

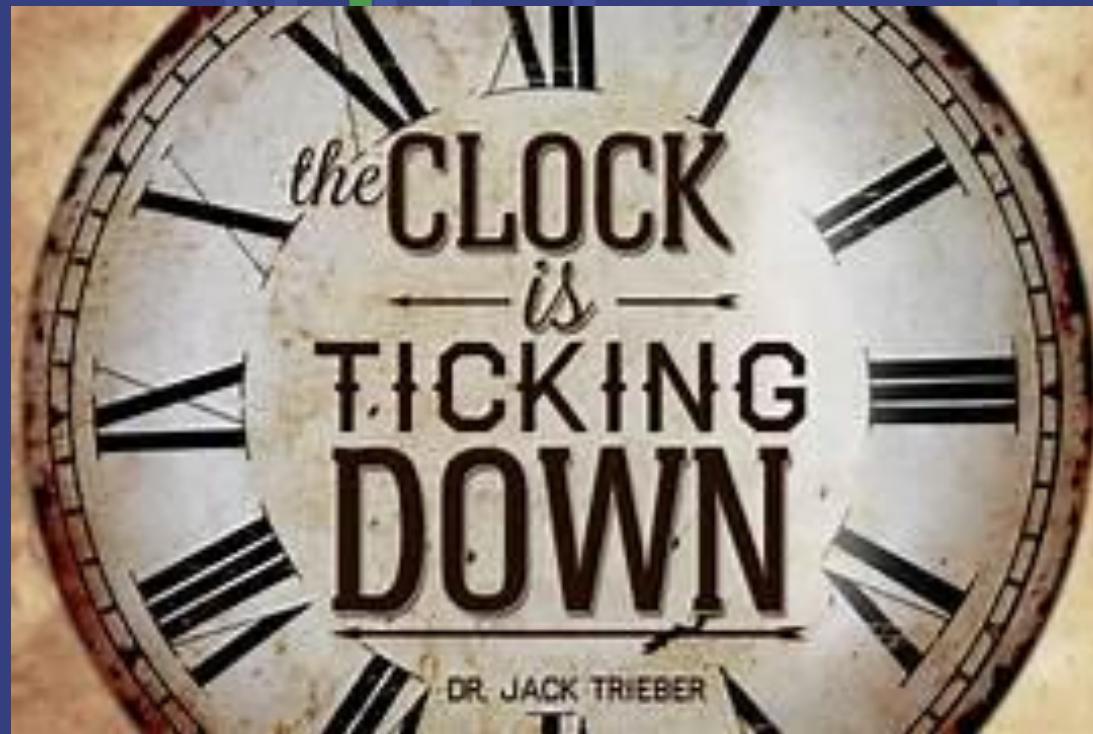
# Welcome to Perins



# Year 10 Core Subjects Information Evening

January 29<sup>th</sup> 2026  
Mr Nevola





PERINS  
SCHOOL

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 2<sup>nd</sup> March)



- Year 10 parents evening (23<sup>rd</sup> April)

# What we hope you take away from this evening



PERINS  
SCHOOL

# 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 29<sup>th</sup> 2026  
Miss Sweetman



# Year 10 Mock week – Week commencing 2nd March

	Mon 2 <sup>nd</sup> March	Tues 3 <sup>rd</sup> March	Weds 4 <sup>th</sup> March	Thurs 5 <sup>th</sup> March	Friday 6 <sup>th</sup> March
<b>Session 1</b> <b>(08.50 - 10.50)</b>	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)
<b>Session 2</b> <b>(11.10 - 13.10)</b>	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 29<sup>th</sup> 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?

