translations, rotations & reflections Transform and describe enlargements inc fractional and negative SF Transform shapes using a combination of transformations Describe transformations when using multiple transformations Describe the changes & invariance achieved by combinations of transformations	
	Constructions, loci and bearings Draw plans and elevations of shapes Draw a 3D form given its plan and elevations Use maps, scale drawings & bearings Standard constructions Find regions satisfying a combination of loci 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 Set up and solve quadratic equations Completing the square Quadratic Formula Solve simultaneous equations algebraically and graphically (linear/linear) Solve simultaneous equations algebraically and graphically (linear/quadratic) Solve simultaneous equations algebraically and graphically (linear/circle)	
	Inequalities On a number line Listing numbers that satisfy an inequality Solving inequalities and show the solution on a number line Represent and interpret inequalities graphically	
10	Probability Probability scale Listing outcomes Two-way tables Frequency trees Use 1-p Relative frequency Sample space diagrams Venn diagrams & set notation Probability tree diagrams	
11	Multiplicative reasoning Best value Use compound measures: Pressure, Density & Speed Percentage profit / loss Reverse percentages Simple interest Compound interest & growth Depreciation & decay Rates of pay	

Unit	Unit / Topic	Complete
12	Similarity and congruence in 2D and 3D Use congruence criteria for triangles (SSS, SAS, ASA and RHS) Use formal geometric proof involving similarity & congruence Identify similar shapes Identify scale factors and find missing lengths in similar shapes Use length, area and volume scale factors Area and surface area of frustums	
13	Graphs of trigonometric functions Recognise, sketch and interpret graphs of the trigonometric functions Exact trig values Transforming graphical functions	
	Further trigonometry Formula for area of a triangle Sine rule in 2D and 3D Cosine rule in 2D and 3D Pythagoras Theorem in 3D	
14	Collecting data Types of data Bias and eliminating bias	
	Cumulative frequency, box plots and histograms Construct & interpret cumulative frequency tables/graphs Median, quartiles & interquartile range from cumulative diagrams Construct & interpret box plots Median, quartiles & interquartile range from box plots Construct & histograms Estimate the mean and median from a histogram	
15	Quadratics, expanding more than two brackets, sketching graphs, graphs of circles, cubes and quadratics Sketch quadratics Identify roots, turning points and intercepts of quadratic graphs Completing the square Expand the product of more than two linear expressions Sketch cubics Solve simultaneous equations graphically Solve and represent quadratic inequalities	
16	Circle theorems Parts of a circle Prove, recall and apply circle theorems	
	Circle geometry Recognise and construct the graph of a circle Find the equation of a tangent to a circle	
17	Changing the subject of formulae (more complex), algebraic fractions, solving equations arising from algebraic fractions, rationalising surds, proof Rationalise the denominator involving surds Simplify, multiply and divide algebraic fractions Change the subject of a complex formula Algebraic Proof Functions & function notation Inverse functions Composite functions	
18	Vectors and geometric proof Understand represent and use vector notation, including column notation Find the length of a vector Calculate the resultant of a vector Geometric problems in 2D where vectors are divided in a given ratio. Geometrical proofs to prove points are collinear & vectors/lines are parallel	
19	Reciprocal and exponential graphs: Gradient and area under graphs Recognise, sketch and interpret reciprocal graphs Calculate and interpret the area under a curve Calculate and interpret gradient of a tangent to a curve	
	Direct and inverse proportion Recognise and interpret graphs of direct & inverse proportion Set up and use formulae for direct & inverse proportion	



Supporting your child's preparations for GCSE Maths

1

Speak about maths positively and get stuck in with them! Students will follow your example. Never say, "I'm not good at maths"

- "Stuck on your homework paper? Let's get on Sparx Maths or Corbett maths together and see if we can figure this out"
- "Nobody learns something the first time. Try this again tomorrow" - build their resilience and confidence
- "With hard work and if you don't give up, you will become an excellent mathematician" - reinforce our message that work ethic conquers all.

2

Support your child in getting the most from the weekly homework paper

- Check there are no blanks
- Have they used the Sparx or Corbett linked videos on any questions they struggled with?
- Are they using similar questions on previous papers to answer questions on the current paper?
- Have they shown full workings (look at the number of marks in a question)?
- Encourage them to attend the after-school homework paper workshops
- Have they made full corrections in green pen on the answers gone through in class?

3

Support your child with regular Sparx Maths sessions on their personalised targets

- Establish a regular time at home when your son/daughter will complete some Sparx Maths videos and quizzes on topics identified as areas for improvement on their trial's exams feedback sheet and their weekly homework papers.
- Sit with and encourage them if needed to build their confidence in their ability to learn independently

4

Make sure your child has a support network and is using it correctly

- Are they attending the after-school homework paper workshops?
- Can you or a family member sit with and support them when they work on their weekly homework paper?
- Could they set up or join a group of friends to work together on their papers?
- Contact us for recommendations if you'd like to consider a private tutor

5

Work with your child's maths teacher. We welcome collaboration and regular contact

- | | |
|--|--|
| ▪ f.walker@wyvern.hants.sch.uk | ▪ t.merriman@wyvern.hants.sch.uk |
| ▪ s.weatherhead@wyvern.hants.sch.uk | ▪ n.macleod@wyvern.hants.sch.uk |
| ▪ w.duckett@wyvern.hants.sch.uk | ▪ j.brewerton@wyvern.hants.sch.uk |
| ▪ c.street@wyvern.hants.sch.uk | ▪ l.ross@wyvern.hants.sch.uk |
| ▪ h.pannell@wyvern.hants.sch.uk | |

Combined Science session summary

Use this section if your child studies AQA Combined Science Trilogy (8464). It leads to two GCSE grades. The six written papers are each 75 minutes and 70 marks. Follow the teacher's Foundation or Higher tier guidance.

Recall then apply

Use small organiser sections, flashcards, quizzes or blank-page recall. Check answers and return after a gap. Mix Biology, Chemistry and Physics across the week, then apply the knowledge to exam questions and mark them honestly.

In the Science organiser, use the F or H icons for the correct Combined tier. Include scientific vocabulary, labelled diagrams, units, calculations, required-practical methods and extended explanations. The 21 required practicals are assessed through written questions.

Choose a realistic routine

The department suggests 20-30 minute science sessions three or four times a week as a starting routine before Christmas, adjusted around other subjects and needs. Keep the phone away, take a break and use feedback to choose gaps. This is subject advice, not a compulsory quota for every family.

The booklet includes planners, confidence tracking, practical-recall sheets, a six-mark answer planner, calculation practice and flashcards. Its six-step hour plan totals roughly an hour for one round; a shorter round is a valid start. Protect sleep, meals, movement and downtime.

Use the department website with your child

[Wyvern Science revision website](#) requires the student's Wyvern school Google account. Choose Combined Science for assessment topic lists, past papers and mark schemes. Parents can ask their child to sign in and show them. Keep using the public [Exams and Revision hub](#) for college-wide information.

AQA confirms an equation sheet for the 2027 Physics papers. Practise selecting equations, substituting values, rearranging and giving units. [AQA equation-sheet update](#).

The Combined Science presentation and full booklet follow. Contact your child's science teacher or tutor early if they need help.



Supporting your child through GCSE Science

Healthy revision for AQA Combined Science: Trilogy
Year 11 Parents' Evening



What we'll cover tonight

**1**

How the exams work

Six papers, two grades, and what the questions actually ask for

**2**

What healthy revision looks like

The methods that work, how much is enough, and why rest matters

**3**

How you can help at home

Simple things to say and do, and where to get support

The exams at a glance

6

exam papers

Two each in Biology,
Chemistry and Physics

75

minutes per paper

70 marks each, all sat
in May-June

2

GCSE grades

A double award, e.g. 6-
5 or 7-7

21

required practicals

Lab work that is
examined on the
papers

Two tiers

Foundation: grades 1-1 to 5-5

Higher: grades 4-4 to 9-9

Physics equation sheet

Provided in the 2027 physics papers. Students still
need to practise using it.

What the questions ask for



Maths in science

At least 20% of marks need maths: calculations, graphs, rearranging equations and units.



Practical skills

At least 15% of marks are about practical work: methods, results, errors and improvements.



Extended writing

6-mark questions reward a clear, logical sequence of points using correct scientific words.

Every paper mixes

- Multiple choice
- Short answers
- Calculations
- Longer written answers

Busy revision vs effective revision



Feels productive, low impact

- Re-reading notes and textbooks
- Highlighting large chunks of text
- Copying notes out neatly
- Long sessions with a phone nearby
- Cramming the night before



Takes effort, works

- Testing yourself from memory
- Short sessions spread over weeks
- Mixing topics in one session
- Exam questions checked against mark schemes
- Explaining a topic out loud

Five strategies that work



Retrieval practice

Flashcards, quizzes, or a blank page: write everything you remember, then check.



Spaced practice

Come back to each topic several times over weeks rather than once for hours.



Interleaving

Mix Biology, Chemistry and Physics topics so practice feels like the real exam.



Exam questions and mark schemes

Answer real questions, then mark them honestly and fix the gaps.



Teach it back

Explaining a process out loud quickly shows what is understood and what is not.

Your knowledge organisers



One book covers every topic, with a revision plan and RAG tracker inside.



Key knowledge, already chosen

Teachers have selected the facts, keywords and diagrams needed for every topic.



Learn it, don't copy it

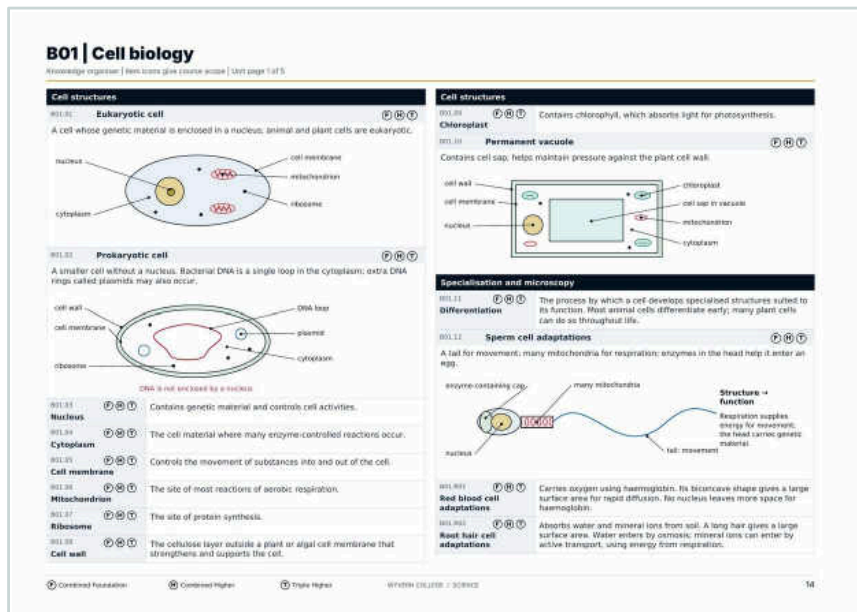
Re-writing or highlighting makes it feel familiar, not remembered.



Know which items to learn

Every item has course icons: F for Combined Foundation, H for Combined Higher. Learn the items for your tier.

Look. Cover. Write. Check.



LOOK Read and understand a few related rows.



COVER Hide the answers with plain paper.



WRITE Write or draw it from memory — no peeking.



CHECK Correct in another colour. Retry after a gap.

Parents: hold the organiser, read out a prompt, and let them answer from memory. Then check together.

Pacing revision through Year 11

1

Now to Christmas

Build the habit

20–30 minutes of science retrieval, three or four times a week

2

After mocks

Target the gaps

Use mock feedback to choose the weakest topics first

3

Spring term

Step it up

Short daily sessions, more full exam questions with mark schemes

4

Easter to exams

Rehearse

Timed papers, while protecting sleep, meals and breaks

What a good revision session looks like



Phone away

In another room, not
face down on the desk



25 minutes

One topic, tested from
memory



Check and fix

Use notes or a mark
scheme to correct gaps



5-minute break

Move, drink water, then
repeat



Two or three rounds, then stop. An hour of focused science is worth far more than an evening at a desk with half the attention on a phone.

Wellbeing is part of revision



8–10

hours of sleep a night is what teenagers need. Memories are consolidated while we sleep, so late-night cramming backfires.



Food and water

Regular meals, breakfast before exams, water while working



Movement

A walk, sport or exercise most days reduces stress



Time with others

Friends, family and hobbies are not a distraction to cut



Screens at night

Phones charged outside the bedroom helps sleep

How you can help (no science needed)



Try this

- Quiz them with flashcards; the answers are on the back
- Ask them to teach you a topic
- Help plan a realistic weekly timetable
- Provide a quiet, phone-free space
- Praise effort and good habits, not just marks



Try to avoid

- “Have you done any revision?” every evening
- Comparing them with siblings or friends
- Focusing only on target grades
- Late nights to “get it done”
- Taking away all downtime as a punishment

Better questions than “Have you revised?”

