

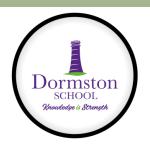
WELCOME

YEAR 10 STRATEGY

Mrs C Williams



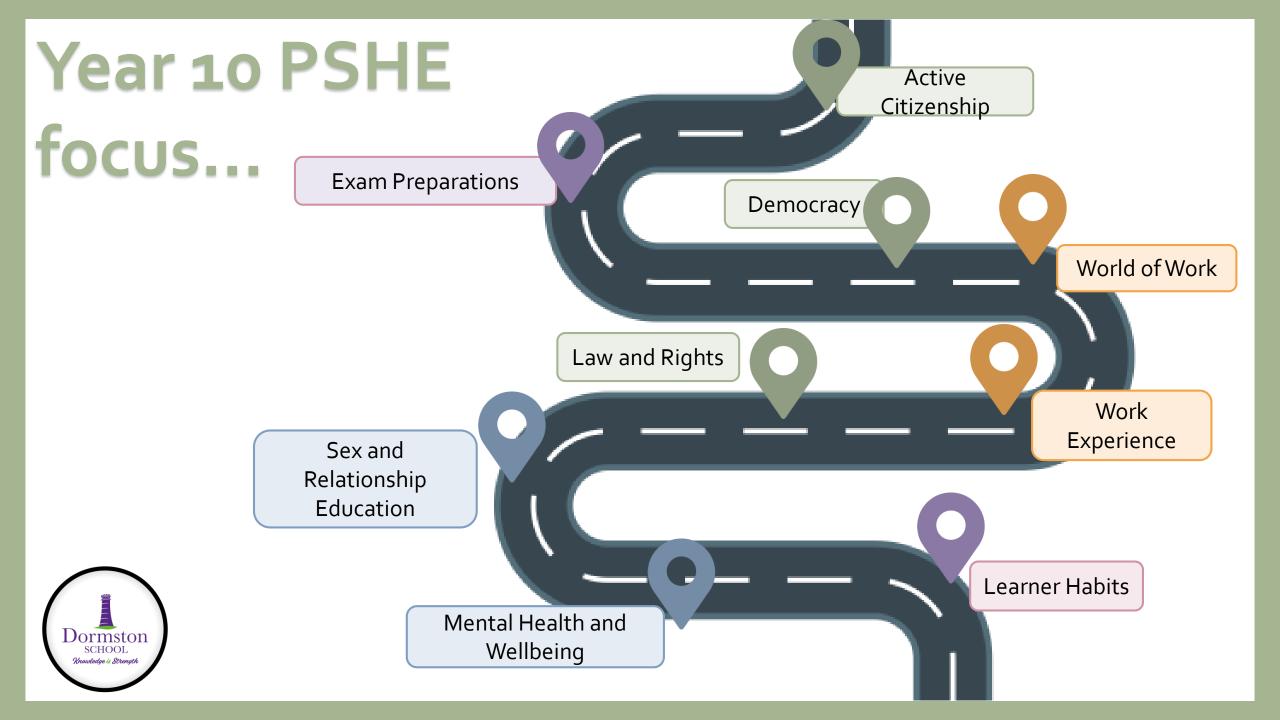
My Role – Year 10 Strategy Leader



- ·Supporting pupils to develop into young adults.
- •Ensure pupils see the value of education.
- •Ensure pupils take responsibility for their own learning.
- •To guide pupils throughout the course of this year.
- •To oversee the development of PSHE and careers education.

What YOU Can Expect from Year 10???

- Dormston SCHOOL Knowledge is Strength
- An increase in subject difficulty and an increase in the amount of homework.
- Recall of old information this might be from KS3
- In PSHE you will develop an idea of your future self
- Through WEX you will develop your employability skills
- A range of skills to help you prepare for year 11.





- Attendance
- 98% 4 days Missed 20 lessons
- 95% 2 weeks Missed 50 lessons
- 89.7% 4 weeks Missed 100 lessons

Last years highest achievers all had 100% attendance, <u>it matters!</u>





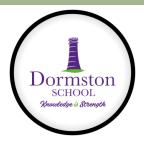
Attendance

All pupils			
	Pupils	Average GCSE Grade	Average GCSE Value Added
All Pupils	209	4.9	+0.1
Attendance group Above 95%	os 95	5.6	• +0.7
90.1 - 95%	62	5.1	+0.1
80.1 - 90%	29	3.9	-0.4
50.1 - 80%	16	2.7	-1.1
0 - 50%	6	1.5	-2.5



- Attendance
- Behaviour/Environment
- Classwork/Non-required work
- Effort
- Revision/Exam preparation





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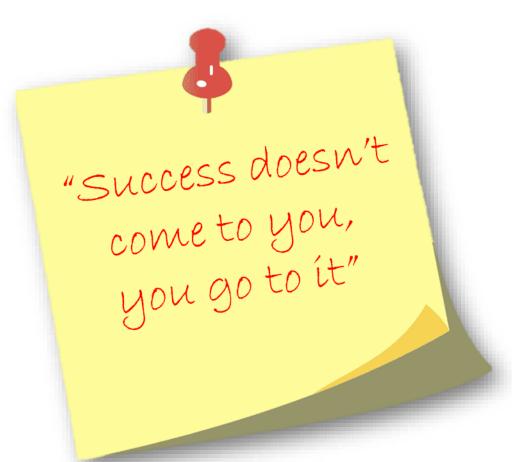


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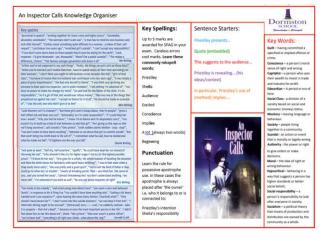


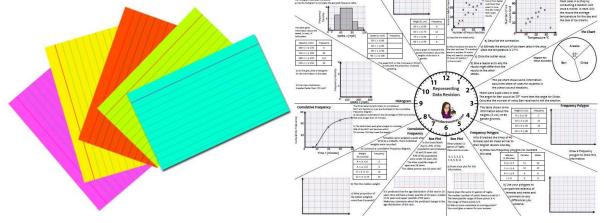


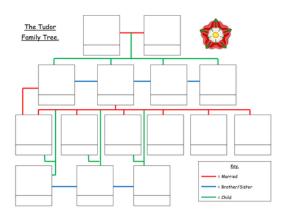
Revision/Exam preparation

- Rest
- Exercise
- **V**ariety
- **I**magination
- Structure
- Individual
- ongoing
- Not too long

Mnemonics







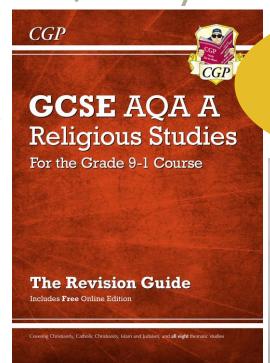




The Dual Coding Theory visual verba

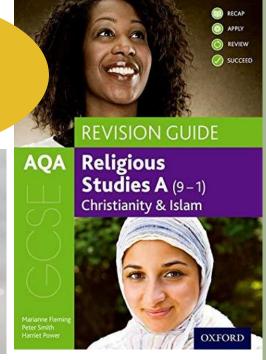
Religious Studies (The year of the exams!)

