

Welcome to Beckfoot Oakbank

Y11 Parent Power Hour
Thursday 13th October

Parent Power Hour

enjoylearnsucceed

5:30pm-5:40pm Ms. Hart

5:40pm – 5:55pm Mr.Ray

5:55pm – 6:10pm Maths/Eng /Sci

6:10pm-6:15pm Mr. Delgado

6:15pm refreshments, Q&A, takeaways

OUR MISSION AND VALUES

*To create a remarkable school where
no child is left behind*



Our Values

enjoy

We **enjoy** belonging to Beckfoot Oakbank.

learn

We are all here to **learn**.

succeed

We are determined to **succeed**.

Our school sentence

Beckfoot Oakbank School ensured that every child succeeded in education, had a great career and enjoyed life.



Our sixth form is good
and one of the best
performing in Bradford



creating remarkable schools
where no child is left behind

Summer 2023 Exams

- No adaptations
- Full subject content
- No advanced information but
- Giving students formulae sheets in GCSE maths and revised equation sheets in GCSE combined science and physics.

118

school days

15th May 2023

Academic
outcomes do
matter- they
give our
students
choices.

Attendance in
Year 11
directly
impacts on
the grades
achieved.

Mock examinations & How to help students revise Mr. Ray

Mock examination series

Why we do mocks?

- Preparation – exam routines, revision, receiving results
- Where students are working

Mock Examinations, 2 weeks 31st October – 11th November
31 exams
45 minutes - 120 minutes
3 maths papers, 2 English papers, 3 science papers

11 weeks

Data, intervention cycle

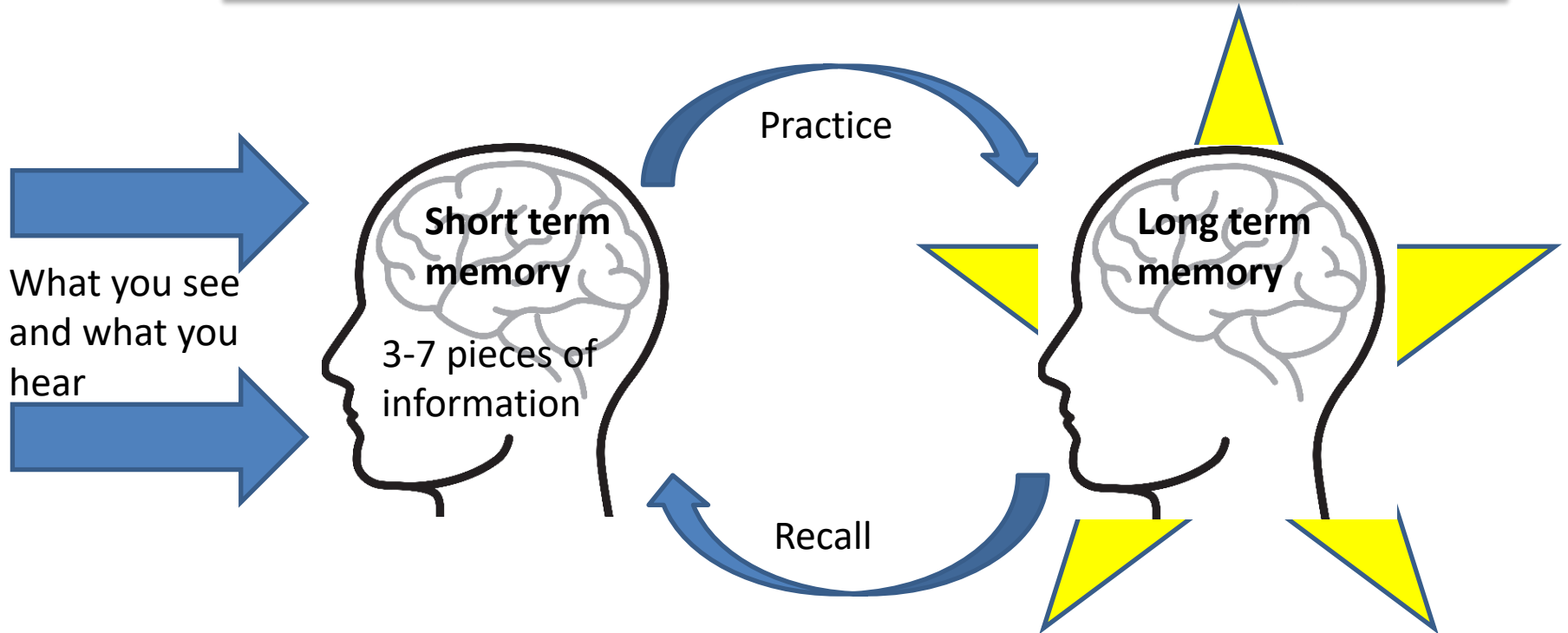
Mock examinations, 2 weeks 20th February – 27th February