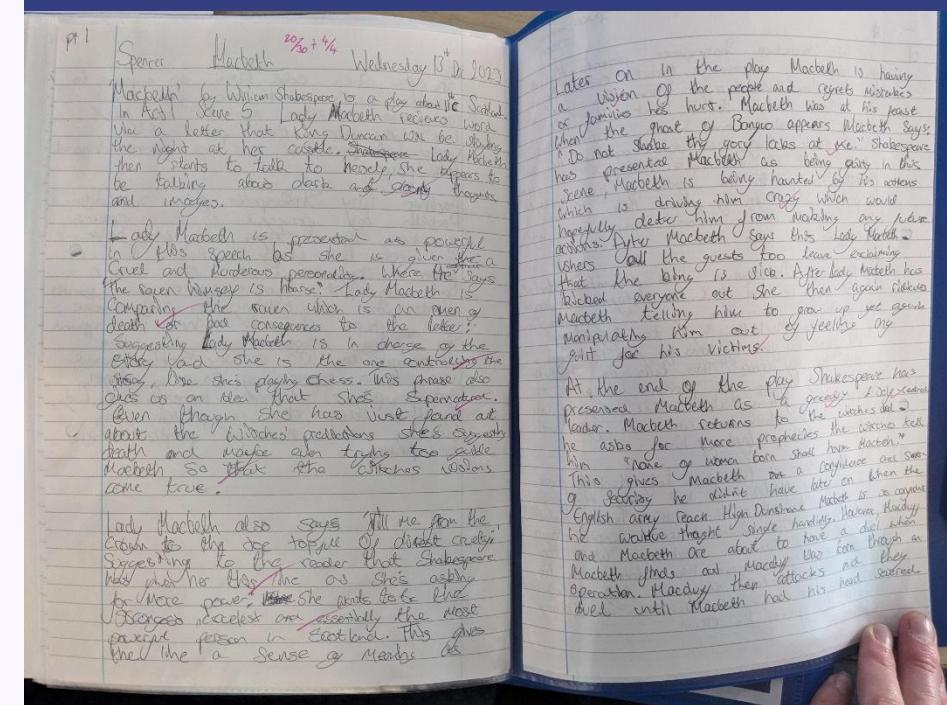
Homework handed in on time

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

Punctual to lessons

Uses the time to do the task

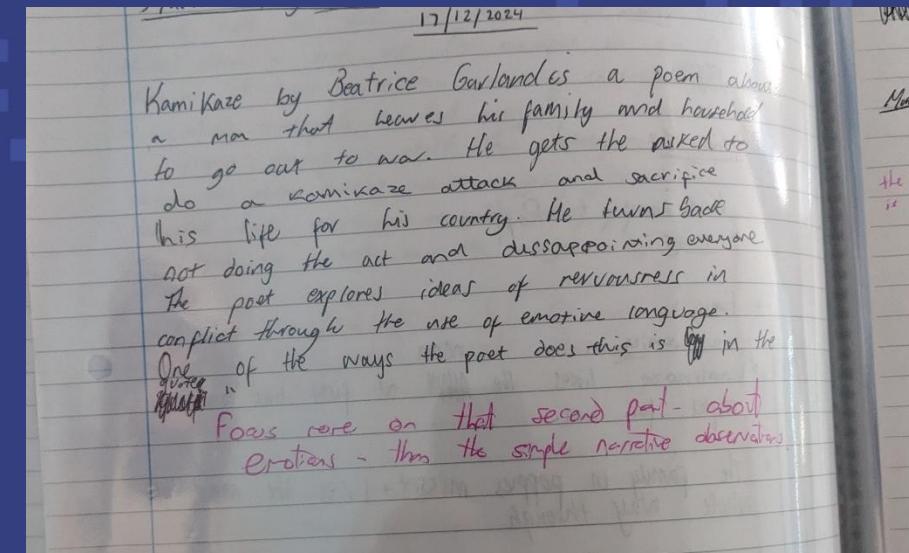
Status	Learning Time	Avg	W1	W2	W3	W4	W5
✓	32min 28s	95%	100%	80%	75%	100%	100%
✓	7min 51s	93%	100%	67%	100%	100%	100%
✓	18min 12s	96%	90%	100%	75%	100%	100%
✗	16min 36s	67%	64%	80%	100%	57%	80%
✓	10min 11s	96%	100%	80%	75%	100%	100%
✓	6min 54s	96%	100%	80%	100%	100%	100%
✓	7min 31s	77%	80%	80%	50%	67%	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
WORD	2. Further BLM book recommendations.docx	June 12, 2020
LINK	How to use the anthologies.url	July 2, 2021
PDF	KS3 Poetry Anthology.pdf	July 2, 2021
PDF	KS4 Poetry Anthology.pdf	July 2, 2021
IMAGE	RR BIPOC.jpg	July 18, 2022
IMAGE	RR LGBTO+.jpg	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 29<sup>th</sup> 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?