- Year 10 are halfway through their GCSE Religious Studies course
- They are following the AQA Specification A course, studying two religions and 4 area of ethics
- Gaining a GCSE before year 11 allows students to:
 - Demonstrate their ability when applying for colleges...
 - Practice and try out revision skills and strategies in a GCSE course
 - Have one less GCSE course to study and revise in year 11
- Revision workshops are on every Tuesday after school (3:00-4:00pm) students will be told the focus of the week's revision in their RS lessons
- Any further questions, feel free to contact Mr Salton-McLaughlin or your child's RS teacher



Recommended Revision Resources





Paper 1: Studying Religions 50% (1hr 45min exam)

- Christianity: Beliefs
- Christianity: Practices
- Islam: Beliefs
- Islam: Practices

Paper 2: Themes in Religion 50% (1hr 45 mins exam)

- A: Relationships & Families
- B: Religion & Life
- D: Peace & Conflict
- E: Crime & Punishment

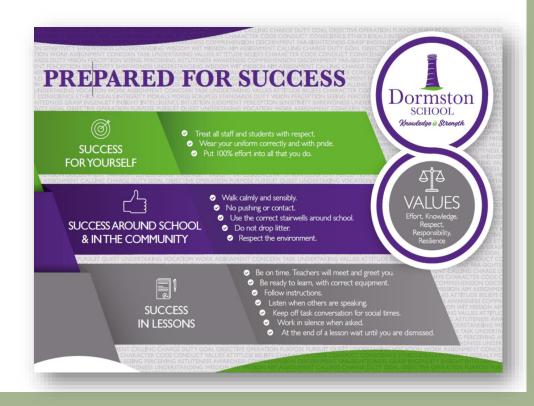
Preparing for Learning



It is vital that pupils start the new school year knowing how to access RM Unify and Go4Schools.







Homework



Homework Timetables have been shared with students but also available on the school website!

Parents will be informed if homework is not being completed regularly. If this becomes a persistent issue, Heads of House and/or Year Strategy Leaders will intervene to provide additional support and monitoring.

Students follow homework timetables that coincide with their two week timetable. Their homework timetable will be recorded in their Student Planners and is also available below.

Year 7 Homework Timetable September 2022

Year 8 Homework Timetable September 2022

Year 9 Homework Timetable Sentember 2022

Year 10 Homework Timetable September 2022

Year 11 Homework Timetable September 2022

Click on the homework tab and scroll down

Students will be set a maximum of 2 pieces a day

<u>Homework</u> Policy

Dormston
SCHOOL Knowledge is Strength

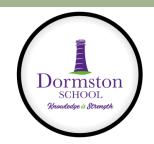
		10X	10Y			
	Monday	English	English Triple Science Biology			
Week One	Tuesday	Maths RS	Maths RS			
	Wednesday	Opt D Opt F	Opt D Opt F			
5	Thursday	English Opt E	English Opt E			
	Friday	Science Triple Science Chemistry	Science Triple Science Chemistry			
	Monday	Maths Opt F	Maths Opt F			
Q	Tuesday	English	English			
Week Two	Wednesday	RS Opt D	RS Opt D			
5	Thursday	Opt E Triple Science Physics	Opt E			
	Friday	Science Triple Science Biology	Science Triple Science Physics			

- Set according to the homework timetable
- 50/60 minutes.
- Added to Go4Schools
- Teachers will track if it has been received—this can be seen by parents/carers.
- Teachers will use homework to further pupils learning e.g. used as an activity in lesson.

Non-Completion:

X2 no homework in one subject = Automated message sent home X3 no homework in one subject = Teacher phones/emails home

Homework Club



Need help or a space to work?

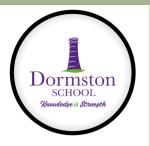
Monday-Friday:
After school in the PLC

All students welcome!





Careers



Think about your future, what do you want to be?

Year 10 activities;

- PSHE Spring Term Next Steps -Post 16 Pathways
- National Careers Week 7th March 2023
- World of work PSHE lessons
- One to One independent careers guidance interviews begin with Mr Pete Small
- 13th -17th July 2023 Work experience Mrs Dawes will be in touch with further details.



Key Dates



Date	Event
16/11/22	Y10 Grades and Effort Data
01/12/22	Y10 Parents Consultation evening
03/03/23 – 17/03/23	Work Experience Week
22/03/23	Y10 Grades and Effort Data
12/06/23	Exam Fortnight
27/06/23	Y10 Grades, effort data and tutor reports

Thank you for your support – if you have any questions please get in touch...

Behaviour, attendance or welfare: Head of House

Avon: PAmos@dormston.dudley.sch.uk

Derwent: RDownie@dormston.dudley.sch.uk

Severn: JWilkes@dormston.dudley.sch.uk

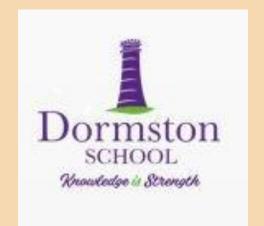
Trent: MPlant@dormston.dudley.sch.uk

Strategy Leader: Cwilliams@dormston.dudley.sch.uk

Subject specific: Head of Department or Subject Teacher

SEND: KBeer@dormston.dudley.sch.uk





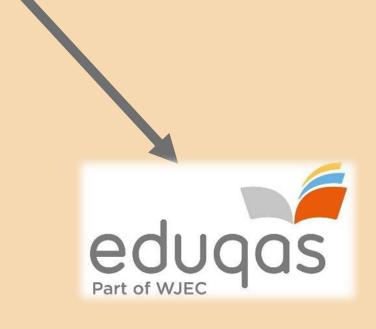
ENGLISH AT DORMSTON – YEAR 10 EVENING

MRS MOSELEY

CURRICULUM LEADER FOR ENGLISH

ENGLISH LANGUAGE AND ENGLISH LITERATURE GCSE



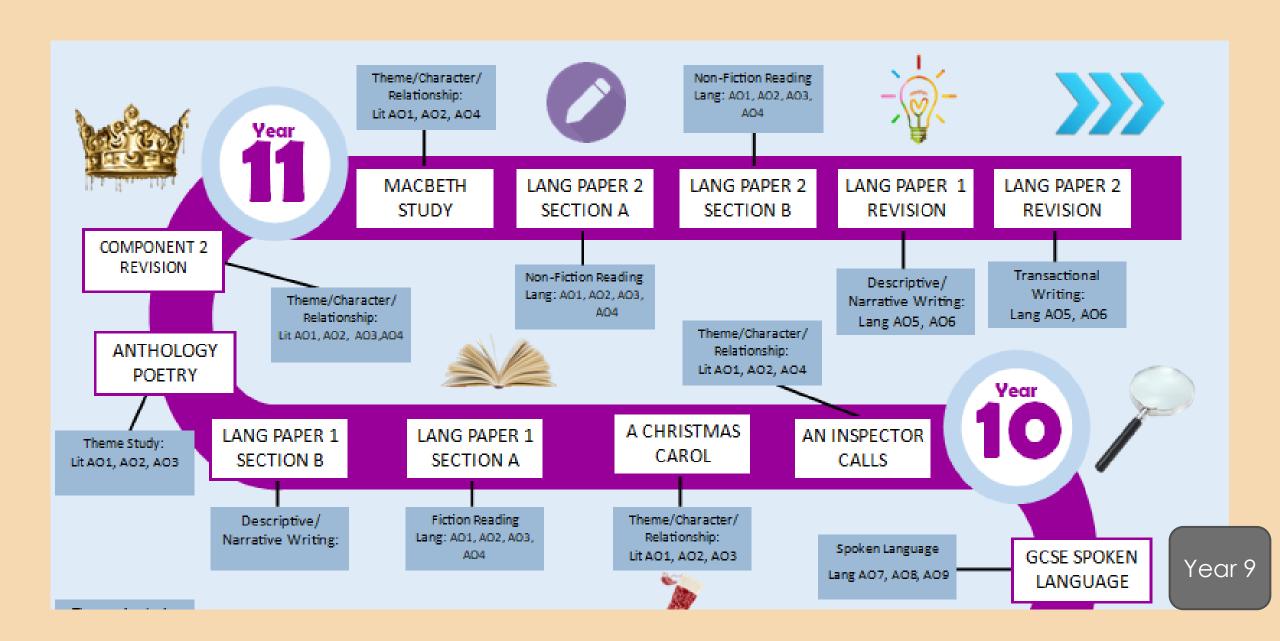


COURSE OVERVIEW:

Eduqas		AQA				
English Literature		English Language				
Macbeth			Paper 1	50%	Paper 2	50%
Poetry Anthology: 18 Poems	Each one =		1 Unseen Fiction	text	2 Non-fiction texts	
A Christmas Carol	20%		4 Reading question	ons	4 Reading questions	
An Inspector Calls			Creative writing		Transactional \	Writing
Unseen Poems						

Year 10	
An Inspector Calls	
A Christmas Carol	
Start Poetry Anthology	
Unseen Poems	
Language Paper 1	

Year 11	
Macbeth	
Complete Poetry Anthology	
Unseen Poems	
Language Paper 2	



HOW CAN MY CHILD PREPARE?

