

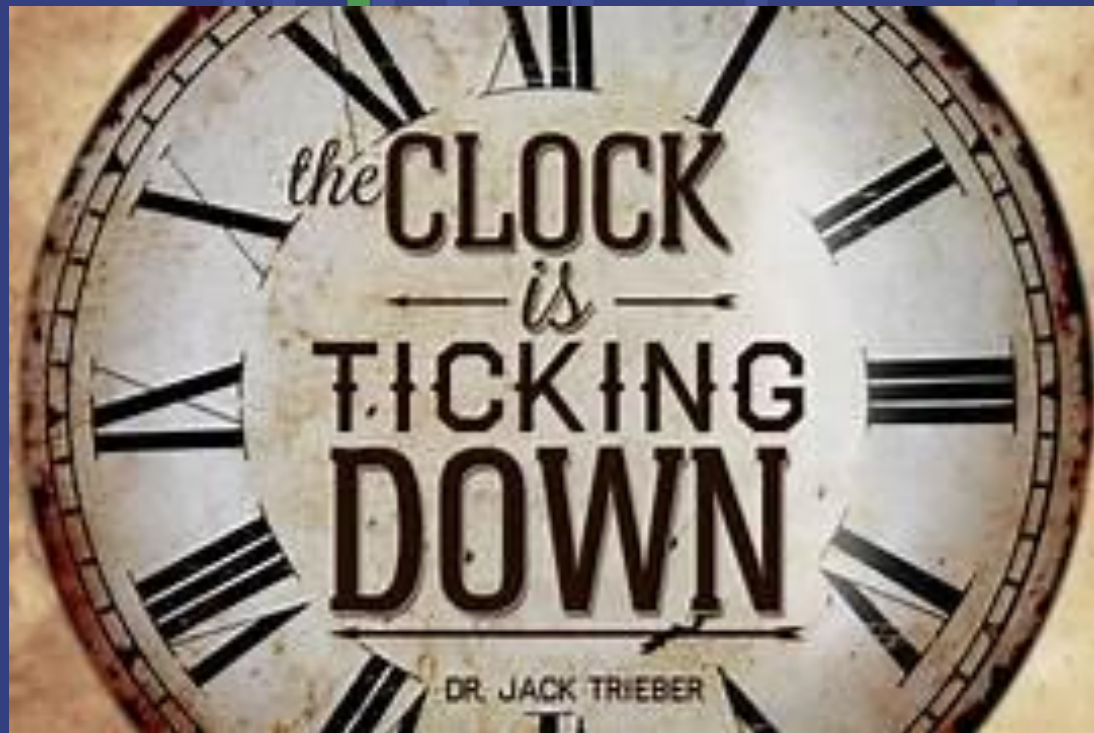
Welcome to Perins



Year 10 Core Subjects Information Evening

January 29th 2026
Mr Nevola





Working in partnership to achieve the best outcomes
for your child



Road to independence



**ARE YOU
READY
FOR
EXAMS?**

Time for Action



Key Dates to be aware

- Year 10 Trial exams (mocks w/c 2nd March)



- Year 10 parents evening (23rd April)

What we hope you take away from this evening



Our team are ready to provide an understanding:

- How to ensure your child is prepared to get the best out of their lessons
- How best students can be helped to revise effectively
- What is being looked for and assessed in the GCSE core subjects



Year 10 Assessment Schedules

January 29th 2026
Miss Sweetman



Year 10 Mock week – Week commencing 2nd March

	Mon 2 nd March	Tues 3 rd March	Weds 4 th March	Thurs 5 th March	Friday 6 th March
Session 1 (08.50 - 10.50)	English Language (1 hr)	Biology (1hr 20 m) Combined Science - Bio (1 hr 10 m)	Chemistry (1 hr 20 m) Combined Science - Chem (1hr 10 m)	Maths: Non-Calculator (1 hr 20 m)	Physics (1 hr 20 m) Combined Sci – Phys (1 hr 10 m)
Session 2 (11.10 - 13.10)	History (1 hr 20 m)	Maths: Calculator (1 hr 20 m)	Languages (1 hr 10 m) & Geography A (1 hr 20 m)	Geography B (1 hr 20 m) & Computer Science (1 hr 20 m)	English Literature (1 hr)

*This provides for core and EBACC subjects. Other subjects may plan to deliver exams in timetabled lessons.

Year 10 Calendar Dates

Year 10 Work Experience Week

Monday 23rd March- Friday 27th March 2026

Year 10 Parents Evening

Thursday 23rd April 2026 16:00-19:00

English

January 29th 2026
Mr Barber



2 separate qualifications

2 terminal exams in each

English Language

2 exams, both 1h45, both 80 marks
3x unseen sources (C19, C20, C21)

Section A: Reading skills

Comprehension

Inference

Language analysis

Structure analysis

Evaluation

Comparison

Section B: Writing skills

Structuring

Vocabulary

Methodology

Accuracy & Variety

English Literature

2 exams: 1h45, 2h15
5 sections, mostly studied texts

Paper 1 (1h45, 64 marks, 40%)

Macbeth (30 + 4 for SPAG)

Jekyll and Hyde (30)

Section 2 (2h15, 96 marks, 60%)

'Modern Text' (30 + 4 for SPAG)

'Power and Conflict Poetry' (30)

Unseen Poem 1 (24)

Unseen poetry comparison (8)

Skills

Interpretation & evidencing

Analysis of writer's choices & their effects

Interpretation of contextual factors

English: assessment composition

English Language

Paper 1 (1h45, 80 marks)

1 fiction source

4 comprehension & Analysis questions

1 descriptive/Narrative writing task

Paper 2 (1h45, 80 marks)

2 non-fiction sources

4 comprehension & Analysis questions

1 non-fiction writing task

English Literature

Paper 1 (1h45, 64 marks, 40%)

Macbeth (30 + 4 for SPAG)

Jekyll and Hyde (30)

Paper 2 (2h15, 96 marks, 60%)

'Modern Text' (30 + 4 for SPAG)

'Power and Conflict Poetry' (30)

Unseen Poem 1 (24)

Unseen poetry comparison (8)

English GCSE – grades What colleges and employers are looking for

“Grade 4 in English Language”

Life skills

Comprehension

Inference

Language analysis

Structure analysis

Evaluation

Comparison

The higher the grade, the better
these things have been
evidenced

A good Literature score can
support a bad Language score

Structuring

Vocabulary

Methodology

Accuracy & Variety

Being prepared for English

A PEN.

A pen which suits the student

Spare pens

A pencil & ruler

A charged laptop

Highlighters

Copies of the text

Recall

'Perins expected standard' in English

"Evidence of hard work in the classroom"

What does acceptable work look like?