8 weeks

Data, intervention cycle

Public examinations GCSEs 15th May

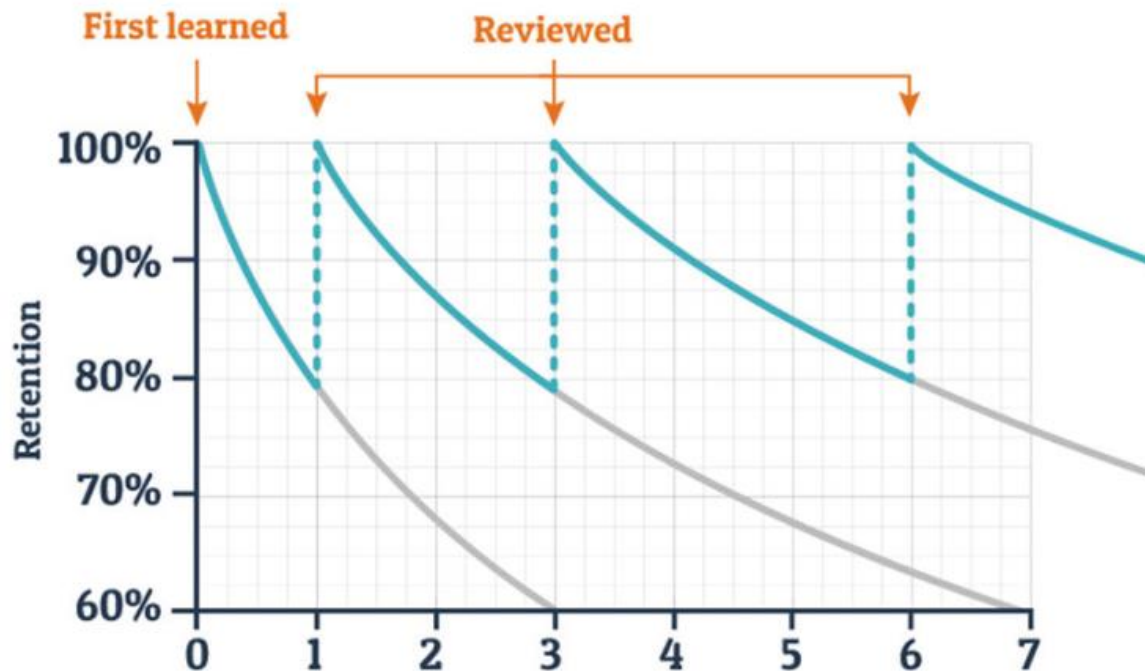
Some facts about our brain...



creating remarkable schools

where no child is left behind
No child left behind

And even if you do remember...



you'll forget quickly!!

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where no child is left behind

Revision

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Organise – timetable,
place, make it easy
Be realistic

Day	4pm	5pm	6pm	7pm	8pm	9pm	10pm
Mon							
Tues							
Wed							
Thurs							
Fri							