Use the Blended Learning Journeys on the school website:

https://de

Blend

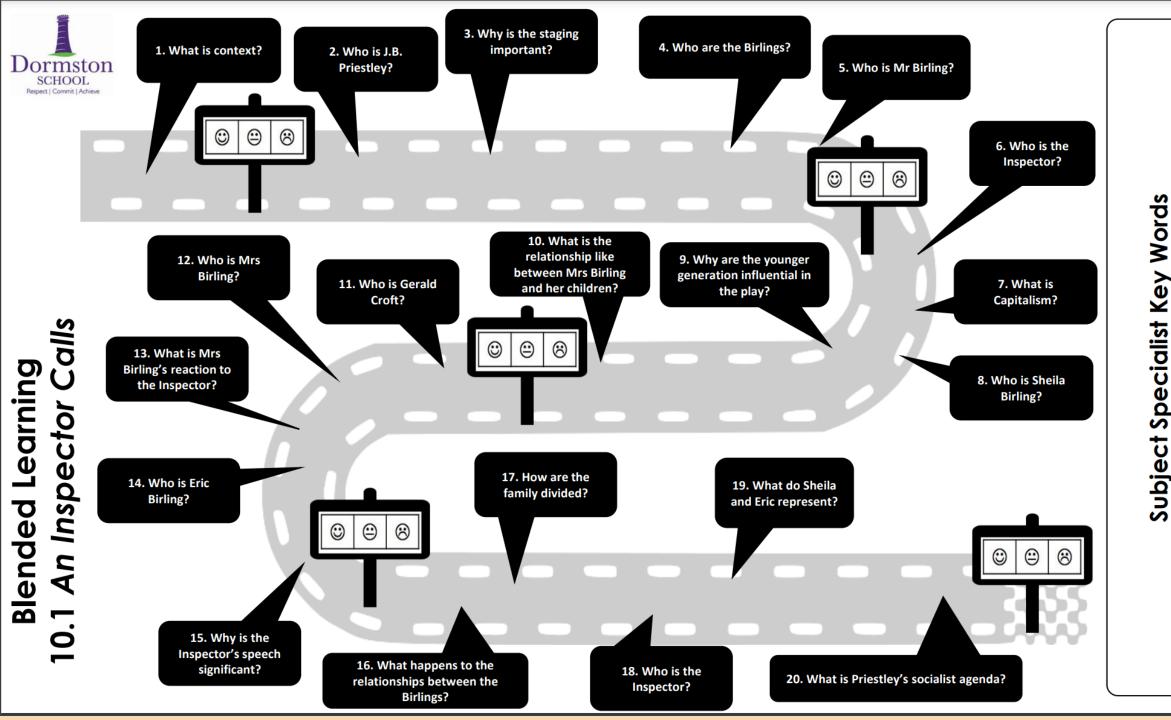
The **Lea** isolate fr

Year 10

English – Poetry Anthology, An Inspector Calls, A Christmas Carol

Year 11

English – Language , Macbeth , Unseen Poetry



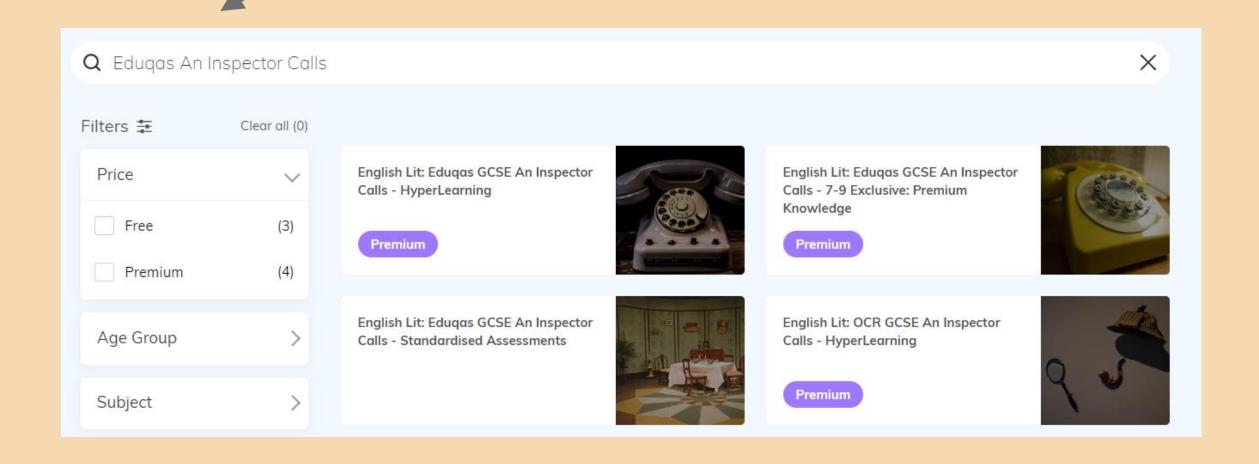
moral, hypocrifical, Social Class, capitalist, Edwardian, authority, socialism. scandal, responsibility, conscience, society mockery, social Guilt,

HOW CAN MY CHILD PREPARE?

- Make revision notes/flashcards regularly throughout the course.
- Re-read the texts. It's the easiest revision! Active revision is best condensing notes, mind mapping, completing practice responses or introductory paragraphs.
- Complete practice essays as often as possible!
- Keep a tally of quotations where they appear in the text and their importance. Start learning them.
- Revision Apps: Seneca, Quizlet, GCSE bitesize etc.
- YouTube AQA English, Mr Bruff. Mrs Whelan's English



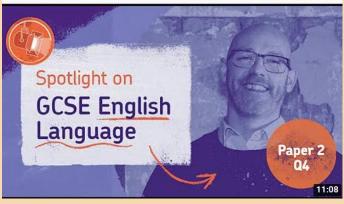
Search by exam board and text title.



YOUTUBE

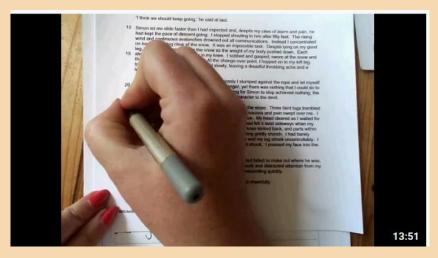
AQA Tutorials







Mrs Whelan's English – AQA Paper Walk throughs



WHAT DOES EFFECTIVE REVISION LOOK LIKE?

HOW CAN I HELP?

- Encourage your child to **read!** Any materials, but most importantly, something they enjoy.
- Revision guides available for practice materials: WJEC Eduqas for Literature, AQA for Language
- Little and often: remembering quotations and key moments in texts.

WHAT DOES EFFECTIVE REVISION LOOK LIKE?

