Supporting Success in Year 11

Thursday 8th February 2024

Wellsway School

Developing confident, respectful and successful young people

This evening's aims:

- Give some clear strategies for supporting your child with effective revision
- Give advice about health and well-being of young people during what can be a stressful period
- Give some specific advice about preparation for English, mathematics and sciences

To get you thinking…

- How has online activity changed since we started running this evening for Y11 parents?

- What's the most popular online activity among children?

Online behaviours

	95% Watches / posts / shares content on any video sharing platforms	80% Uses apps / sites to send messages or make voice or video calls	63% Uses social media apps or sites	57% Uses live streaming apps or sites to watch or post / share content	48% USES ALL FOUR TYPES OF SITE
Aged 3-4	89%	50%	21%	32%	16%
Aged 5-7	93%	59%	33%	39%	25%
Aged 8-11	95%	84%	64%	54%	43%
Aged 12-15	98%	97%	91%	73%	70%
Aged 16-17	98%	99%	97%	79%	77%

Ofcom
making communications work for everyone

Children and parents:
media use and attitudes report 2022

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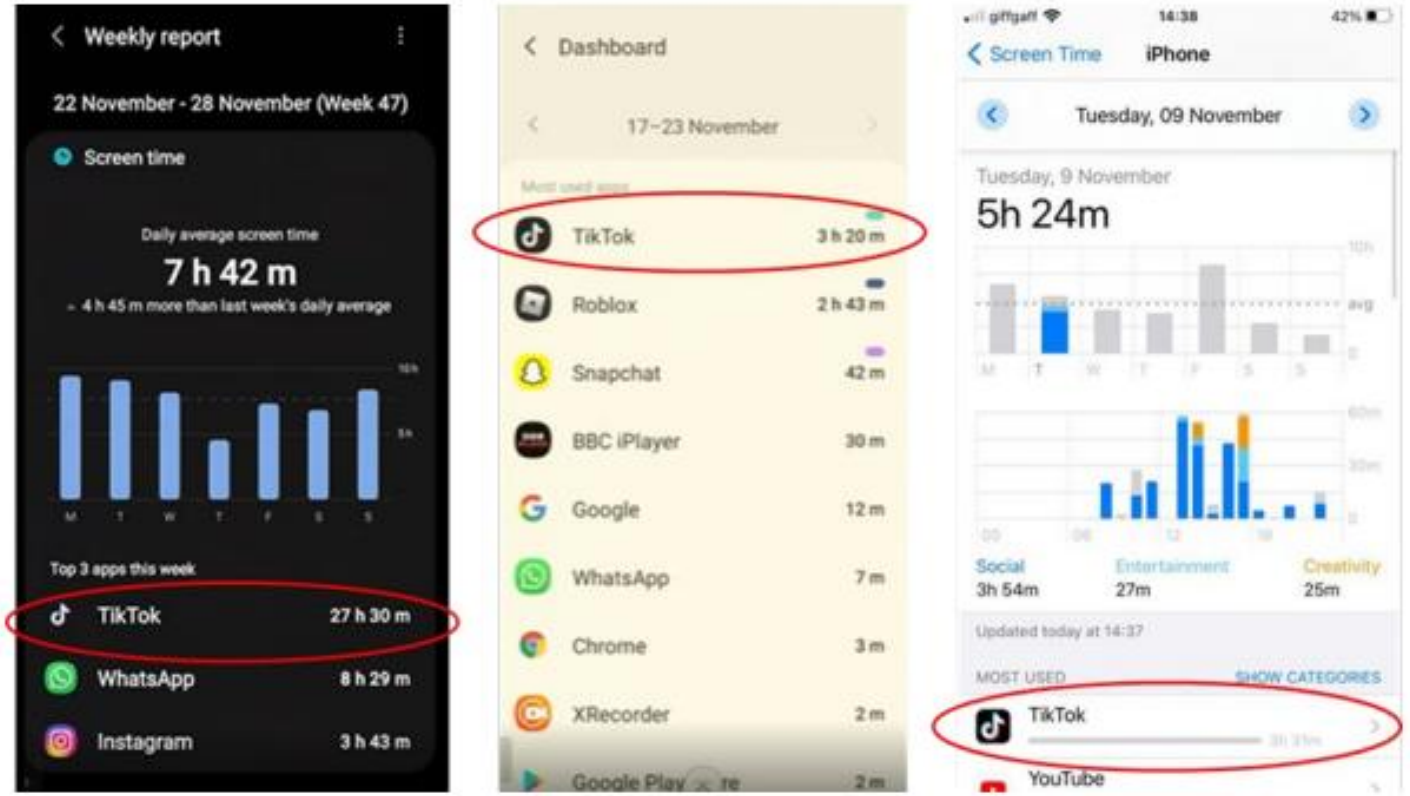


For 15 of the 21 children, TikTok was the app they used the most. The pictures above show that Taylor (13) had spent 27 hrs 30 mins on the app one week and Suzy (10) and Freddie (10) had spent more than three hours a day on the app.

So, how long should Year 11 students be spending revising?

Children's Media Lives
2022

A report for Ofcom

REVEALING REALITY

A rough guide…

Most students are taking exams in 8-9 subjects

Most subjects will have at least 10 topics that need to be revised

Each topic could take at least 2 hours to revise well…

How much at a time?

3 parts revision

to

1 part break

For most students this will be:

30 minutes revision

+

10 minutes break

The reality

…which means that

before the real GCSE

exams, most students

will need to find time for

around 200 hours of revision

Do any of the following sound familiar?

"It's too early to start revising"

"I'm organising my notes"

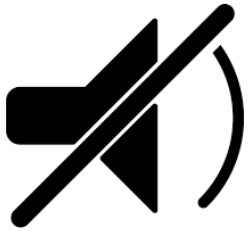
"I need to sort my room so I can concentrate"

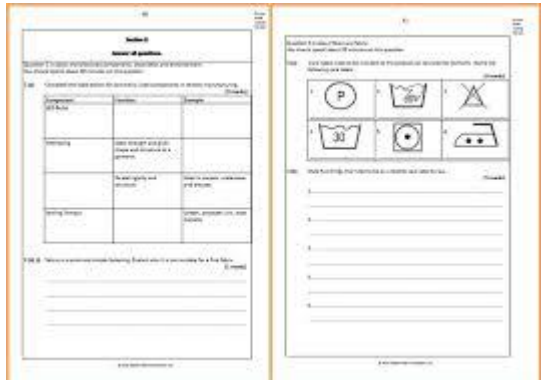
"I haven't got my books from school so can't work on revision"

"I should focus on XXX subject rather than wasting time on one I know I'm not going to do well in"

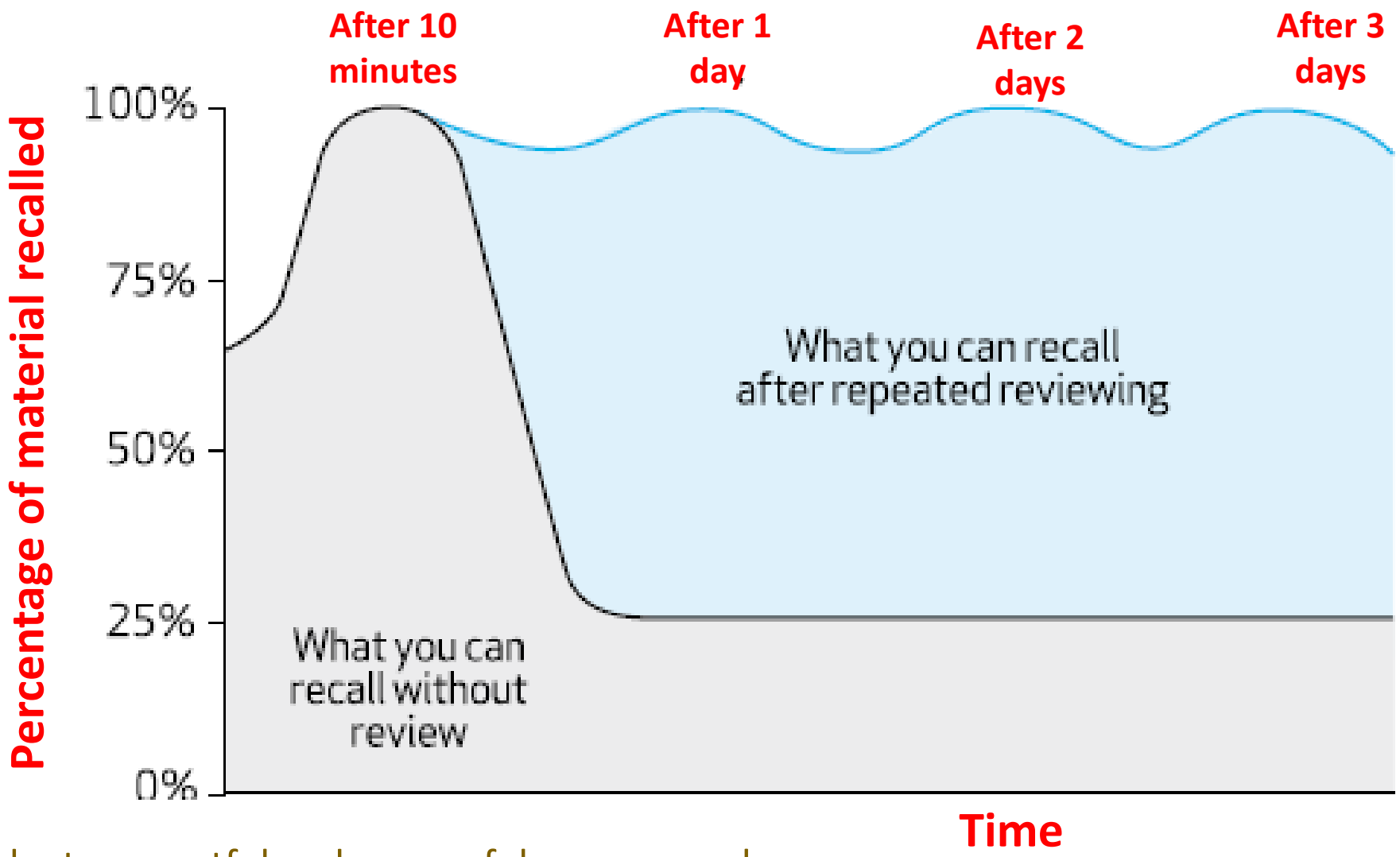
What response would you give to these statements?

What will effective revision in your household look and sound like?





Memory performance over time



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Which do you think were found to have higher – moderate – lower effectiveness?

Distributed practice (short sessions)
Elaborative interrogation
Self – explanation
Regular practice testing
Interleaved practice
Summarising
Highlighting
Mnemonics
Regular practice testing
Imagery to represent text
Re-reading

Dunlowsky et al (2013) studied 10 strategies used by students to revise and prepare for examinations.

Effective revision strategies – what the research says

- Higher effectiveness
  - **Regular practice testing**
  - **Distributed practice (short sessions)**
- Moderate effectiveness
  - Elaborative interrogation (turning facts to be learned into why-questions and then answering them)
  - Self – explanation (explaining to yourself what you are doing and thinking)
  - Interleaved practice
- Lower effectiveness
  - Summarising
  - Highlighting
  - Mnemonics
  - Imagery to represent text
  - Re-reading

A blend of these techniques is most effective

A recent study shows music did not improve learning;

What has the lowest impact?

1)Unstructured revision:

revision needs to be planned, with a realistic goal for each session

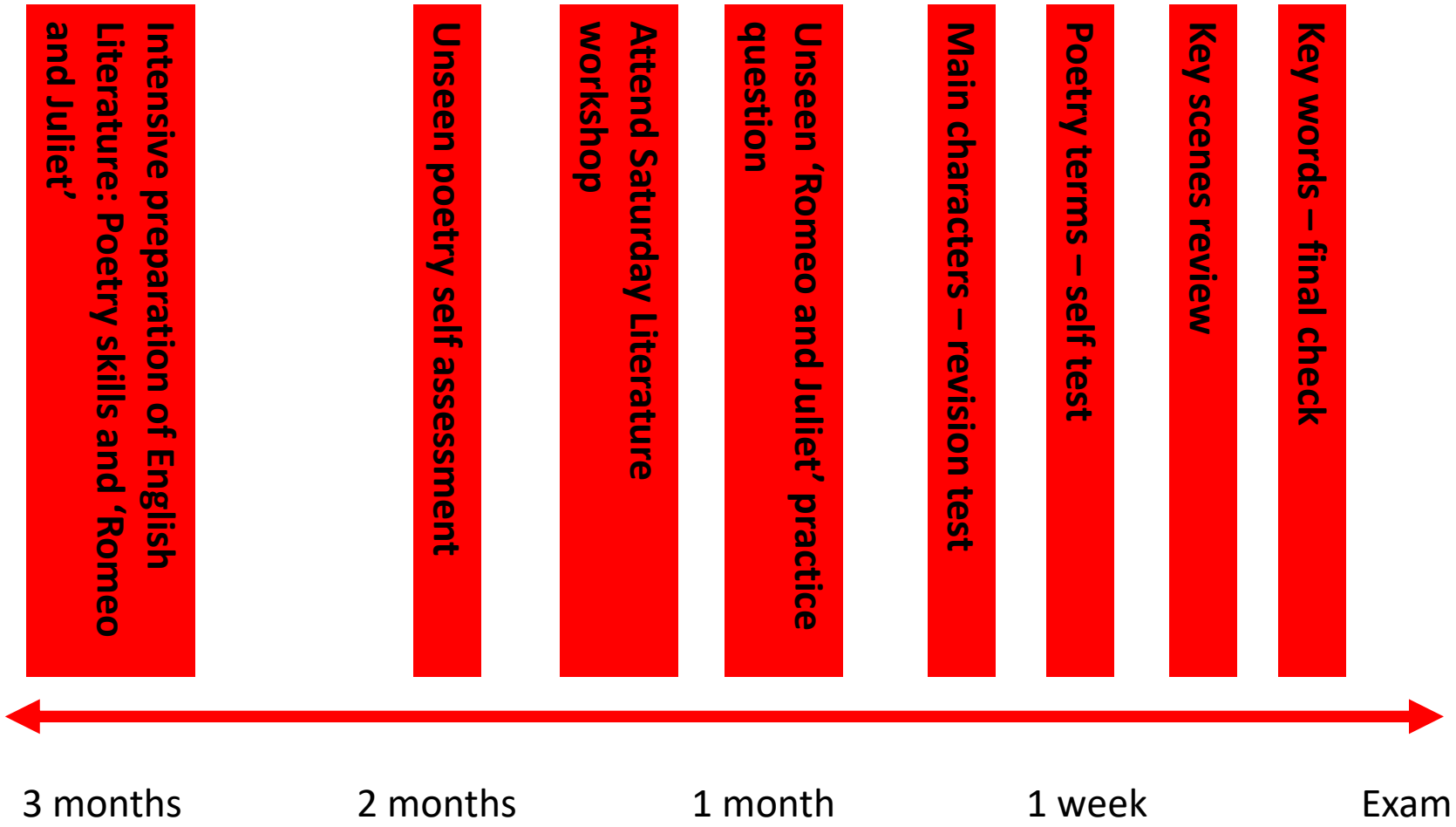
2)Reading:

unless you go over everything again and again, which is time-consuming

3)Highlighting/underlining:

although useful when done well, it is often done poorly

What this could look like



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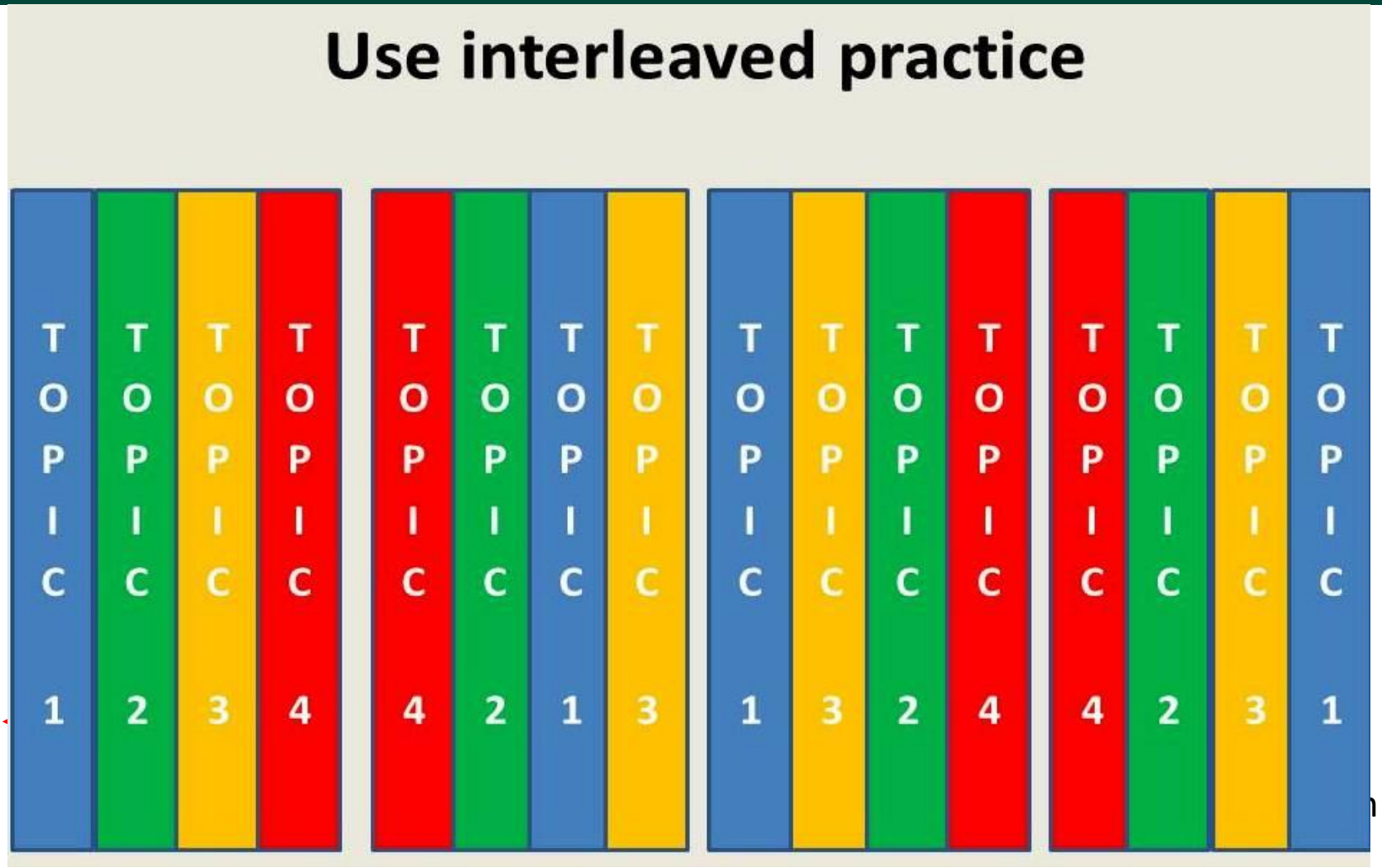
What this could look like



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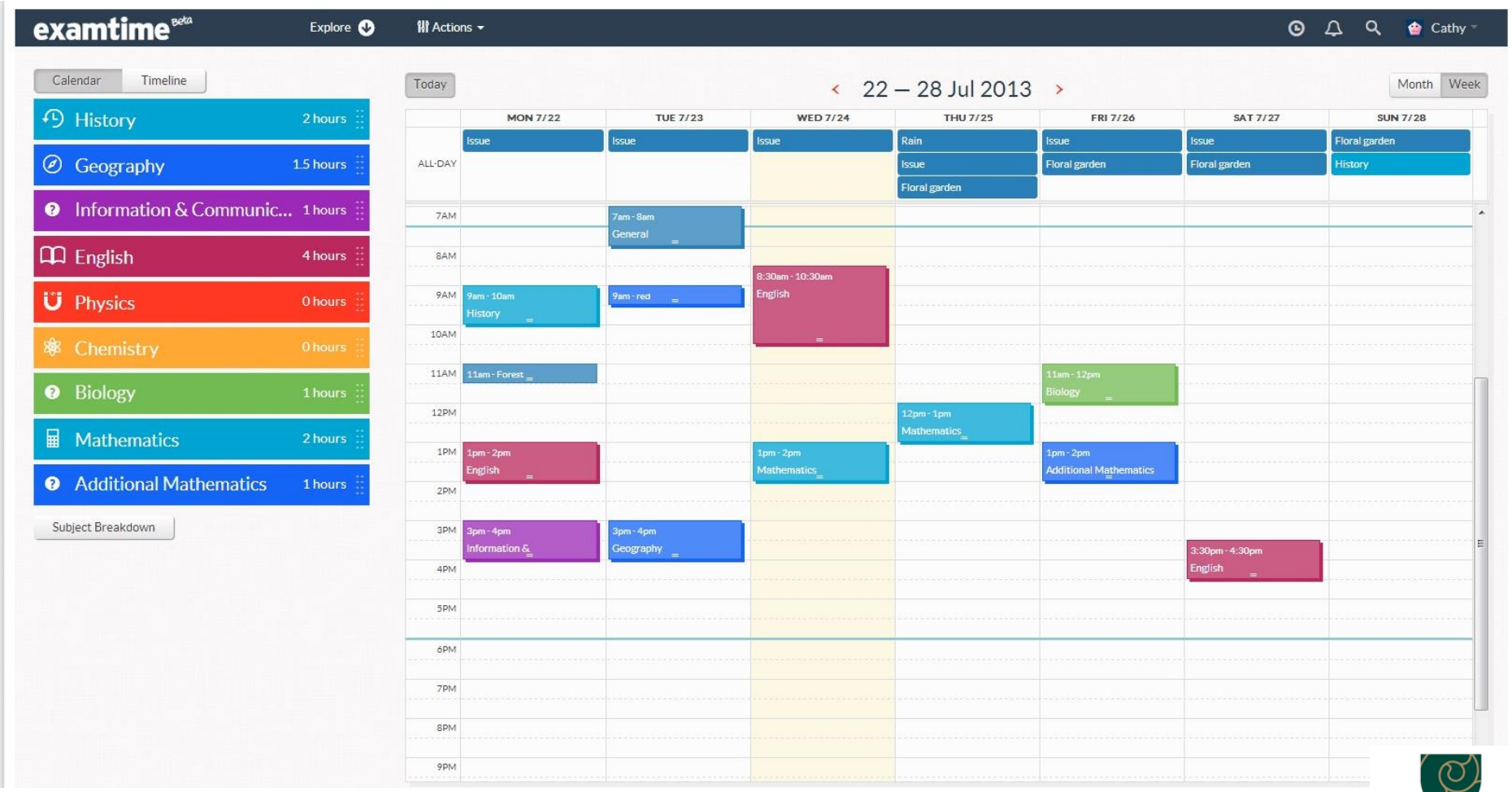
Revision Timetable



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Making revision timetables effective

- Remember English and Science count as two GCSEs (or three in the case of separate sciences) so twice as much time should be spent on them.
- Always leave a buffer slot which can be used if your plans change.
- Find out what you need to know for each subject
- Start with your weakest areas
- Either allocate a topic or area to each revision session or make a list of what needs to be done and tick it off as you go
- Don’t waste time deciding what to do – be ready to start revising!
- Don’t let the timetable add to the stress! Use it as a guide to help you manage your time

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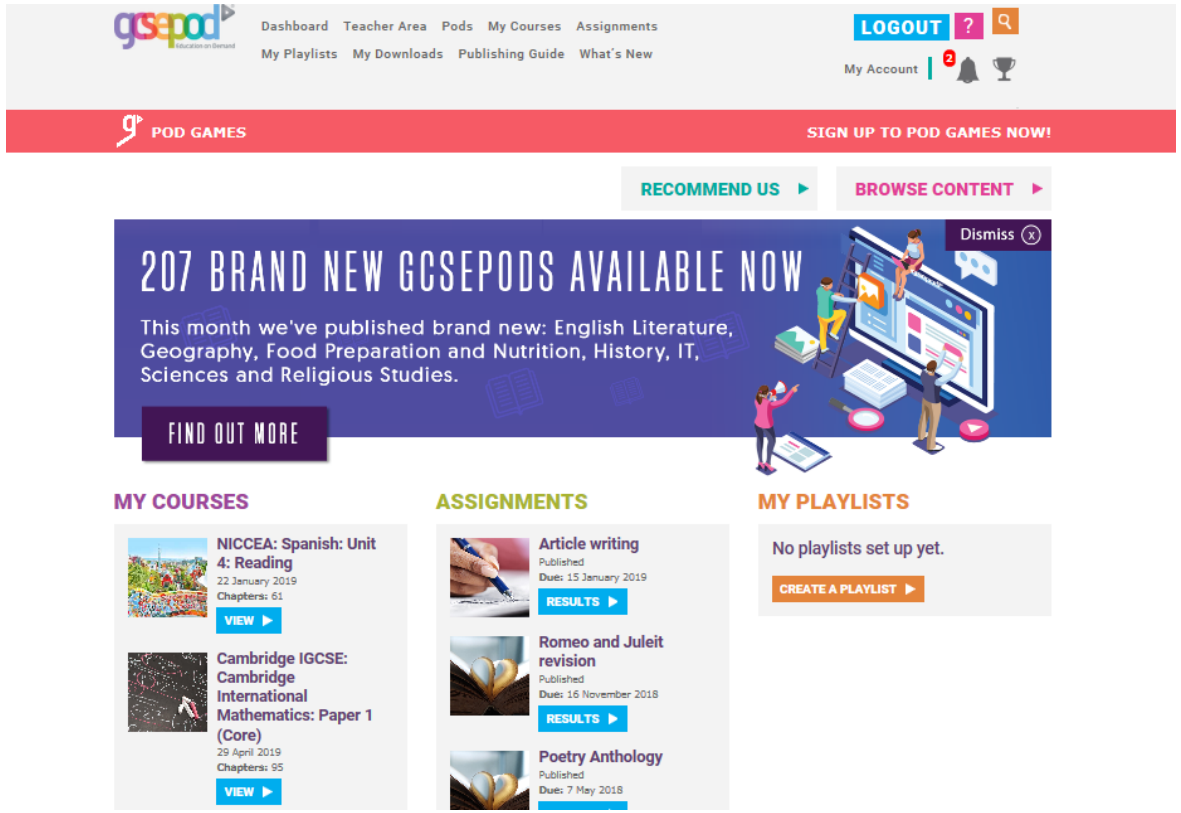
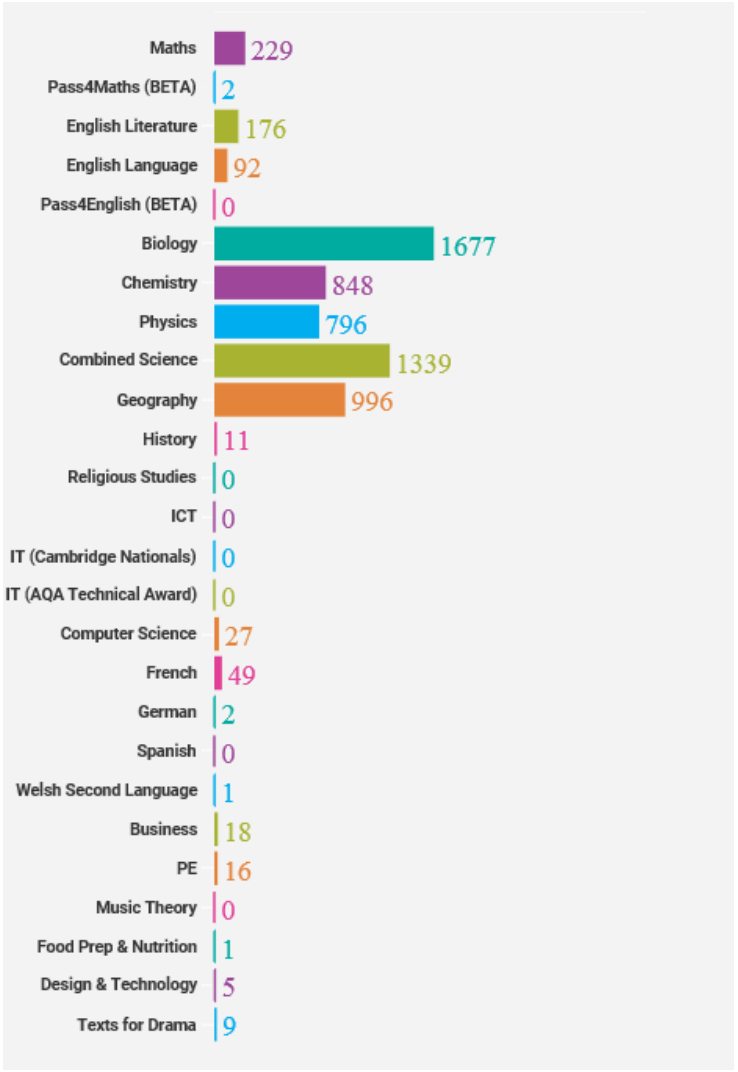
GCSEPod