“

What did you get right today without looking at your notes?

“

Can you explain how that works to me?

“

Which topic feels least secure at the moment?

“

What did the mark scheme say you missed?

“

What’s your plan for science this week?

“

When are you having a proper break?

Spotting stress and getting support



Signs to look out for

- Changes in sleep or appetite
- Withdrawing from friends or family
- Irritability or tearfulness
- Avoiding revision or school altogether
- Headaches or stomach aches before tests



Who can help

School: form tutor, Head of Year or science teacher

Childline: 0800 1111, free and confidential

Shout: text SHOUT to 85258, 24/7

GP or NHS 111: if worries persist or feel urgent

Useful resources



AQA past papers

Free papers and mark schemes at [aqa.org.uk](https://www.aqa.org.uk)



Physics equation sheet

Download from AQA and practise with it



BBC Bitesize

Short explanations and quizzes for AQA Trilogy



Seneca Learning

Free adaptive quizzes by topic



Free Science Lessons

Clear YouTube videos for every topic



Revision booklet

Your Wyvern booklet: planners, checklists and flashcards

Wyvern Science revision website



[sites.google.com/wyvern.hants.sch.uk/
wyvern-science-revision](https://sites.google.com/wyvern.hants.sch.uk/wyvern-science-revision)



Sign in with a school account

Students use their Wyvern Google login. Parents: ask your child to show you.



Choose the course

Go to the Combined Science section.



What to revise and past papers

Topic lists for upcoming assessments, plus papers and mark schemes.



Check it weekly

New resources and exam information are added through the year.



Three things to take home

Thank you. Questions?



Little and often



Test, don't re-read



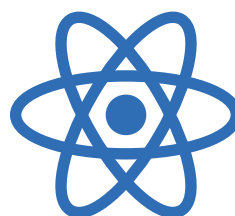
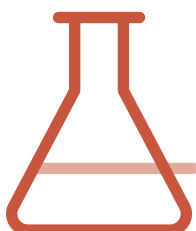
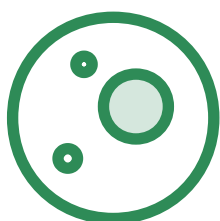
Protect sleep and balance



SCIENCE DEPARTMENT

Year 11 · AQA GCSE Combined Science: Trilogy (8464)

My Science Revision Booklet

NAME
_____SCIENCE CLASS
_____TEACHER
_____TIER (FOUNDATION / HIGHER)
_____TARGET GRADE
_____*"Little and often beats a lot, once."*

My Science Exams

Six papers, each 1 hour 15 minutes and worth 70 marks. Together they give you two GCSE grades (for example 6-6 or 7-6). Fill in the date and session once the exam timetable is published.

Paper	What it covers	Date	AM / PM
Biology Paper 1	Cell biology · Organisation · Infection and response · Bioenergetics		
Biology Paper 2	Homeostasis and response · Inheritance, variation and evolution · Ecology		
Chemistry Paper 1	Atomic structure and the periodic table · Bonding, structure and properties of matter · Quantitative chemistry · Chemical changes · Energy changes		
Chemistry Paper 2	Rates and extent of chemical change · Organic chemistry · Chemical analysis · Chemistry of the atmosphere · Using resources		
Physics Paper 1	Energy · Electricity · Particle model of matter · Atomic structure		
Physics Paper 2	Forces · Waves · Magnetism and electromagnetism		

Every paper includes

Multiple choice, short answers, calculations, questions on the required practicals and at least one 6-mark extended answer.

Physics equation sheet

You are given an equation sheet in both physics papers. You still need to practise **choosing** the right equation and **rearranging** it.

Ideas connect

Questions often link ideas from different topics, so keep revisiting everything — not just the most recent work.

Wyvern Science Revision Website

Our department's revision website keeps everything for GCSE Science in one place — what to revise, past papers and revision resources chosen by your teachers.



sites.google.com/wyvern.hants.sch.uk/wyvern-science-revision

Scan the QR code with your phone camera, or type the address into a browser. Bookmark it once you're in.

Sign in with your Wyvern school Google account. A Google sign-in page is normal. A personal Gmail account won't work.

How to use it

- 1 Choose your course** — go to the **Combined Science** section.
- 2 Check what to revise** — find the list for your next assessment or the trial exams. Copy the topics into the tracker in this booklet.
- 3 Get past papers** — download a paper **and its mark scheme**. Use them with the "hour of revision" plan.
- 4 Make it a habit** — check the site once a week for new resources and exam information.

Parents and carers

The site needs a student login. Ask your child to sign in and show you around — it's a good way to start a conversation about their revision.

Five Top Tips for Science Revision

Revision that **feels** hard is usually the revision that works. If you can read it and nod along, you are recognising it — not remembering it.

1 Test yourself, don't re-read

Close the book and write down everything you can remember about a topic (blurring), or use flashcards and quizzes. Then check and fill the gaps in a different colour.

2 Little and often, spread out

Three 25-minute science sessions a week from now is worth far more than cramming in May. Come back to each topic several times, a few days or weeks apart.

3 Mix up the sciences

Do a bit of Biology, Chemistry and Physics in the same week. Switching topics feels harder but trains you for the real exam, where questions jump around.

4 Practise real exam questions

Use AQA past papers and mark schemes. Mark your answers honestly — the mark scheme shows the exact words examiners want.

5 Phone in another room

Even a phone switched off on your desk pulls your attention. Put it somewhere else for each session and check it in your break.

My science goal this term

One habit I will stop

Breaks, Food and Sleep

Your brain is an organ — it needs fuel, water, oxygen and sleep to work well. Looking after it is part of revising, not time off from it.

Make breaks work for you

Leave your desk

Go to a different room or step outside, so your brain gets a proper change of scene.

Move

Walk, stretch or do a few minutes of exercise. More blood flow to the brain helps you refocus.

Drink water

Even mild dehydration makes it harder to concentrate.

Set a timer

Five to ten minutes, then back to it. "Just one more video" can swallow an evening.

Fuel and sleep

✓ Helps

- Water through the day
- A proper breakfast
- Slow-release foods: oats, wholegrain bread, eggs
- Fruit, veg, nuts and yoghurt as snacks

✗ Doesn't help

- Energy drinks
- Lots of caffeine, especially after 3pm
- Sugary snacks as your main fuel
- Skipping meals to "save time"

8–10

hours of sleep a night. Your brain stores what you learned that day while you sleep — staying up late to cram means less of it sticks. Charge your phone outside your bedroom.

Science Revision Methods That Work

Pick a method that makes you **think and recall**. Highlighting, copying notes neatly and re-reading feel productive but help much less.

Blurting

Write everything you know about a topic from memory in 10 minutes. Check against your notes and add what you missed in a different colour. Use the blurring pages in this booklet.

Flashcards

Question on the front, answer on the back. Sort them into 'know it' and 'not yet' piles and test the 'not yet' pile more often. Great for keywords, definitions and equations.

Retrieval quizzes

Use your Retrieval 5 sheets, Seneca or BBC Bitesize quizzes. Always quiz before you look anything up.

Past paper questions

Do questions on one topic, then mark them with the AQA mark scheme. Write the correct answer next to anything you missed.

Draw it

Turn processes into diagrams and flow charts: the heart, the carbon cycle, electrolysis, a circuit. Then explain your diagram out loud.

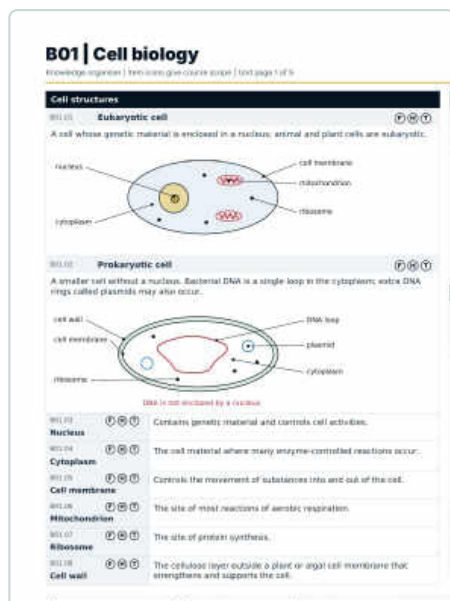
Teach it

Explain a topic to someone at home in two minutes without notes. If you get stuck, that's the bit to revise next.

Use sparingly: highlighting whole paragraphs · copying out the textbook · reading notes over and over · making notes look pretty instead of testing yourself

Knowledge Organisers: Look, Cover, Write, Check

Your knowledge organiser book has the key knowledge for every topic. Don't copy it out or highlight it — **learn** it.



- 1 LOOK** — read and understand a few related rows. Ask about anything that doesn't make sense.
- 2 COVER** — hide the answers with plain paper. Keep the prompt visible.
- 3 WRITE** — write or draw the answer from memory. No peeking.
- 4 CHECK** — compare and correct in another colour. Try again after a gap.

Spread it out

Review each small set **4–5 times on different days**. Use the plan and RAG tracker in your organiser — start with red topics.

Which items?

Each item has course icons: **F** Combined Foundation, **H** Combined Higher. Learn the items for your tier.

Parents: hold the organiser, read out a prompt, and let them answer from memory. Then check together.

Cracking Science Exam Questions

Command words — what the question wants

State / Give	A short fact. No explanation needed.
Describe	Say what happens or what you see. For a graph, give the trend and use numbers.
Explain	Say why or how it happens. Use 'because' and 'so' to link ideas.
Compare	Give similarities and differences, for both things.
Calculate	Show your working. Write the answer with a unit.
Evaluate	Give points for and against, then reach a judgement.
Suggest	Apply what you know to a new situation. There may be more than one right answer.
Determine	Use the data or graph provided to get your answer.

Calculations: FIFA

- F Formula** — choose the right equation (physics: from the equation sheet)
- I Insert values** — substitute the numbers, converting units first
- F Fine tune** — rearrange and work it out
- A Answer** — with the correct unit and sensible significant figures

Show every step — working earns marks even if the final answer is wrong.

Practical methods: CIDER

- C Control** variables — what you keep the same, and how
- I Independent** variable — what you change
- D Dependent** variable — what you measure, and with what
- E Equipment** — name it and say what it's for
- R Repeats** — repeat and calculate a mean
- S Safety** — a risk and how to reduce it

6-mark answers

Underline the command word → plan 4–6 points before writing → put them in a logical order (step by step, or cause → effect) → use correct scientific words. For a "plan a method" question, work through **CIDER**.

Required Practicals Checklist

At least 15% of the marks are about practical work. For each one, can you recall the method, name the variables, and spot sources of error? Tick when you can do it **from memory**.

#	Practical	Method	Variables	Risks	Errors & improvements
1	Microscopy				
2	Osmosis				
3	Food tests				
4	Enzymes (effect of pH)				
5	Photosynthesis (light intensity)				
6	Reaction time				
7	Field investigations (quadrats)				
8	Making salts				
9	Electrolysis				
10	Temperature changes				
11	Rates of reaction				
12	Chromatography				
13	Water purification				
14	Specific heat capacity				
15	Resistance				
16	I-V characteristics				
17	Density				
18	Force and extension				
19	Acceleration				
20	Waves				
21	Infrared radiation				

■ Biology
 ■ Chemistry
 ■ Physics

My Topic Confidence Tracker

Rate yourself **R** (not confident), **A** (getting there) or **G** (confident) at three points in the year. Start your revision with the reds.

#	Topic	After mocks	February	Easter
1	Cell biology			
2	Organisation			
3	Infection and response			
4	Bioenergetics			
5	Homeostasis and response			
6	Inheritance, variation and evolution			
7	Ecology			
8	Atomic structure and the periodic table			
9	Bonding, structure and properties			
10	Quantitative chemistry			
11	Chemical changes			
12	Energy changes			
13	Rates and extent of chemical change			
14	Organic chemistry			
15	Chemical analysis			
16	Chemistry of the atmosphere			
17	Using resources			
18	Energy			
19	Electricity			
20	Particle model of matter			
21	Atomic structure			
22	Forces			
23	Waves			
24	Magnetism and electromagnetism			

My Weekly Revision Plan

Plan around school, clubs, family and rest — not instead of them. Aim for **three or four 25-minute science sessions a week** now, building up after the mocks.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Before school							
After school							
Early evening							
Evening							
Late evening							

Colour code your sessions

- Biology
- Chemistry
- Physics
- Other subjects

Protect these

A full night's sleep · meals with family · exercise or sport · at least one evening off a week

An Hour of Science Revision

Two rounds of this pattern with a break in between is a strong evening's work. One round is a great start.