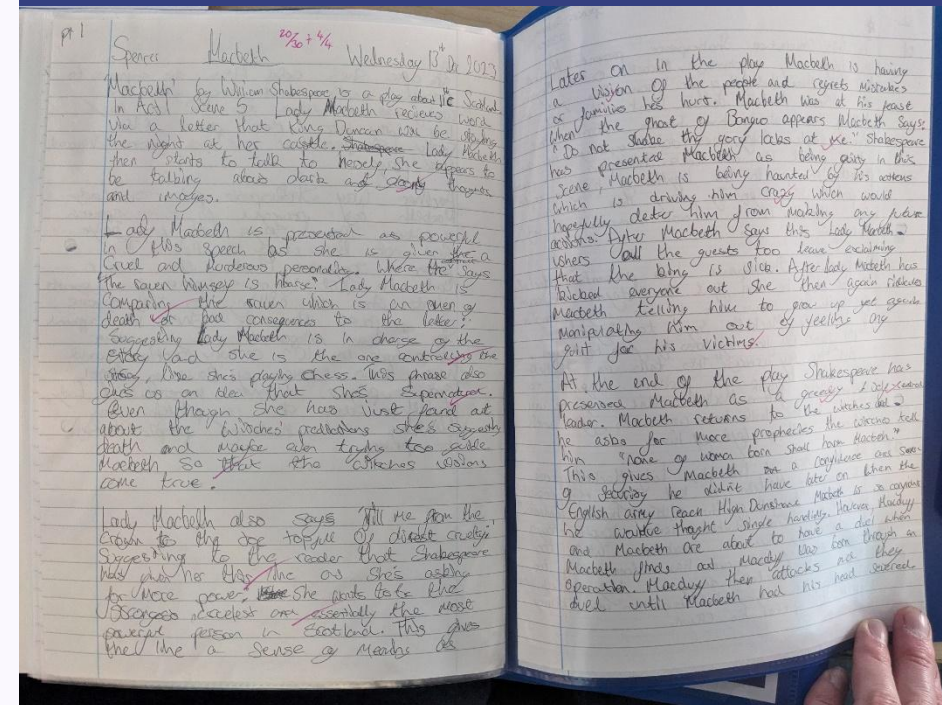
Homework handed in on time

Seneca scores 80% or above, essays 'a respectable length'

Punctual to lessons

Uses the time to do the task

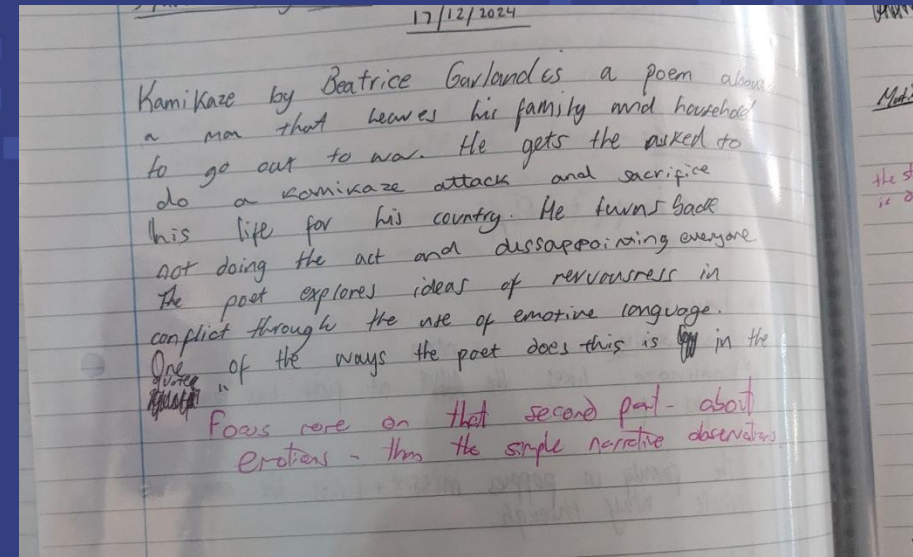
Status ^	Learning Time ^	Avg ^	W1 ^	W2 ^	W3 ^	W4 ^	W5 ^
✓	32min 28s	95%	100%	80%	75%	100%	100%
✓	7min 51s	93%	100%	67%	100%	100%	100%
✓	18min 12s	96%	90%	100%	75%	100%	100%
✗	16min 36s	67%	64%	80%	100%	57%	80%
✓	10min 11s	96%	100%	80%	75%	100%	100%
✓	6min 54s	96%	100%	80%	100%	100%	100%
✓	7min 31s	77%	80%	80%	50%	67%	100%
✗	-	-	-	-	-	-	-
✓	13min 6s	100%	100%	100%	100%	100%	100%
✗	-	-	-	-	-	-	-
✓	8min 54s	97%	100%	100%	100%	100%	100%
✓	7min 46s	97%	100%	100%	100%	80%	100%
✗	-	-	-	-	-	-	-
🕒	24min 49s	100%	100%	100%	100%	100%	100%



'Perins expected standard' in English

"Evidence of hard work in the classroom"

✓	32min 28s	95%	100%	80%	75%	100%	100%
✓	7min 51s	93%	100%	67%	100%	100%	100%
✓	18min 12s	96%	90%	100%	75%	100%	100%
✗	16min 36s	67%	64%	80%	100%	57%	80%
✓	10min 11s	96%	100%	80%	75%	100%	100%
✓	6min 54s	96%	100%	80%	100%	100%	100%
✓	7min 31s	77%	80%	80%	50%	67%	100%
✗	-	-	-	-	-	-	-
✓	13min 6s	100%	100%	100%	100%	100%	100%
✗	-	-	-	-	-	-	-
✓	8min 54s	97%	100%	100%	100%	100%	100%
✓	7min 46s	97%	100%	100%	100%	80%	100%
✗	-	-	-	-	-	-	-
🕒	24min 49s	100%	100%	100%	100%	100%	100%



What does unacceptable work look like?

- Homework late (or absent!) or low quality
- Late to lessons or enters in wrong frame of mind
- Quick to break silence or talk off topic
- Requires too many reminders to stay on task
- Does not use the time to complete the work

+ **naughty** behaviours like rude to staff, swearing, pushing and shoving, interfering with other people's learning etc...)

Revision – how does the school help?