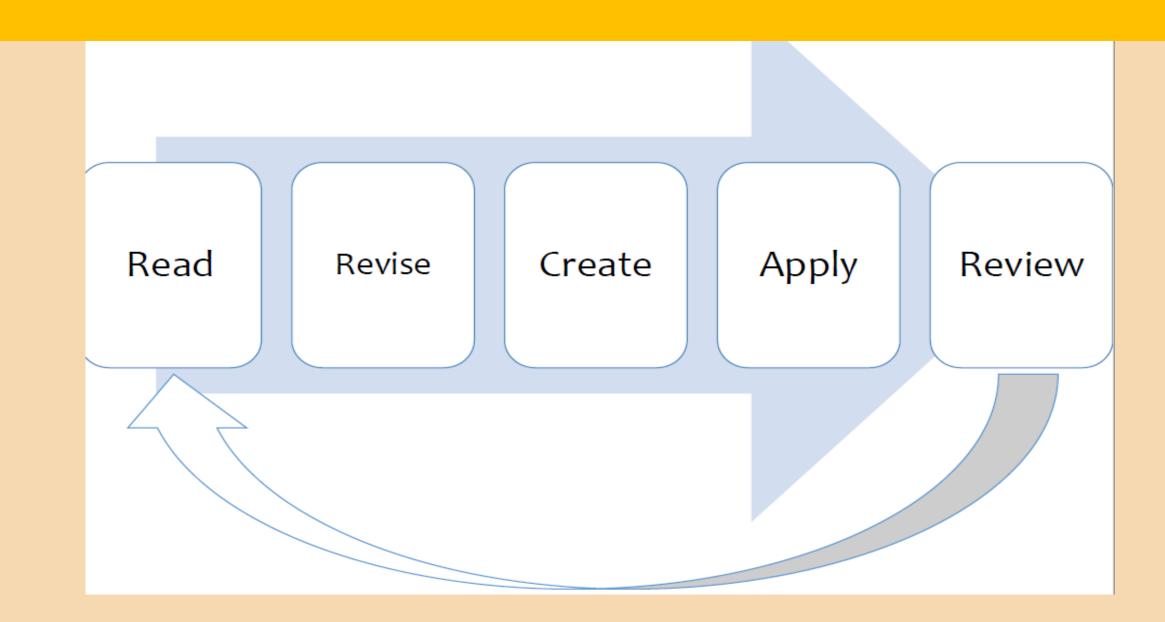


It is the degree of thought process involved which determines how effective the revision is, so...

Effective revision is DOING!

As a rule... Look for the pen, not the book!

WHAT DOES EFFECTIVE REVISION LOOK LIKE?



PHONE BLOCKERS



E.G. "FOREST"

SET A TIME AND THE APP BLOCKS ALL ACCESS TO APPS, CALLS, MESSAGES, ETC.

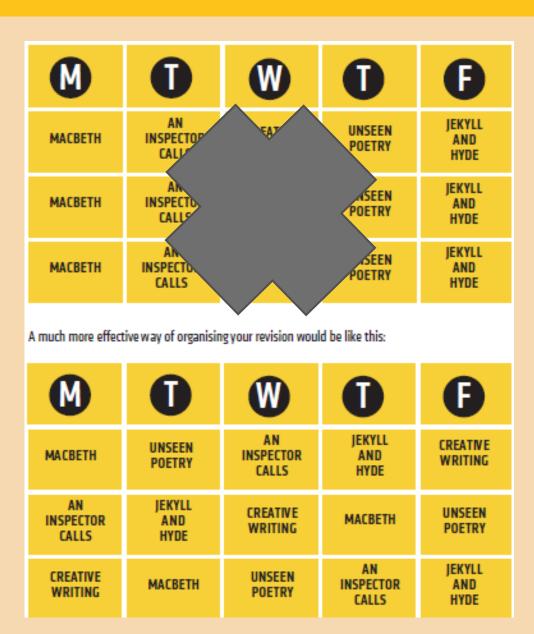
INCREASES CONCENTRATION AND ELIMINATES DISTRACTIONS.

LOTS OF DIFFERENT APP VERSIONS.

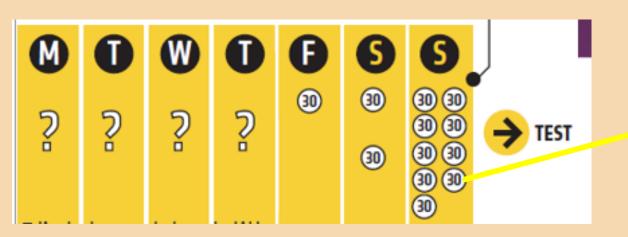
FOREST IS GOOD BECAUSE IF YOU BLOCK YOUR PHONE FOR SO LONG A TREE IS PLANTED!

INTERLEAVING AND THE SCIENCE OF MEMORY

- BY MIXING UP OR 'INTERLEAVING' WHAT
 YOU REVISE AND WHEN, YOU WILL
- REMEMBER THAT MATERIAL FAR MORE EFFECTIVELY SIMPLY DUE TO THE FACT THAT YOU WILL HAVE TO REVISIT THAT MATERIAL MULTIPLE TIMES WITH MORE GAPS IN BETWEEN.



SPACED PRACTICE



Cramming



Spacing

ANY QUESTIONS?

nmillership@dormston.dudley.sch.uk (Key
stage 4 coordinator)

fmoseley@dormston.dudley.sch.uk (Curriculum Leader for English)

Maths at Dormston

MR. M. ROCK
KS4 COORDINATOR FOR MATHEMATICS

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
			Simi	larity				De	evelopin	g Algeb	ra	
Autumn	sin	Congruence, similarity and Trigonometry enlargement					solutio	solutions of equations 1			multaneous equations	
	Geometry						Proportions and Proportional Change					
Spring		les & rings	i	ng with cles	Vec	tors	Ratio fract	os & tions		ntages Iterest	Proba	ability
	Delving into data						Using number					
Summer	Collecting, representing and interpreting data					No calcu meth		numb	es of er and ences	Indice Ro		

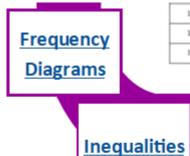
_	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
			Gra	phs			Algebra						
Autumn	Gradients & Non-linear lines graphs			Using graphs		Expanding & Factorising		Changing the subject		Functions			
		Reasoning				Revision and Communication							
Spring	Multip	licative	Geon	netric	Algebraic		8	orming L ructing		ng & ribing	Show	that	
Summer		Revision							Exami	nations			

Year 10 scheme of work example - Sequences

	Similar	rity and congruence, enlargement
Lesson	Set 1	Set 2
1	Enlargement from a point including a fraction	Enlargement from a point
2	Negative enlargements (integer)	Enlargement from a point including a fraction
3	Negative fractional enlargements	Negative enlargements (integer only)
4 Identify similar shapes and calculate missing sides and angles 5 Use parallel lines to find missing angles 6 Identify similar triangles		Identify similar shapes and calculate missing sides and angles
5	Use parallel lines to find missing angles	Use parallel lines to find missing angles
6	Identify similar triangles	Explore areas of similar shapes 1
7	Explore areas of similar shapes 1 and 2	Explore areas of similar shapes 2
8	Explore volumes of similar shapes	Explore volume of similar shapes
9	Solve mixed problems	Solve mixed problems
10	Understand the difference between similarity and congruence and understand and use the conditions of congruent triangles	Understand the difference between similarity and congruence and understand and use the conditions of congruent triangles
11	Prove that a pair of triangles are congruent.	