1**Pick a topic 5 min**

Choose a red or amber topic from your tracker.

2**Blurt it 10 min**

Write everything you remember on a blurring page — no notes.

3**Check and fill gaps 10 min**

Use your book or revision guide. Add missing points in a different colour.

4**Exam questions 20 min**

Answer past paper questions on the same topic.

5**Mark it 10 min**

Use the AQA mark scheme. Correct your answers in green.

6**Make flashcards 5 min**

Turn anything you got wrong into flashcards for next time.

Then take a 10-minute break away from your desk ☕

Blurting Sheet

Set a 10-minute timer. Write everything you know about the topic without looking. Then check your notes and add what you missed.

Topic:

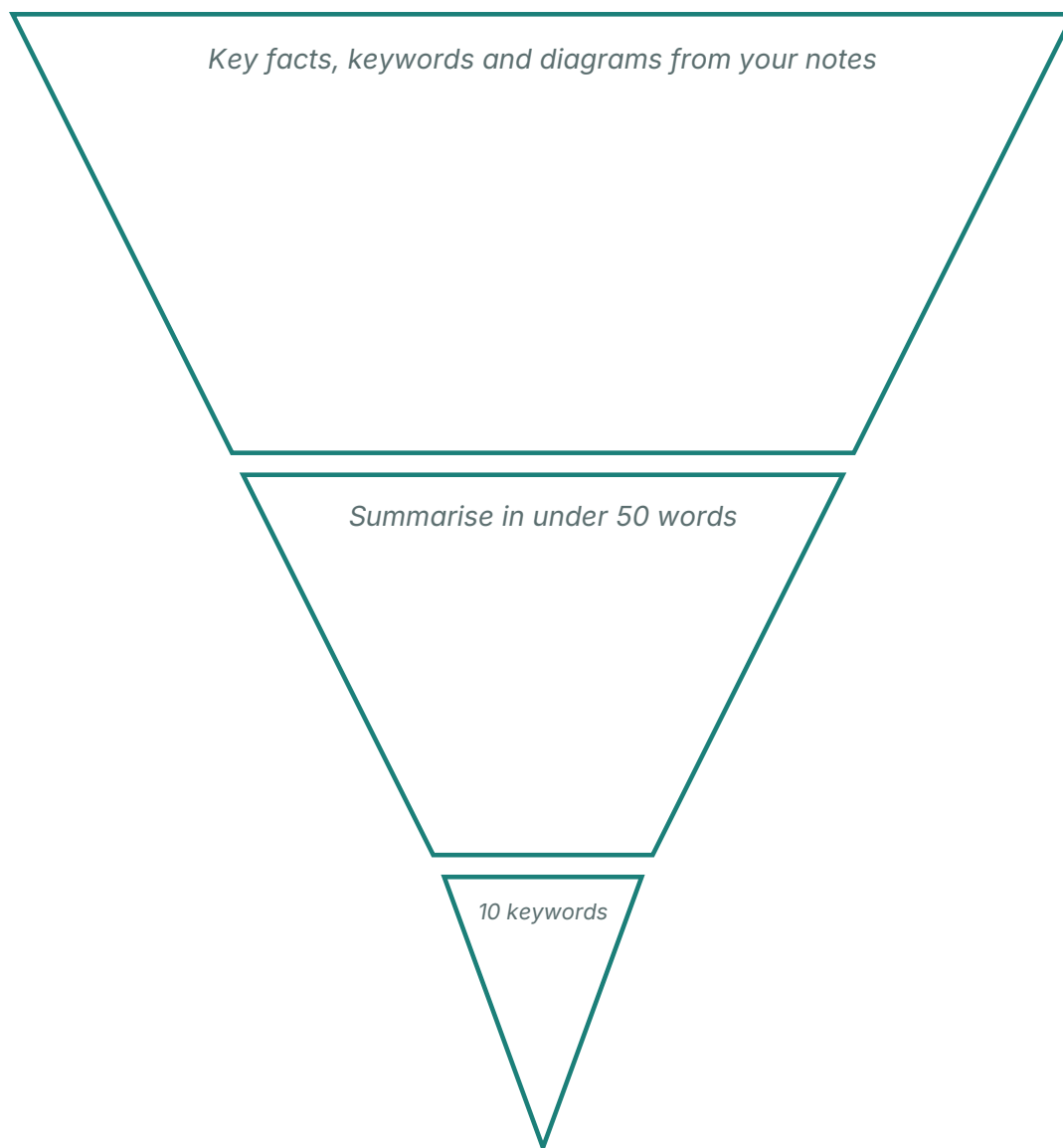
From memory (pen colour 1)

Added after checking (pen colour 2)

Next time I need to remember...

Revision Triangle

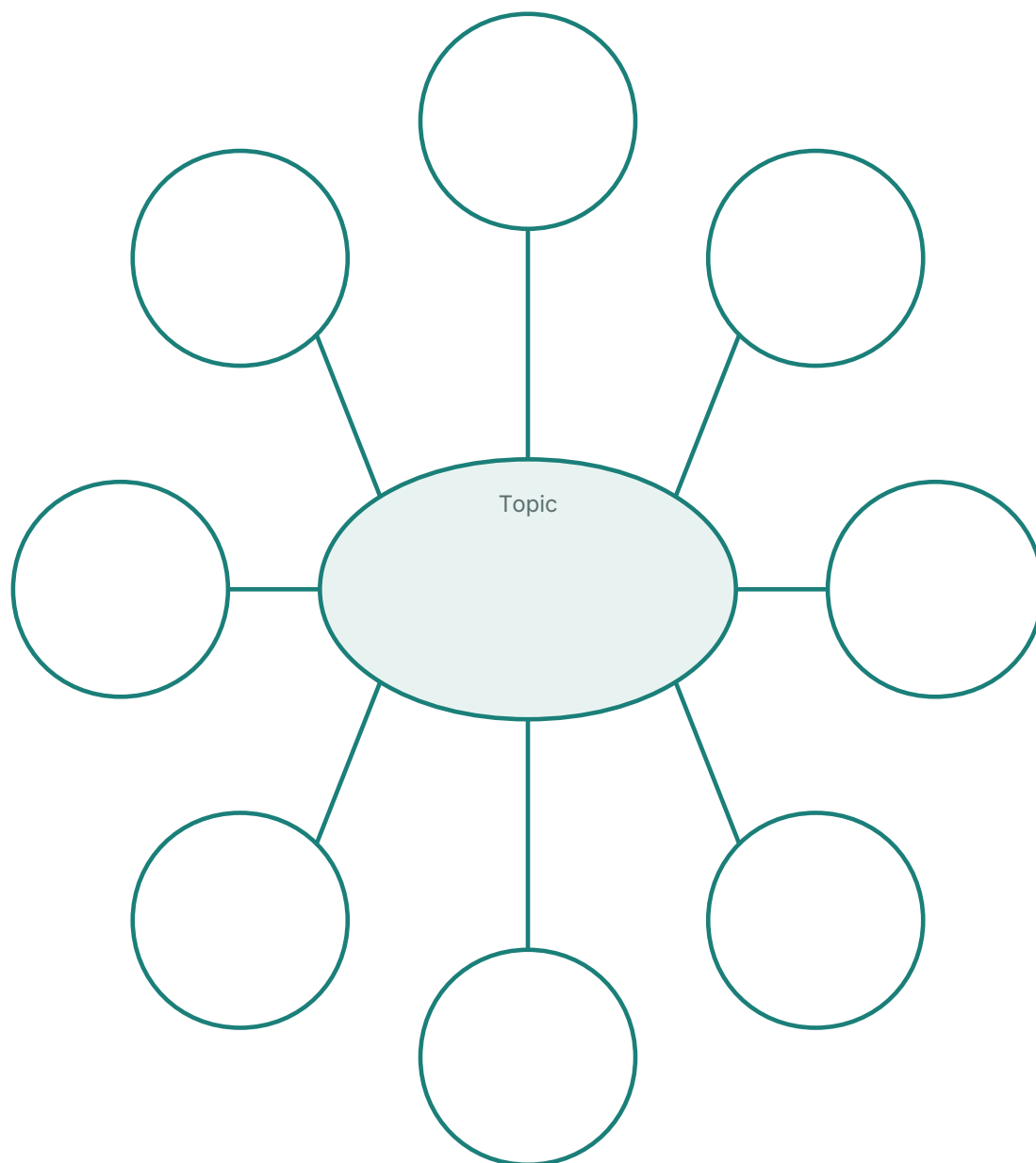
Topic:



Challenge: cover the top two sections and rebuild the whole topic from your 10 keywords.

Mind Map

Put the topic in the middle. Add key ideas, keywords, equations and quick diagrams.
Draw links between bubbles that connect.



Required Practical Recall Sheet

Fill this in **from memory** using **CIDER**, then check against your practical sheet.

Practical:

Aim — what are you investigating?

C Control variables (what I keep the same)

I Independent variable (what I change)

D Dependent variable (what I measure)

E Equipment

Method (numbered steps)

R Repeats — how many, and why

S Safety — risks and how to reduce them

Sources of error and improvements

Results table headings (with units) and expected pattern

6-Mark Answer Planner

Use this to plan an extended response question before you write it out in full.

Question

Command word: Describe ☐ Explain ☐ Compare ☐ Evaluate ☐ Plan a method ☐

Point 1

Point 2

Point 3

Point 4

Point 5

Point 6

Key scientific words I must use

After marking: what did the mark scheme have that I missed?

Physics Calculations Practice

Use **FIFA** and the AQA physics equation sheet. Most marks are lost by skipping the working, the rearrangement or the unit.

Question-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)**Question**-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)**Question**-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)**Question**-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)

Flashcards

Cut out. Question on the front, answer on the back. Tick the science. Keep testing the ones you get wrong.

Q		☐ ☐ ☐
Q		☐ ☐ ☐
Q		☐ ☐ ☐
Q		☐ ☐ ☐
Q		☐ ☐ ☐
Q		☐ ☐ ☐

Flashcards

Cut out. Question on the front, answer on the back. Tick the science. Keep testing the ones you get wrong.

Q			
Q			
Q			
Q			
Q			
Q			

For Parents and Carers

You don't need to know any science to help. Small, calm and regular support makes a real difference.

✓ Helpful

- Test them with their flashcards — the answers are on the back
- Ask them to teach you a topic for two minutes
- Help them fill in the weekly plan in this booklet
- Provide a quiet space and keep phones out of the room
- Praise effort and good habits, not just grades
- Protect sleep, meals and time off

✗ Less helpful

- "Have you done any revision?" every evening
- Comparing them with siblings or friends
- Focusing only on target grades
- Late nights to "get it done"
- Removing all downtime

Better questions to ask

What did you get right today without looking?

Can you explain that to me?

Which topic feels least secure?

What did the mark scheme say you missed?

Where to get support

Your child's science teacher or form tutor is the first point of contact. Free resources: AQA past papers and mark schemes (aqa.org.uk), BBC Bitesize, Seneca Learning, Free Science Lessons. If you are worried about stress or wellbeing, please contact the Head of Year. Childline: 0800 1111 · Shout: text SHOUT to 85258.

Exam Day

Pack the night before

- ☐ Black pens (at least two)
- ☐ Pencil and rubber
- ☐ Ruler (30 cm)
- ☐ Protractor
- ☐ Scientific calculator with fresh batteries
- ☐ Clear pencil case and water bottle

In the exam

- ☐ Read every question twice and underline the command word
- ☐ Check how many marks — about one mark per minute
- ☐ Show working on every calculation
- ☐ Use the physics equation sheet
- ☐ Never leave a multiple choice blank
- ☐ Use spare time to check units and graph labels

You've prepared for this.

Breathe. Read carefully.

Show what you know.

One question at a time.

Good luck from the Science Department

My Exam Timetable

Stick your exam timetable here, and highlight your six science papers.





THINK · GROW · CARE

Science Department

Separate Science session summary

Use this section for AQA GCSE Biology (8461), Chemistry (8462) and Physics (8463), often called Triple Science. It leads to three separate GCSE grades. There are six final written papers, each 105 minutes and 100 marks. Follow the teacher's entry and tier instructions.

Priorities for the autumn trials

The department's session identifies Biology Paper 1, Chemistry Paper 2 and Physics Paper 2 for these trials. Use the teacher's current topic checklist and your child's personal timetable. The Biology topics include cells, organisation, infection and bioenergetics; Chemistry covers rates through using resources; Physics includes forces, waves, electromagnetism and space.