Yr11 Tuesday lunchtimes and Thursdays after school

Books on Scopay including study guides and revision guides

Richly resourced Curriculum Hub and Revision Area

Trips & events

Simple homework strategy (Seneca and essays)

Some targeted, personalised, invitation-only provision (albeit limited, and not until yr11)

Revision	
+ New ▾ Discard changes Promote Page details A	
+ New ▾ Upload ▾ Edit in grid view Share Sync	
Name ▾	Modified ▾
15x GCSE Exam practice questions.docx	December 5, 2023
5x GCSE Exam practice questions J&H.docx	May 8, 2024
Chapter 2 Exam Style Task and Feedback Sheet.docx	November 8, 2018
Chapter 7 Exam Style Task and Feedback Sheet.docx	November 8, 2018
Dr Jekyll and Mr Hyde Revision guide improved.doc	November 8, 2018
J&H - 10 Minute Challenges.zip	November 8, 2018
J&H Useful Links.docx	November 8, 2018
Jekyll Hyde - Knowledge Organiser.pptx	November 8, 2018

Documents > Recommended Reading		
	Name ▾	Modified ▾
	Shakespeare Critical Essays	March 9, 2022
	1. Black Lives Matter book list Age 13-16 fr...	June 12, 2020
	2. Further BLM book recommendations.docx	June 12, 2020
	How to use the anthologies.url	July 2, 2021
	KS3 Poetry Anothology.pdf	July 2, 2021
	KS4 Poetry Anthology.pdf	July 2, 2021
	RR BIPOC.jpg	July 18, 2022
	RR LGBTQ+ ing	July 18, 2022

Revision – how can you help?

Conversations

Create an appropriate space for independent study
(Accountability for focus, establish boundaries!)

Resource it as best you can

Flashcards & other participation

Theatre trips!?

"All hail Macbeth,
who shall be _____
hereafter."

King

" IS THIS A
DAGGER
THAT I _ ? _ ? _ ."

" SEE BEFORE
me. "

Mathematics

January 29th 2026
Mr Holligan



Mathematics GCSE – what it entails

- Pearson Edexcel: 3 papers, each 90 minutes long
- 1 non-calculator paper; 2 calculator papers
- Questions are 1 – 7 marks; emphasis on workings

- Foundation Grade 1 – 5
- Higher Grade 3 – 9
- GCSE is given for 'mathematics' and does not reference the tier
- Decision on tier of entry is finalized in February of Year 11; but students need to know where they are at before then!

Foundation	Grade	Higher
	9	
	8	
	7	
	6	
	5	
Pass	4	Pass
	3	
	2	
	1	
	U	

Mathematics GCSE – what colleges and employers are looking for

Mathematics is nationally the most popular A level choice~ (and most respected by universities). Generally, colleges will ask for a minimum Grade 7 at GCSE.

Many employers will look for a Grade 5 as a 'Good' pass

4 is a pass ('C'). Students who fail to meet this are required to retake at college (until turning 18)

Foundation	Grade	Higher
	9	85%
	8	73%
	7	60%
	6	47%
77%	5	33%
62%	4	22%
46%	3	16%
30%	2	
15%	1	
	U	

Being prepared for maths



- Students are encouraged to look after their own books
- Students need a MODERN scientific calculator
- Students who have and use their own calculator do better in exams

What does it mean to do maths?

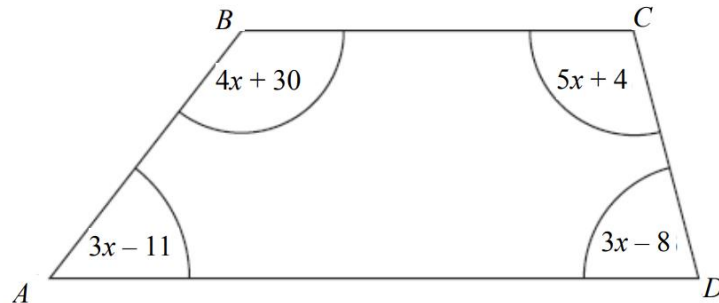


Department
for Education

Ensure that all pupils ...
Become fluent in the fundamentals of mathematics
Reason mathematically by following a line of inquiry
Can solve problems ... persevering in seeking solutions

Typical 4-mark crossover question

$ABCD$ is a quadrilateral.



All angles are measured in degrees.

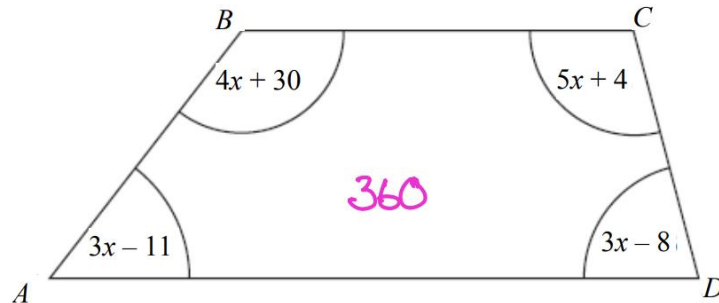
Show that $ABCD$ is a trapezium.

(Total for Question 7 is 4 marks)

What does acceptable work look like?

- Clearly laid out method
- Steps can be followed by the examiner & conclusion is clear
- Maths teachers model methods in class
- Students need to practice their working (before they get into the exam!)

$ABCD$ is a quadrilateral.



All angles are measured in degrees.

Show that $ABCD$ is a trapezium.

$$4x + 5x + 3x + 3x + 30 + 4 - 8 - 11 = 360$$

$$15x + 15 = 360$$

$$15x = 345$$

$$x = \frac{345}{15}$$
$$= 23$$

$$A = 3 \times 23 - 11 = 58$$

$$B = 4 \times 23 + 30 = 122$$

$$A + B = 58 + 122$$
$$= 180$$

$$C = 5 \times 23 + 4 = 119$$

$$D = 3 \times 23 - 8 = 61$$

$$C + D = 119 + 61$$
$$= 180$$

$ABCD$ is a trapezium as there are two pairs of co-interior angles.

(Total for Question 7 is 4 marks)

What does unacceptable work look like?