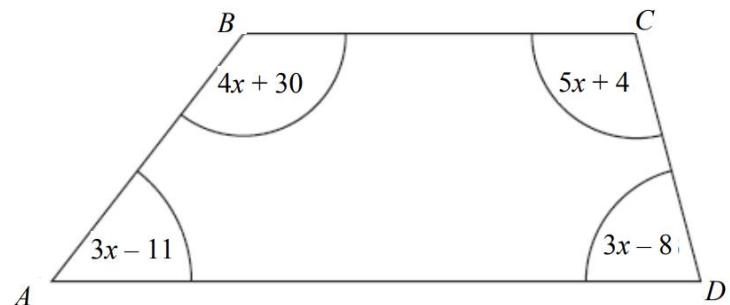


Department  
for Education

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)

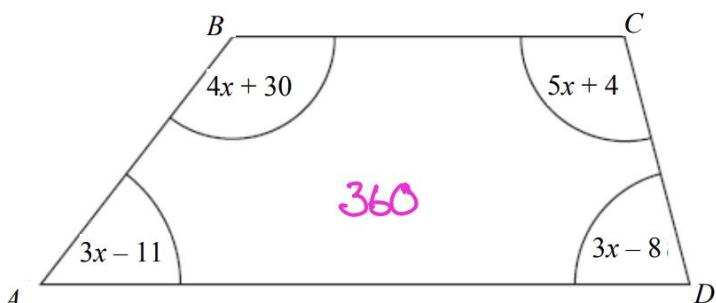


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# What does acceptable work look like?

- 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.

$$4x + 5x + 3x + 3x + 30 + 4 - 8 - 11 = 360$$
$$15x + 15 = 360$$
$$15x = 345$$
$$x = \frac{345}{15}$$
$$= 23$$
$$A = 3x - 11 = 58$$
$$B = 4x + 30 = 122$$
$$A + B = 58 + 122 = 180$$
$$C = 5x + 4 = 119$$
$$D = 3x - 8 = 61$$
$$C + D = 119 + 61 = 180$$

*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

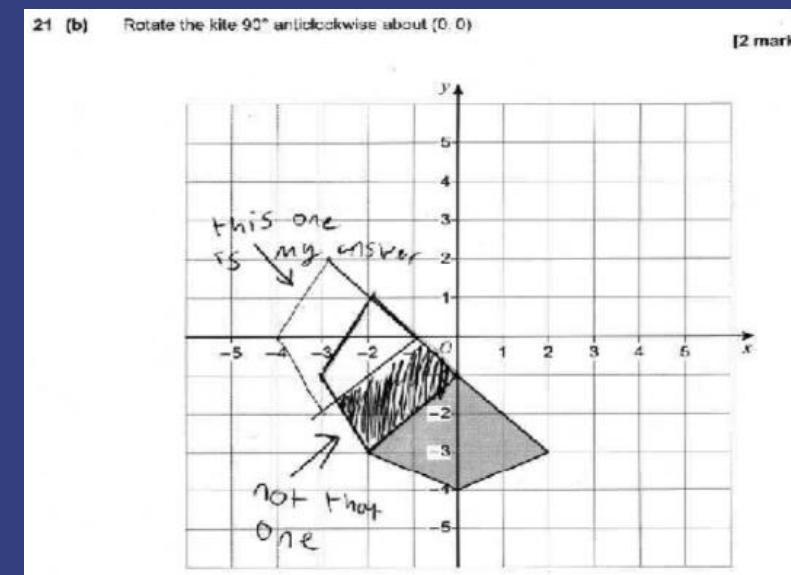
Handwritten mathematical working for a problem involving Pythagoras' theorem and trigonometry. The student has made several errors, including incorrect simplification of fractions, missing units, and a final answer that is not clearly boxed or labeled.