Geometry and Measures: Construct and Transform Geometric Figures

Year 7	Year 8	Year 9	Year 10	Year 11
Summer block 1 Geometric notation Draw lines, angles and simple shapes Parallel and perpendicular lines Name and construct polygons	Work with scale factors Summer block 1 Revise and extend Y7 notation Summer block 3 Recognise line symmetry Reflect shapes in a given line Additional Higher content Standard ruler and compass constructions	Autumn block 5 Standard ruler and compass constructions Additional Higher content Loci Spring block 5 Revise Y7/8 coverage Recognise rotational symmetry Rotate points about a given point Translate shapes and describe translations Additional Higher content Perform a series of transformations	Autumn block 1 Similarity and enlargement Higher tier content Negative scale factors of enlargement Spring block 2 Parts of a circle	Spring block 4 Revisit/extend KS3 and year 10 work Loci Spring block 5 Plans and elevations
	KS3 National Curriculum		KS4 Nationa	l Curriculum
drawings derive and use the standard segment, constructing a perpangle); recognise and use the distance to the line describe, sketch and draw us perpendicular lines, right ang rotationally symmetric identify properties of, and de to given figures use the standard convention		(perpendicular bisector of a line a given point, bisecting a given point to a line as the shortest ions: points, lines, parallel lines, olygons that are reflectively and rotations and reflections applied is of triangle ABC	In addition to consolidating subjective pupils should be taught to: interpret and use fractional { enlargements {describe the changes and in combinations of rotations, reconstruct and interpret plans describe translations as 2D to	and negative} scale factors for nvariance achieved by eflections and translations} s and elevations of 3D shapes

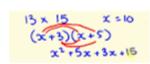


$170 < h \leq 175$	32
$175 < h \leq 180$	19
$180 < h \leq 190$	8

<u>Averages</u>

Data





from Grouped **Averages** from a <u>Table</u>

Averages

Rearranging **Equations**

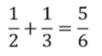
Solving **Equations**

Factorising

Expand & Simplify







$$\frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$

Index $(a^*)' = a^{*r}$ $a^{0} = 1$ Laws 2-50-(50) 2-50

Rules of Indices

 $(a^2)^2 - a^{21}$

Standard **Index Form**

Percentage of an Amount

Interest & Growth

Depreciation & Decay

Using a <u>Calculator</u>

Reverse **Percentages** Fractions +/-

Fractions x/÷

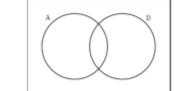
Ratio

Proportion (Recipes)

Estimation

Rounding & Error Intervals





What is your favorite sport to watch on television?										
	Football	Basketball	Basebal							
Males	40	22	15							
Females	12	16	45							
Total	63	20	60							

Exchange Rates

Best <u>Value</u>

Multiples in Context Product of Prime **Factors**

Venn **Diagrams**

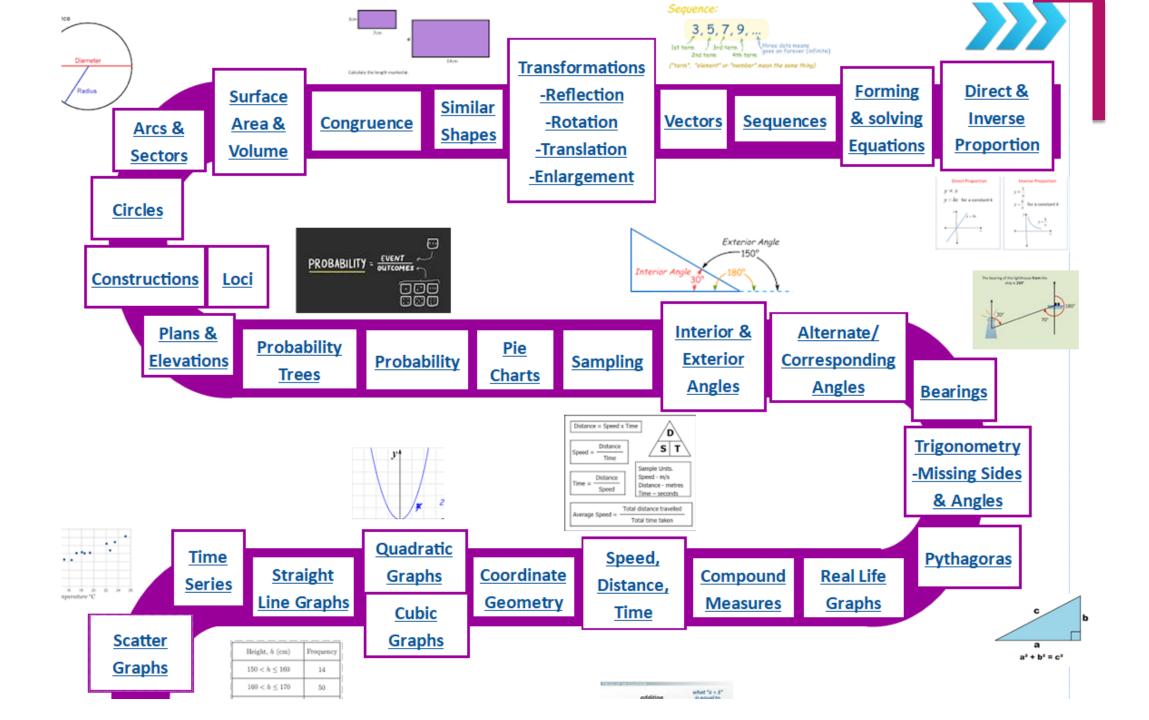
Frequency

Trees

Two Way **Tables**

Year 10 & 11





Unit	Lessons	Key 'Build a Mathematician' (BAM) Indicators
Investigating properties of shapes	16	Simplify surds, including rationalising the denominator of a surd expression
Calculating	6	Manipulate quadratic expressions by completing the square Deduce roots and turning points of quadratic functions
Solving equations and inequalities I	12	Understand the concept of an instantaneous rate of change
Mathematical movement I	3	Sketch translations and reflections of given functions Solve quadratic inequalities in one variable
Algebraic proficiency: tinkering	5	Use the sine and cosine rules to solve problems
Proportional reasoning	5	
Pattern sniffing	4	
Solving equations and inequalities II	6	
Algebraic proficiency: visualising I	7	
Analysing statistics	5	
Algebraic proficiency: visualising II	3	
Mathematical movement II	4	
Total:	76	

Maths books front/inside covers

Current GradeYa larget GradeYII target GradeEffort GradeNext steps:



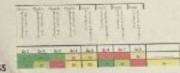
Feedback in Maths



As a Mathematics department, we understand that feedback on your learning is very important to help you to develop your skills and improve. These are some of the ways your Maths Teacher will provide feedback.

RAG sheets from MathsWatch

These RAG sheets show you your strengths and areas to improve from your 8 question MathsWatch homework tasks. Your teacher will then use these results to help you address



any gaps in learning; you should also use these to watch the videos provided. You should expect these roughly twice every half term (although this may differ when you have other assessments and feedback).

RAG sheets from Assessments

These RAG sheets show you your strengths and areas to improve from your end of term topic tests. Your-teacher will then use these results to help you address any gaps in learning; you should also use these to watch the videos provided. You should expect these every term.

Mini Whiteboards

Every time you use your Mini Whiteboard, your teacher is assessing what you are learning. You will receive immediate feedback when the correct answers are shared to show you (and your teacher) where you are with your learning and to identify next steps.