- These have been provided by the Exam board as examples of '0' scores
- Workings need to be laid out clearly
- Questions need to be answered fully
- Students MUST use a pencil for diagrams

Handwritten student work for Question 9 (b) showing multiple errors and confusion:

$$x = 10y - 7x$$

$$10y - 7x = \frac{8x}{100}$$

$$100y - 700x = 8x$$

$$100y = 708x$$

$$y = \frac{708x}{100}$$

$$y = \frac{177x}{25}$$

Use Pythagoras' theorem to work out the exact value of $\frac{x}{y}$

$$(7x)^2 + x^2 = (10y)^2$$

$$49x^2 + x^2 = 100y^2$$

$$50x^2 = 100y^2$$

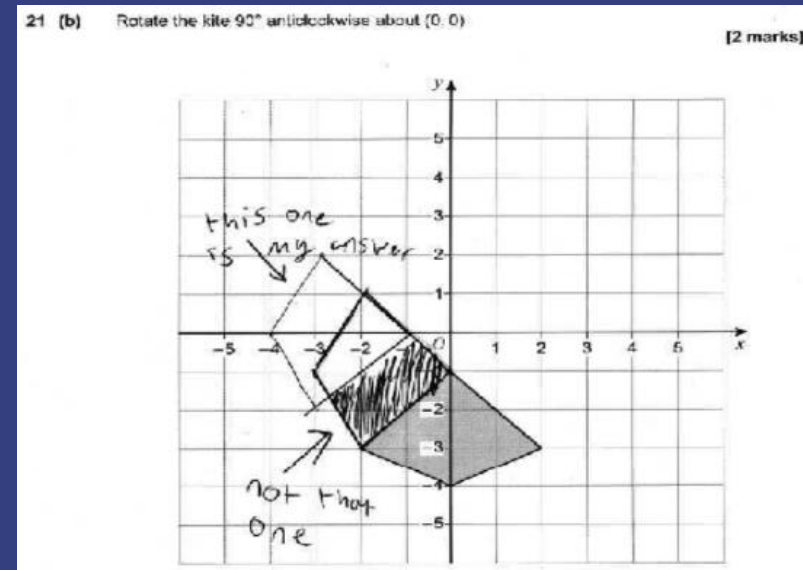
$$x^2 = 2y^2$$

$$x = 2y$$

Handwritten student work for Question 21 (b) showing a diagram of a kite on a coordinate grid. The kite is shaded and labeled "this one is my answer". The grid shows the kite's vertices at approximately (-3, 1), (-1, 2), (1, 2), and (3, 1). The student has also written "not that one" with an arrow pointing to a different shaded region.

9 (b) Work out the lowest common multiple (LCM) of 12 and 15 [2 marks]

Answer 3 or 60



How to revise maths?

Skills practice

- Sparx

Sparx

Homework

Independent learning

[Sparx Maths](#)

- Corbettmaths



How to videos

Practice questions/ans

[Videos and Worksheets – Corbettmaths](#)

- MathsMadeEasy

MME.

Revision by topic/grade

Sample questions

[Edexcel GCSE Maths Revision | Past Papers | Tests | Worksheets \(mmerevise.co.uk\)](#)

Past paper questions

- Provided by school

Materials on **Sharepoint / Edulink**

[Maths - Home \(sharepoint.com\)](#)

- Maths genie

Maths Genie

Has past papers with sample answers written in a student friendly way

<https://www.mathsgenie.co.uk/papers.php>

How can you help at home?

- Look through your child's exercise books with them
- ✓ What have they been studying?
- ✓ Are they correcting their own work & modelling answers?
- ✓ Are loose sheets stuck in? (some students struggle to complete this in class where teaching time is a premium)
- If possible, provide a quiet space for revision with social media turned off
- ✓ GCSE maths is based on an ability to independently solve problems
- If possible, print out revision lists and past papers
- ✓ It's helpful to practice writing answers (most students who use a laptop for other subjects will still do their GCSE maths on paper)
- Make sure they come to school with the right equipment
- Students who have and practice using their own equipment will do better in their exams

How does the school help?

- Year 10 mocks are an early chance to practice in exam conditions
- **We provide revision lists, lessons on how to revise, online revision material & sample papers**
- Students take their completed papers home & get a current 'grade'
- With a detailed breakdown of where they are gaining / losing marks
- Which provides for a focussed discussion at parents evening

Revision Checklist (Foundation) Year 9

1	Integers and Decimals	Check	3	Use laws of indices to multiply & divide numbers		5	Calculate percentage of an amount	U349/U554
	Types of number			Order of operations including powers and brackets			Use decimals to find quantities (multiplier methods)	
	Use and order positive and negative numbers	M527		Use of calculator	M757		Four operations with mixed number fractions	
	Use inequality symbols			Identify factors, multiples and prime numbers			Reciprocal of an integer, decimal or fractions	
	Four operations using positive and negative numbers			Prime factorisation of a number (& write in index form)		6	Equations and Inequalities	Check
	Round to nearest 10, 100, 1000 and use to estimate			Find common factors & highest common factor			Use function machines	
	Use decimals and place value			Find LCM of two (or three) numbers			Solve equations (inc brackets & unknowns on both sides)	
	Compare and order decimal numbers	M553	4	Interpreting and Representing Data (1)	Check		Set up & solve equations to solve problems	
	Four operations using decimal numbers			Sort and classify data (inc. tally charts)			On a number line	
	Round to nearest integer, decimal place & significant fig.			Extract data from lists and tables (inc timetables)			Listing numbers that satisfy an inequality	
	Use one calculation to check another			Identify mode from a list / table			Solving inequalities and show solution on a number line	
	Use index laws to simplify & calculate value of expression			Draw and interpret bar charts (inc dual & composite)		8	Angles and Polygons	Check
	Convert between ordinary numbers and standard form			Draw and interpret line graphs (vertical & time-series)			Measure and draw lines, angles, 2D & 3D shapes	
	Work with the four operations in standard form			Draw and interpret pictograms			Identify and name 2D shapes and their properties	U121
	Use a calculator with indices and standard form	U161		Draw and interpret stem and leaf diagrams			Identify parallel and perpendicular lines	
2	Algebra and Expressions	Check		Draw and use pie charts			Use angle facts - around a point, straight line, opposite etc	U655
	Write an expression			Draw and interpret scatter graphs & lines of best fit	U199/U277		Use angle properties of parallel lines	
	Collect like terms			Understand bias			Interior and exterior angles of polygons	
	Simplify expressions	U105		Calculate the mean, mode, median and range from a list	M440		Use sum of interior angles for irregular & regular polygons	
	Use index laws						Use sum of exterior angles for regular polygons	
	Expand single brackets		5	Fractions, Decimals and Percentages	Check	9	Plotting and Interpreting Graphs	Check
	Simplify expressions using squares and cubes			Equivalent fractions including simplifying & comparing			Use coordinates in all four quadrants	
	Factorise expressions	U365		Express one amount as a fraction of another			Midpoints of a line segment	
	Substitute into expressions involving brackets & powers			Convert between mixed numbers and improper fractions			Conversion graphs	
	Substitute into a formula (& word formula)			Four operations using fractions			Fixed cost and cost per unit graphs	
	Know the terms equation, identity, expression etc.			Find a fraction of an amount			Draw, use and interpret (inc gradient) straight line graphs	
	Answer simple 'show that' questions			Use fraction to decimal conversions	M958		Identify parallel lines	
3	Factors, Multiples, Powers and Roots	Check		Recognise terminating & recurring decimals			Find the equation of a line (including from a graph)	
	Find squares and cubes	U851		Convert between fractions, decimals & percentages				
	Use index notation including negative powers			Order & compare fractions, decimals & percentages				
				Write one amount as a percentage of another				