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



Homework

Independent learning

[Sparx Maths](#)

- Corbettmaths



How to videos

Practice questions/ans

[Videos and Worksheets – Corbettmaths](#)

- MathsMadeEasy



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



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
Types of number		
Use and order positive and negative numbers	M527	
Use inequality symbols		
Four operations using positive and negative numbers		
Round to nearest 10, 100, 1000 and use to estimate		
Use decimals and place value		
Compare and order decimal numbers	M553	
Four operations using decimal numbers		
Round to nearest integer, decimal place & significant fig.		
Use one calculation to check another		
Use index laws to simplify & calculate value of expression		
Convert between ordinary numbers and standard form		
Work with the four operations in standard form		
Use a calculator with indices and standard form	U161	
2	Algebra and Expressions	Check
Write an expression		
Collect like terms		
Simplify expressions	U105	
Use index laws		
Expand single brackets		
Simplify expressions using squares and cubes		
Factorise expressions	U365	
Substitute into expressions involving brackets & powers		
Substitute into a formula (& word formula)		
Know the terms equation, identity, expression etc.		
Answer simple 'show that' questions		
3	Factors, Multiples, Powers and Roots	Check
Find squares and cubes	U851	
Use index notation including negative powers		

3	Use laws of indices to multiply & divide numbers	
Order of operations including powers and brackets		
Use of calculator	M757	
Identify factors, multiples and prime numbers		
Prime factorisation of a number (& write in index form)		
Find common factors & highest common factor		
Find LCM of two (or three) numbers		
4	Interpreting and Representing Data (1)	Check
Sort and classify data (inc. tally charts)		
Extract data from lists and tables (inc timetables)		
Identify mode from a list / table		
Draw and interpret bar charts (inc dual & composite)		
Draw and interpret line graphs (vertical & time-series)		
Draw and interpret pictograms		
Draw and interpret stem and leaf diagrams		
Draw and use pie charts		
Draw and interpret scatter graphs & lines of best fit	U199/U277	
Understand bias		
Calculate the mean, mode, median and range from a list	M440	
5	Fractions, Decimals and Percentages	Check
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		
Use fraction to decimal conversions	M958	
Recognise terminating & recurring decimals		
Convert between fractions, decimals & percentages		
Order & compare fractions, decimals & percentages		
Write one amount as a percentage of another		

## Paper 1

Description			
Marks Achieved	Marks Available	Marks Lost	Reflection
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
<b>Total</b>	33	80	47