Learn facts methods and diagrams

Use the organiser's T icons for the Triple Higher pathway described in the session, following teacher advice. Practise definitions, draw and label diagrams from memory, explain processes aloud and recall required practical methods, variables, risks and improvements.

Create resources that you will return to: question-and-answer cards, a mind map rebuilt from memory or a short quiz. A neat set of notes is a starting resource. Check what can actually be remembered and used, then answer exam questions and correct them.

Choose a realistic routine

Use short sessions with planned returns and increase exam practice as the year progresses. The session's 20-30 minute science examples are a starting guide, not an extra compulsory quota on top of every other subject. Protect sleep, meals and breaks.

Find the correct course resources

On the [Wyvern Science revision website](#), sign in with the student's school Google account and choose Triple Science, then the subject and topic. Use AQA past papers and mark schemes, BBC Bitesize, Educake, Cognito and Free Science Lessons as directed by the teacher.

The 2027 Physics equation sheet will be provided. Practise choosing and rearranging equations and checking units. The updated Separate Science presentation and full booklet follow, including practical-recall and planning sheets.



Supporting your child through GCSE Science

Revision for AQA GCSE Biology, Chemistry and Physics
Year 11 Parents' Information Evening



What we'll cover tonight



1

How the exams work

Six papers, three grades, and what the questions actually ask for



2

What healthy revision looks like

The methods that work, how much is enough, and why rest matters



3

How you can help at home

Simple things to say and do, and where to get support

The exams at a glance - GCSE (FINAL-MAY-JUNE)

6

exam papers

Two each in Biology,
Chemistry and Physics

105

minutes per paper

100 marks each, all sat
in May-June

3

GCSE grades

A separate 9-1 grade
for each science

28

required practicals

Lab work that is
examined on the
papers

Higher: grades 4 to 9, decided per subject

Physics equation sheet

Provided in the 2027 physics papers. Students still
need to practise using it.

Separate Science autumn trial topics

The department identified Biology Paper 1, Chemistry Paper 2 and Physics Paper 2 for the autumn trials. Follow the current teacher topic list and personal examination timetable.

Biology Paper 1

Cell biology
Organisation
Infection and response
Bioenergetics

Chemistry Paper 2

The rate and extent of chemical change
Organic chemistry
Chemical analysis
Chemistry of the atmosphere
Using resources

Physics Paper 2

Forces
Waves
Magnetism and electromagnetism
Space physics

Use the Triple Science section of the [Wyvern Science revision website](#) for the course-specific topic lists, questions and mark schemes. The student's school Google login is required.

These are department-supplied trial priorities. The full GCSE courses include additional Paper 1 and Paper 2 material.

What the questions ask for



Maths in science

Maths is at least 10% of Biology, 20% of Chemistry and 30% of Physics marks.



Practical skills

At least 15% of marks are about practical work: methods, results, errors and improvements.



Extended writing

6-mark questions reward a clear, logical sequence of points using correct scientific words.

Every paper mixes

- Multiple choice
- Short answers
- Calculations
- Longer written answers

The focus for this evening-

- 1. How to revise/ use your revision guide/ knowledge organisers revision techniques**
- 2. Where to find exam questions**
- 3. Where to start for your trial papers**
- 4. Exam tips/ universal knowledge**

Busy revision vs effective revision



Feels productive, low impact

- Re-reading notes and textbooks
- Highlighting large chunks of text
- Copying notes out neatly
- Long sessions with a phone nearby
- Cramming the night before



Takes effort, works

- Testing yourself from memory
- Short sessions spread over weeks
- Mixing topics in one session
- Exam questions checked against mark schemes
- Explaining a topic out loud

Five strategies that work



Retrieval practice

Flashcards, quizzes, or a blank page: write everything you remember, then check.



Spaced practice

Come back to each topic several times over weeks rather than once for hours.



Interleaving

Mix Biology, Chemistry and Physics topics so practice feels like the real exam.



Exam questions and mark schemes

Answer real questions, then mark them honestly and fix the gaps.



Teach it back

Explaining a process out loud quickly shows what is understood and what is not.

Create a revision timetable

- Creating a revision timetable is a great way to organise the study time, plus it also helps boost the motivation to revise for the exams.

WEEKLY REVISION PLANNER

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	TIME	SATURDAY	SUNDAY
8:30AM-4PM	SCHOOL	SCHOOL	SCHOOL	SCHOOL	SCHOOL	9AM-10AM	BREAKFAST/ SHOWER	BREAKFAST/ SHOWER
4PM-5PM	HOMEWORK	TV/ GAMING/ SOCIAL MEDIA	HOMEWORK	TV/ GAMING/ SOCIAL MEDIA	HOMEWORK	10AM-11AM	REVISION - ENGLISH	REVISION - SCIENCE
5PM-6PM	DINNER	DINNER	DINNER	DINNER	DINNER	11AM-1PM	SEEING FRIENDS/ LUNCH	SPORT/ LUNCH
6PM-7PM	REVISION - GEOGRAPHY	HOMEWORK	REVISION - HISTORY	REVISION - FRENCH	REVISION - SCIENCE	1PM-3PM	REVISION - MATHS	REVISION - FLASH CARDS
7PM-8PM	REVISION - MATHS	REVISION - ENGLISH	FREE TIME	HOMEWORK	FREE TIME	3PM-5PM	OUT WITH FAMILY	SPORT/ TV/ GAMING
8PM-9PM	FREE TIME/ SHOWER	FREE TIME/ SHOWER	FREE TIME/ SHOWER	FREE TIME/ SHOWER	FREE TIME/ SHOWER	6PM-8PM	DINNER/ FREE TIME	DINNER/ FREE TIME

Revision methods that help you recall

Choose a method that makes you remember and use the actual content. You do not need to label yourself as a fixed visual, auditory or kinaesthetic learner.

Retrieve

Cover the answers, write or draw from memory, then check. Explain a process aloud or answer a short quiz without notes.

Return after a gap

Plan short visits on different days. Use errors to choose the next task. Mix topics and include earlier material.

Use the method the topic needs

Label a diagram for an apparatus question, practise calculations for equations and plan a logical explanation for a six-mark response. Check against the organiser or mark scheme.

Protect rest

Work at a time that fits a realistic routine. Include breaks and protect sleep. Ask the teacher if a topic needs an explanation.

Evidence note: [Education Endowment Foundation guidance on learning styles](#).

Learning a Science topic

Understand the information

Read the relevant guide or organiser pages, or watch a course-appropriate explanation. The session used 10-15 minutes as an example for this first step. Choose AQA and the correct course.

Create a resource you will use

Spend a few minutes making question-and-answer cards, or add key ideas to a topic mind map. Alternatively, use the prepared prompts and answers in the knowledge organiser. You can include definitions, equations and diagrams.

Keep coming back

Quiz yourself or ask someone to quiz you. Cover the answer and recall it before checking. Return on different days and give errors further attention.

Apply the topic

When ready, answer exam questions, mark them and correct gaps. The session suggested a longer block for a whole topic or paper; build this into a realistic plan with breaks. There is no compulsory extra block for every evening.

Example flashcard prompts

What is an isotope? Atoms of the same element with the same number of protons but different numbers of neutrons.

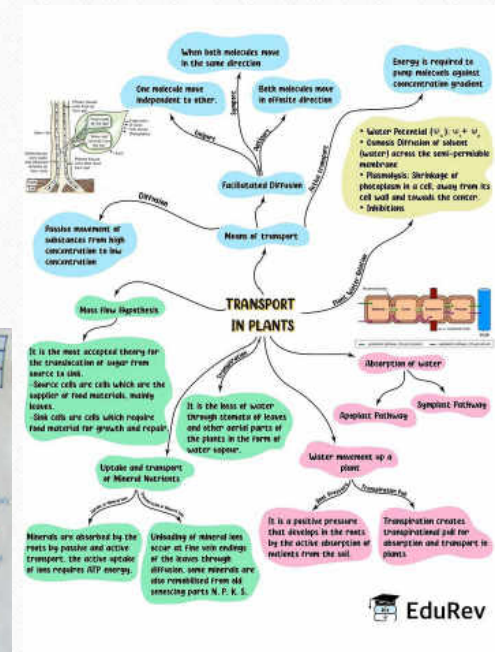
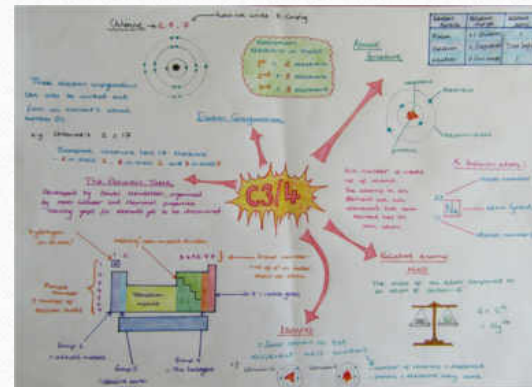
What does the atomic number tell us? The number of protons in an atom's nucleus.

This is the reading version of the session's topic-revision steps. BBC Bitesize and the department website can provide explanations and practice.

Use mind maps

Spaced practice

- If you find it difficult to remember tons of new study notes, Mind Maps may be the key to improving your memory. The theory behind mind mapping explains that making associations by connecting ideas helps you to memorise information easier and quicker. There are much more benefits to using Mind Maps for learning including being able to map out your curriculum, develop GCSE concepts in-depth and create sample exam answers.



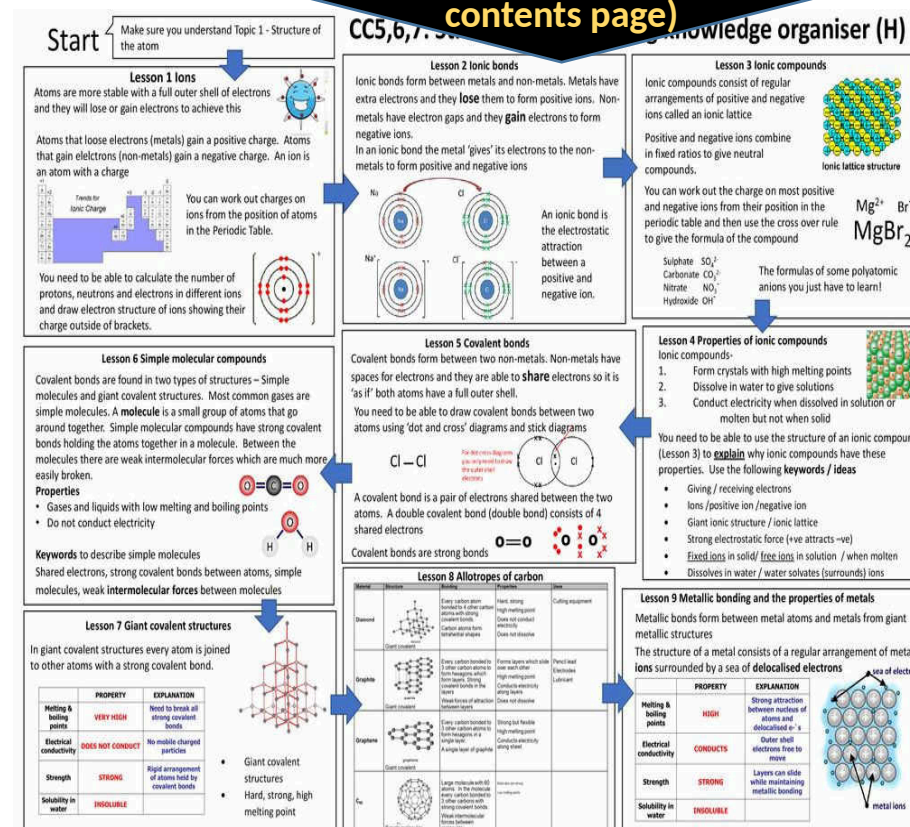
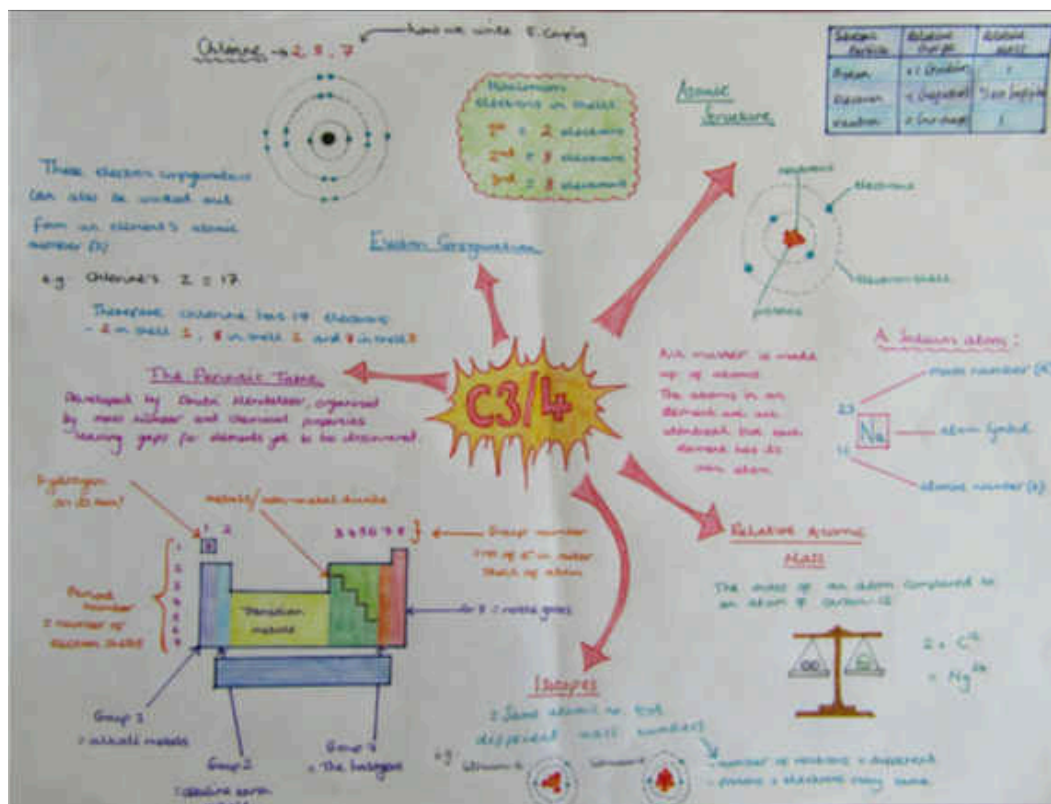
Spider diagram/knowledge organiser poster examples