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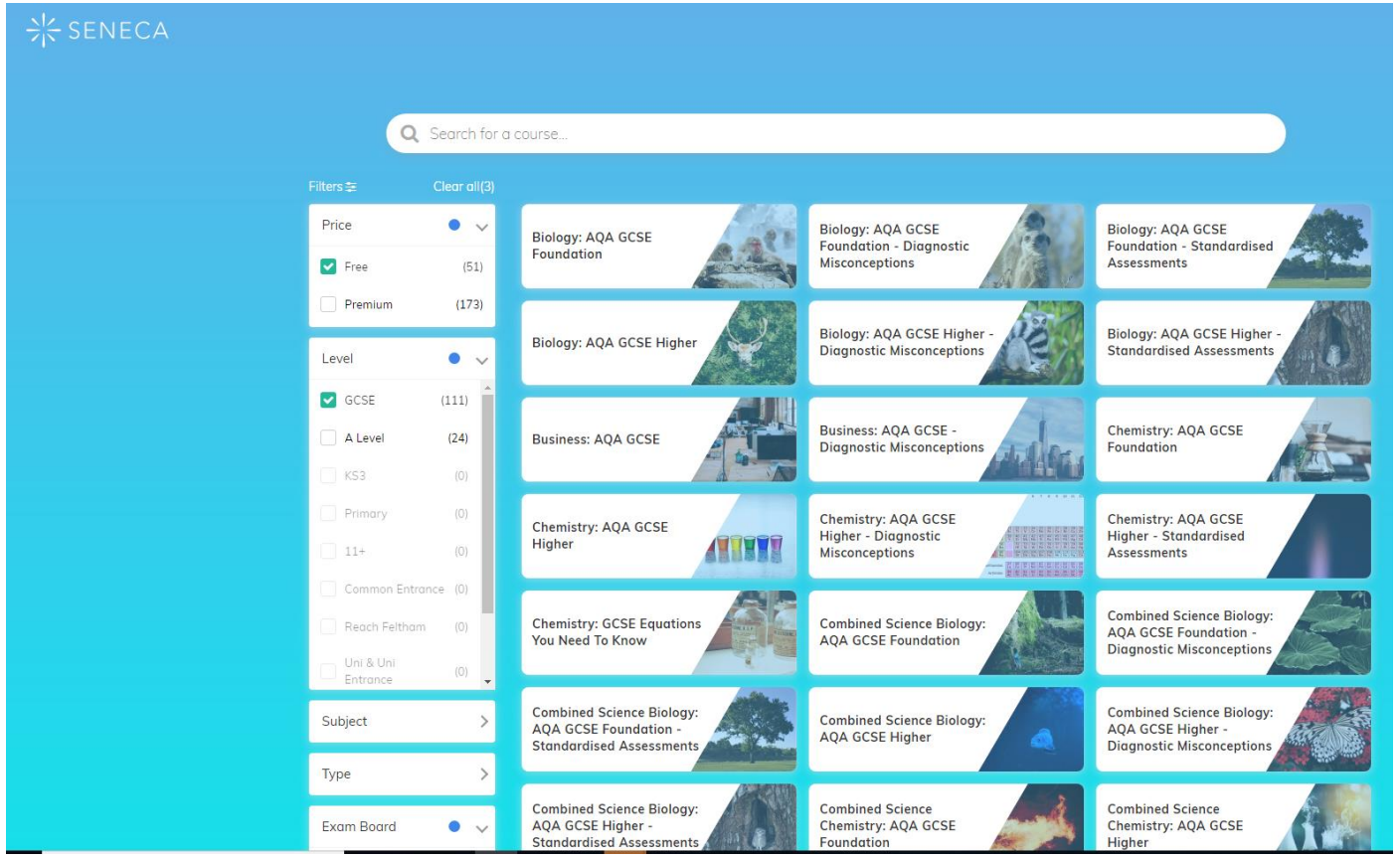
Seneca


SENECA
Search for a course...
Filters
Clear all(3)
Price
Free (51)
Premium (173)
Level
GCSE (111)
A Level (24)
KS3 (0)
Primary (0)
11+ (0)
Common Entrance (0)
Reach Feltham (0)
Uni & Uni Entrance (0)
Subject
Type
Exam Board
Biology: AQA GCSE Foundation
Biology: AQA GCSE Foundation - Diagnostic Misconceptions
Biology: AQA GCSE Foundation - Standardised Assessments
Biology: AQA GCSE Higher
Biology: AQA GCSE Higher - Diagnostic Misconceptions
Biology: AQA GCSE Higher - Standardised Assessments
Business: AQA GCSE
Business: AQA GCSE - Diagnostic Misconceptions
Chemistry: AQA GCSE Foundation
Chemistry: AQA GCSE Higher
Chemistry: AQA GCSE Higher - Diagnostic Misconceptions
Chemistry: AQA GCSE Higher - Standardised Assessments
Chemistry: GCSE Equations You Need To Know
Combined Science Biology: AQA GCSE Foundation
Combined Science Biology: AQA GCSE Foundation - Diagnostic Misconceptions
Combined Science Biology: AQA GCSE Foundation - Standardised Assessments
Combined Science Biology: AQA GCSE Higher
Combined Science Biology: AQA GCSE Higher - Diagnostic Misconceptions
Combined Science Biology: AQA GCSE Higher - Standardised Assessments
Combined Science Chemistry: AQA GCSE Foundation
Combined Science Chemistry: AQA GCSE Higher

Examinations and stress

We need to distinguish between:

- A – **Eustress** (positive and motivational)
- B – **Distress** (damaging to health and relationships)

Recognising stress

- These are high stakes examinations and your child will probably be feeling under pressure;
- This pressure is likely to grow between now and May;
- You might see some of the following behaviour signs:
  - Increased moodiness and irritability;
  - Increasingly argumentative;
  - Disrupted sleep patterns;
  - Becoming withdrawn;
  - Complaining of stomach aches and headaches;
  - Making negative statements about him or herself.

How to manage this

- Listen and try to be available;
- Offer reassurance – these examinations will not last for ever;
- Try not to lose your temper;
- Encourage your child to use problem – focused strategies, by being well planned and developing feelings of control;
- Encourage your child to use emotion – focused strategies by taking planned breaks and arranging some positive distractions.

‘Study in’

We believe firmly that the right place for students to prepare for exams is under the care and guidance of their teachers.

We can only guarantee support from subject specialists and monitoring of welfare by pastoral teams if students spend time with us during the exam season.

In recent years we have seen large improvements in performance in exams which occur late in the season. This has happened as a direct result of the additional support students have received.

What's happening in summer 2024?

- Unlike GCSEs in 2022 and 2021, when only certain elements of subjects were included, this year, like 2023, exams will include the full subject content for all papers
- The gaps between exam papers have been reduced, and the longer gaps used in the 2023 exam series do not appear on the 2024 GCSE exam timetable
- With GCSE exams in 2024 being conducted in the same way as before the pandemic, Ofqual has said that grading this year will be "normal" and that "now we're back to normal"
- Additional formulae and equation sheets will be provided in physics, combined science (physics) and maths exams

End of year arrangements

- Exams should conclude by 19th June
- **BUT** 26th June is an exam contingency day
- Yr11 prom is on 19th June
- Results: 22nd August

Supporting Success in Maths

2024

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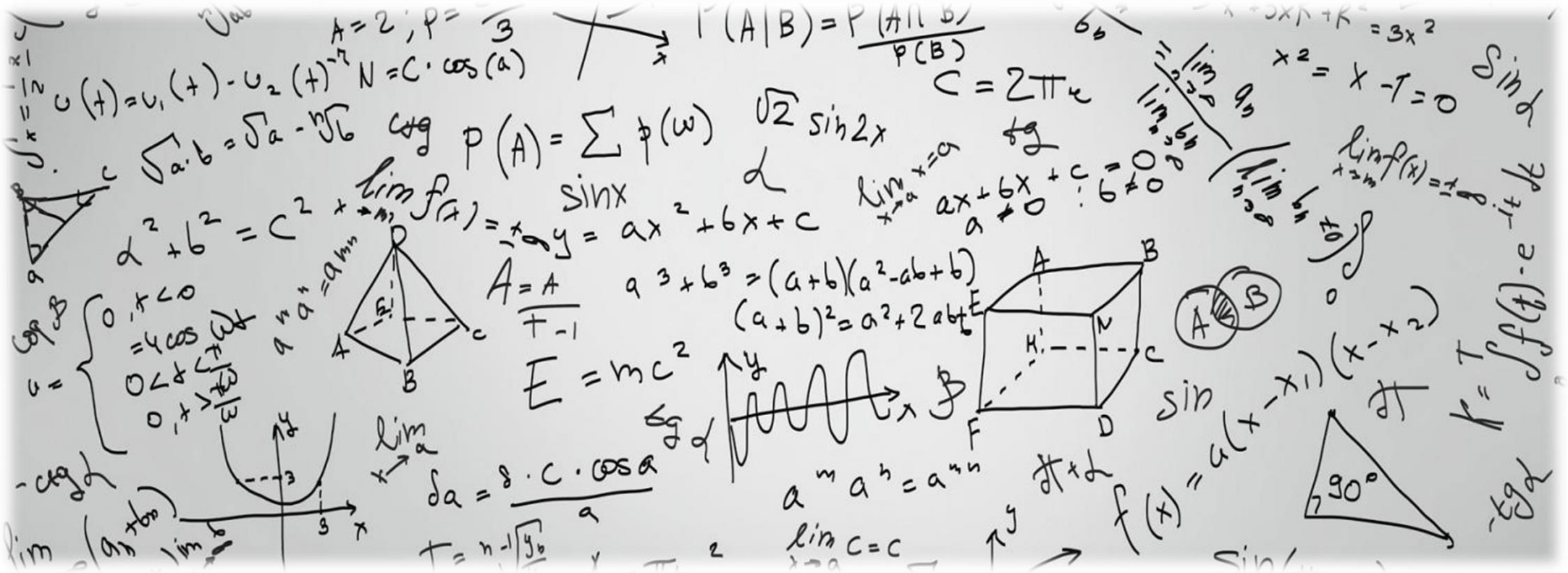
Revision in mathematics



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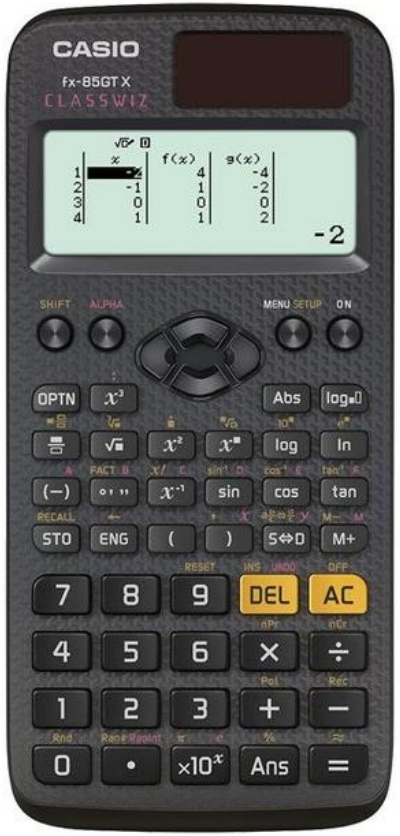
Course Information



Number	Ratio and Proportion	Algebra	Geometry	Statistics and Probability

Paper 1 Non-Calculator	Paper 2 Calculator	Paper 3 Calculator

Exam board is Edexcel.

Vast majority of students know now if they are sitting Higher/Foundation in the summer; possibly a few changes after mocks.

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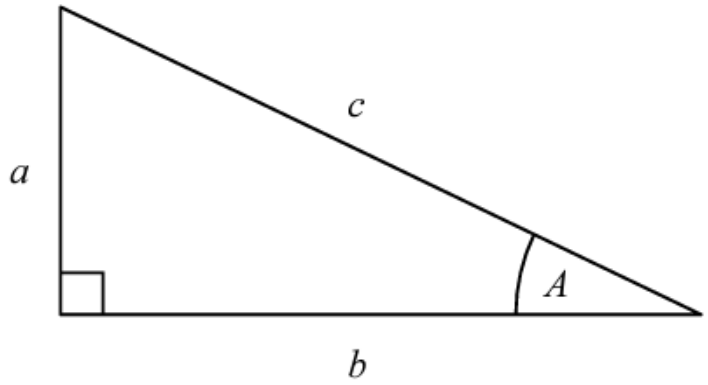
Changes to 2024?

Paper 1: Thursday 16th May
Paper 2: Monday 3rd June
Paper 3: Monday 10th June

Pythagoras' Theorem and Trigonometry

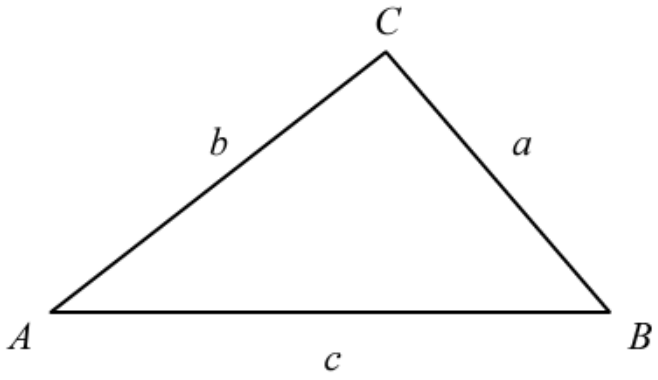


In any right-angled triangle where a, b and c are the length of the sides and c is the hypotenuse:

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

In any right-angled triangle ABC where a, b and c are the length of the sides and c is the hypotenuse:

$$\sin A = \frac{a}{c} \quad \cos A = \frac{b}{c} \quad \tan A = \frac{a}{b}$$



In any triangle ABC where a, b and c are the length of the sides:

sine rule: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

cosine rule: $a^2 = b^2 + c^2 - 2bc \cos A$

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

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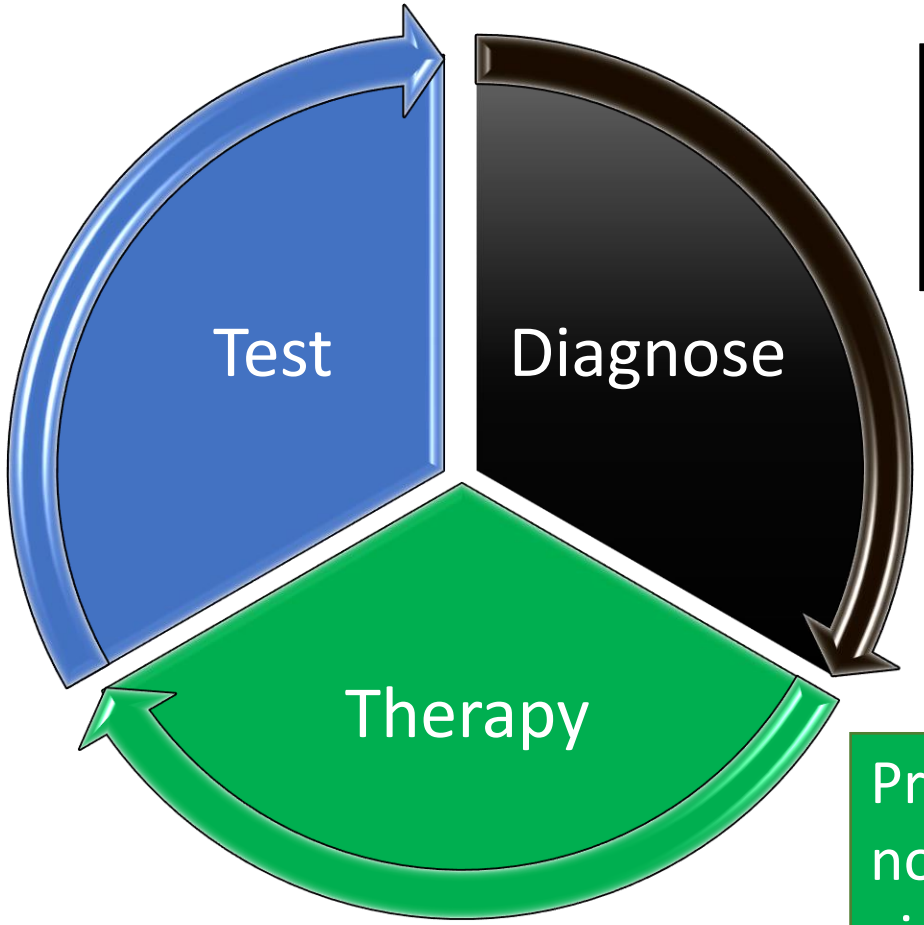
Revision Strategy for Maths

Mark the work!
If they are getting it right – pick out a new topic.
If they are making lots of mistakes, don't move on and seek additional help.