Marks Achieved

Marks Lost

0% 50% 100%

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23 Total

Silly Mistake Practise

Need to Top

# Science

January 29<sup>th</sup> 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

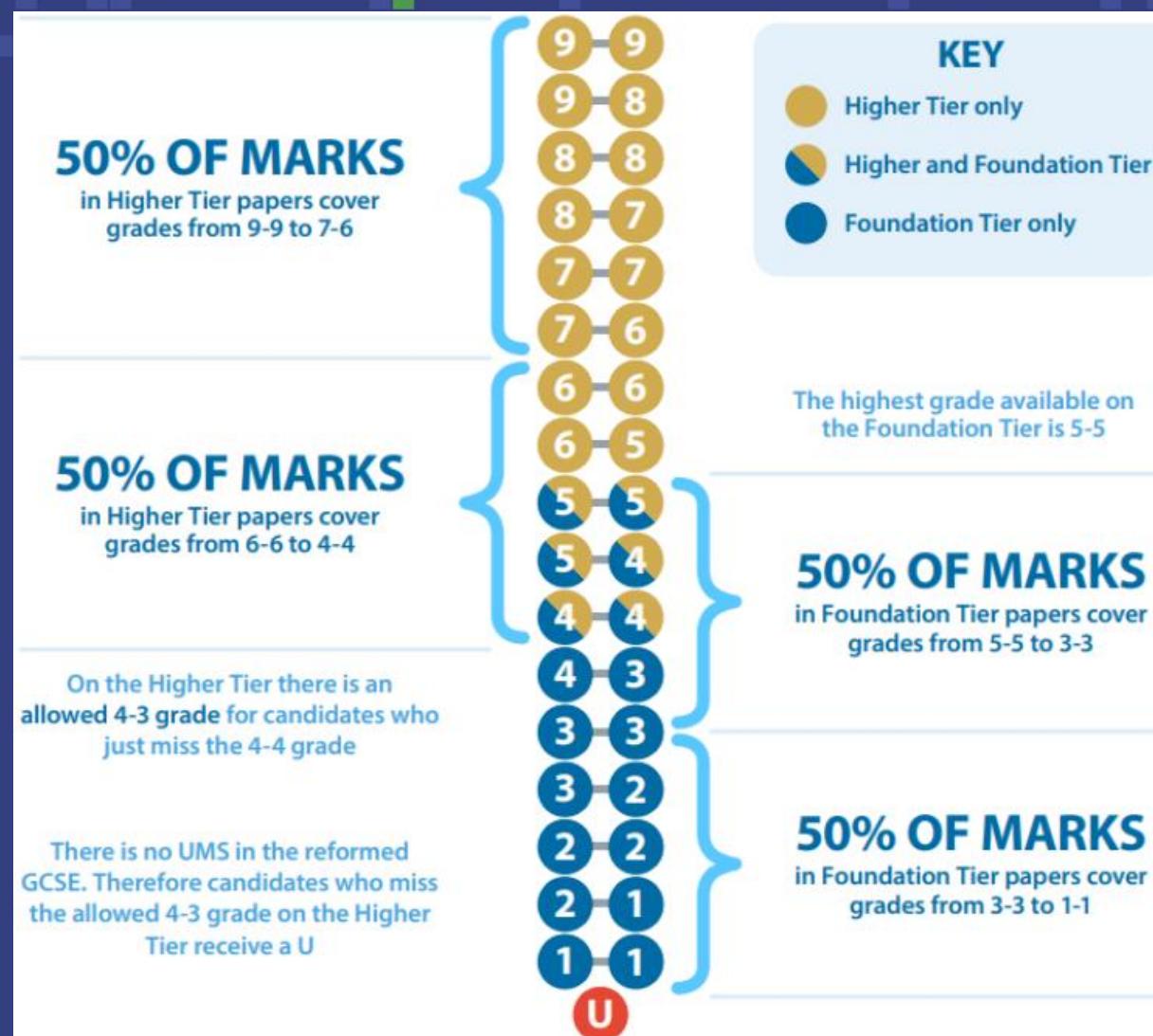
BIOLOGY	CHEMISTRY	PHYSICS
1. Cell Level Systems	1. Particles	1. Matter
2. Scaling up	2. Elements and Bonding	2. Forces
3. Organism Level Systems	3. Chemical Reactions	3. Electricity
4. Community Level systems	4. Predicting Chemical Reactions	4. Magnetism
5. Genetics	5. Rate of Change	5. Waves
6. Global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



# 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
<b>Medical Science</b>	<b>Barton Peveril</b> <b>Alton College</b>	<b>4-4</b> <b>5-5</b>
<b>Environmental Science</b>	<b>Peter Symonds</b> <b>QMC</b>	<b>6-5 or 5-5</b> <b>5-5*</b>
<b>Physical Education</b>	<b>Barton Peveril</b> <b>Alton College</b>	<b>4-4 (5*)</b> <b>5-5</b>
<b>Electronics</b>	<b>QMC</b>	<b>6-6 (recommended)</b>
<b>Applied Human Biology</b>	<b>Peter Symonds</b>	<b>4-4</b>
<b>Health &amp; Science (L2)</b> <b>Health &amp; Nursing T-level</b>	<b>Alton College</b>	<b>3-3</b> <b>5-5 or 5-4</b>
<b>Engineering (L3)</b>	<b>Alton College</b>	<b>4-4</b>

# 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



## Perins Values – Science

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

# What effort looks like in science

## Basics:

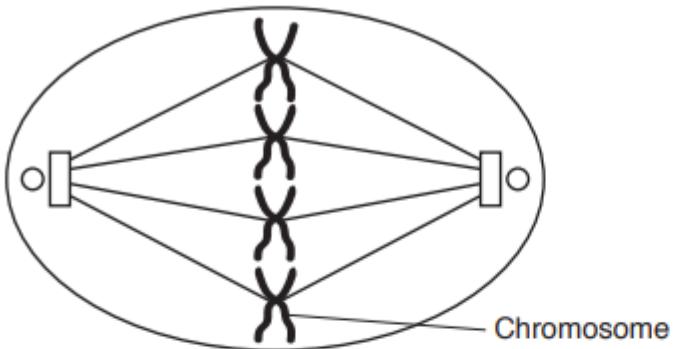
- On time
- Prepared to learn – book out, pen out, bags and coats in the bag store
- Full focus on the information presented
- Ask for clarity