These are added to over several revision sessions on one topic

Spaced practice

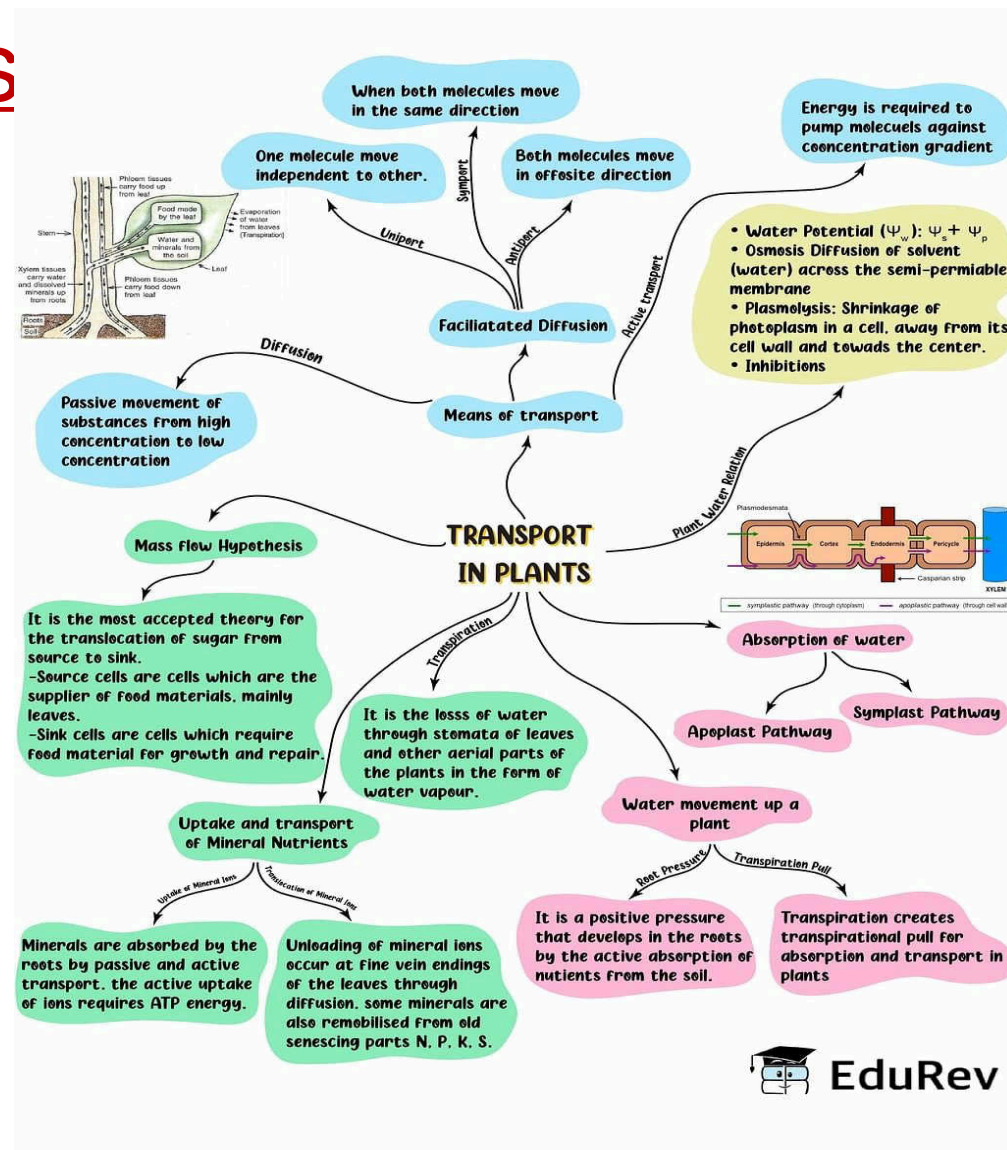
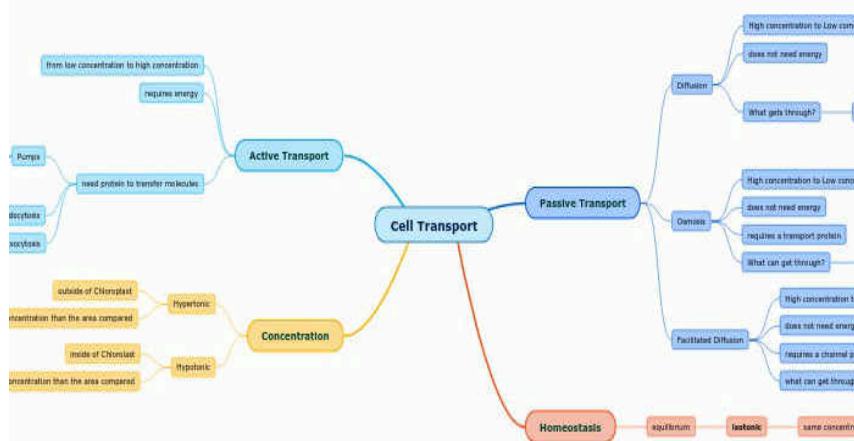
Split into sections like the revision guide (on the contents page)

Knowledge organiser (H)



Mind map examples

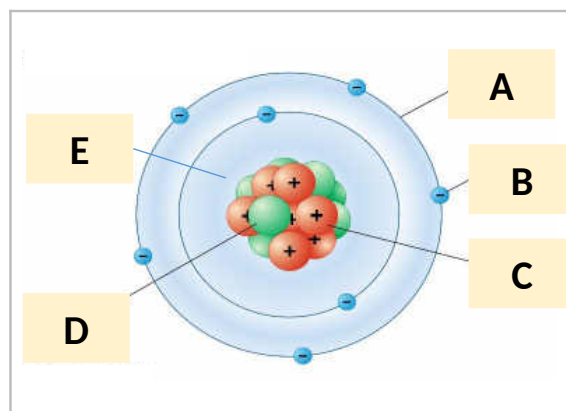
These are added to over several revision sessions on one topic



Revising key diagrams

Step	Approx. time (minutes)	
1	2-3	Read the labels around a diagram and any associated information
2	2-5	Create a revision card (see example below)
3	Keep coming back to it!	Get someone to quiz you/ quiz yourself

FRONT OF CARD



BACK OF CARD

A = Shell
B = Electron
C = Proton
D = Neutron
E = Nucleus

Topic 4 — Atomic Structure

23

Developing the Model of the Atom

The History of the Atom



Tiny sphere that can't be broken up.

Developed further after...
electron discovery



Plum pudding model — sphere of positive charge with negative electrons stuck in it.

alpha scattering experiment

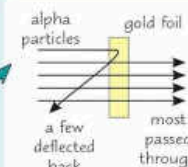


Nuclear model — positively charged nucleus surrounded by cloud of negative electrons.

Niels Bohr's theoretical calculations (that agreed with experimental data).



Bohr model — electrons orbit the nucleus at certain distances.



Experiment showed:

Most of the mass of an atom is concentrated at the centre (nucleus).

Nucleus is positively charged.

It was discovered the nucleus could be split into smaller particles.

First, the positive proton was found.

About 20 years after the idea of the nucleus was accepted, James Chadwick proved neutrons exist.

The Current Model of the Atom

nucleus: positively charged

protons: +1 charge

electrons: -1 charge

neutrons: 0 charge

Electrons can absorb EM radiation and move to higher energy levels.

radius $\approx 1 \times 10^{-10}$ m

Nuclear radius is about 10 000 times smaller than the atom's radius.

energy levels

Electrons can emit EM radiation and move to lower energy levels.

An atom's overall electric charge is zero: number of electrons = number of protons.

Topic 4 — Atomic Structure

Revising the Required Practicals

- At the end of their course, students will be required to demonstrate their understanding of scientific experimentation through written exam questions that relate to the required list of activities; 15 % of the marks will be dedicated to this.

[youtube.co](https://www.youtube.com/watch?v=PLAd0MczbcNHu)
[PLAd0M](https://www.youtube.com/watch?v=PLAd0MczbcNHu)
[czbcNHu](https://www.youtube.com/watch?v=PLAd0MczbcNHu)

Approx. time (minutes)	
3-5	Read the page in the revision guide (Highlight the dependent, independent and control variables in <u>your revision guide!</u>)
5-10	Watch a video on YouTube , for example, type... photosynthesis required practical AQA gcse (there are a few examples)
5-10	Set yourself a quiz on educake Write your own condensed method (optional)
10-15	Find/complete/mark and correct an exam question

Revising required practical's

Step	Approx. time (minutes)	
1	3-5	Read the page in the revision guide (Highlight the dependent, independent and control variables in your revision guide!)
2	5-10	Watch a video on YouTube , for example, type... photosynthesis required practical AQA gcse (there are a few examples)
3	5-10	Set yourself a quiz on educake Write your own condensed method (optional)
4	10-15	Find/complete/mark and correct an exam question

Section 6 — Plant Structures and Their Functions

47

Photosynthesis

You don't know **photosynthesis** 'till you know its **equation**. It's in a nice **green box** so you can't possibly miss it.

Plants are Able to Make Their Own Food by Photosynthesis

- During photosynthesis, **photosynthetic organisms**, such as **green plants** and **algae**, use **energy** from the Sun to make **glucose**.
- Some of the glucose is used to make **larger, complex molecules** that the plants or algae need to **grow**. These make up the organism's **biomass** — the mass of **living material**.
- The **energy stored** in the organisms' **biomass** then works its way through the **food chain** as animals **eat** them and each other. So photosynthetic organisms are the main producers of food for **nearly all life on Earth**.
- Photosynthesis happens inside **chloroplasts** — they contain **chlorophyll** which **absorbs light**. Energy is **transferred** to the **chloroplasts** by **light**. This is the **equation** for photosynthesis:

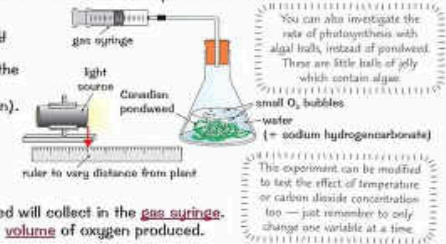


- Photosynthesis is an **endothermic** reaction — **energy is taken in** during the reaction.
- The rate of photosynthesis is affected by the **light intensity**, the **concentration of CO₂** and the **temperature**. Any of these three factors can become the **limiting factor**. This just means that it's stopping photosynthesis from happening any **faster**. There's more about limiting factors on page 48.