Work out what they are good at/what they are not yet good at!

Practice the things they are not **yet** good at: watch a video and then DO LOTS OF QUESTIONS.

Blue Book Work

- All students have been given a blue book in addition to their (orange) classwork book.
- Contains all mock exam feedback instructions
- ALL revision/independent work should be happening in here: which makes it an easy place for us all to see how much they are doing!

Feedback Sheets

Year 11 Mathematics Mock Higher Feedback Sheet: Paper 1

Question Number	Topic	Marks	Worked Solution Video (tick when watched)	Corbett Video	Extra practice (tick when complete)
1	Solving Inequalities	2/2		178	
2	Product of Prime Factors	2/2		223	
	Sharing in a Ratio			270	
7	Volume of Cuboids Density Ratio	3/3		355 384 269	
8	Estimated Mean from Grouped Frequency	3/3		55	
9	Surface Area of Cuboids	3/3		310	
10	Cumulative Frequency Graphs	2/6		153, 154	
11	Probability and Ratio: Problem-Solving	3/3		269a 245, 250	
12	Recurring Decimals to Fractions	3/3		96	
13	Area of Semi-Circles, Pythagoras' Theorem	0/3		47, 261	

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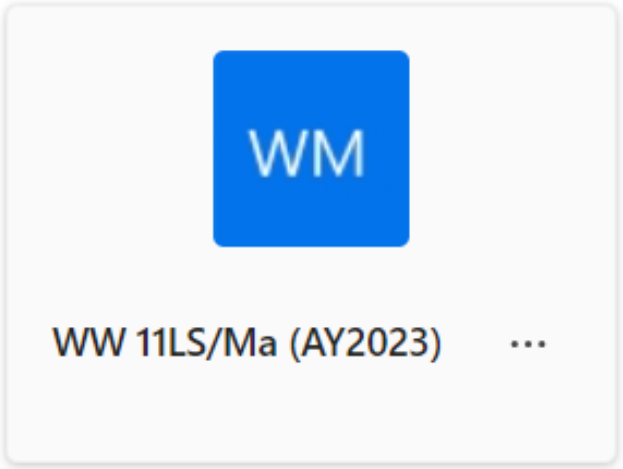
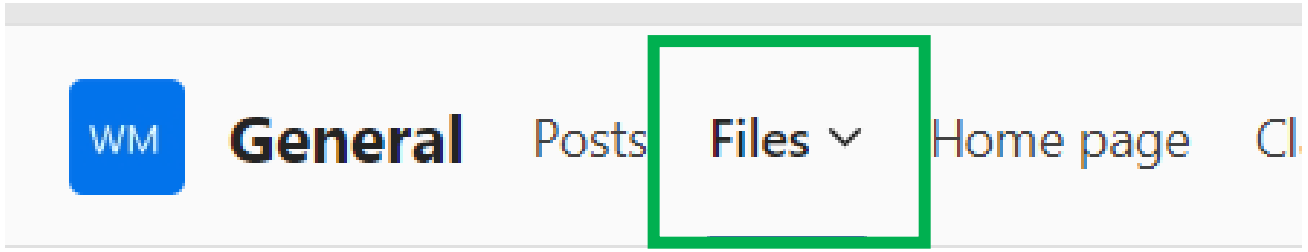
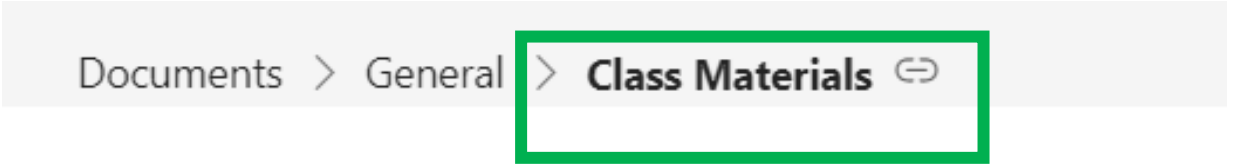
Worked Solution Videos







Name	Modified
01. Papers	December 8, 2023
02. Student Friendly Mark Schemes	December 8, 2023
03. Worked Solutions	December 8, 2023
04. Video Solutions	December 8, 2023

Name
November Mock Exam Feedback

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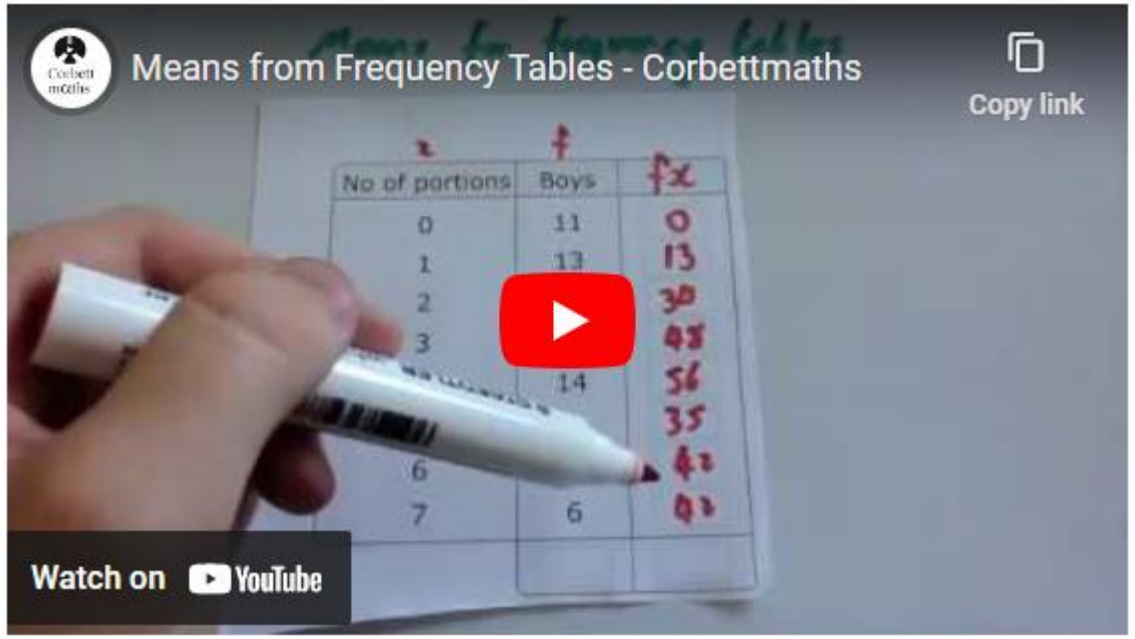
Corbett Maths



Area: triangle Video 49 Practice Questions Textbook Exercise

Averages: median Video 50 Practice Questions Textbook Exercise

Click here for answers

Averages: median (frequency table) Video 51 Practice Questions Textbook Exercise

Averages: median (grouped data) Video 52 Practice Questions Textbook Exercise

Averages: mean Video 53 Practice Questions Textbook Exercise

Averages: combined mean Video 53a Practice Questions Textbook Exercise

Averages: mean (frequency table) Video 54 Practice Questions Textbook Exercise

Averages: mean (estimated) Video 55 Practice Questions Textbook Exercise

Averages: mode Video 56 Practice Questions Textbook Exercise

Corbett Maths

4. Thirty students were asked how many cats they owned.
The results are shown in the table.

Number of cats	Number of children
0	6
1	13
2	7
3	3
4	1

Calculate the mean number of cats owned per child.

.....

(3)

Area: triangle Video 49 Practice Questions Textbook Exercise

Averages: median Video 50 Practice Questions Textbook Exercise

Click here for answers

Averages: median (frequency table) Video 51 Practice Questions Textbook Exercise

Averages: median (grouped data) Video 52 Practice Questions Textbook Exercise

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Averages: mode Video 56 Practice Questions Textbook Exercise

Corbett Maths

Corbett maths

Mean from a Frequency Table

Video 54 on www.corbettmaths.com

Examples

Workout

Click here

Scan here

Question 1: Work out the mean for each of these frequency tables.
You may not use a calculator

(a)

Age	Frequency
5	2
6	2
7	5
8	1

(b)

Number of phones	Frequency
0	1
1	3
2	2
3	0
4	4
5	0

(c)

Number of pets	Frequency
0	13
1	28
2	50
3	9

Area: triangle Video 49 Practice Questions Textbook Exercise

Averages: median Video 50 Practice Questions Textbook Exercise

Click here for answers

Averages: median (frequency table) Video 51 Practice Questions Textbook Exercise

Averages: median (grouped data) Video 52 Practice Questions Textbook Exercise

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Averages: combined mean Video 53a Practice Questions Textbook Exercise

Averages: mean (frequency table) Video 54 Practice Questions Textbook Exercise

Averages: mean (estimated) Video 55 Practice Questions Textbook Exercise

Averages: mode Video 56 Practice Questions Textbook Exercise

Low Stakes Assessments

- We know that students benefit from exam practice and expert modelling of questions.

- We are writing bespoke assessments which take place fortnightly (on Monday/Tuesdays) – based on areas of weakness identified from mock exams/teacher feedback etc.

- You can support by asking your son/daughter how the assessment went and talking to them about their revision. Topics to revise are always shared in advance via Bromcom.

Maths Genie

Maths Genie

www.mathsgenie.co.uk

GCSE Revision
Video tutorials, practice exam style questions and answers.

Grade 8/9

Videos	Exam Questions	Exam Questions Booklet	Solutions
Quadratic Simultaneous Equations	Exam Questions	Quadratic Simultaneous Equations	Solutions
Transforming Graphs y=f(x)		Transforming Graphs y=f(x)	Solutions
Proof	Exam Questions	Proof	Solutions
Completing the Square	Exam Questions	Completing the Square	Solutions
The Nth Term of a Quadratic Sequence	Exam Questions	Quadratic Sequences	Solutions

Maths Genie

Maths Genie

Year 11 Maths Mock Exams: Higher

Between the 13th and 24th November, you will be completing **three** Maths assessments. One is **non-calculator;** the second two are **calculator.**

You will be sitting **full papers** that cover the entire GCSE course; the exam board is Edexcel.

How do I revise for Maths?

1. Select a topic from the list below
2. Watch the relevant video(s) from Maths Genie. https://www.mathsgenie.co.uk/gcse.html
3. Try some practice questions (from Maths Genie) https://www.mathsgenie.co.uk/gcse.html
4. Mark your own work!

The best way to revise for Maths is by DOING LOTS OF MATHS and answering lots of questions.

Grade 3 Content					
Topic Name	Confidence score out of 5 (before revising)	Exam Questions	Solutions	Dates Revised	Confidence score out of 5 (after revising)
Error Intervals		Link	Link		
Fractions		Link	Link		
Estimating		Link	Link		
Writing/Simplifying Ratio		Link	Link		
Sharing Ratio		Link	Link		

Past Papers?

- Past papers are important – but they should only be part of your child's revision! Targeted topic work in combination with past papers has been shown to improve outcomes than past papers alone.

- Students should only be completing past papers if they are also MARKING THEIR WORK: we don't want them practising the wrong things.

- We will be giving students two papers to complete over half-term: one calculator and one non-calculator! Student friendly mark schemes will be shared via Bromcom – please make sure these are completed.

Maths Extra

Every Wednesday and Thursday

3:05 – 4:05 pm

COME ALONG TO ROOM L19

for help with your maths homework, your class-work or some revision

to use a school laptop or i-pad for on-line maths homework

to practise maths questions for your next test or exam

Mrs. Prescott will be there to help

How can you support?

- Talk to them about their Maths – positively!
- Make sure they are bringing their equipment to school each day – they NEED to have their own scientific calculator (Casio FX-83GTCW is current model).
- Keep an eye on the maths work they are doing; if it looks like lots of 'note-taking', encourage them to do more questions.
- If they are stuck? Help if possible – watching the videos and pausing together is excellent! If not – direct them to speaking to their teacher/attending Maths Extra.

Final thoughts….

The best way to get better at Maths is by doing lots of Maths!