Candidate Number : 7688

UCI : 372240207688C

Reg Group : 10DOC

ULN : 9101691685

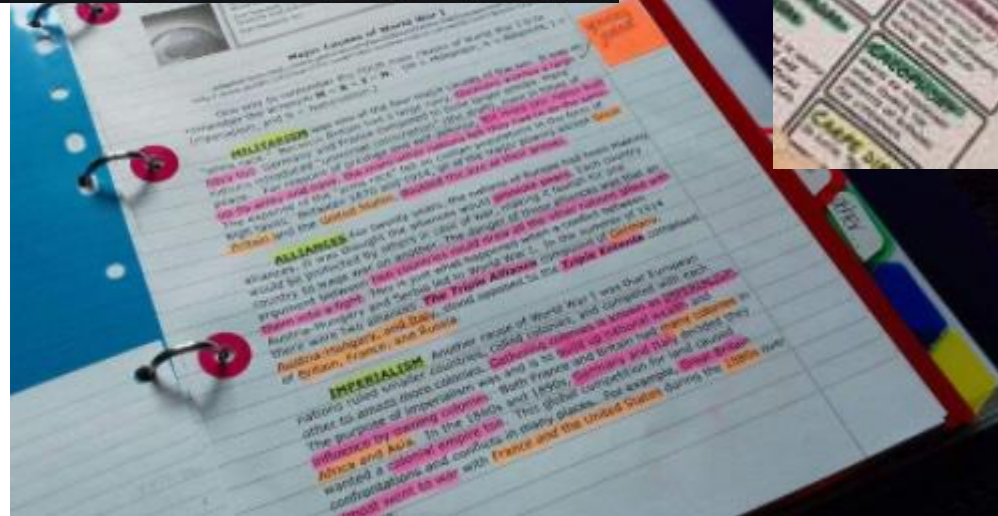
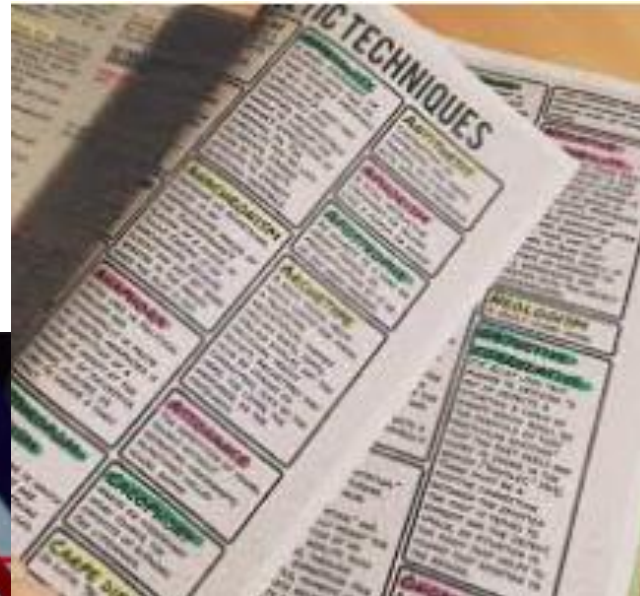
Special Arrangements required

Date	Start Time	Board	Level	Element Code	Element Title	Component Code	Component Title	Duration	Room	Seat
Mon 17 May	8:45AM	DOM	Lcl/B	Y10ENG	Y10 ENGLISH LANGUAGE MOCK	Y10ENG	Y10 ENGLISH LANGUAGE MOCK	1h 45m	SPORTS HALL	T9
Mon 17 May	1:30PM	DOM	Lcl/B	Y10END	Y10 ENGINEERING DESIGN MOCK	Y10END	Y10 ENGINEERING DESIGN MOCK	1h 30m	SPORTS HALL	T11
Tue 18 May	8:45AM	DOM	Lcl/B	8300F	Mathematics Tier F	8300/1F	Mathematics Paper 1 Tier F	1h 30m	SPORTS HALL	T9
Wed 19 May	1:30PM	DOM	Lcl/B	Y10GEO	Y10 GEOGRAPHY MOCK	Y10GEO	Y10 GEOGRAPHY MOCK	1h 30m	SPORTS HALL	T10
Fri 21 May	8:45AM	DOM	Lcl/B	B1F	Paper 1: Biology 1 Tier F	8464/B/1F	Paper 1: Biology 1 Tier F	1h 15m	SPORTS HALL	T10
Mon 24 May	8:45AM	DOM	Lcl/B	C1Fdn	Paper 3: Chemistry 1 Tier F	8464/C/1F	Paper 3: Chemistry 1 Tier F	1h 15m	SPORTS HALL	T10
Tue 25 May	8:45AM	DOM	Lcl/B	P1Fdn	Paper 5: Physics 1 Tier F	8464/P/1F	Paper 5: Physics 1 Tier F	1h 15m	SPORTS HALL	T10
Wed 26 May	1:30PM	DOM	Lcl/B	21217L	Unit : Principles of Training,	21217L	Unit : Principles of Training, Nutrition.....	1h 00m	SPORTS HALL	P13

creating remarkable schools

where no child is left behind





Building relationships | Breaking the cycle | Planning for Everyone | Managing Emotions

Confident communicators | Knowledgeable and Expert Learners | Committed Community Contributors | Future-ready Learners

No child left behind

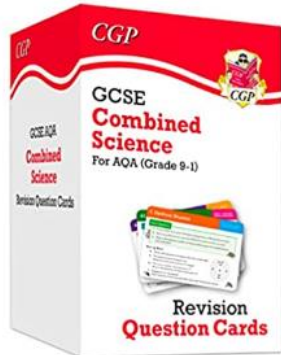
Revision

Front

What is the capital
of Australia?