## 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 ✓

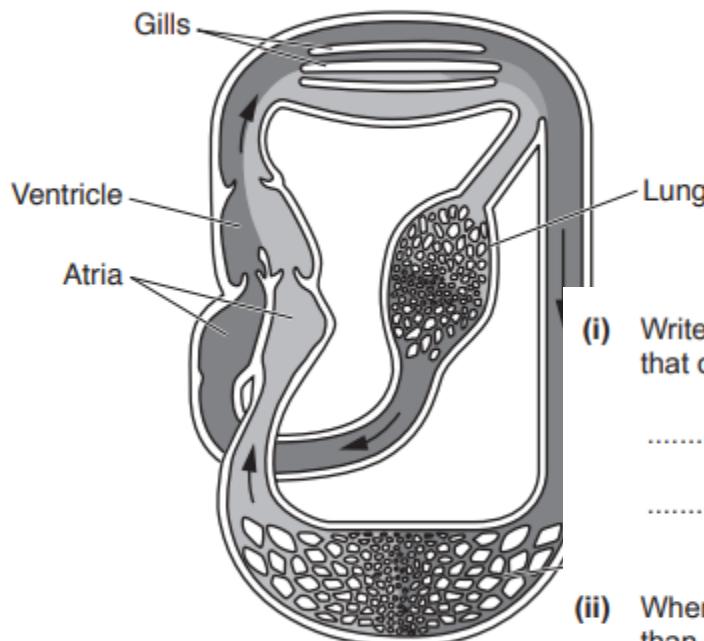
**IGNORE** deoxyribonucleic acid

# 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.



The lungfish circulatory system is different to that of humans.

Blood in the lungfish can flow through gills and lungs.

(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 circ...

.....

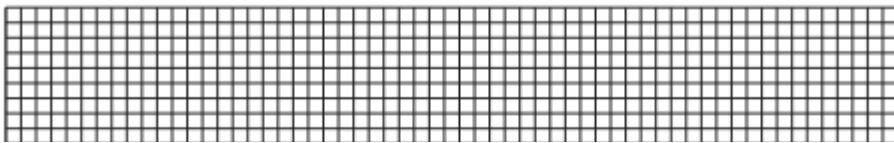
..... (so) more **oxygen** is carried around the body / more **oxygen** is supplied to the body cells ✓ [2]

# PRACTICAL SKILLS

(b) The table shows his results.

Concentration of sugar solution (mol/dm <sup>3</sup> )	At	Mass of potato chip
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/dm<sup>3</sup>) **or** 0.2 (mol/dm<sup>3</sup>) 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/dm<sup>3</sup> the water potential inside (cells) is **greater** ✓