Supporting Success in English

2024

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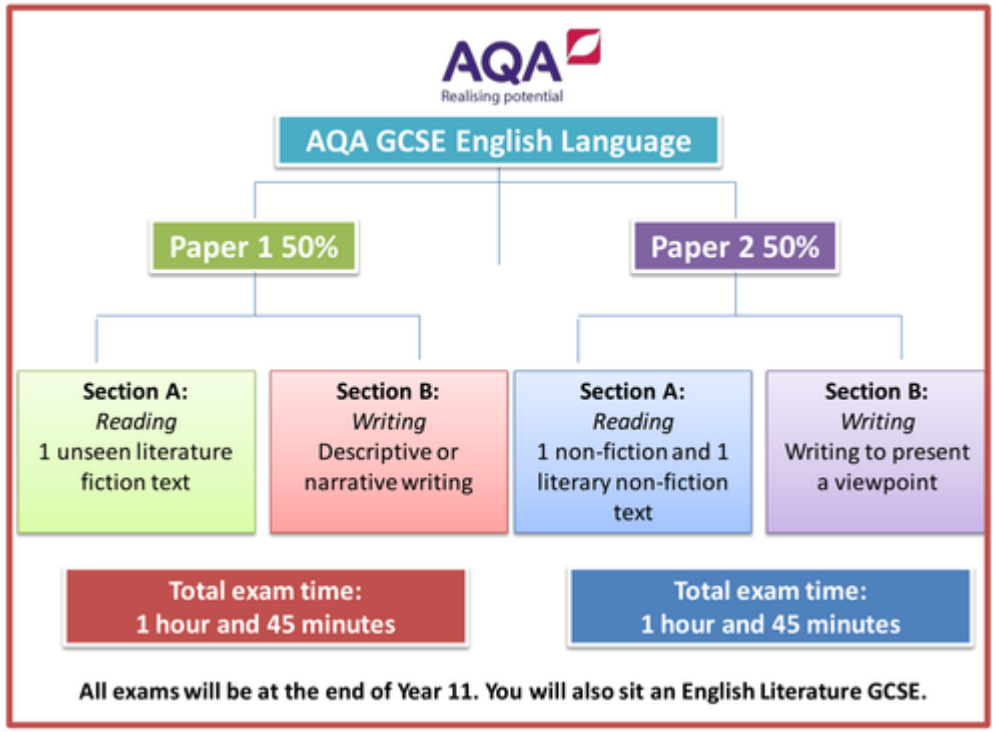
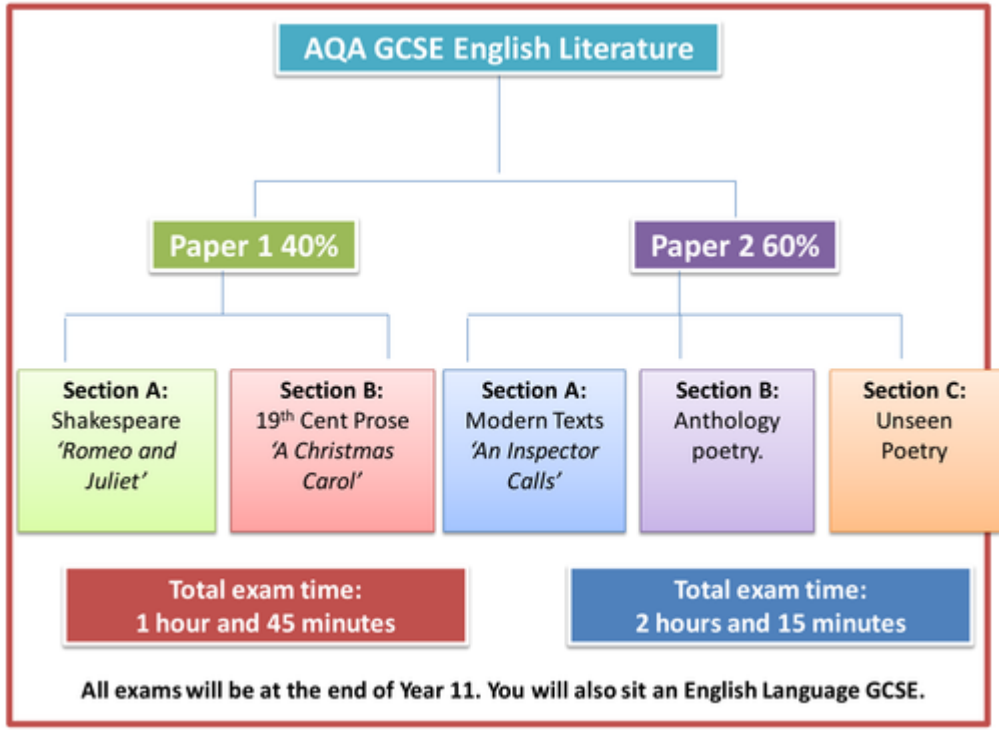
Exam Board: AQA



https://www.aqa.org.uk/subjects/english/gcse/english-language-8700

Exam Board: AQA



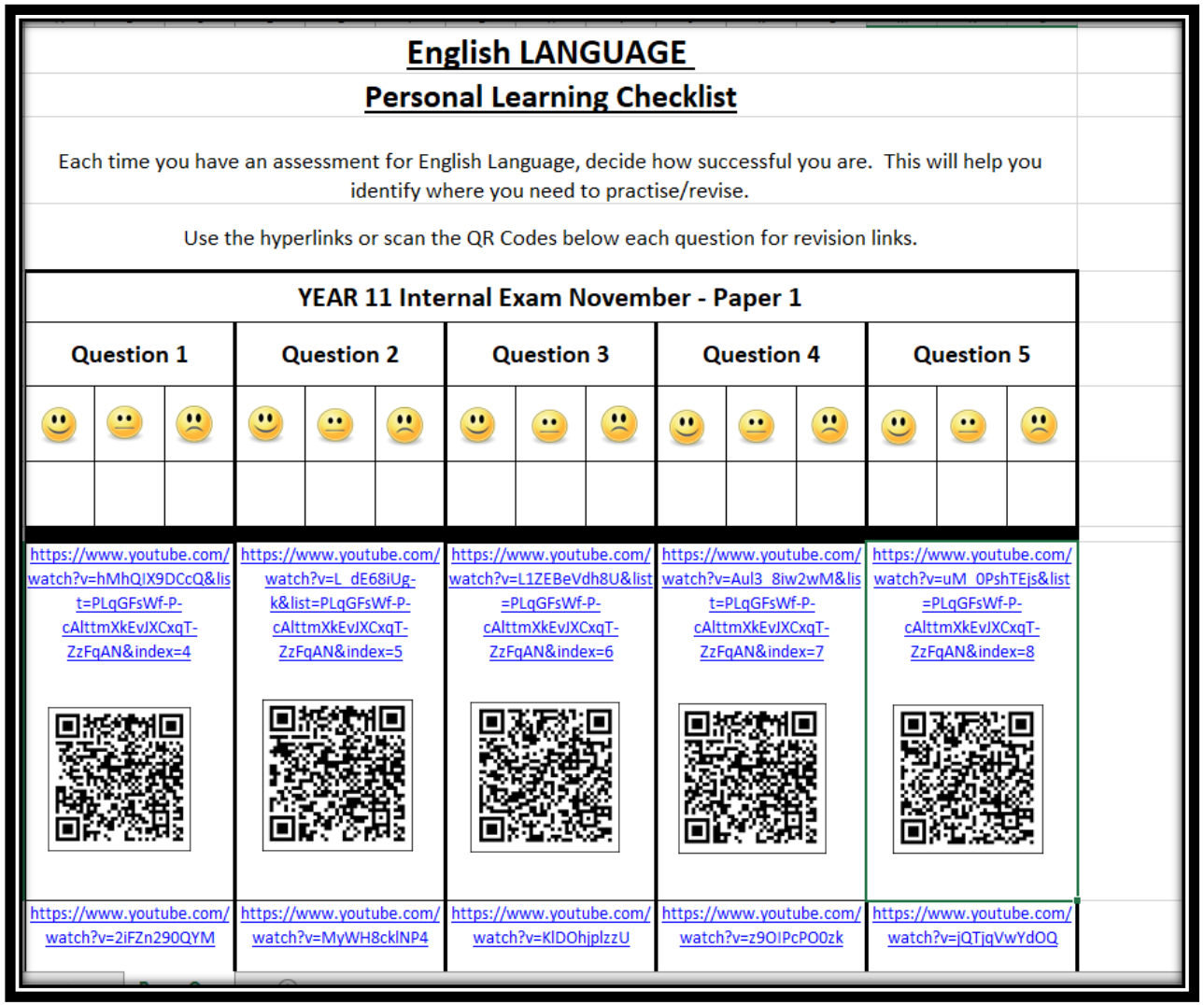
https://www.aqa.org.uk/subjects/english/gcse/english-literature-8702

Three steps to success:

- Diagnose (Identify topics to improve)
- Therapy (learn how to get better)
- Assess (find out if you have improved)

PLCS

- Diagnose (Identify topics to improve)
- Therapy (learn how to get better)
- Assess (find out if you have improved)



English LANGUAGE

Personal Learning Checklist

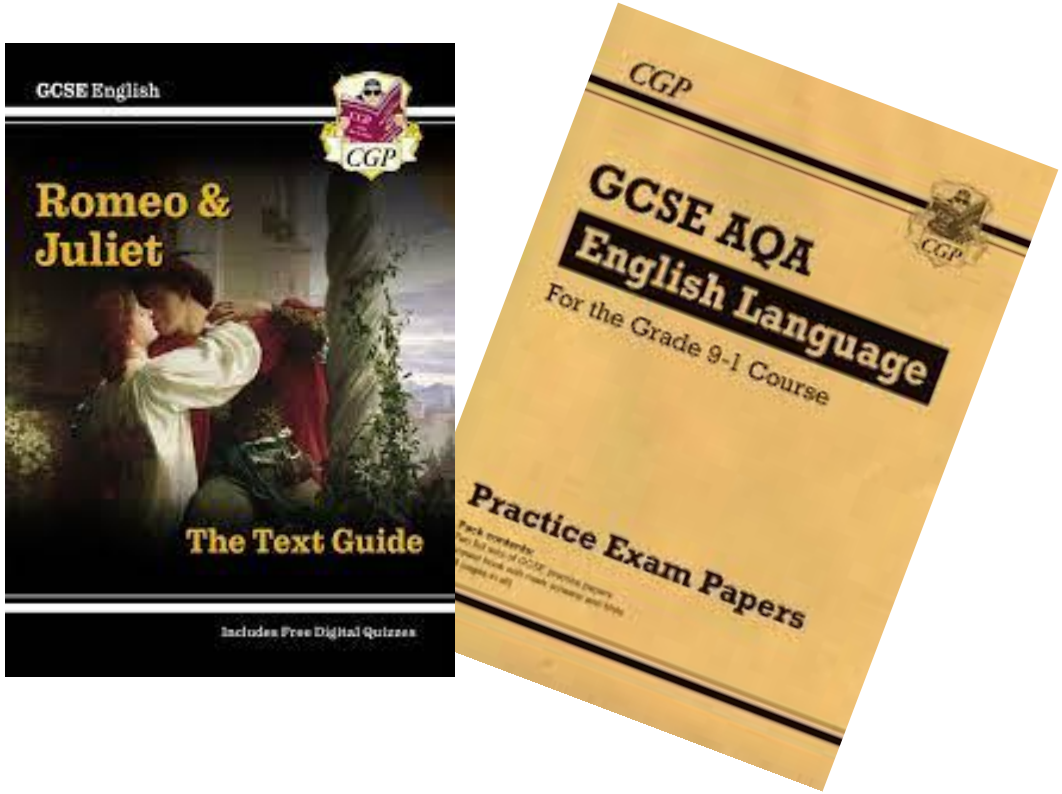
Each time you have an assessment for English Language, decide how successful you are. This will help you identify where you need to practise/revise.

Use the hyperlinks or scan the QR Codes below each question for revision links.

YEAR 11 Internal Exam November - Paper 1					
	Question 1	Question 2	Question 3	Question 4	Question 5
	😀 😐 ☹	😀 😐 ☹	😀 😐 ☹	😀 😐 ☹	😀 😐 ☹
	https://www.youtube.com/watch?v=hMhQIX9DCcQ&list=PLqGFsWf-P-cAlttmXkEvJXCxqT-ZzFqAN&index=4	https://www.youtube.com/watch?v=L_dE68iUg-k&list=PLqGFsWf-P-cAlttmXkEvJXCxqT-ZzFqAN&index=5	https://www.youtube.com/watch?v=L1ZEBeVdh8U&list=PLqGFsWf-P-cAlttmXkEvJXCxqT-ZzFqAN&index=6	https://www.youtube.com/watch?v=Aul3_8iw2wM&list=PLqGFsWf-P-cAlttmXkEvJXCxqT-ZzFqAN&index=7	https://www.youtube.com/watch?v=uM_0PshTEjs&list=PLqGFsWf-P-cAlttmXkEvJXCxqT-ZzFqAN&index=8
	https://www.youtube.com/watch?v=2iFZn290QYM	https://www.youtube.com/watch?v=MyWH8ckINP4	https://www.youtube.com/watch?v=KlDOhjplzzU	https://www.youtube.com/watch?v=z9OIPcPO0zk	https://www.youtube.com/watch?v=jQTjqVwYdOQ