Back

Canberra



How we learn and remember

Transform It

Turn **facts** into **images**.
Then use the images to
rewrite the facts.



Recreate It

Recreate **diagrams**,
maps or images – first by
copying from the sheet,
eventually moving on to
recalling entirely from
memory.



Prioritise It

Identify the **top three**
most important pieces of
content on the sheet –
justify your reasons
(explain why).



Be a Photocopier

On a blank piece of paper,
recreate as much of the
organiser as you can.
When you have done all
you can, **green pen** it by
using the original to add
what you couldn't recall.



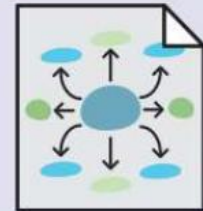
Reduce It

Summarise content into
single words. Then use
these words to rewrite
the content.



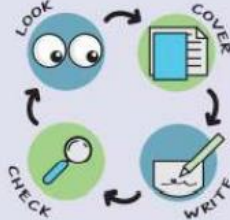
Mind-map It

Choose a section of the
knowledge organiser to
mindmap from memory.
Add categories, colour,
questions and layers of
thinking about the
information.



Look, Cover, Write, Check

Choose a section and
look, trying to remember
it. **Cover** it up. **Write** it
out. **Check** what you
missed and add it in
green pen.



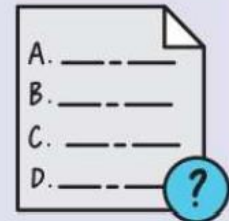
Connect It

Find **connections**
between ideas,
vocabulary or facts on
the knowledge
organiser. How many
connections can you find
between them?



Quiz It

Write yourself a **quiz**
based on the KO. Come
back to it another day
and see if you can
answer it from memory.
Red pen your answers.