Live Marking and Verbal Feedback

Accessing maths watch and non required work

1. Google search: mathswatch vle



recorded in their planner but can be checked or reset with your maths teacher if needed. Please note it is all lower case

Difference between non required work and homework set



My Wor

Videos

My Progress

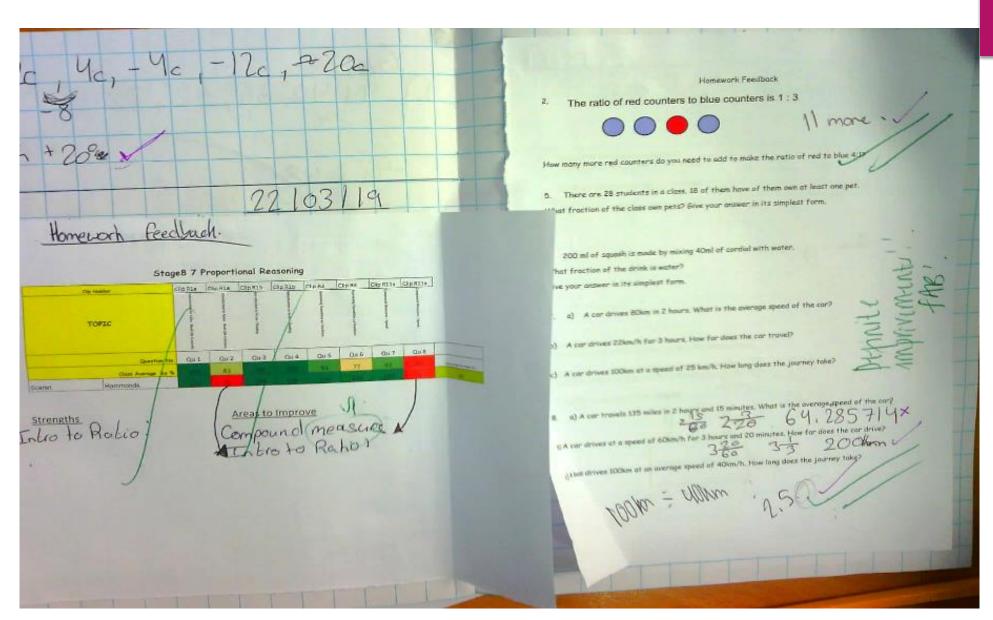
Extras

148 days until renewal

Assigned Work				
			Homework Average	Test Average
This Year's Work	All Work	Showing All Types ▼	0%	0%

Title	Туре	Assigned By	Assigned	Due	Marks	%	Grad	е
Two way tables and frequency trees 10x4	HW	h work	14/09/2021	14/09/2021 08:00				
NRW 2021 Stage9 5 2 Pattern Sniffing	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 2 2 Construction	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 7 1 Calculating Space	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 1 1 Calculating	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 3 2 Algebraic Prof:Tinkering	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 5 1 Pattern Sniffing	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 2 1 Construction	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 4 3 Proportional Reasoning	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 6 2 Solving equations and Inequalities	HW	h work	13/09/2021	10/12/2021 08:00				
NRW 2021 Stage9 3 2 Algebraic Prof:Tinkering	HW	h work	13/09/2021	10/12/2021 08:00				

Marking and assessment feedback



Other useful hints and websites

- Pinpoint learning year 11
- Corbett maths
- Maths genie
- Maths kitchen some areas are free but can pay for premium
- Whiterose maths
- Whiterose homelearning
- Onmaths Can register to see progress

Any questions please contact the following:

Mrock@dormston.dudley.sch.uk (Key stage 4 coordinator)

<u>Ljacques 1 @dormston.dudley.sch.uk</u> (Curriculum leader for mathematics)

Science at Dormston

MISS E WARD – CURRICULUM LEADER FOR SCIENCE

MISS J OSMOND- KS4 CO COORDINATOR (YEAR 9-10)

MRS R JAI- SECOND IN SCIENCE / YEAR 11

YEAR 10 COMBINED SCIENCE TRILOGY

Students in **sets 2 to 5 in Year 10** (both X and Y population) will study GCSE Combined Science Trilogy. They will be assessed terminally at the end of Year 11 and complete **six 1 hour 15 minute exams in Biology, Chemistry and Physics topics.** Students will complete three exams during exam week to assess knowledge and understanding.

	<u>Topic</u>	Link to Prior Learning	<u>Topic</u>	Link to Prior Learning
<u>_</u>	Recap Prior Learning		P2 Electricity	P2.1 Electricity & Magnetism
Autumn			RP15 – Resistance RP16 – I-V	P1 Energy
Ā			Characteristics	
7	C3 Quantitative	C1.2 Elements, Atoms, and	B5 Homeostasis &	B1.3 Reproduction
mn 2	Chemistry	Compounds C1.3 Reactions	Response	B1 Cells B2 Organisation
Autumn			RP6 – Reaction Time	
	C4 Chemical Changes	C1.3 Reactions	C5 Energy Changes	C1.3 Reactions
בן		C1.4 Acids and Alkalis		C3 Quantitative Chemistry
<u>≅</u> ' ∣	RP8 – Making Salts	C2.3 Metals and Acids	RP10 – Temperature	C4 Chemical Changes
Spring 1	RP9 - Electrolysis	C1 Atomic Structure and	Changes	
"		the Periodic Table		
		C3 Quantitative Chemistry		
	C7 Organic Chemistry	C2.4 The Earth	P5 Forces	P1.1 Forces
92		C2 Structure, Bonding and		P2.3 Motion and Pressure
.≦⊟		the Properties of Matter	RP18 – Force and	P1 Energy
Spring 2		C9 Chemistry of the	Extension	
		Atmosphere	RP19 - Acceleration	
	B7 Ecology	B2.2 Ecosystems Processes	C6 The Rate & Extent	C3 Quantitative Chemistry
Summer 1		B2.3 Adaptation and	of Chemical Change	C4 Chemical Changes
틸	RP7 – Field	Inheritance		C5 Energy Changes
5	Investigations	B1 Cells	RP11 - Rates of	
S			Reaction	
2	Revision, End of Year Ass	essment & Application-Base	ed Learning	
ē				
Summer				
⊏				

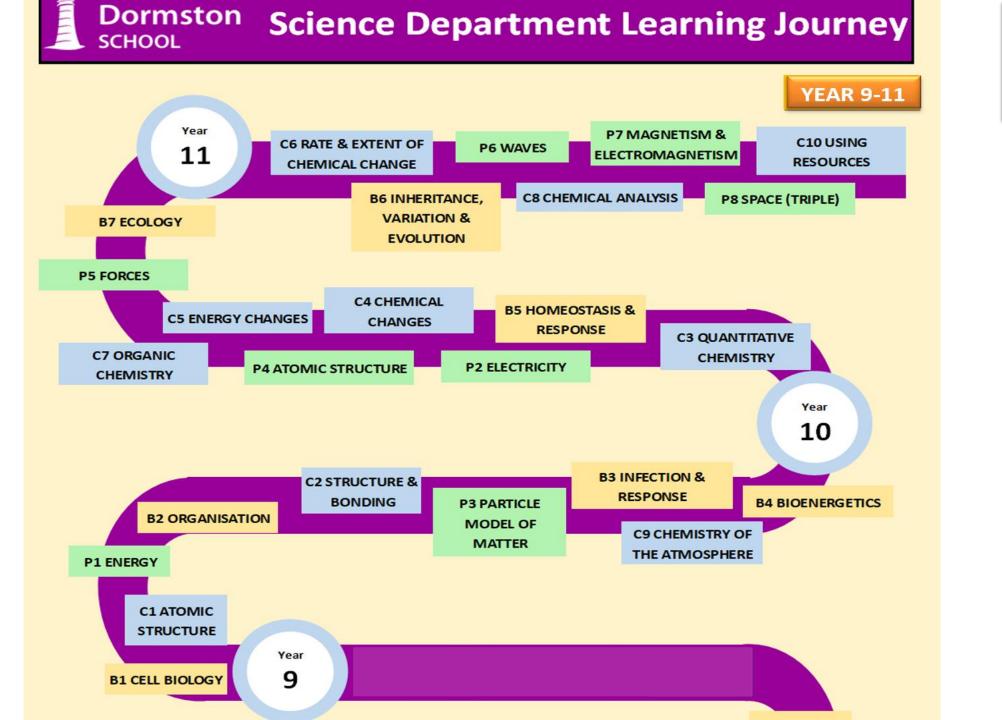
YEAR 10 Triple SCIENCE

Only **10X1 and 10Y1** pupils will be following this course and will achieve three separate science GCSE's at the end of the course. Students will sit **six 1 hour 45 minute exams in May / June 2023**. All content will be assessed through the use of questions based on content, mathematical application and practical skills. At the end of each term, pupils will sit cumulative 45-minute assessments in each science.