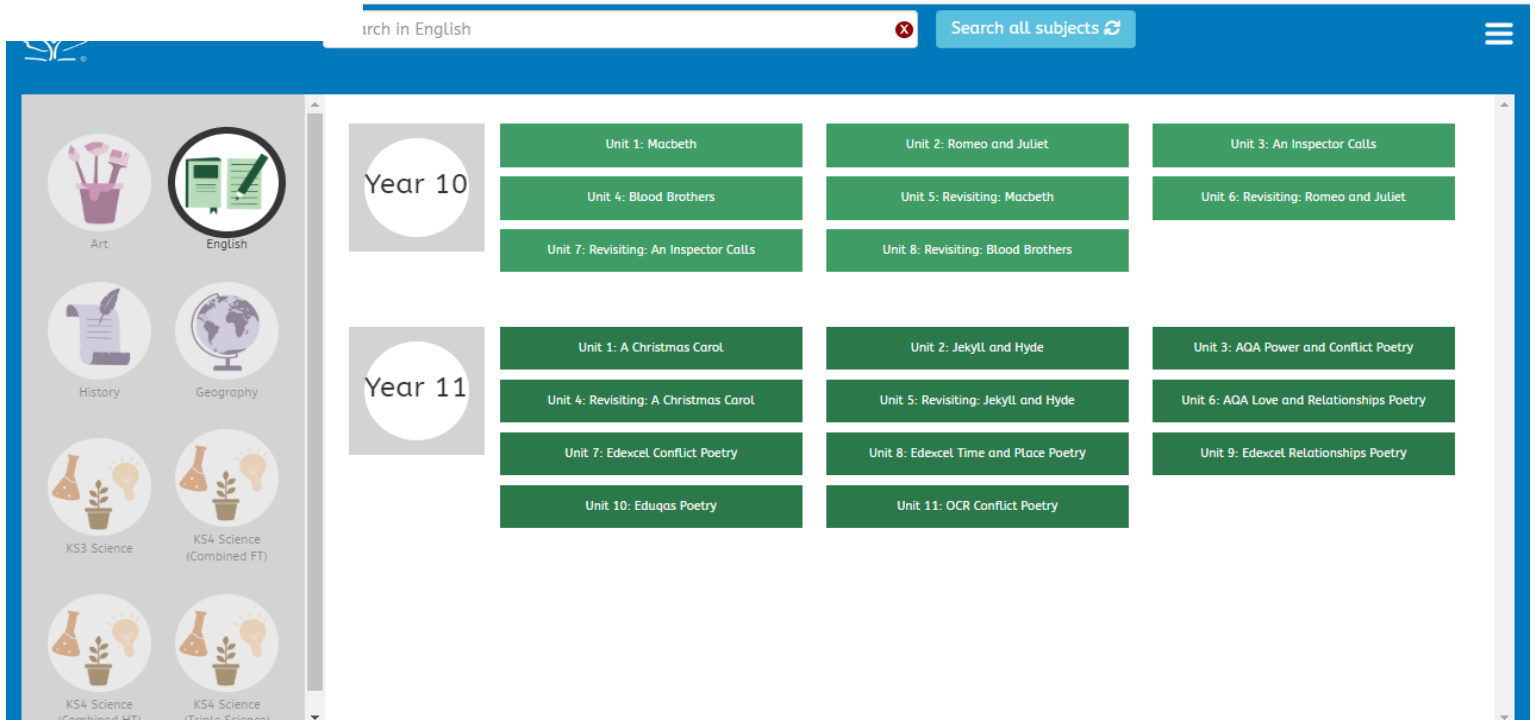
Top Tips

- Attention Span
- Empathy
- Diverse thought



OAK NATIONAL ACADEMY

https://continuityoak.org.uk/lessons



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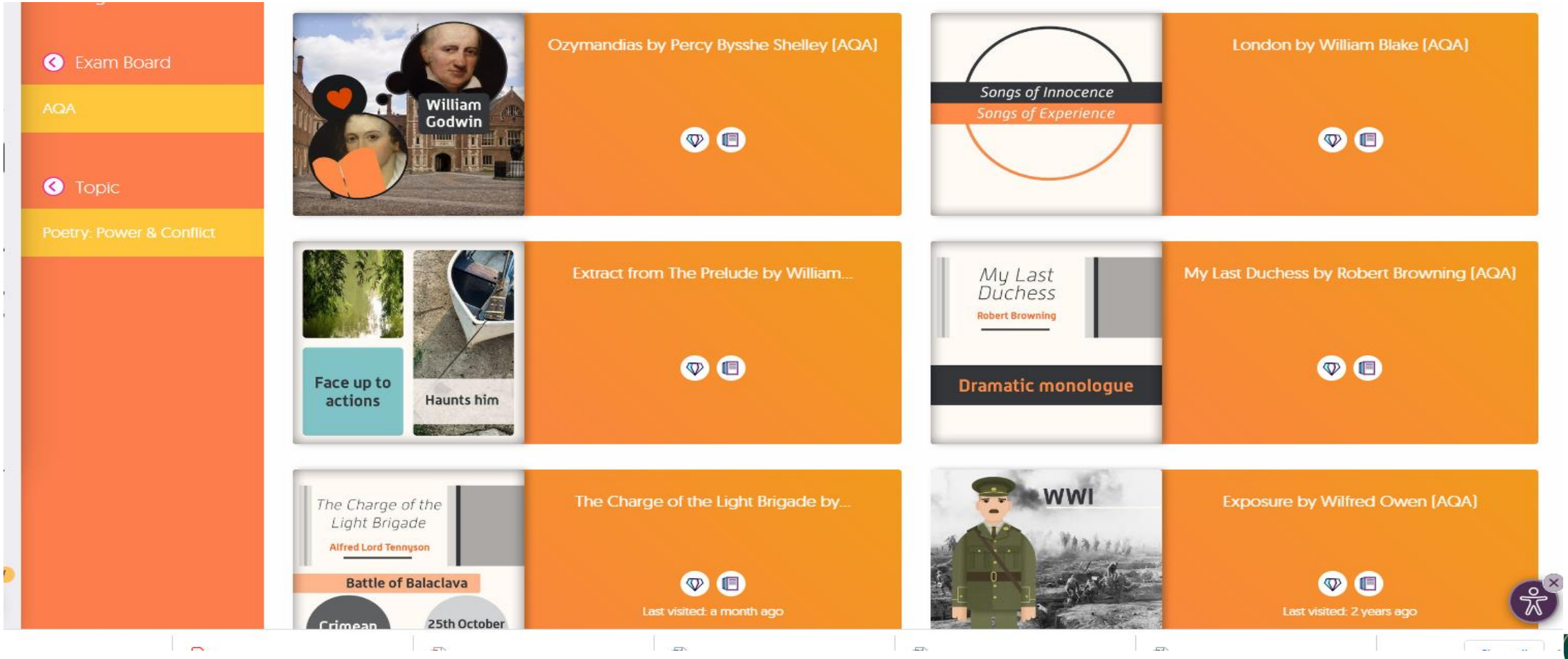

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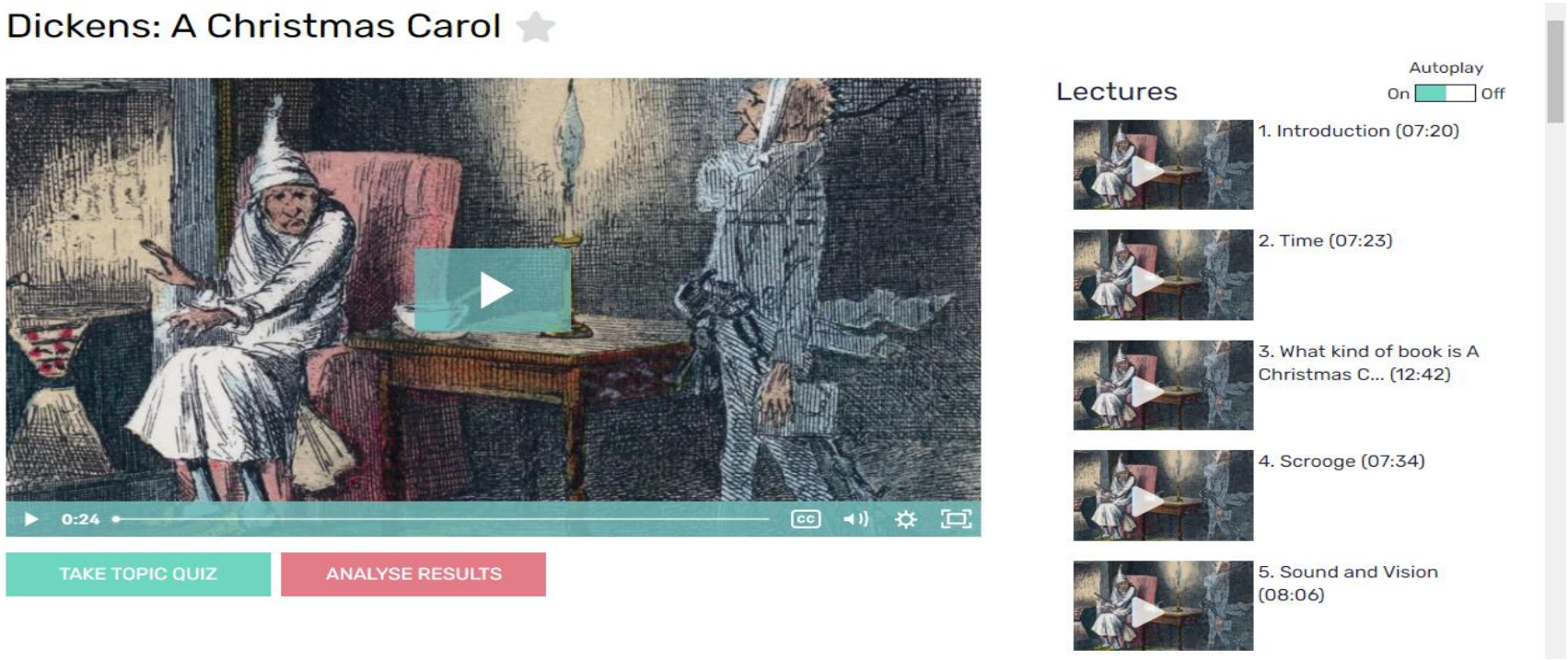
Massolit has lots of lectures that you can listen to and improve your understanding of the texts.

Google Massolit and go to the sign in page

https://www.massolit.io/users/sign_in



The internet is useful!

AQA our (exam board) here you will find exam materials to practise with

www.aqa.org.uk/subjects/english/gcse/english-language-8700/assessment-resources

https://www.aqa.org.uk/subjects/english/gcse/english-literature-8702/specification-at-a-glance

YouTube

www.youtube.com

Just type in what you want to practise and you will find lots of options available to you.

Mr Bruff

https://www.youtube.com/channel/UCM2vdqz-7e4HAuzhpFuRY8w

Massolit

https://www.massolit.io

BBC Bitesize GCSE English Language

www.bbc.co.uk/education/subjects/zr9d7ty

Revision platforms

https://www.senecalearning.com

Education Quizzes

www.educationquizzes.com/gcse/english

English on Wednesday

This takes place in L04 from 3.05pm.

Each week, we will focus on a different aspect of the exam paper. The details of each session is on the door so students can plan which sessions to attend.

Final thoughts….

The best way to get better at English is by reading and practising writing answers!

Supporting Success in Science

2024

Developing confident, respectful and successful young people

Science Content

	Paper 1	Paper 2
Bio	Unit 1 – cell biology Unit 2 – organisation Unit 3 – infection & response Unit 4 – bioenergetics	Unit 5 – homeostasis & response Unit 6 – inheritance, variation & evolution Unit 7 – ecology
Chem	Unit 1 – atomic structure & the periodic table Unit 2 – bonding, structure & properties of matter Unit 3 – quantitative chemistry Unit 4 – chemical changes Unit 5 – energy changes	Unit 6 – the rate & extent of chemical change Unit 7 – organic chemistry Unit 8 – chemical analysis Unit 9 – chemistry of the atmosphere Unit 10 – using resources
Phys	Unit 1 – energy Unit 2 – electricity Unit 3 – particle model of matter Unit 4 – atomic structure	Unit 5 – forces Unit 6 – waves Unit 7 – magnetism & electromagnetism Unit 8 – space physics – separate only

The units listed above match those in AQA specific revision guides.

March Internal Exams
= Paper2

The Plan

Most of the content will be finished prior to the next internal exams.

21-Feb	0	Revision
27-Feb	0	INTERNAL EXAMS
06-Mar	0	P2,C2,B2
13-Mar	orting for succes evening- 1	Exam Review
20-Mar	0	Rev. from here
27-Mar	0	
03-Apr	Easter	
11-Apr	Easter	
17-Apr	0	
24-Apr	0	
01-May	2nd May B/H	
08-May	0	
15-May	0	External Exams start
22-May	0	
30-May	Half-term	
05-Jun	0	
12-Jun	INSET- 16th June	
19-Jun	0	
26-Jun	0	

Biology paper 1 – 10th May
Chemistry paper 1 – 17th May
Physics paper 1 – 22nd May

May Half Term

Biology paper 2 - 7th June
Chemistry paper 2 – 11th June
Physics paper 2 – 14th June

How many science lessons before the first science exam?

55 lessons

How to revise for the upcoming mocks

The following document has been put onto bromcom for all students and emailed to parents and carers

Combined Science Paper 2 Revision

Futura Learning Partnership

TASSOMAI The Learning Program

Have you completed Tassomai today?

If not spend 10 minutes to achieve your daily goal!

It is now time to get ready for your second set of internal exams. For biology, chemistry and physics you will complete a paper 2 – you have not done these papers before. The paper 2 modules are below for each subject:

Biology	Chemistry	Physics
Unit 5 – homeostasis & response	Unit 6 – the rate & extent of chemical change	Unit 5 – forces
Unit 6 – inheritance, variation & evolution	Unit 7 – organic chemistry	Unit 6 – waves
Unit 7 – ecology	Unit 8 – chemical analysis	Unit 7 – magnetism & electromagnetism
	Unit 9 – chemistry of the atmosphere	
	Unit 10 – using resources	

The following pages have the generic PLCs for paper 2 – example below:

Futura Learning Partnership

Separate Chemistry - Paper 1
Personal Learning Checklist

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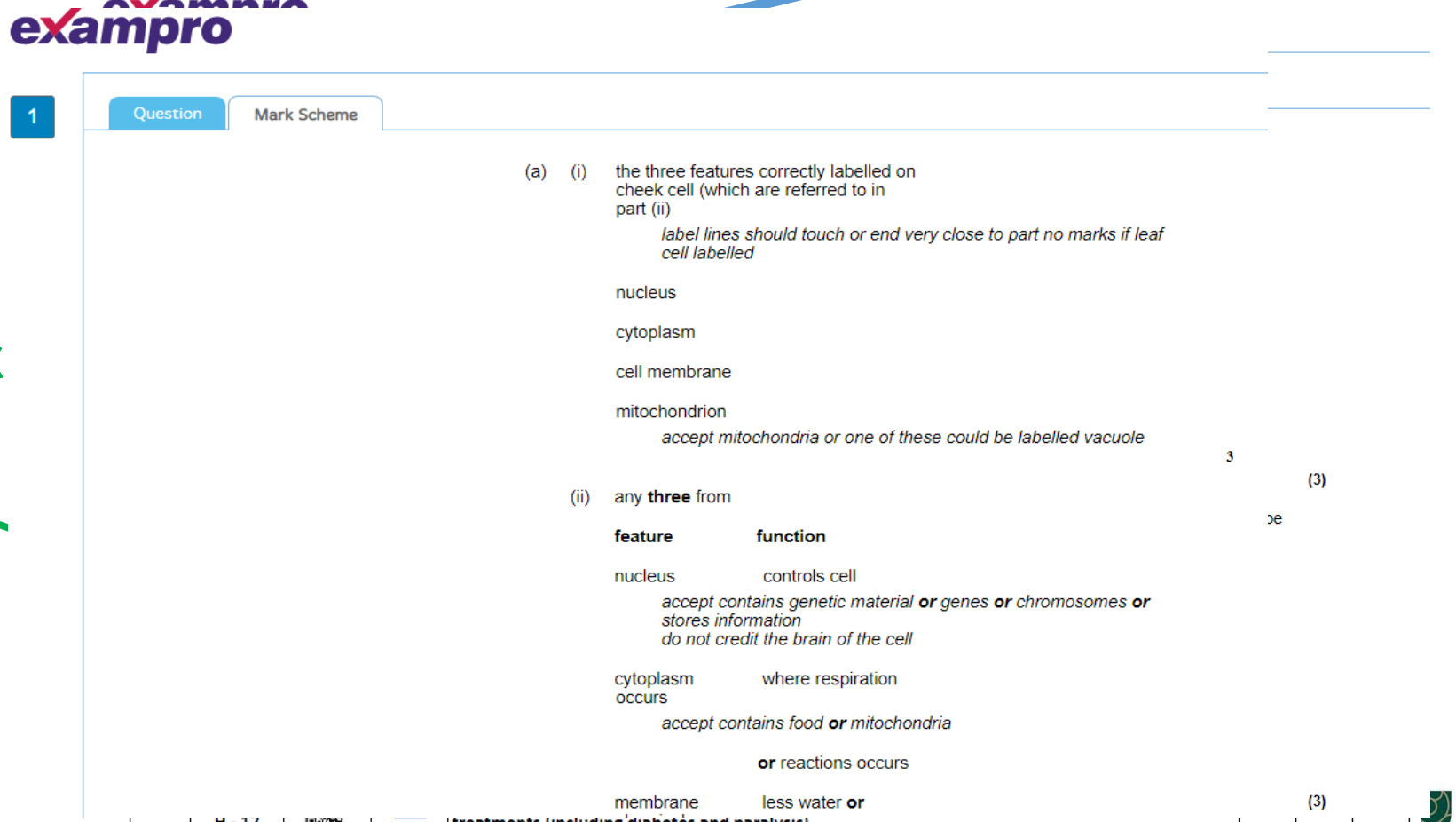
Student						
Point	Rev. Guide	Exam Qu Link	Bitesize Link	<-- For working hyperlinks please use the electronic version on INSIGHT	Revised (tick & date)	Revised (tick & date)
Unit 1 - Atomic Structure and the Periodic Table						
4.1.1 Atom						
1.1	16, 31, 32		Link	Recall what atoms are, describe the atomic model and how it has changed over time. Be able to state the number and charges of the sub atomic particles in an atom. Describe electronic configuration. Explain why elements in the same group have the same properties.		
1.2	17, 19, 34, 35, 37		Link	Describe the difference between elements, compounds and mixtures. Use diagrams to represent compounds, elements and mixtures and Use formulae and symbols to represent them. Describe the history of the periodic table. Identify metals and non-metals on the periodic table, compare and contrast their properties.		
1.3	39, 40, 41, 42, 43		Link	Describe the properties and reactivity of group 0,1,7 with refereene to their elecrton arrangement and be able to predict their reactions.		