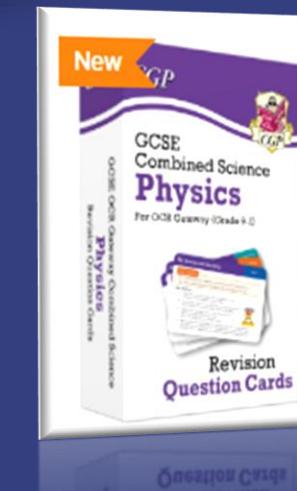
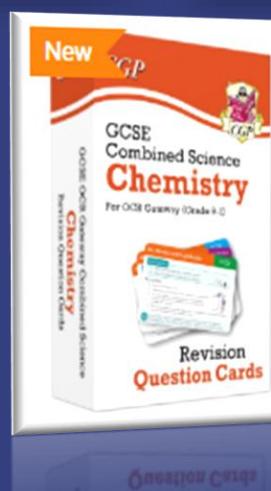
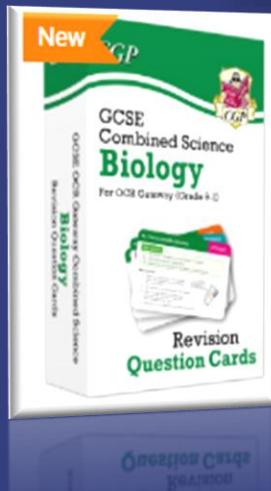
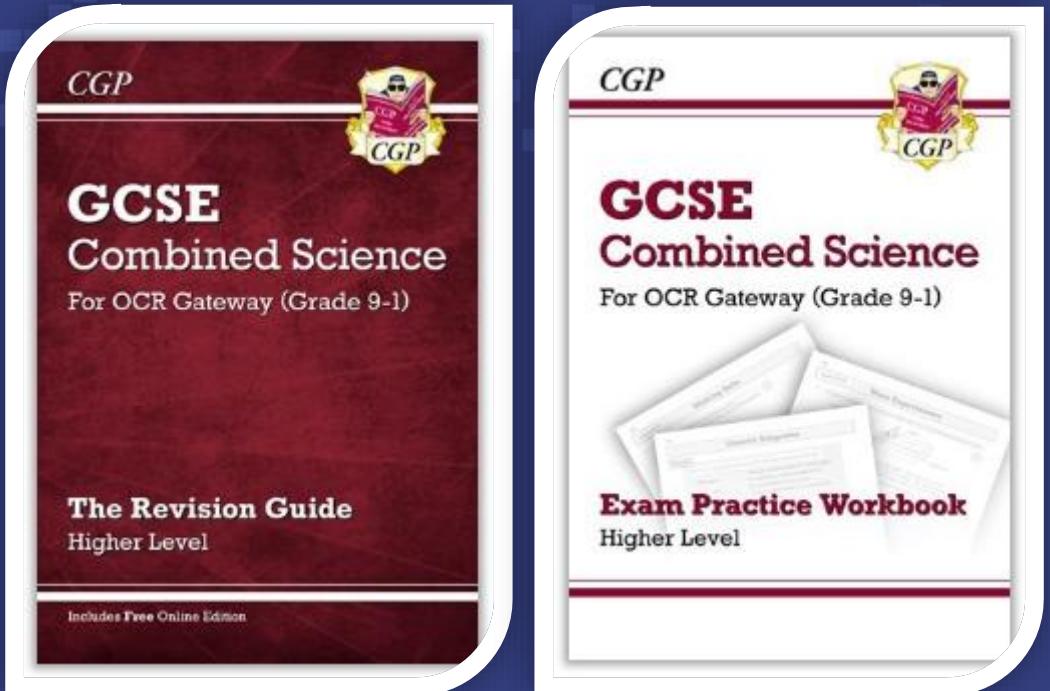


[3]

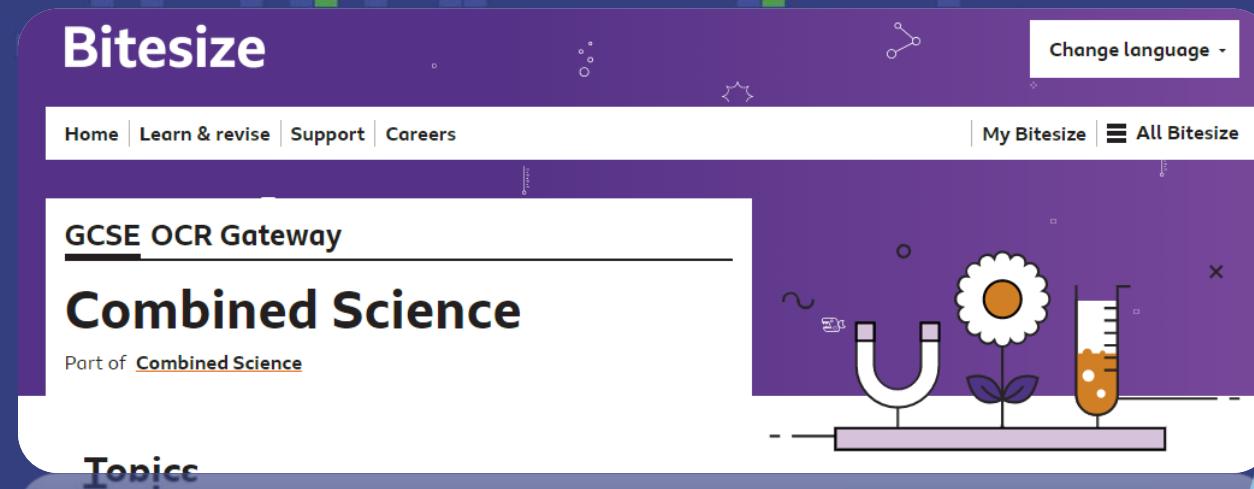
(so) water moves out when the water potential inside  
(cells) is **greater** ✓