You Can Investigate the Effect of Light Intensity on the Rate of Photosynthesis

Canadian pondweed (an aquatic plant) can be used to measure the effect of **light intensity** on the **rate of photosynthesis**. The rate at which the pondweed produces **oxygen** corresponds to the rate at which it's photosynthesising — the **faster** the rate of oxygen production, the **faster** the rate of photosynthesis. Here's how the experiment works:

- The **apparatus** is **set up** according to the **diagram**. The gas syringe should be empty to start with. **Sodium hydrogencarbonate** may be added to the water to make sure the plant has enough **carbon dioxide** (sodium hydrogencarbonate releases CO₂ in solution).
- A source of **white light** is placed at a **specific distance** from the pondweed.
- The pondweed is left to photosynthesise for a **set amount of time**.
- As it photosynthesises, the oxygen released will collect in the **gas syringe**. This allows you to **accurately measure** the **volume** of oxygen produced.
- The whole experiment is repeated with the **light source** at **different distances** from the pondweed. The **rate of oxygen production** at each distance can then be calculated (volume produced ÷ time taken).
- For this experiment, any **variables** that could affect the results should be **controlled**, e.g. the **temperature** (which can be controlled by putting the conical flask in a **water bath**) and the **carbon dioxide concentration** (which can be controlled by adding a **set amount** of sodium hydrogencarbonate to a **set volume** of water).



PRACTICAL

You can also investigate the rate of photosynthesis with algal balls, instead of pondweed. These are little balls of jelly which contain algae.

This experiment can be modified to test the effect of temperature or carbon dioxide concentration too — just remember to only change one variable at a time.

I'm working on sunshine — woah oh...

You could also measure how much oxygen's produced by counting the bubbles — fun, but it's not as accurate.

- Q1 Explain how photosynthesis contributes to a plant's biomass. [2 marks]
- Q2 State three limiting factors of photosynthesis. [3 marks]

Section 6 — Plant Structures and Their Functions

Your knowledge organisers



One book covers every topic, with a revision plan and RAG tracker inside.



Key knowledge, already chosen

Teachers have selected the facts, keywords and diagrams needed for every topic.



Learn it, don't copy it

Re-writing or highlighting makes it feel familiar, not remembered.



Know which items to learn

Every item has course icons. Separate science students learn every item marked T (Triple Higher).

Science recall tasks

Choose a small topic and a task that makes you recall its facts and relationships. Check your answer afterwards.

Quick recall options

Ten facts: recall ten facts about a topic in five minutes.

Keyword blitz: choose five keywords, define them, add a useful diagram and use them in a sentence.

Cover Recall Check: hide the answer, recall it and check.

Three questions: explain what happens, how it happens and why.

Practicals and explanations

Required practical: recall the aim, method, variables and expected results.

Verbal questioning: ask a partner a question, check the answer and return to an incorrect response after a few more questions.

Build a connected picture

Blank-page recall: write everything you know, or use five keywords, three facts, one diagram, one equation and one method as prompts.

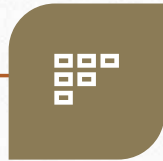
Words and diagrams: use a labelled diagram with keywords to explain an idea, then summarise it in one sentence.

Use the organiser or mark scheme to check what is missing. Keep useful revision resources safe so that you can return to them later in Year 11.

Practice, practice, practice..



ONE OF THE BIGGEST RECOMMENDATIONS THAT PAST GCSE STUDENTS SUGGEST IS TO PRACTICE QUESTIONS BY DOING AS MANY GCSE PAST PAPERS AS YOU CAN.



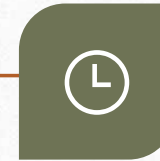
PRACTISING PAST PAPERS WILL HELP YOU GET FAMILIAR WITH THE LAYOUT



EXAM FORMAT



QUESTION STYLE



TIME PRESSURE



RETRIEVE INFORMATION QUICKER

Useful resources



AQA past papers

Free papers and mark schemes at [aqa.org.uk](https://www.aqa.org.uk)



Physics equation sheet

Download from AQA and practise with it



BBC Bitesize

Short explanations and quizzes for each AQA science



Seneca Learning

Free adaptive quizzes by topic



Free Science Lessons and Cognito

Clear YouTube videos for every topic



Revision booklet

Your Wyvern booklet: planners, checklists and flashcards

Wyvern Science revision website



[sites.google.com/wyvern.hants.sch.uk/
wyvern-science-revision](https://sites.google.com/wyvern.hants.sch.uk/wyvern-science-revision)



Sign in with a school account

Students use their Wyvern Google login. Parents: ask your child to show you.



Choose the course

Go to the Triple Science section.



What to revise and past papers

Topic lists for upcoming assessments, plus papers and mark schemes.

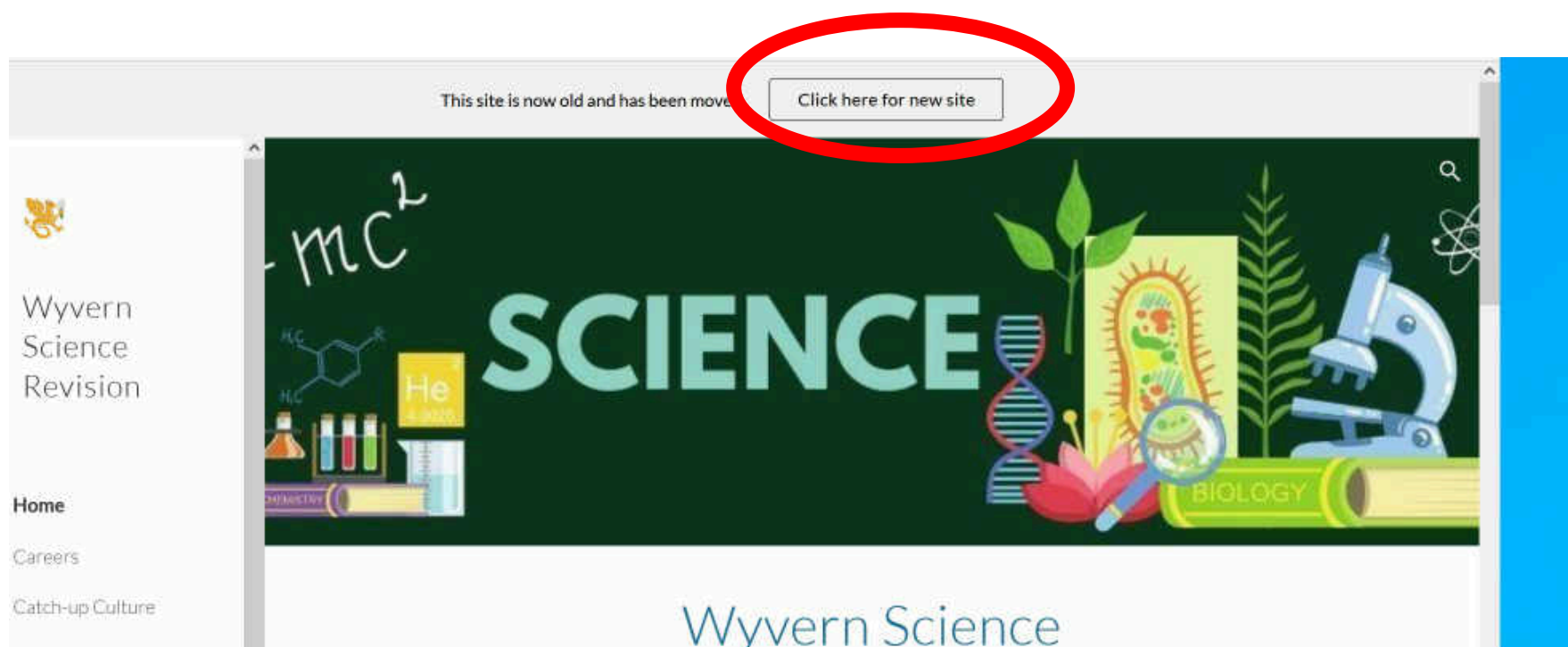


Check it weekly

New resources and exam information are added through the year.

Wyvern science revision on google

Need your school email
and password



Finding Science revision resources

Open the [Wyvern Science revision website](#) with your child. It requires the student's Wyvern school Google account; a personal Gmail login will not give the same access.

Follow the course route

- 1 Open the website contents or menu.
- 2 Select Revision.
- 3 Select GCSE revision.
- 4 Choose Triple Science.
- 5 Choose Biology, Chemistry or Physics.
- 6 Select the relevant topic and its revision questions or resources.

Use a question and its mark scheme

Choose a topic from the current assessment list or an area identified in feedback. Answer the questions, mark them and correct what is missing. Take an unresolved question to the science teacher.

Keep checking the current information

The department site holds topic guidance and past papers. The public Exams and Revision hub remains the first destination for college-wide timetables, organisers and exam information.

[Open the public Exams and Revision hub](#)

Choosing your Science trial revision

The department's trial guidance identifies Biology 1, Chemistry 2 and Physics 2. Check the personal timetable and current topic checklist for your child.

Choose where to start

Use the topic contents and confidence tracker to pick an area that feels least secure. Work through it and mark what you have practised. You can also work systematically through the topic list if that suits your plan.

Practise and keep the feedback

Recall key knowledge, answer questions, use the mark scheme and correct errors. Keep your cards, notes and corrected questions safe so they can support later revision.

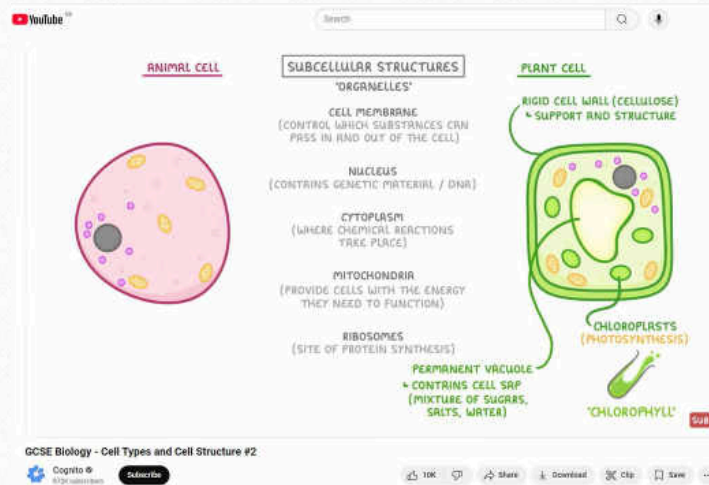
Use the correct specification and course

Use the Triple Science resources on the [department revision website](#). AQA separate-science qualification codes are Biology 8461, Chemistry 8462 and Physics 8463. Combined Science Trilogy 8464 is a different qualification.

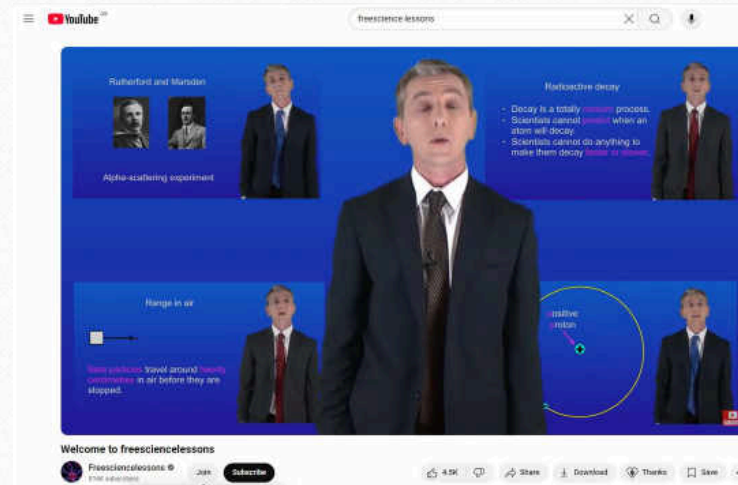
The detailed topic list appears earlier in this section. Your teacher's current instructions should guide the final priorities.

Interactive Games and Websites

Cognito



FreeScienceLessons



Pacing revision through Year 11

1

Now to Christmas

Build the habit

20–30 minutes of science retrieval, three or four times a week

2

After mocks

Target the gaps

Use mock feedback to choose the weakest topics first

3

Spring term

Step it up

Short daily sessions, more full exam questions with mark schemes

4

Easter to exams

Rehearse

Timed papers, while protecting sleep, meals and breaks

What a good revision session looks like



Phone away

In another room, not
face down on the desk

25 minutes

One topic, tested from
memory

Check and fix

Use notes or a mark
scheme to correct gaps

5-minute break

Move, drink water, then
repeat



Two or three rounds, then stop. An hour of focused science is worth far more than an evening at a desk with half the attention on a phone.

Wellbeing is part of revision



8–10

hours of sleep a night is what teenagers need. Memories are consolidated while we sleep, so late-night cramming backfires.