PLCs – Personal Learning Checklists

By the end of the year you will have 2 PLCs. Use these to direct your revision.

You can click on the QR codes to access exam questions and the mark schemes.


exampro

1

Question | Mark Scheme

(a) (i) the three features correctly labelled on cheek cell (which are referred to in part (ii)

label lines should touch or end very close to part no marks if leaf cell labelled

nucleus

cytoplasm

cell membrane

mitochondrion

accept mitochondria or one of these could be labelled vacuole

3

(3)

(ii) any **three** from

feature	**function**
nucleus	controls cell
cytoplasm	where respiration occurs
membrane	less water **or**

*accept contains genetic material **or** genes **or** chromosomes **or** stores information*
do not credit the brain of the cell

*accept contains food **or** mitochondria*

or reactions occurs

(3)

	H - 17			treatments (including diabetes and paralysis)			
1.13	F - 17 H - 17		Link	Describe the process of diffusion, including examples, and how it can be affected by different factors	100%		

Additional information prior to the exams

- Pupils will be given all equations for your physics exams. (Not chemistry or biology)

AQA

Physics Equations Sheet

GCSE Combined Science: Trilogy (8464) and GCSE Combined Science: Synergy (8465)

FOR USE IN JUNE 2023 ONLY

HT = Higher Tier only equations

kinetic energy = 0.5 × mass × (speed)^2	$E_k = \frac{1}{2} m v^2$
elastic potential energy = 0.5 × spring constant × (extension)^2	$E_e = \frac{1}{2} k e^2$
gravitational potential energy = mass × gravitational field strength × height	$E_p = m g h$
change in thermal energy = mass × specific heat capacity × temperature change	$\Delta E = m c \Delta\theta$
power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$
power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
charge flow = current × time	$Q = I t$
potential difference = current × resistance	$V = I R$
power = potential difference × current	$P = V I$
power = (current)^2 × resistance	$P = I^2 R$
energy transferred = power × time	$E = P t$

	energy transferred = charge flow × potential difference	$E = Q V$
HT	potential difference across primary coil × current in primary coil = potential difference across secondary coil × current in secondary coil	$V_P I_P = V_S I_S$
	density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$
	thermal energy for a change of state = mass × specific latent heat	$E = m L$
	weight = mass × gravitational field strength	$W = m g$
	work done = force × distance (along the line of action of the force)	$W = F s$
	force = spring constant × extension	$F = k e$
	distance travelled = speed × time	$s = v t$
	acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
	(final velocity)^2 – (initial velocity)^2 = 2 × acceleration × distance	$v^2 - u^2 = 2 a s$
	resultant force = mass × acceleration	$F = m a$
HT	momentum = mass × velocity	$p = m v$
	period = $\frac{1}{\text{frequency}}$	$T = \frac{1}{f}$
	wave speed = frequency × wavelength	$v = f \lambda$
HT	force on a conductor (at right angles to a magnetic field) carrying a current = magnetic flux density × current × length	$F = B I l$

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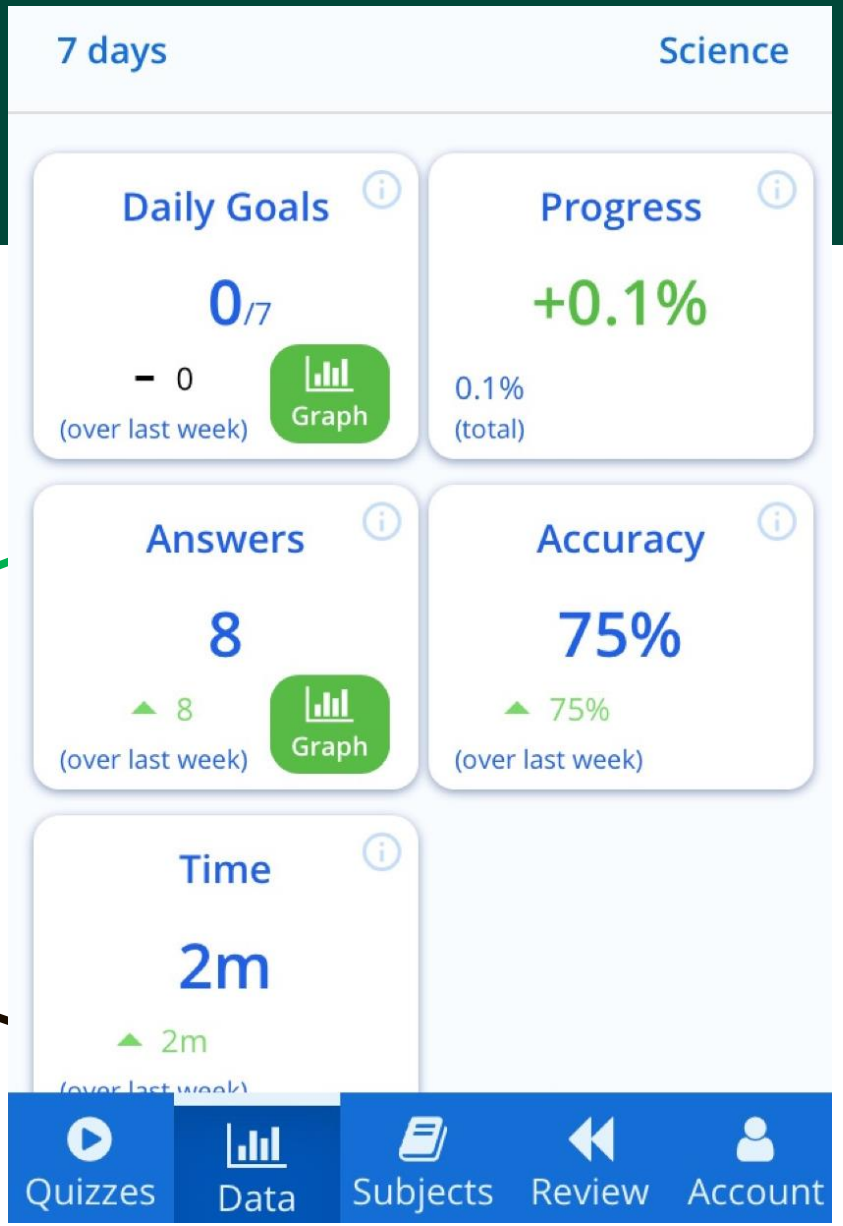
Tassomai

Tassomai is most effective when used frequently (3-4 times a week for 10-15 minutes).

Students should complete their daily goal.

You can view usage and achievement by clicking the data tab.



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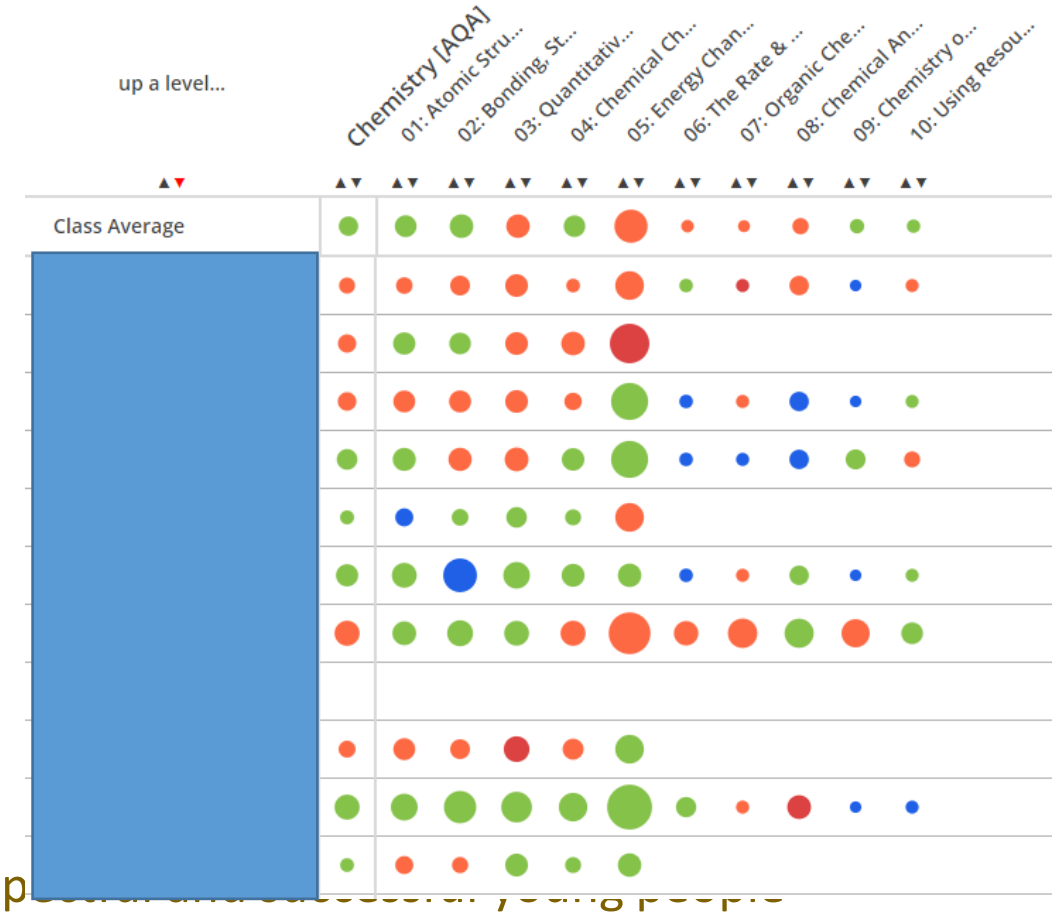
Tassomai – why is it helpful?

- Quiz is personal to pupils and programmed to visit their areas of weakness
- Teachers



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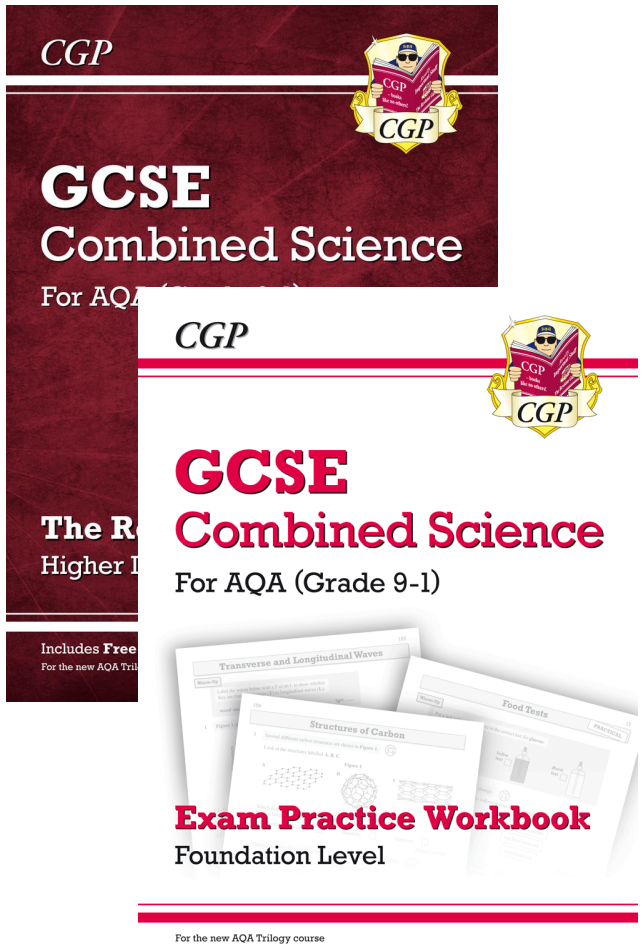
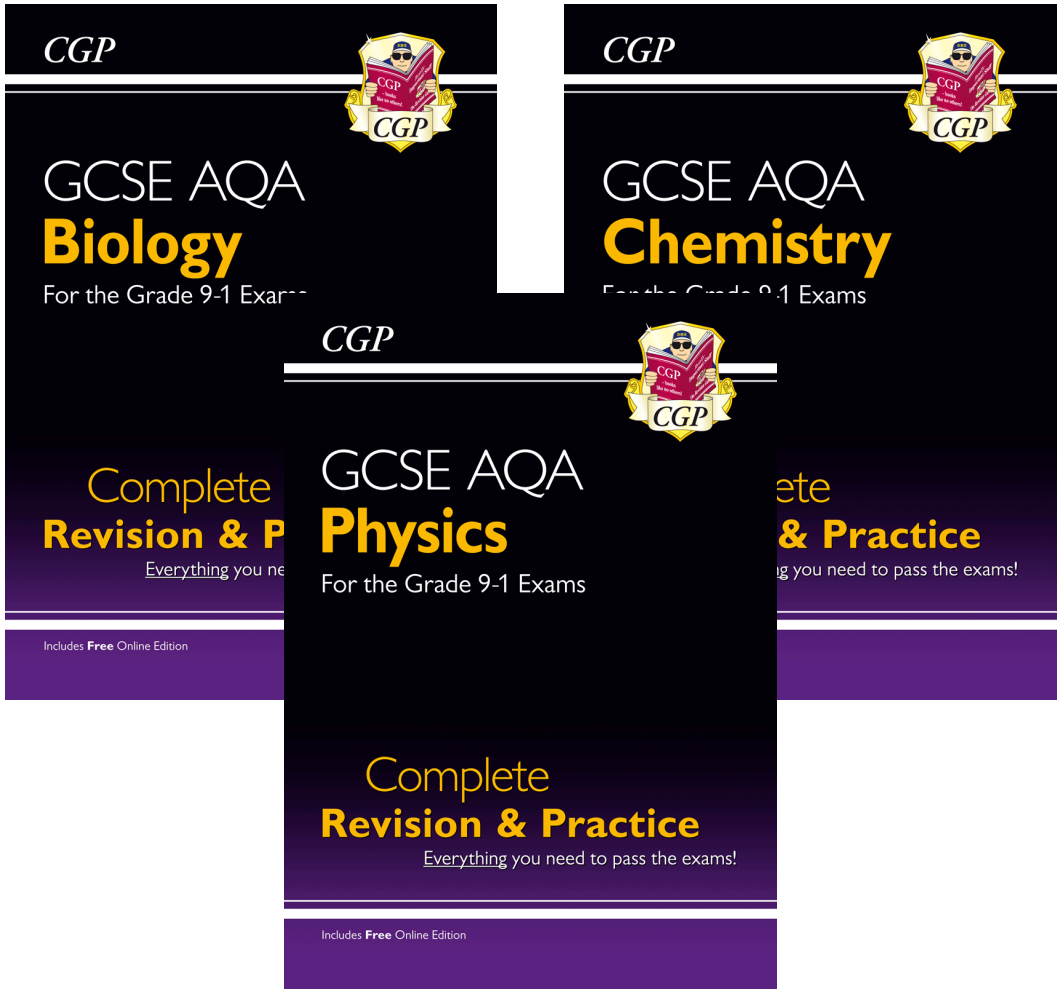
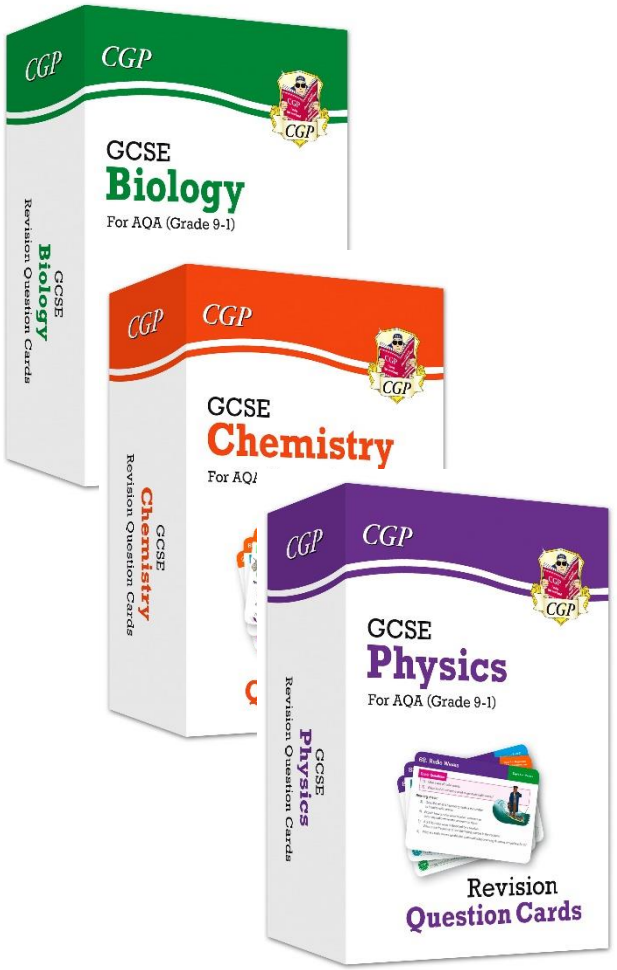
CGP Revision Resources