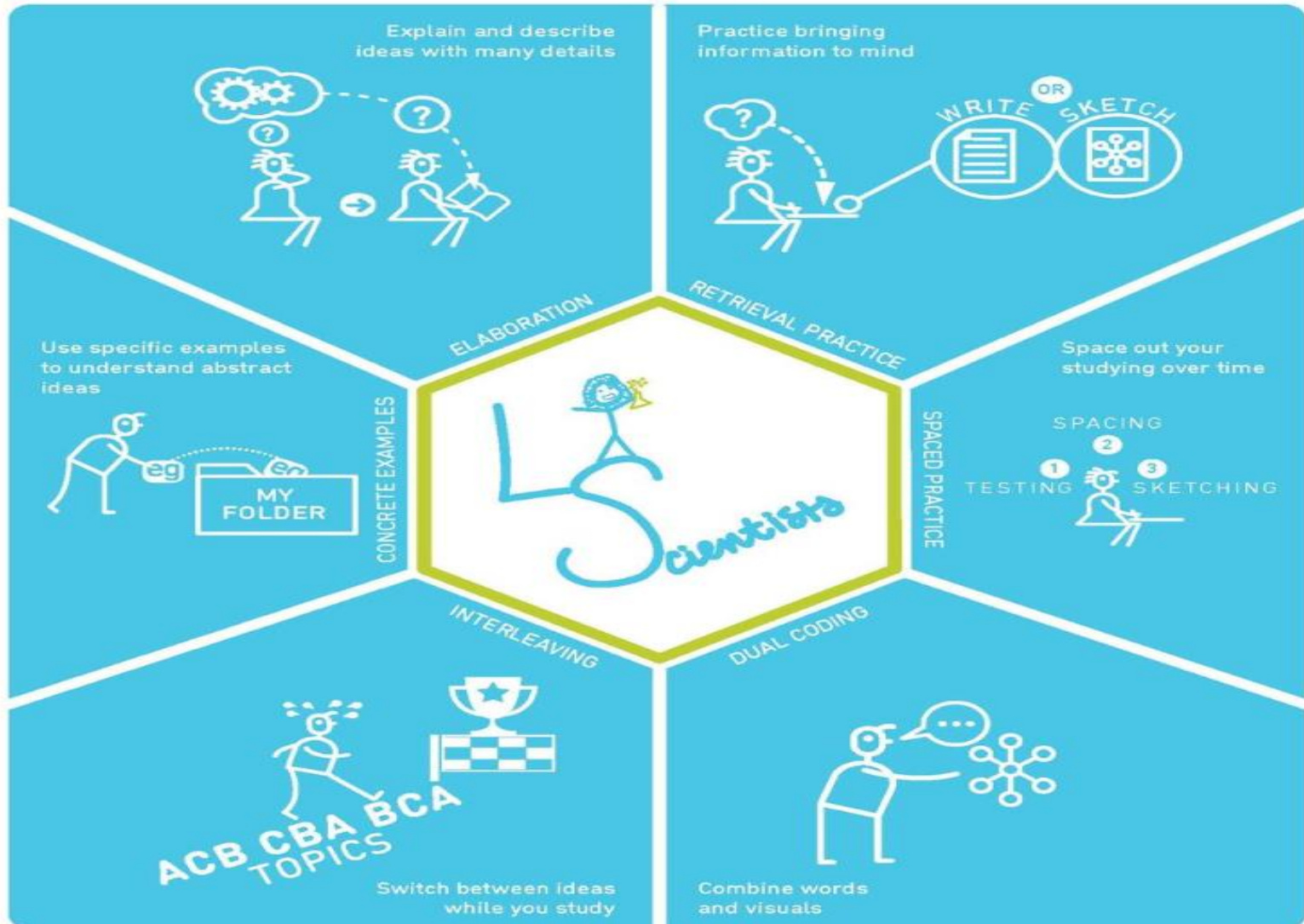
How we learn and remember



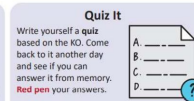
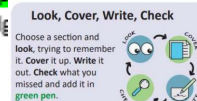
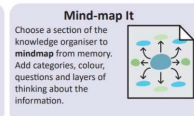
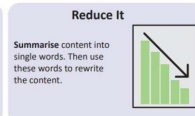
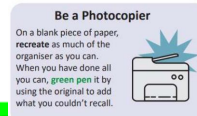
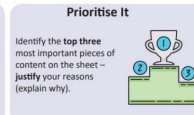
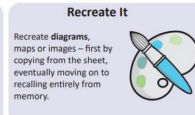
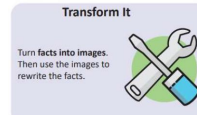
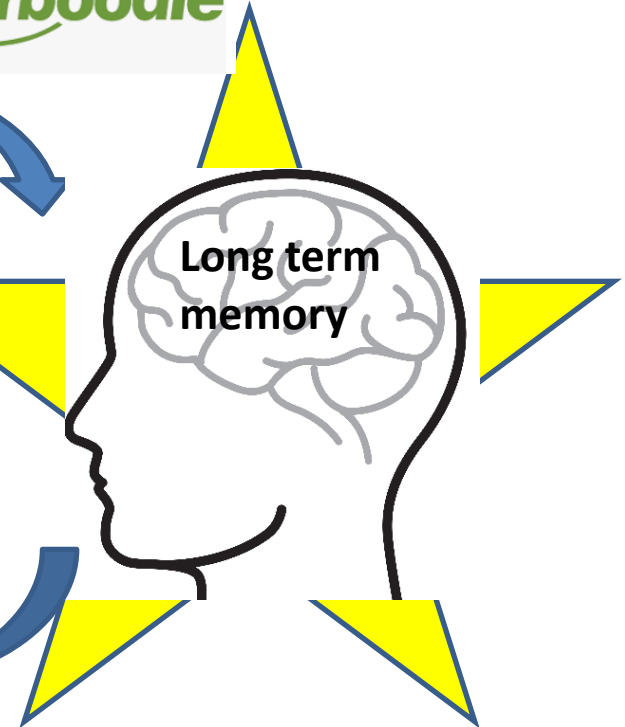
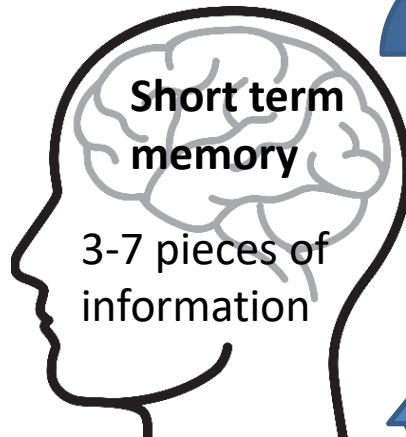
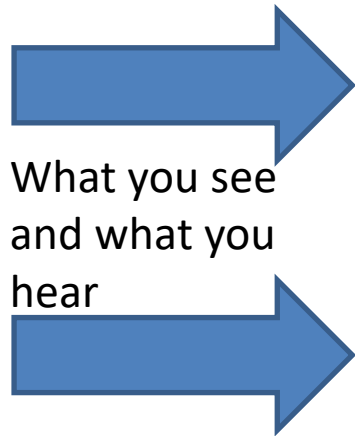
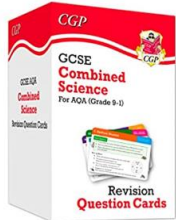
Six Strategies for Effective Learning