Number

Algebra

Geometry

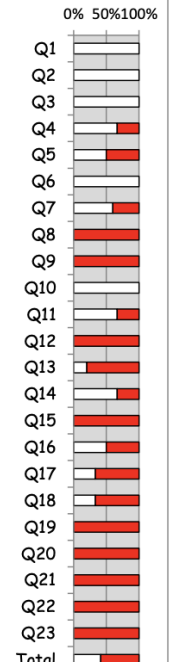
Data

Paper 1

Description	Marks	Marks	Marks
	Achieved	Available	Lost
Q1 Arithmetic Sequences	2	2	0
Q2 Fractions Sums	3	3	0
Q3 Area Problems	5	5	0
Q4 Venn Diagrams	2	3	1
Q5 Estimation	2	4	2
Q6 Straight Line Graphs	4	4	0
Q7 Ratio Problem Solving	3	5	2
Q8 Averages	0	3	3
Q9 Percentage Change	0	1	1
Q10 Simultaneous Equations	4	4	0
Q11 Transformations	2	3	1
Q12 Types of Graph	0	3	3
Q13 Histograms	1	5	4
Q14 Triple Brackets	2	3	1
Q15 Sectors	0	4	4
Q16 Algebraic Probability	1	2	1
Q17 Surds	1	3	2
Q18 Recurring Decimals to Fractions	1	3	2
Q19 Similar Triangles	0	3	3
Q20 Powers and Roots	0	3	3
Q21 Vol and Surface Area	0	5	5
Q22 Trigonometric Graphs	0	4	4
Q23 Circles	0	5	5
Total	33	80	47

☐ Marks Achieved

☒ Marks Lost



Reflection

Silly Mistake
Need to Practise

Answers: [ht](#)

Science

January 29th 2026

Mr Adams



Combined Science – 2 GCSE's

BIOLOGY	CHEMISTRY	PHYSICS
1. Cell Level Systems	1. Particles	1. Matter
2. Scaling up	2. Elements and Bonding	2. Forces
3. Organism Level Systems	3. Chemical Reactions	3. Electricity and magnetism
4. Community Level systems	4. Predicting Chemical Reactions	4. Waves and Radioactivity
5. Genetics	5. Rate of Change	5. Energy
6. Global Challenges	6. Global Challenges	6. Global Challenges

Biology Paper 1 Units 1-3 70 minutes 60 marks	16.7% of GCSE	Chemistry Paper 1 Units 1-3 70 minutes 60 marks	16.7% of GCSE	Physics Paper 1 Units 1-3 70 minutes 60 marks	16.7% of GCSE
Biology Paper 2 Units 4-6 70 minutes 60 marks	16.7% of GCSE	Chemistry Paper 2 Units 4-6 70 minutes 60 marks	16.7% of GCSE	Physics Paper 2 Units 4-6 70 minutes 60 marks	16.7% of GCSE