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Required Practical Revision

Biology Paper 2

Unit	Required Practical	Youtube	Bitesize	Exam Questions
5	Investigating reaction times	Video 1	Link	
5	Investigating the effect of light or gravity on the growth of newly germinated seedlings. (separate only)	Video 1	Link	F H
7	Measure the population size of a common species in a habitat (sampling techniques)	Video 1 Video 2	Link	F H
7	Investigating the effect of temperature on the rate of decay of fresh milk by measuring pH change. **(Separate only)**	Video 1 Video 2	Link	F H

Chemistry Paper 2

Unit	Required Practical	Youtube	Bitesize	Exam Questions
6	Rates of Reaction	Video 1 Video 2 - Precipiate Video 3 – collecting gas	Link 1 Link 2	F H
8	chromatography	Video 1 Video 2	Link	F H
8	Identifying ions **(separate only)**	Video 1 Video 2	Link	F H
10	Potable Water	Video 1 Video 2	Link	F H

Physics Paper 2

Unit	Required Practical	Youtube	Bitesize	Exam Questions
6	Wave speed	Video 1 Video 2	Link	F H
6	Reflection and Refraction **(separate only)**	Video 1 Video 2	Link	F H
5	Force and Extension	Video 1 Video 2	Link	F H
5	Acceleration	Video 1 Video 2	Link	

All of the above are included in the how to revise document

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Required Practical Work

One of the best ways to revise required practicals is to watch the videos on youtube walking you through them and then to complete exam questions from your PLC

Maths in Science

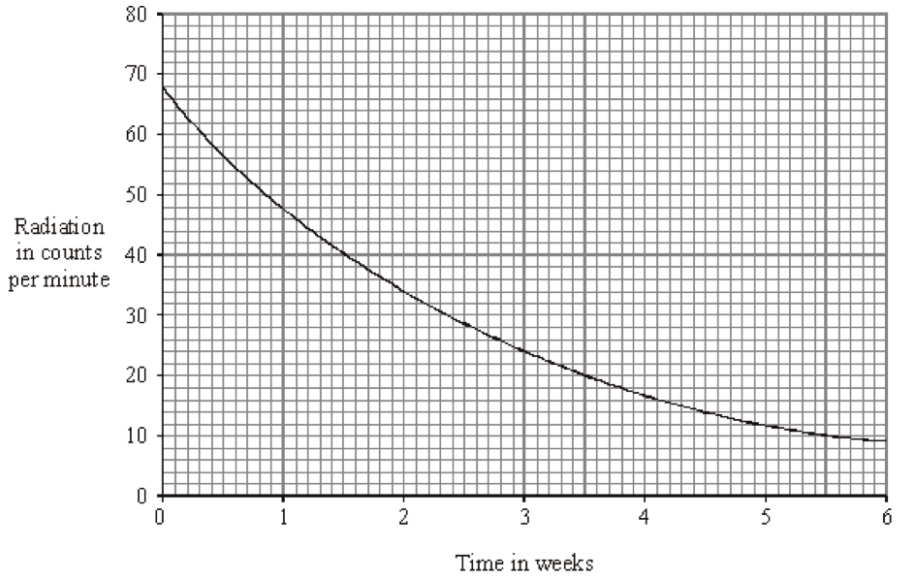
Around 20% of the exam will link directly to mathematics.

This will include using formulae, calculating means, using standard form, interpreting data from graphs and tables…

It is important that students take a calculator to all of their science exams.

Q2. A teacher measured the amount of radiation from a radioactive source, during the same lesson each week, over a period of six weeks.

The results are shown on the graph.



How long does it take for the radiation to fall from 68 counts per minute to half that value?

Show clearly how you work out your answer.

.....

.....

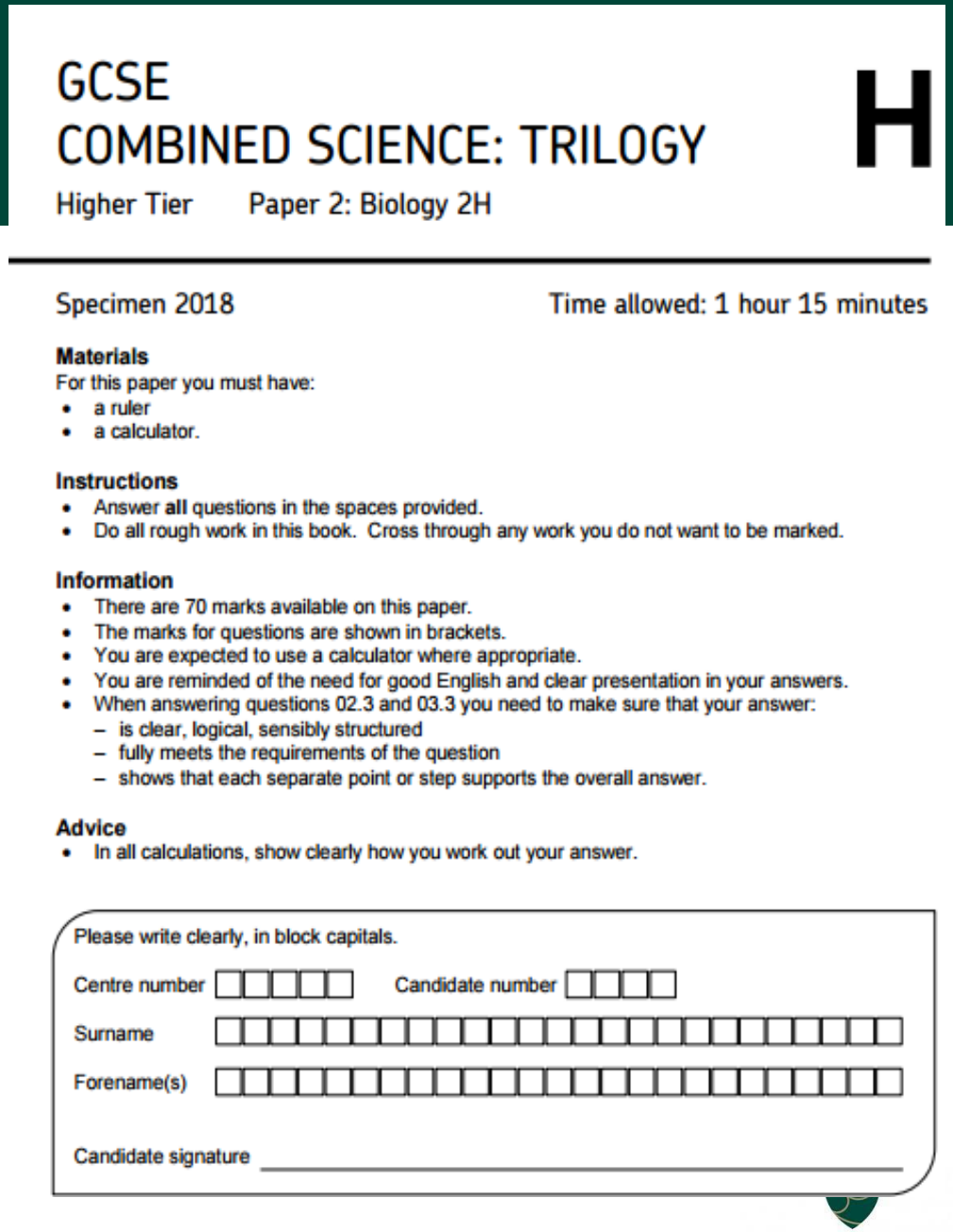
Time taken for radiation to halve .....

(Total 3 marks)

Testing

All current specification papers will be given to students for their internal exams or during revision.

Additional old specification, but still relevant, questions can be found by searching online. A good website for this is 'physics and maths tutor'; there is a link in the supporting success booklet.



GCSE
COMBINED SCIENCE: TRILOGY

H

Higher Tier Paper 2: Biology 2H

Specimen 2018 Time allowed: 1 hour 15 minutes

Materials
For this paper you must have:
- a ruler
- a calculator.

Instructions
- Answer **all** questions in the spaces provided.
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- There are 70 marks available on this paper.
- The marks for questions are shown in brackets.
- You are expected to use a calculator where appropriate.
- You are reminded of the need for good English and clear presentation in your answers.
- When answering questions 02.3 and 03.3 you need to make sure that your answer:
  - is clear, logical, sensibly structured
  - fully meets the requirements of the question
  - shows that each separate point or step supports the overall answer.

Advice
- In all calculations, show clearly how you work out your answer.

Please write clearly, in block capitals.

Centre number Candidate number

Surname

Forename(s)

Candidate signature

Science Revision

- Science revision sessions will start after mocks in term 5
- 3 sessions a week Tue-Thur
- Each session will be on a specific unit or required practical
  - Students and parents/carers will be informed of the content of sessions each week
  - Students can pick and choose what they need to attend (using their PLC!)

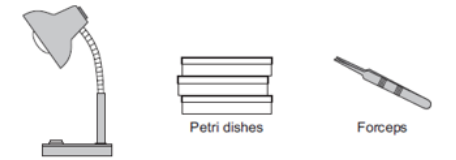
Walking Talking Mocks

Finally, prior to the summer exams we will utilise walking talking mocks.

These papers are a time to hone exam technique and cover key concepts.

Question 11

(b) The drawings show some apparatus and materials.

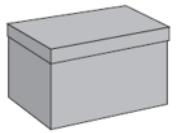


Lamp

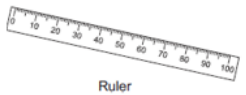
Petri dishes

Forceps

50 maize seedlings on damp cotton wool



Supply of cardboard boxes with lids



Ruler

Scissors

In this question you will be assessed on using good English, organising information clearly and using specialist terms where appropriate.

Describe how the students could use some or all of the apparatus and materials shown in the drawings to investigate the growth response of maize seedlings to light shining from one side.

You should include a description of the results you would expect.

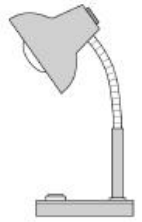
Plan an investigation to show the effect of light from one direction on the growth of plant seedlings.

Include details of any controls needed.

You may use some of the equipment shown in **Figure 4** and any other laboratory apparatus.

[6 marks]

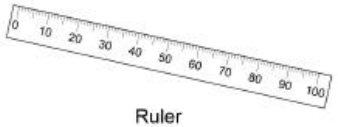
Figure 4



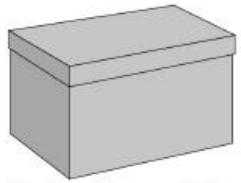
Lamp

Several pots of seedlings

Scissors



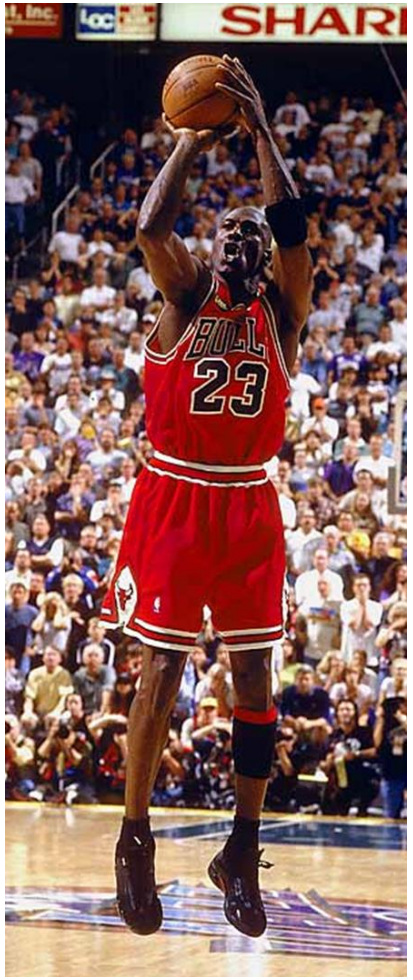
Ruler



Cardboard boxes with lids

Michael Jordan on resilience…….

"I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life."



"And that is why I succeed"