LEARNINGSOCIETISTS.ORG

All of these strategies have supporting evidence from cognitive psychology. For each strategy, we explain how to do it, some points to consider, and where to find more information.



Why they work?



Building relationship

Confident communicators | Knowledge

Emotions

Future-ready Learners

How we learn and remember

No child left behind

Year 11
Mock examinations 1
Oct 31st – 11th Nov



enjoylearnsucceed

Assessment Information

No child left behind

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Year 11 Mock exam timetable – week 1				
Date	Start	Duration	Code	Title
Mon 31 Oct	10:20	01:00	8702-2	Eng Lang-Paper 2:Section A
Mon 31 Oct	13:00	01:00	21117K	BTEC H&SC Unit 3: Health and wellbeing
Mon 31 Oct	13:40	01:00	21123K	BTEC PA Component 3: Ideas Log
Tue 01 Nov	10:20	01:30	8300/1F	Mathematics Paper 1 Tier F
Tue 01 Nov	10:20	01:30	8300/1H	Mathematics Paper 1 Tier H
Tue 01 Nov	13:00	01:30	803501	Paper 1:Living with the Physical Environment
Wed 02 Nov	10:20	01:15	8464/B/1H	Paper 1: Biology 1 Tier H
Wed 02 Nov	10:20	01:15	8464/B/1F	Paper 1: Biology 1 Tier F
Wed 02 Nov	13:00	02:00	21429K	BTEC Enterprise 3: Promotion and Finance
Thu 03 Nov	10:20	01:00	8702/2	Eng Lit Paper 2: Modern Texts and Poetry
Thu 03 Nov	13:00	02:00	8145-1	History Paper 1AD: America, 1920-1973
Fri 04 Nov	10:20	01:15	8464/C/1F	Paper 3: Chemistry 1 Tier F
Fri 04 Nov	10:20	01:15	8464/C/1H	Paper 3: Chemistry 1 Tier H

Faculty: **Maths**

What will my assessment look like?

One Non-calculator paper and two calculator papers. 90 minutes each.

A mix of question styles, from short, single-mark questions to multi-step problems. The mathematical demand increases as you progress through the paper.

What do I need to revise?

Foundation

You will be tested across the 6 strands of the Maths specification:

- 1 Number
- 2 Algebra
- 3 Ratio, proportion and rates of change
- 4 Geometry and measures
- 5 Probability
- 6 Statistics

Higher

You will be tested across the 6 strands of the Maths specification:

- 1 Number
- 2 Algebra
- 3 Ratio, proportion and rates of change
- 4 Geometry and measures
- 5 Probability
- 6 Statistics

What can I revise from?

AQA Website: www.aqa.org.uk

Past Papers and Mark Schemes available.


www.mymaths.co.uk

Login: [Oakbank](http://www.oakbank.org.uk) Password: Obtuse

www.corbettmaths.com

Free worksheets; exam questions; videos

Notes from class, resources in Class Materials from Teams



LEARN TO STUDY USING...
Retrieval Practice
PRACTICE BRINGING INFORMATION TO MIND

HOW TO DO IT

Put away your class materials, and write or sketch everything you know. Be as thorough as possible. Then, check your class materials for accuracy and important points you missed.

Take as many practice tests as you can get your hands on. If you don't have ready-made tests, try making your own and trading with a friend who has done the same.

You can also make flashcards. Just make sure you practice recalling the information on them, and go beyond definitions by thinking of links between ideas.

HOLD ON!