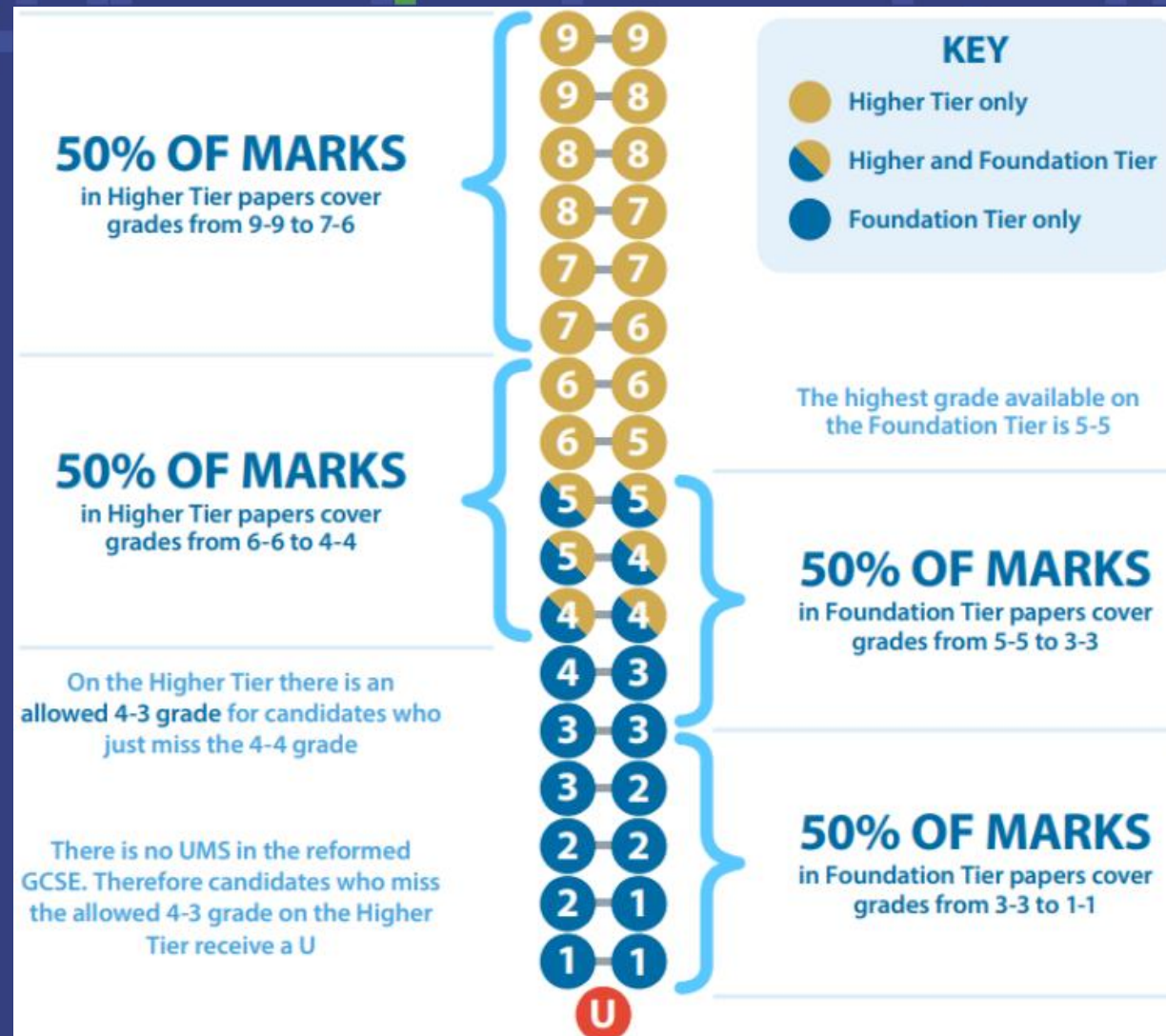
Separate Science Path – 3 Sciences

BIOLOGY	CHEMISTRY	PHYSICS
1. Cell Level Systems	1. Particles	1. Matter
2. Scaling up	2. Elements and Bonding	2. Forces
3. Organism Level Systems	3. Chemical Reactions	3. Electricity
4. Community Level systems	4. Predicting Chemical Reactions	4. Magnetism
5. Genetics	5. Rate of Change	5. Waves
6. Global Challenges	6. Global Challenges	6. Radioactivity
		7. Energy
		8. Global Challenges

Biology Paper 1 Units 1-3 105 minutes 90 marks	50% of GCSE	Chemistry Paper 1 Units 1-3 105 minutes 90 marks	50% of GCSE	Physics Paper 1 Units 1-4 105 minutes 90 marks	50% of GCSE
Biology Paper 2 Units 4-6 105 minutes 90 marks	50% of GCSE	Chemistry Paper 2 Units 4-6 105 minutes 90 marks	50% of GCSE	Physics Paper 2 Units 5-8 105 minutes 90 marks	50% of GCSE

Biology GCSE 1-9	Chemistry GCSE 1-9	Physics GCSE 1-9
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GCSE Combined Science - Tiers



GCSE Combined Science - Tiers

Will my certificate show the tier I sat?

Certificates do not show the tier of entry; they only show the grade achieved.

Is it easier to get a 5-5 on Higher Tier?

Each tier contains 20% common questions. This is used by exam boards to align the standards between tiers. This ensures that it is not easier to get a 4-4 or 5-5 on one tier than another.

What is recommended?

Ofqual recommend that if a student is expected to get a 4-4 or 5-5, they should take the Foundation tier papers.

Which tier should I be entered for if I just achieve a 5-5 in my mock?

If you only just got enough marks for a 5-5, it is recommended that you should take Foundation tier papers. Students who are aiming for a 5-5 are able to access at least twice as many marks in the Foundation Tier papers.

Science opportunities

Course	Peter Symonds	QMC	Alton College	Barton Peveril
Biology	6-6 or 6-5	6-6	6-6	6-6
Chemistry	7-6 or 6-6	6-6	6-6	6-6
Physics	7-6 or 6-6	6-6	6-6	6-6

These are the big three, but there are
MANY more...

Science opportunities

Course	College	Pre-requisite Grades
Medical Science	Barton Peveril Alton College	4-4 5-5
Environmental Science	Peter Symonds QMC	6-5 or 5-5 5-5*
Physical Education	Barton Peveril Alton College	4-4 (5*) 5-5
Electronics	QMC	6-6 (recommended)
Applied Human Biology	Peter Symonds	4-4
Health & Science (L2) Health & Nursing T-level	Alton College	3-3 5-5 or 5-4
Engineering (L3)	Alton College	4-4

GCSE Science - tools

- Pens – black for exams (these are scanned)
- Pens, pens, pens! – bring spares to school

Maths skills in science:

- Calculator – ‘Scientific’ helps
- Students can access more marks with ease
- Pencil and rubber – plotting graphs
- Ruler – taking measurements in questions



P	Participation	<ul style="list-style-type: none"> Bring everything you need to learn Do what you can to take part and contribute to a lesson
E	Excellence	<ul style="list-style-type: none"> Challenge yourself every lesson If at first you don't succeed, try and try again
R	Respect	<ul style="list-style-type: none"> Be silent for the teacher and other learners while they are speaking Listen and act responsibly on any help offered
I	Independence	<ul style="list-style-type: none"> Use the 'Brain – Book – Buddy – Boss' method to accomplish tasks Regularly review classwork and read around the subject area at home
N	Nurture	<ul style="list-style-type: none"> Offer help to other learners on tasks Complete practical work in groups Share equipment sensibly
S	Safe	<ul style="list-style-type: none"> Do not eat or drink in a lab Follow instructions given by the teacher Tidy-up practical work in a timely manner

What effort looks like in science

Basics:

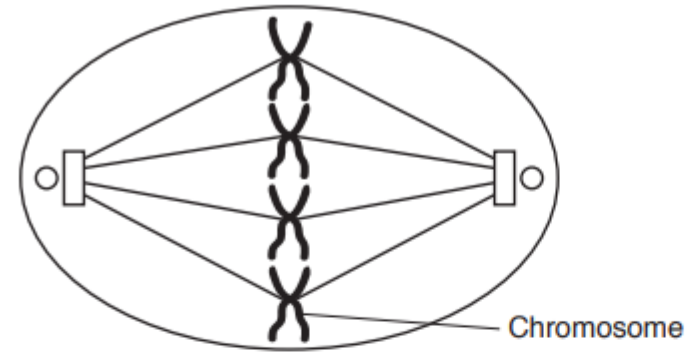
- On time
- Prepared to learn – book out, pen out, bags and coats in the bag store
- Full focus on the information presented
- Ask for clarity

PERINS Values:

- Recognised by achievement points
- Chat with your teacher

RECALL QUESTION

12 (a) The diagram shows a cell during one stage of **mitosis**.



(i) Describe **two** things that happen to the chromosomes in the next stage of mitosis.

(chromosomes) separate / split / divide / pulled apart ✓

2

2x1.1

WHERE A CANDIDATE USES A DIAGRAM
LOOK FOR THE CORRECT IDEAS LABELLED
ON THE DIAGRAM

(chromatids) move to opposite ends / by spindle fibres ✓

IGNORE just by fibres

ALLOW AS AN EXTRA MARKING POINT
(two) **new** nuclei form / membrane forms around
them / nuclear envelope forms around them ✓

IGNORE cell membrane splits
IGNORE references to DNA replication
IGNORE cytokinesis / cell splitting **[2]**

(ii) Chromosomes are made of DNA.