	Biology	Link to Prior Learning	Retrieva Focus	Chemistry	Link to Prior Learning	Retrieva Focus	Physics	Link to Prior Learning	Retrieval
	Recap Prior Learning		B1	Recap Prior Learning		C1	Recap Prior Learning		P1 (eq
Autumn	B5 Homeostasis and Response B.RP7 – Reaction Time	B1.3 Reproduction B1 Cells B2 Organisation	B2 B3 B4	C3 Quantitative Chemistry	C1.2 Elements, Atoms, and Compounds C1.3 Reactions	C2 C9	P2 Electricity P.RP3 – Resistance P.RP4 – I-V Characteristics	P2.1 Electricity & Magnetism P1 Energy	ati ns, P3
A	B.RP8 – Plant Responses			C5 Energy Changes C.RP4 – Temperature Changes	C1.3 Reactions C3 Quantitative Chemistry C4 Chemical Changes				, ,
	B7 Ecology B.RP9 – Field	B2.2 Ecosystems Processes	B1 B2	C4 Chemical Changes	C1.3 Reactions C1.4 Acids and Alkalis	C1 C2	P5 Forces P.RP6 – Force	P1.1 Forces P2.3 Motion and Pressure	P1
Spring	Investigations B.RP10 - Decay	B2.3 Adaptation and Inheritance B1 Cells	B3 B5		C2.3 Metals and Acids C1 Atomic Structure and the Periodic Table C3 Quantitative Chemistry	С3	and Extension P.RP7 - Acceleration	P1 Energy	P3
				C6 The Rate & Extent of Chemical Change C.RP5 – Rates	C3 Quantitative Chemistry C4 Chemical Changes C5 Energy Changes				
	Revision		B4	of Reaction C7 Organic	C2.4 The Earth	C2	Revision		P2
Summer			B4	Chemistry (can	C2 Structure, Bonding and the	C4			P3
3			<i>B7</i>	potentially be pushed into	Properties of Matter C9 Chemistry of the Atmosphere	C5			P4

YEAR 10 half termly retrieval topics

Half term	Retrieval topic focus
Autumn 1	B4, P4, C1
Autumn 2	P2, B1
Spring 1	P2, C3. B5
Spring 2	P1, C2, C4
Summer 1	P5, B2, C5, C7
Summer 2	B7, P5, C6



Science books front/inside covers

Col		
End of year		
target grade		
Year 11 target		
grade		
Term	Grade achieved	Effort grade
Autumn		
Spring		
Summer		

Review B1 Cell Biology

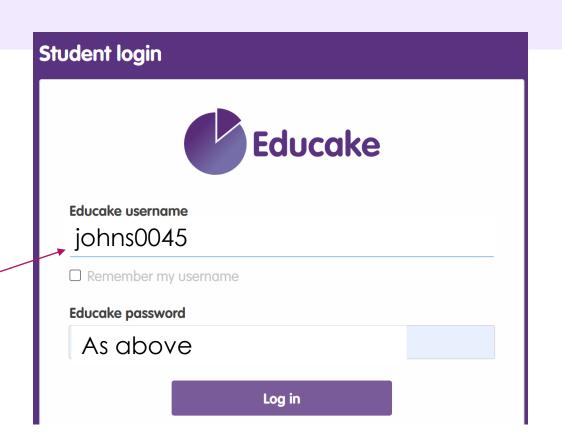
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	⊏an you…?	\odot	(1)	8
	B1.1 Cell Structure			
	Name the main organelles of plant and animal cells (eukaryotic cells)			
	Recall the relative size of bacterial cells (prokaryotic cells)			
	Describe the difference in how the genetic material is found within eukaryotic and prokaryotic			
	cells.	\perp		-
	Explain how the main sub-cellular structures, including the nucleus, cell membranes,			
	mitochondria, cell wall and chloroplasts in plant cells and plasmids in bacterial cells are related to their functions			
	Explain how the structure of different types of cell relate to their function in a tissue, an organ or			
	organ system, or the whole organism. Including sperm cells, nerve cells and muscle cells in			
	animals and root hair cells, xylem and phloem cells in plants.			
	Describe cell differentiation			
	Describe the differences in magnification and resolution between electron and light microscopes			
	Define binary fission (biology only)			
	Explain how to prepare an uncontaminated culture (biology only)			
	B1.2 Cell division			
	Recall that the nucleus of a cell contains chromosomes made of DNA molecules. Each			
	chromosome carries a large number of genes. In body cells the chromosomes are normally found			
	in pairs Give an overview of mitosis			-
	Understand that Cell division by mitosis is important in the growth and development of			
	multicellular organisms			
	Recognise and describe situations where mitosis is occurring.			
	Define a stem cell			
	Recall that stem cells from human embryos and adult bone marrow can be cloned and made to			
	differentiate into many different types of human cells			
	Name some conditions which may be helped by treatment with stem cells			
	Discuss the ethical or religious objections and potential risk of stem cell use			
	Recall that stem cells from meristems in plants can be used to produce clones of plants quickly			
	and economically and describe possible uses			
	B1.3 Transport in cells	1		1
	Explain how substances may move into and out of cells across the cell membranes via diffusion			_
	Describe diffusion	-		-
	Recall that some of the substances transported in and out of cells by diffusion are oxygen and carbon dioxide in gas exchange, and of the waste product urea from cells into the blood plasma			
	for excretion in the kidney			
	Describe factors the affect the rate of diffusion			
	Recall that a single-celled organism has a relatively large surface area to volume ratio to allow			
	sufficient transport of molecules into and out of the cell			
	Explain how the small intestine and lungs in mammals, gills in fish, and the roots and leaves in			
	plants, are adapted for exchanging materials	-		-
	List factors that increase the effectiveness of an exchange surface Describe osmosis	+		
	Recall that active transport moves substances from a more dilute solution to a more	+		-
	concentrated solution (against a concentration gradient). This requires energy from respiration.			
	Link the structure of a root hair cell to its function.	+		
		+	-	\leftarrow

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This should be recorded in their planner but can be checked or reset with your science teacher if needed. Please note it is all lower case

Marking and assessment feedback

Q1.

Read the information about stem cells.

Stem cells are used to treat some human diseases.

Stem cells can be collected from early embryos. These stem cells have not begun to differentiate, so they could be used to produce any kind of cell, tissue or organ. The use of embryonic stem cells to treat human diseases is new and, for some diseases, trials on patients are happening now.

Stem cells can also be collected from adult bone marrow. The operation is simple but may be painful. Stem cells in bone marrow mainly differentiate to form blood cells. These stem cells have been used successfully for many years to treat some kinds of blood disease. Recently there have been trials of other types of stem cell from bone marrow. These stem cells are used to treat diseases such as heart disease.

Evaluate the use of stem cells from embryos or from adult bone marrow for treating human diseases.

You should give a conclusion to your evaluation.	
	(Total 5 marks

Q1.