Retrieval practice works best when you go back to check your class materials for accuracy afterward.

Retrieval is hard! If you're struggling, identify the things you've missed from your class materials, and work your way up to recalling it on your own with the class materials closed.

Don't only recall words and definitions. Make sure to recall main ideas, how things are related or different from one another, and new examples.

RESEARCH

Read more about retrieval practice as a study strategy

Roediger, H. L., Putnam, A. L., & Smith, M. A. (2011). Ten benefits of testing and their applications to educational practice. In J. Mestre & B. Ross (Eds.), *Psychology of learning and motivation: Cognition in education*, (pp. 1-34). Oxford: Elsevier.

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English Support for Year 11

Miss Finlay

GCSE English Language - 1hr 45m

Paper 1 - fiction

- Q1 - retrieval (4 marks)
- Q2 - language analysis (8)
- Q3 - structure analysis (8)
- Q4 - evaluation (20)
- Q5 - narrative writing (40)

Paper 2 - non-fiction

- Q1 - True/false (4 marks)
- Q2 - summary (8)
- Q3 - language analysis (12)
- Q4 - comparison (16)
- Q5 - persuasive writing (40)

GCSE English Language - 1hr 45m

Paper 1 - fiction

- Q1 - retrieval (4 marks)
- Q2 - language analysis (8)
- Q3 - structure analysis (8)
- Q4 - evaluation (20)
- Q5 - narrative writing (40)

Year 10
mock
June
'22

Paper 2 - non-fiction

- Q1 - True/false (4 marks)
- Q2 - summary (8)
- Q3 - language analysis (12)
- Q4 - comparison (16)
- Q5 - persuasive writing (40)

Year 11
mock
Nov
'22

GCSE English Language - 1hr 45m		GCSE English Literature	
Paper 1 - fiction Q1 - retrieval (4 marks) Q2 - language analysis (8) Q3 - structure analysis (8) Q4 - evaluation (20) Q5 - narrative writing (40)	Year 10 mock June '22	Paper 1 Romeo and Juliet - (34 marks)	
		Paper 1 A Christmas Carol - (30)	
Paper 2 - non-fiction Q1 - True/false (4 marks) Q2 - summary (8) Q3 - language analysis (12) Q4 - comparison (16) Q5 - persuasive writing (40)	Year 11 mock Nov '22	Paper 2 An Inspector Calls - (34)	
		Paper 2 Poetry anthology and unseen poetry (62)	

GCSE English Language - 1hr 45m		GCSE English Literature	
Paper 1 - fiction Q1 - retrieval (4 marks) Q2 - language analysis (8) Q3 - structure analysis (8) Q4 - evaluation (20) Q5 - narrative writing (40)	Year 10 mock June '22	Paper 1 Romeo and Juliet - (34 marks)	Nov 22
		Paper 1 A Christmas Carol - (30)	
Paper 2 - non-fiction Q1 - True/false (4 marks) Q2 - summary (8) Q3 - language analysis (12) Q4 - comparison (16) Q5 - persuasive writing (40)	Year 11 mock Nov '22	Paper 2 An Inspector Calls - (34)	June 22
		Paper 2 Poetry anthology and unseen poetry (62)	

Revision	
<p>English Language - they need to know</p> <ul style="list-style-type: none"> the core skills required for every question 	

Revision	
<p>English Language - they need to know</p> <ul style="list-style-type: none"> the core skills required for every question 	
<p>English Language - revision sources</p> <ul style="list-style-type: none"> Their exercise book Home learning on Teams GCSE Bitesize - paper 2 	

Revision	
<p>English Language - they need to know</p> <ul style="list-style-type: none"> the core skills required for every question 	<p>English Literature - they need to know</p> <ul style="list-style-type: none"> the plot - they need to know what happens when, what the characters know and what the audience know the key themes - love, fate, conflict, death, relationships the key characters the structure of an essay
<p>English Language - revision sources</p> <ul style="list-style-type: none"> Their exercise book Home learning on Teams GCSE Bitesize - paper 2 	

Revision	
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<p>English Language - revision sources</p> <ul style="list-style-type: none"> Their exercise book Home learning on Teams GCSE Bitesize - paper 2 	<p>English Literature - revision resources</p> <ul style="list-style-type: none"> their exercise book their Romeo & Juliet script & revision guide Home learning on Teams Rewatching the play - on Teams GCSE Bitesize

If you have any questions, please email
nf@beckfootoakbank.org
and we will be happy to help.