Food and water

Regular meals, breakfast before exams, water while working



Movement

A walk, sport or exercise most days reduces stress



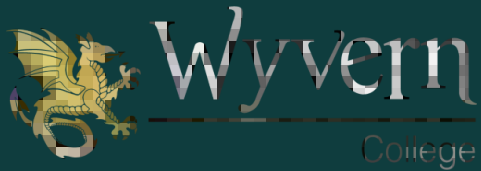
Time with others

Friends, family and hobbies are not a distraction to cut



Screens at night

Phones charged outside the bedroom helps sleep



Three things to take home

Thank you. Questions?



Little and often



Test, don't re-read



Protect sleep and balance

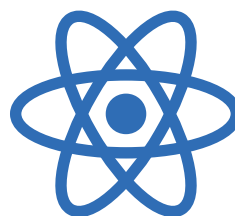
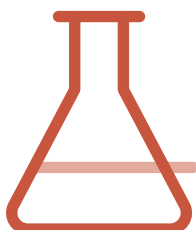
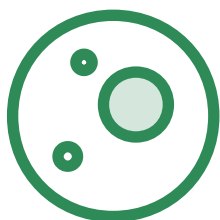


SCIENCE DEPARTMENT

Year 11 · AQA GCSE Biology (8461) · Chemistry (8462) · Physics (8463)

My Science Revision Booklet

Separate Sciences

NAME
_____SCIENCE CLASS
_____TIER (FOUNDATION / HIGHER)
_____TEACHER
_____TARGET GRADE
_____*"Little and often beats a lot, once."*

My Science Exams

Six papers, two per subject, each 1 hour 45 minutes and worth 100 marks. You get three separate GCSE grades: one each for Biology, Chemistry and Physics. Fill in the date and session once the exam timetable is published.

Paper	What it covers	Date	AM / PM
Biology Paper 1	Cell biology · Organisation · Infection and response · Bioenergetics		
Biology Paper 2	Homeostasis and response · Inheritance, variation and evolution · Ecology		
Chemistry Paper 1	Atomic structure and the periodic table · Bonding, structure and properties of matter · Quantitative chemistry · Chemical changes · Energy changes		
Chemistry Paper 2	Rates and extent of chemical change · Organic chemistry · Chemical analysis · Chemistry of the atmosphere · Using resources		
Physics Paper 1	Energy · Electricity · Particle model of matter · Atomic structure		
Physics Paper 2	Forces · Waves · Magnetism and electromagnetism · Space physics		

Every paper includes

Multiple choice, short answers, calculations, questions on the required practicals and 6-mark extended answers. Maths is worth at least 10% of Biology, 20% of Chemistry and 30% of Physics marks.

Physics equation sheet

You are given an equation sheet in both Physics papers. You still need to practise **choosing** the right equation and **rearranging** it.

Ideas connect

Questions often link ideas from different topics, so keep revisiting everything — not just the most recent work.

Wyvern Science Revision Website

Our department's revision website keeps everything for GCSE Science in one place — what to revise, past papers and revision resources chosen by your teachers.



[sites.google.com/wyvern.hants.sch.uk/
wyvern-science-revision](https://sites.google.com/wyvern.hants.sch.uk/wyvern-science-revision)

Scan the QR code with your phone camera, or type the address into a browser. Bookmark it once you're in.

Sign in with your Wyvern school Google account. A Google sign-in page is normal. A personal Gmail account won't work.

How to use it

- 1 **Choose your course** — go to the **Triple Science (separate sciences)** section.
- 2 **Check what to revise** — find the list for your next assessment or the trial exams. Copy the topics into the tracker in this booklet.
- 3 **Get past papers** — download a paper **and its mark scheme**. Use them with the "hour of revision" plan.
- 4 **Make it a habit** — check the site once a week for new resources and exam information.

Parents and carers

The site needs a student login. Ask your child to sign in and show you around — it's a good way to start a conversation about their revision.

Five Top Tips for Science Revision

Revision that **feels** hard is usually the revision that works. If you can read it and nod along, you are recognising it — not remembering it.

1**Test yourself, don't re-read**

Close the book and write down everything you can remember about a topic (blurting), or use flashcards and quizzes. Then check and fill the gaps in a different colour.

2**Little and often, spread out**

Three 25-minute science sessions a week from now is worth far more than cramming in May. Come back to each topic several times, a few days or weeks apart.

3**Mix up the sciences**

Do a bit of Biology, Chemistry and Physics in the same week. Switching topics feels harder but trains you for the real exam, where questions jump around.

4**Practise real exam questions**

Use AQA past papers and mark schemes. Mark your answers honestly — the mark scheme shows the exact words examiners want.

5**Phone in another room**

Even a phone switched off on your desk pulls your attention. Put it somewhere else for each session and check it in your break.

My science goal this term

One habit I will stop

Breaks, Food and Sleep

Your brain is an organ — it needs fuel, water, oxygen and sleep to work well. Looking after it is part of revising, not time off from it.

Make breaks work for you

Leave your desk

Go to a different room or step outside, so your brain gets a proper change of scene.

Move

Walk, stretch or do a few minutes of exercise. More blood flow to the brain helps you refocus.

Drink water

Even mild dehydration makes it harder to concentrate.

Set a timer

Five to ten minutes, then back to it. "Just one more video" can swallow an evening.

Fuel and sleep

✓ Helps

- Water through the day
- A proper breakfast
- Slow-release foods: oats, wholegrain bread, eggs
- Fruit, veg, nuts and yoghurt as snacks

✗ Doesn't help

- Energy drinks
- Lots of caffeine, especially after 3pm
- Sugary snacks as your main fuel
- Skipping meals to "save time"

8–10

hours of sleep a night. Your brain stores what you learned that day while you sleep — staying up late to cram means less of it sticks. Charge your phone outside your bedroom.

Science Revision Methods That Work

Pick a method that makes you **think and recall**. Highlighting, copying notes neatly and re-reading feel productive but help much less.

Blurting

Write everything you know about a topic from memory in 10 minutes. Check against your notes and add what you missed in a different colour. Use the blurring pages in this booklet.

Flashcards

Question on the front, answer on the back. Sort them into 'know it' and 'not yet' piles and test the 'not yet' pile more often. Great for keywords, definitions and equations.

Retrieval quizzes

Use your Retrieval 5 sheets, Seneca or BBC Bitesize quizzes. Always quiz before you look anything up.

Past paper questions

Do questions on one topic, then mark them with the AQA mark scheme. Write the correct answer next to anything you missed.

Draw it

Turn processes into diagrams and flow charts: the heart, the carbon cycle, electrolysis, a circuit. Then explain your diagram out loud.

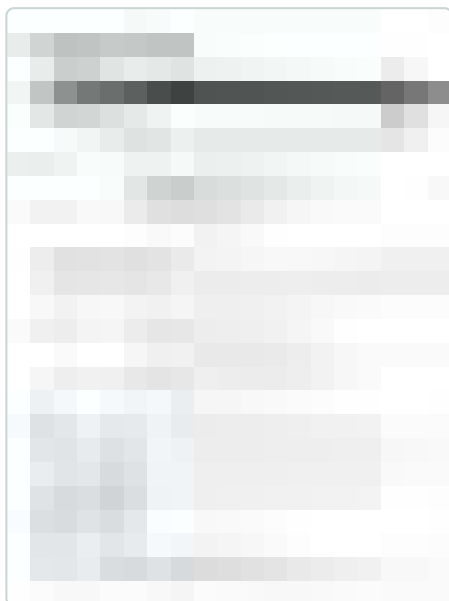
Teach it

Explain a topic to someone at home in two minutes without notes. If you get stuck, that's the bit to revise next.

Use sparingly: highlighting whole paragraphs · copying out the textbook · reading notes over and over · making notes look pretty instead of testing yourself

Knowledge Organisers: Look, Cover, Write, Check

Your knowledge organiser book has the key knowledge for every topic. Don't copy it out or highlight it — **learn** it.



- 1 **LOOK** — read and understand a few related rows. Ask about anything that doesn't make sense.
- 2 **COVER** — hide the answers with plain paper. Keep the prompt visible.
- 3 **WRITE** — write or draw the answer from memory. No peeking.
- 4 **CHECK** — compare and correct in another colour. Try again after a gap.

Spread it out

Review each small set **4–5 times on different days**. Use the plan and RAG tracker in your organiser — start with red topics.

Which items?

Each item has course icons. As a separate science student, learn every item marked **T** (Triple Higher).

Parents: hold the organiser, read out a prompt, and let them answer from memory. Then check together.

Cracking Science Exam Questions

Command words — what the question wants

State / Give	A short fact. No explanation needed.
Describe	Say what happens or what you see. For a graph, give the trend and use numbers.
Explain	Say why or how it happens. Use 'because' and 'so' to link ideas.
Compare	Give similarities and differences, for both things.
Calculate	Show your working. Write the answer with a unit.
Evaluate	Give points for and against, then reach a judgement.
Suggest	Apply what you know to a new situation. There may be more than one right answer.
Determine	Use the data or graph provided to get your answer.

Calculations: FIFA

- F Formula** — choose the right equation (physics: from the equation sheet)
- I Insert values** — substitute the numbers, converting units first
- F Fine tune** — rearrange and work it out
- A Answer** — with the correct unit and sensible significant figures

Show every step — working earns marks even if the final answer is wrong.

Practical methods: CIDER

- C Control** variables — what you keep the same, and how
- I Independent** variable — what you change
- D Dependent** variable — what you measure, and with what
- E Equipment** — name it and say what it's for
- R Repeats** — repeat and calculate a mean
- S Safety** — a risk and how to reduce it

6-mark answers

Underline the command word → plan 4–6 points before writing → put them in a logical order (step by step, or cause → effect) → use correct scientific words. For a "plan a method" question, work through **CIDER**.

Required Practicals Checklist

At least 15% of the marks are about practical work. For each one, can you recall the method, name the variables, and spot sources of error? Tick when you can do it **from memory**.

#	Practical	Method	Variables	Risks	Errors & improvements
1	Microscopy				
2	Microbiology (antiseptics / antibiotics)				
3	Osmosis				
4	Food tests				
5	Enzymes (effect of pH)				
6	Photosynthesis (light intensity)				
7	Reaction time				
8	Plant responses (light / gravity)				
9	Field investigations (quadrats)				
10	Decay (effect of temperature)				
11	Making salts				
12	Neutralisation (titration)				
13	Electrolysis				
14	Temperature changes				
15	Rates of reaction				
16	Chromatography				
17	Identifying ions				
18	Water purification				
19	Specific heat capacity				
20	Thermal insulation				
21	Resistance				
22	I-V characteristics				
23	Density				
24	Force and extension				
25	Acceleration				
26	Waves				
27	Light (reflection and refraction)				
28	Radiation and absorption				

■ Biology
 ■ Chemistry
 ■ Physics

My Topic Confidence Tracker

Rate yourself **R** (not confident), **A** (getting there) or **G** (confident) at three points in the year. Start your revision with the reds.

#	Topic	After mocks	February	Easter
1	Cell biology			
2	Organisation			
3	Infection and response			
4	Bioenergetics			
5	Homeostasis and response			
6	Inheritance, variation and evolution			
7	Ecology			
8	Atomic structure and the periodic table			
9	Bonding, structure and properties			
10	Quantitative chemistry			
11	Chemical changes			
12	Energy changes			
13	Rates and extent of chemical change			
14	Organic chemistry			
15	Chemical analysis			
16	Chemistry of the atmosphere			
17	Using resources			
18	Energy			
19	Electricity			
20	Particle model of matter			
21	Atomic structure			
22	Forces			
23	Waves			
24	Magnetism and electromagnetism			
25	Space physics			

My Weekly Revision Plan

Plan around school, clubs, family and rest — not instead of them. Aim for **three or four 25-minute science sessions a week** now, building up after the mocks.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Before school							
After school							
Early evening							
Evening							
Late evening							

Colour code your sessions

- Biology
- Chemistry
- Physics
- Other subjects

Protect these

A full night's sleep · meals with family · exercise or sport · at least one evening off a week

An Hour of Science Revision

Two rounds of this pattern with a break in between is a strong evening's work. One round is a great start.

1**Pick a topic 5 min**

Choose a red or amber topic from your tracker.

2**Blurt it 10 min**

Write everything you remember on a blurring page — no notes.

3**Check and fill gaps 10 min**

Use your book or revision guide. Add missing points in a different colour.

4**Exam questions 20 min**

Answer past paper questions on the same topic.

5**Mark it 10 min**

Use the AQA mark scheme. Correct your answers in green.

6**Make flashcards 5 min**

Turn anything you got wrong into flashcards for next time.

Then take a 10-minute break away from your desk ☕

Blurting Sheet

Set a 10-minute timer. Write everything you know about the topic without looking. Then check your notes and add what you missed.