[4]

# WHAT CAN YOU DO?



# WHAT CAN YOU DO?



**Bitesize**

Home | Learn & revise | Support | Careers

My Bitesize | All Bitesize

Change language

**GCSE OCR Gateway**

**Combined Science**

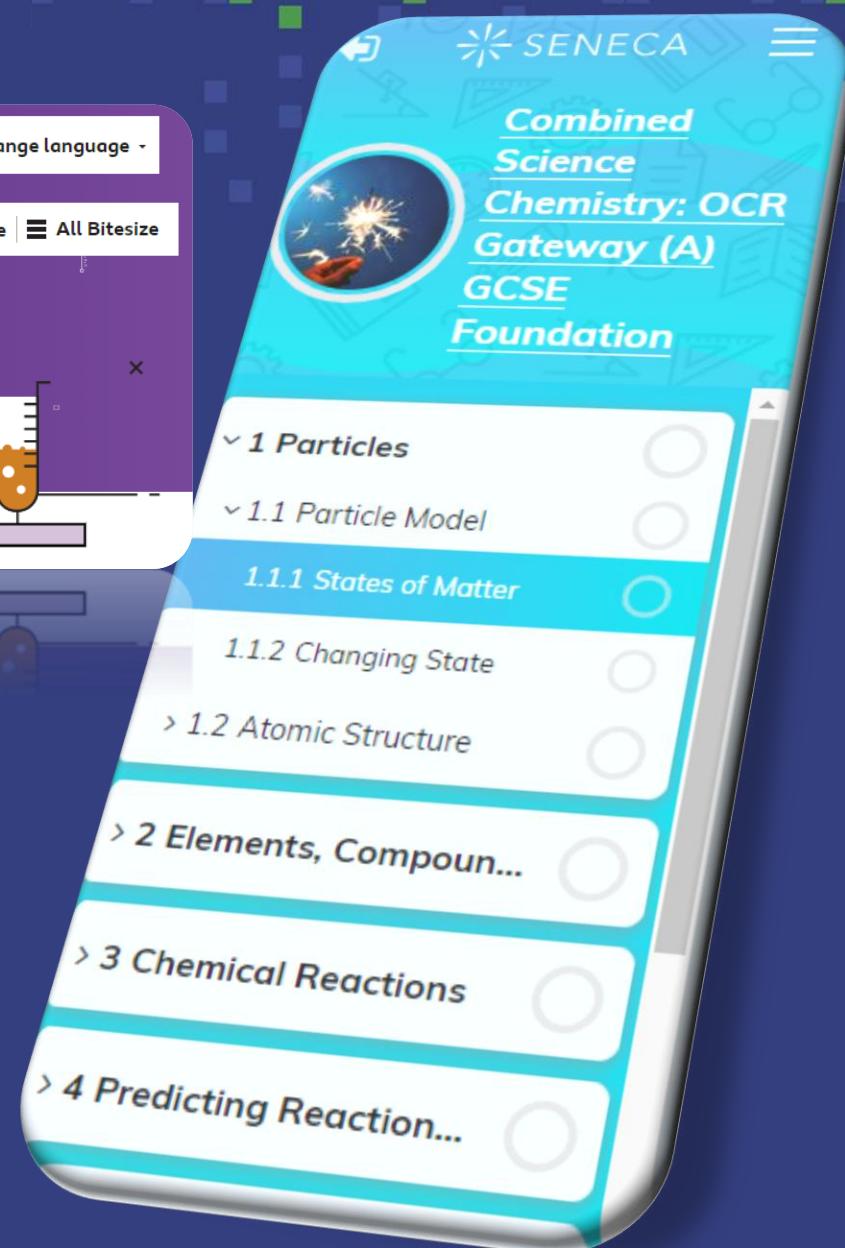
Part of Combined Science

**Topics**

U-shaped magnet, flower, test tube with orange liquid.



**kerboodle**



**SENECA**

**Combined Science Chemistry: OCR Gateway (A) GCSE Foundation**

**1 Particles**

**1.1 Particle Model**

**1.1.1 States of Matter**

**1.1.2 Changing State**

**1.2 Atomic Structure**

**2 Elements, Compoun...**

**3 Chemical Reactions**

**4 Predicting Reaction...**

# 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