Marks should **not** be awarded for simply copying the information provided A mark may be awarded for a <u>comparison</u> between treatments if the answer only involves copied information

any four from:

For all 4 marks to be awarded, there must be at least 1 pro and 1 con

embryo stem cells - examples of

pros

- can treat a wide variety / lots of diseases / problems
- many available / plentiful
- using them better than wasting them
- painless

cons

- (possible) harm / death to embryo
- (relatively) untested / unreliable / may not work
 allow long term effects not known
 or may be more risky
- embryo can't be 'asked' / 'embryo rights' idea

adult bone marrow stem cells - examples of

pros

- no ethical issues (in collection) or permission given
- quick recovery
- (relatively) safe

allow does not kill (donor) / low risk

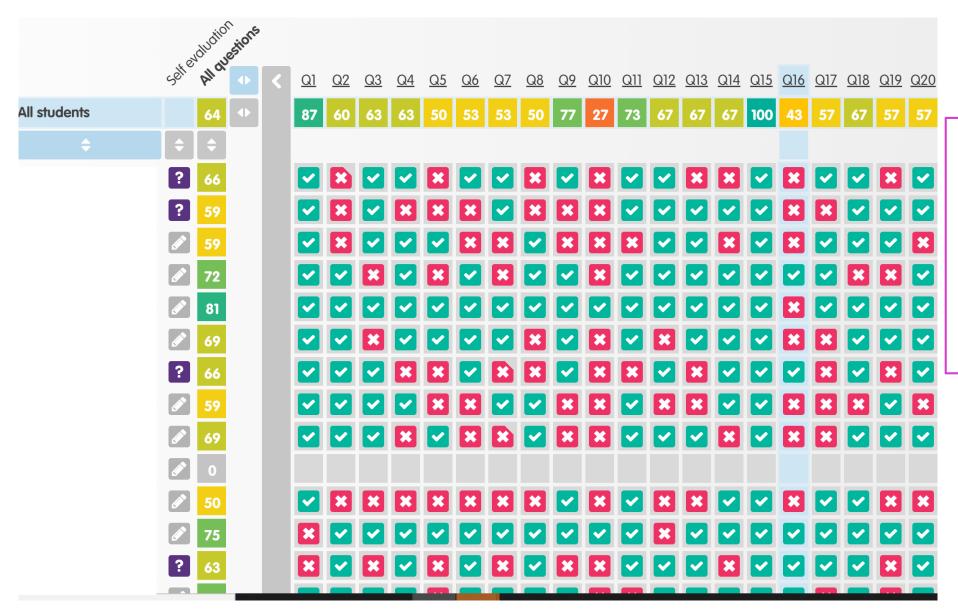
well tried / tested / know they work

cons

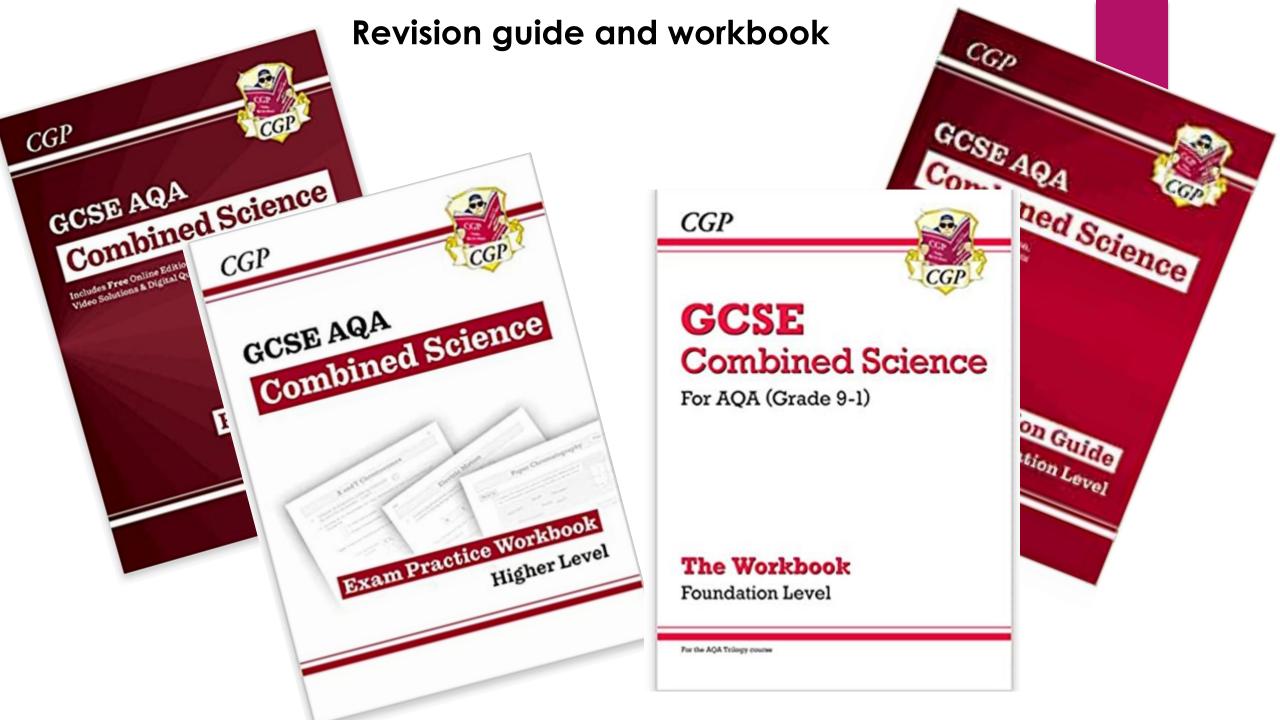
- operation hazards eg infection
- few types of cell / tissue produced or few diseases / problems treated
- painful so may deter donors

4

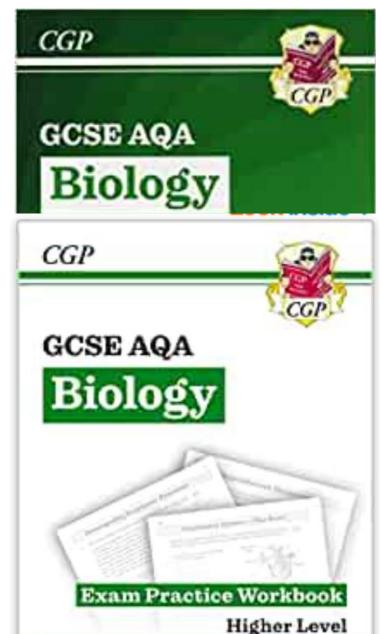
Marking and assessment feedback

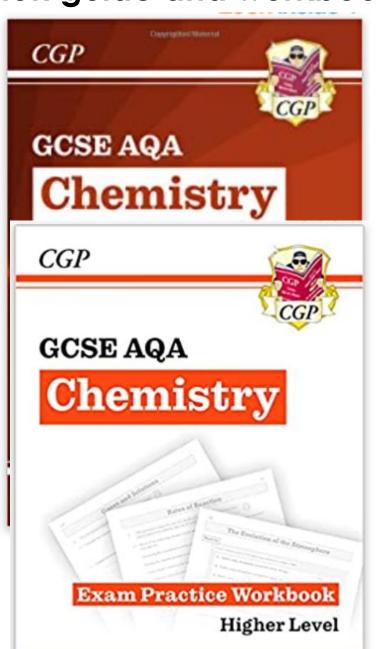


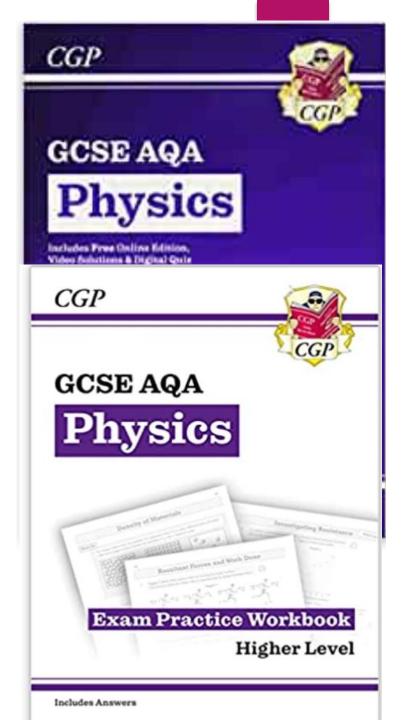
Peer and self assessment, verbal feedback and live marking



Revision guide and workbook







Other useful hints and websites

- Cognito –free to sign up– year 9-11
- Seneca free to sign up year 9-11
- Free Science lessons (youtube clips)year 9-11
- Savemyexams
 – some areas are free but can pay for premium
- Physics and maths tutor- year 9-11

Any questions please contact the following:

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