Describe the structure of DNA.

double helix ✓

polymer ✓

ALLOW polynucleotide ✓✓

ALLOW AS EXTRA MARKING POINTS

contains (four) bases ✓

reference to ATCG ✓

(made up of) nucleotides ✓

contains sugar / deoxyribose / phosphate group ✓

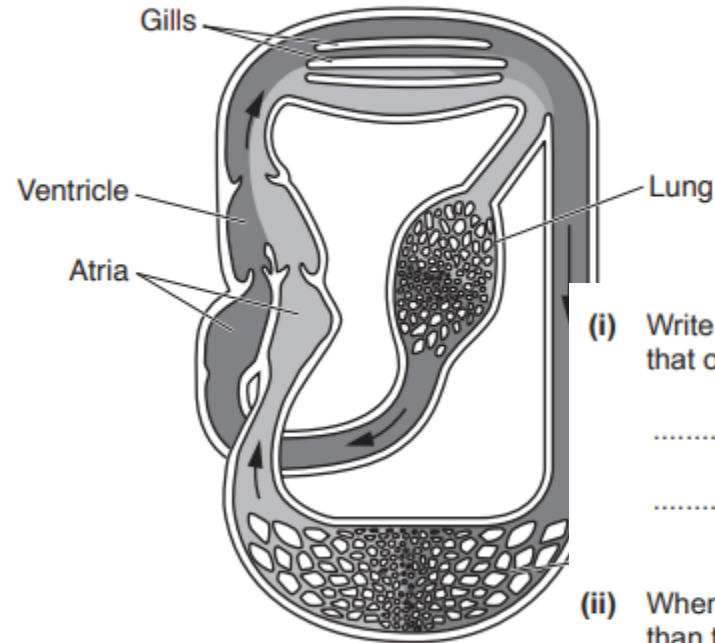
IGNORE deoxyribonucleic acid

APPLY QUESTION

(b) Lungfish are fish that have both gills and a lung.

When in water, the blood flows through the gills. When on land, blood flow to the gills is stopped and the blood enters the lung instead.

The diagram shows the circulatory system of a lungfish.



(i) Write down one **other** way the **structure** of the lungfish circulatory system is different to that of humans.

- (heart has) three chambers / not four chambers ✓
- (heart has) one ventricle / not two ventricles ✓
- only one artery leaving (heart) ✓

[1]

(ii) When lungfish and humans are on land, the human circulatory system is more efficient than that of lungfish.

(in humans) oxygenated and deoxygenated blood kept separate ✓

Suggest why the human circulatory system is more efficient.

-
-
- (so) more **oxygen** is carried around the body / more **oxygen** is supplied to the body cells ✓

[2]

The lungfish circulatory system is different to that of humans because:

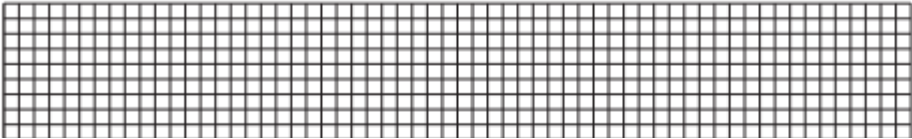
Blood in the lungfish can flow through gills and the lung.

PRACTICAL SKILLS

(b) The table shows his results.

Concentration of sugar solution (mol/dm ³)	Mass of potato chip		
	At		
0.0			
0.2			
0.4			
0.6			
0.8			
1.0			

(c) Plot a graph of the percentage change in mass against concentration of sugar solution and draw a line of best fit.



Use ideas about osmosis to explain the patterns in the results.

(chips) get bigger/gain mass when **water moves** in
OR
(chips) get smaller/loses mass when **water moves** out ✓

Calculate the p

Record your an

and **any two from:**

chip in low(er) concentration (of solution) **or**
0 (mol/dm³) **or** 0.2 (mol/dm³) the water potential inside
(cells) is **less** ✓

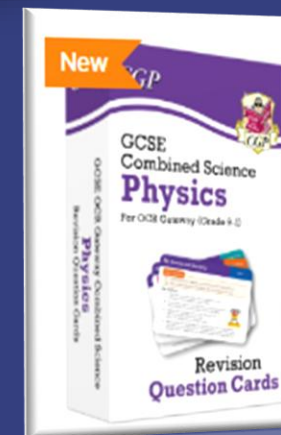
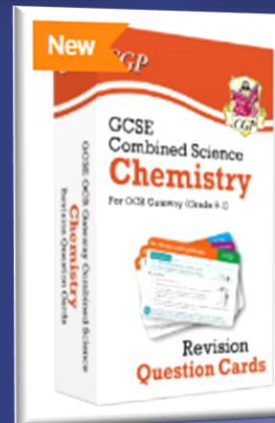
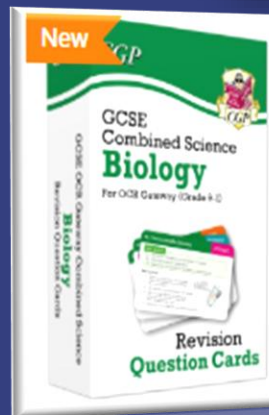
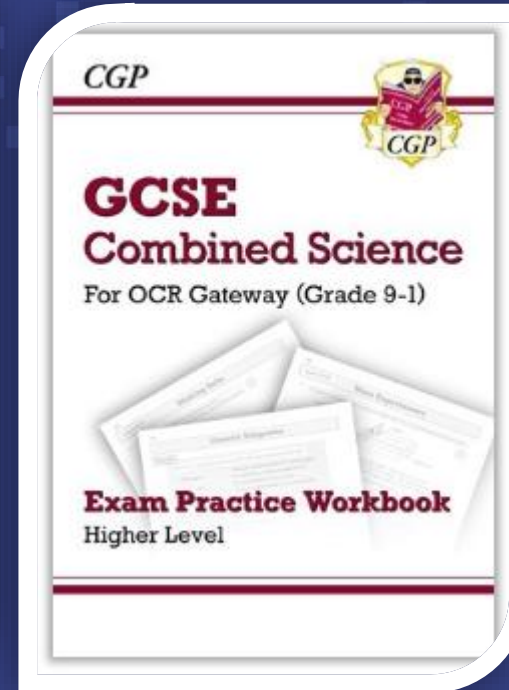
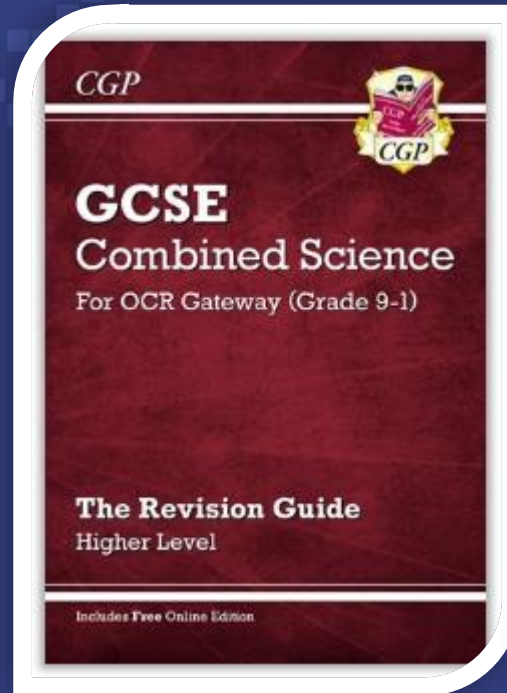
(so) water moves in when the water potential inside (cells)
is **less** ✓

chip in high(er) concentration (of solution) **or** more than
0.2 mol/dm³ the water potential inside (cells) is **greater** ✓