Topic:

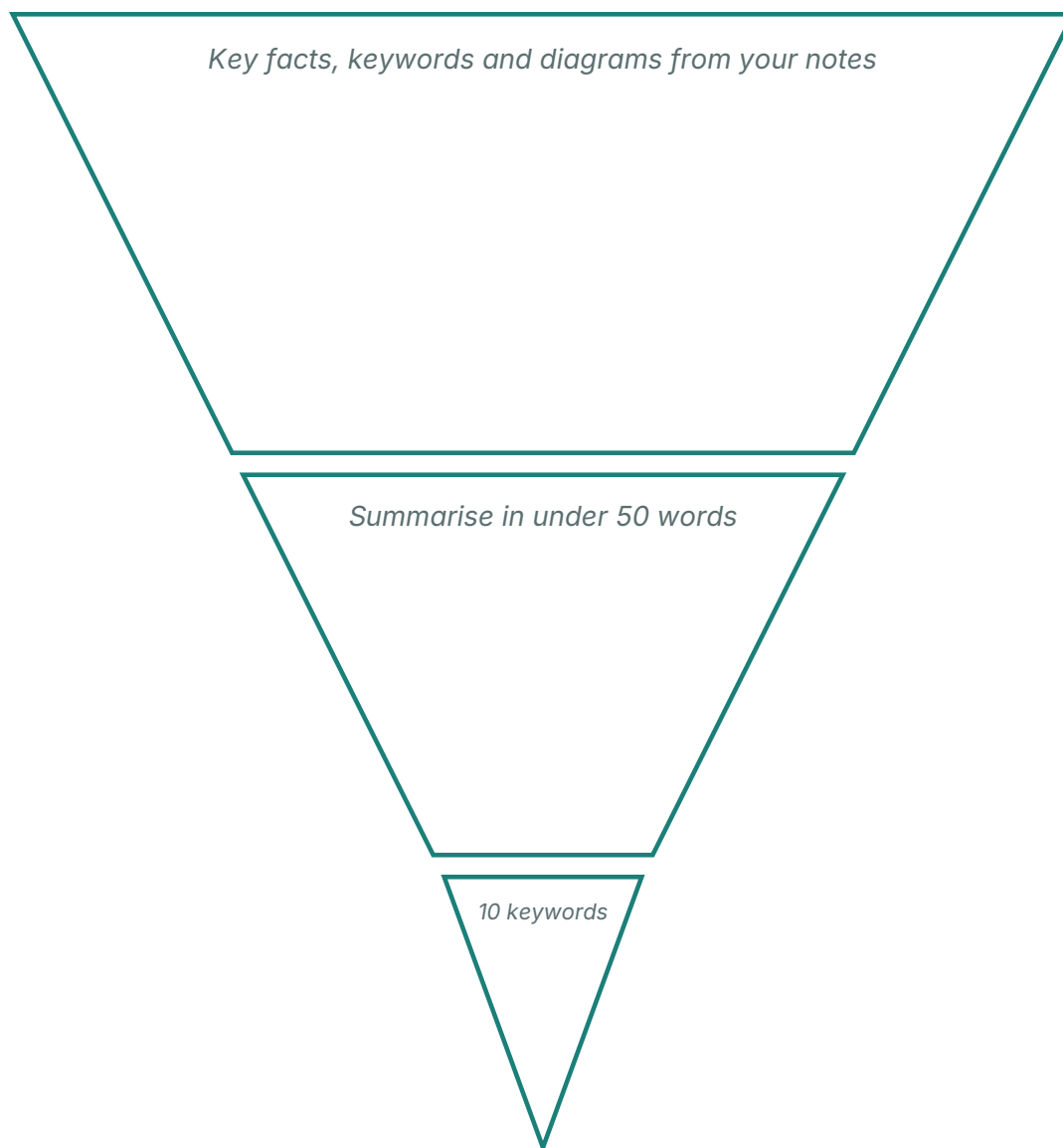
From memory (pen colour 1)

Added after checking (pen colour 2)

Next time I need to remember...

Revision Triangle

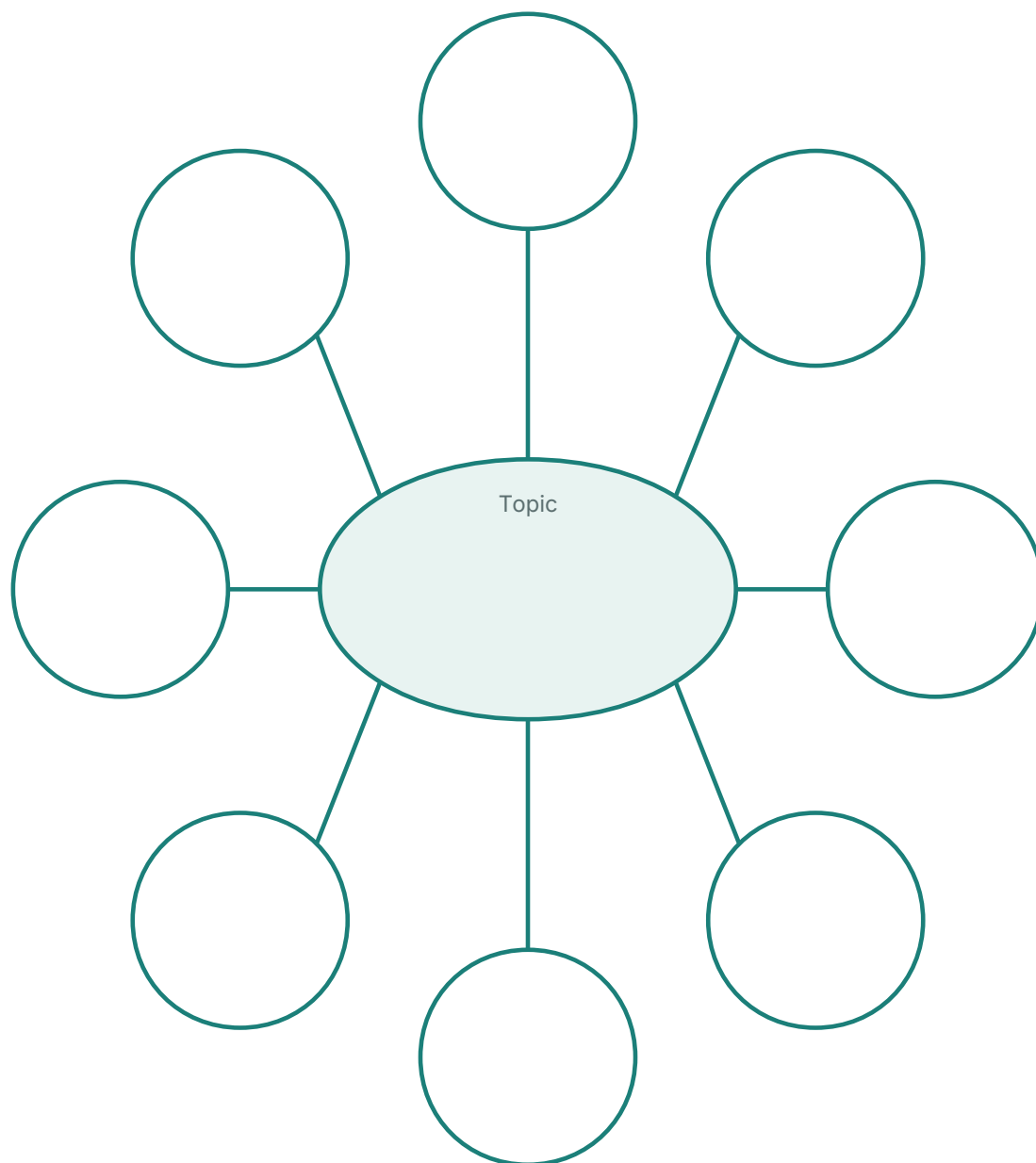
Topic:



Challenge: cover the top two sections and rebuild the whole topic from your 10 keywords.

Mind Map

Put the topic in the middle. Add key ideas, keywords, equations and quick diagrams.
Draw links between bubbles that connect.



Required Practical Recall Sheet

Fill this in **from memory** using **CIDER**, then check against your practical sheet.

Practical:

Aim — what are you investigating?

C Control variables (what I keep the same)

I Independent variable (what I change)

D Dependent variable (what I measure)

E Equipment

Method (numbered steps)

R Repeats — how many, and why

S Safety — risks and how to reduce them

Sources of error and improvements

Results table headings (with units) and expected pattern

6-Mark Answer Planner

Use this to plan an extended response question before you write it out in full.

Question

Command word: Describe ☐ Explain ☐ Compare ☐ Evaluate ☐ Plan a method ☐

Point 1

Point 2

Point 3

Point 4

Point 5

Point 6

Key scientific words I must use

After marking: what did the mark scheme have that I missed?

Physics Calculations Practice

Use **FIFA** and the AQA physics equation sheet. Most marks are lost by skipping the working, the rearrangement or the unit.

Question-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)**Question**-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)**Question**-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)**Question**-----
Formula_____
Insert values_____
Fine tune_____
Answer (with unit)

Flashcards

Cut out. Question on the front, answer on the back. Tick the science. Keep testing the ones you get wrong.

Q			
Q			
Q			
Q			
Q			
Q			

Flashcards

Cut out. Question on the front, answer on the back. Tick the science. Keep testing the ones you get wrong.

Q			
Q			
Q			
Q			
Q			
Q			

For Parents and Carers

You don't need to know any science to help. Small, calm and regular support makes a real difference.

✓ Helpful

- Test them with their flashcards — the answers are on the back
- Ask them to teach you a topic for two minutes
- Help them fill in the weekly plan in this booklet
- Provide a quiet space and keep phones out of the room
- Praise effort and good habits, not just grades
- Protect sleep, meals and time off

✗ Less helpful

- "Have you done any revision?" every evening
- Comparing them with siblings or friends
- Focusing only on target grades
- Late nights to "get it done"
- Removing all downtime

Better questions to ask

What did you get right today without looking?

Can you explain that to me?

Which topic feels least secure?

What did the mark scheme say you missed?

Where to get support

Your child's science teacher or form tutor is the first point of contact. Free resources: AQA past papers and mark schemes (aqa.org.uk), BBC Bitesize, Seneca Learning, Free Science Lessons. If you are worried about stress or wellbeing, please contact the Head of Year. Childline: 0800 1111 · Shout: text SHOUT to 85258.

Exam Day

Pack the night before

- ☐ Black pens (at least two)
- ☐ Pencil and rubber
- ☐ Ruler (30 cm)
- ☐ Protractor
- ☐ Scientific calculator with fresh batteries
- ☐ Clear pencil case and water bottle

In the exam

- ☐ Read every question twice and underline the command word
- ☐ Check how many marks — about one mark per minute
- ☐ Show working on every calculation
- ☐ Use the physics equation sheet
- ☐ Never leave a multiple choice blank
- ☐ Use spare time to check units and graph labels

You've prepared for this.

Breathe. Read carefully.

Show what you know.

One question at a time.

Good luck from the Science Department

My Exam Timetable

Stick your exam timetable here, and highlight your six science papers.





THINK · GROW · CARE

Science Department

Useful links and support

The college hub comes first

[Wyvern Exams and Revision](#) - current college exam and revision information, timetable links, free organisers for English, both Maths tiers and Science, the explainer video, revision planner and candidate guidance.

[Wyvern student wellbeing](#) - the wellbeing destination linked from the hub. Please also contact the tutor or Head of Year if worries are affecting your child.

Maths resources from the session

[Sparx Maths](#) - use the student's school account for topic learning.

[Corbettmaths 5-a-day](#) - ask the teacher which level to choose.

[Maths Genie](#) - topic and exam practice.

[1st Class Maths](#) - revision topics and practice.

Science resources from the sessions

[Wyvern Science revision website](#) - student Wyvern Google login required. Choose Combined or Triple Science.

[AQA papers and mark schemes](#) - choose the exact qualification.

[BBC Bitesize GCSE](#) - select AQA and the correct course.

[Seneca Learning](#), [Educake](#), [Cognito](#) and [Free Science Lessons](#) - follow the teacher's course guidance.

Exam rules and equipment

[JCQ information for candidates](#) and [AQA 2027 equation-sheet update](#) support the candidate guidance on the school hub. Ask the subject teacher about assessment rules and equipment.

If you need help

Contact your child's subject teacher for topic priorities or a question they cannot resolve, and their tutor for wider concerns or resource barriers. Revision guides and scientific calculators are available through the Finance Office; check what is appropriate before purchasing.

Prepared from the opening talk and the departmental materials supplied after the evening. The school hub and personal exam instructions should be used for subsequent updates. External resources may need an account or school subscription.