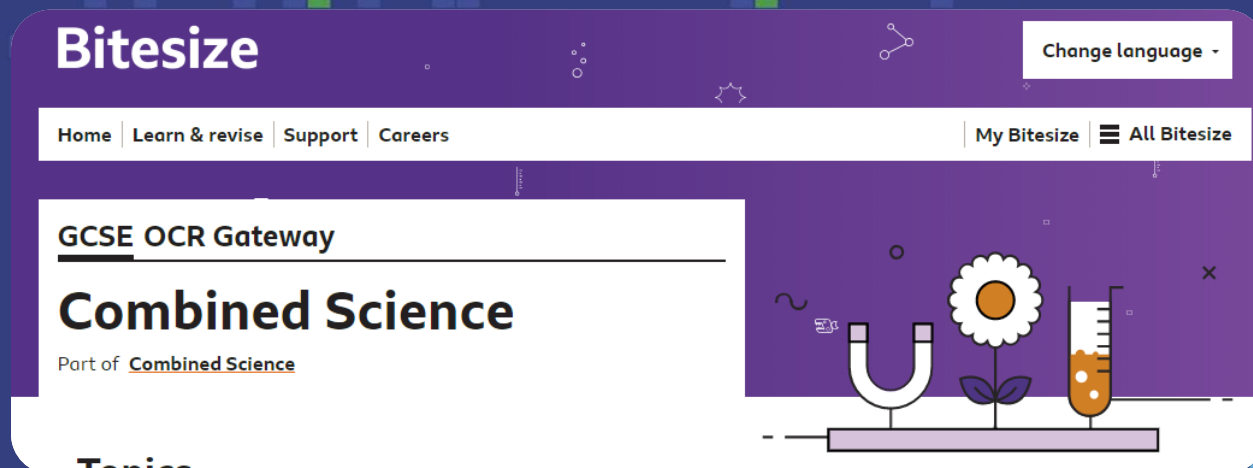
(so) water moves out when the water potential inside
(cells) is **greater** ✓

[4]

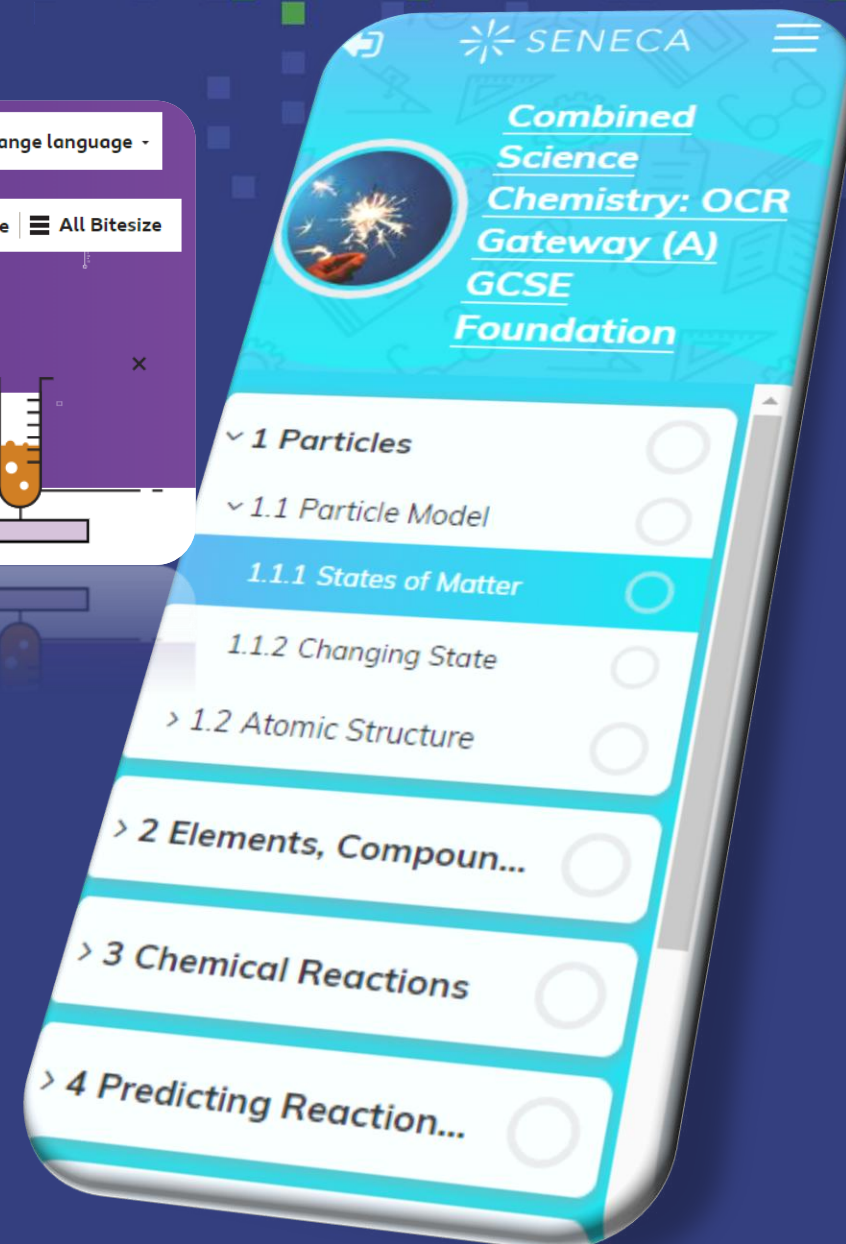
WHAT CAN YOU DO?



WHAT CAN YOU DO?



Topics



How can you help at home?

- Look through your child's exercise books with them
- What have they been studying?
- Are they correcting their own work & modelling answers?
- Are loose sheets stuck in? (some students struggle to complete this in class where teaching time is a premium)
- If possible, provide a quiet space for revision
- If possible, print out revision lists and past papers
- It's helpful to practice writing/typing answers
- Make sure they come to school with the right equipment