Science Support for Year 11

Mrs.Humpherson

Structure of Course / Exams

- *Courses at Beckfoot Oakbank:*
AQA Science trilogy Foundation Tier
AQA Science trilogy Higher Tier
- 6 exams for all students.

Biology Paper 1, Biology Paper 2
Chemistry paper 1, Chemistry paper 2
Physics Paper 1, Physics Paper 2
- Exams are 1 hour 15 mins

Exam	Content	
Biology 1	1 Cells 2 Organisation Working scientifically	3 Infection and response 4 Bioenergetics
Biology 2	5 Homeostasis & response 6 Inheritance variation & evolution Working scientifically	7 Ecology
Chemistry 1	1 Atomic structure & periodic table 2 Bonding 3 Quantitative Chemistry Working scientifically	4 Chemical changes 5 Energy Changes
Chemistry 2	6 Rates of reaction 7 Organic Chemistry 8 Chemical analysis Working scientifically	9 Chem of atmosphere 10 Using resources
Physics 1	1 Energy 3 Electricity Working scientifically	3 Particle model of matter 4 Atomic Structure
Physics 2	5 Forces 7 Magnetism and electromagnetism Working scientifically	6 Waves

To help students revise for November mocks

ixIL

CSE bitesize

revision guide / flashcards

3 Quick Quiz questions

knowledge organisers: Read cover write check

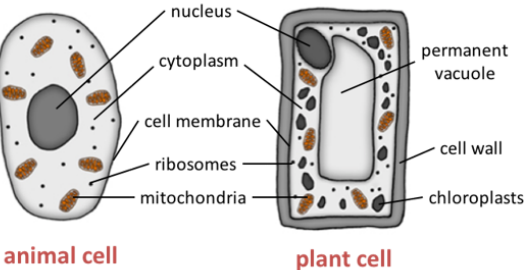
physics data Sheet / Numeracy help sheet.



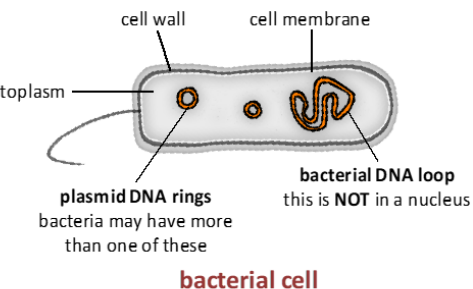
To help students revise for November mocks

SIXIL KNOWIT booklets to complete – FT
GRASPIT HT or higher grade FT.

Cell structure part 1 - Animal, plant cells and bacterial cells



You will need to know the differences between plant, animal and bacterial cells.



Bacterial cells are much smaller than plant and animal cells.

6. Copy and complete the table and tick the correct column for

Cell part	Function	Animal
	Contains genetic material, which controls the activities of the cell	
Cytoplasm		
	Controls the movement of substances into and out of the cell	
	Most energy is released by respiration here	
Ribosomes	Protein synthesis happens here	
	Strengthens the cell – made of cellulose	
Chloroplasts		
	Filled with cell sap to help keep the cell turgid	
	Loop of DNA NOT found in a nucleus	
Plasmid (DNA)		

BBC Bitesize

**AQA
Synergy >**

**AQA Trilogy
>**

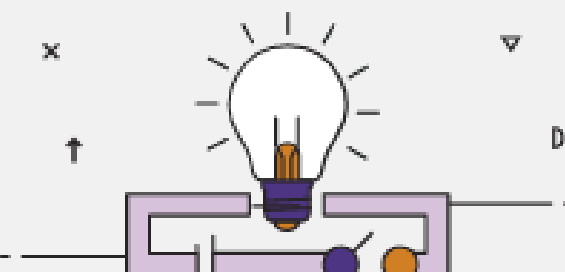
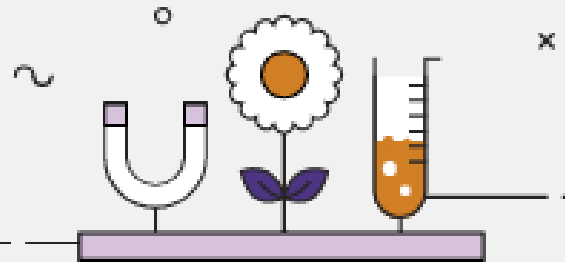
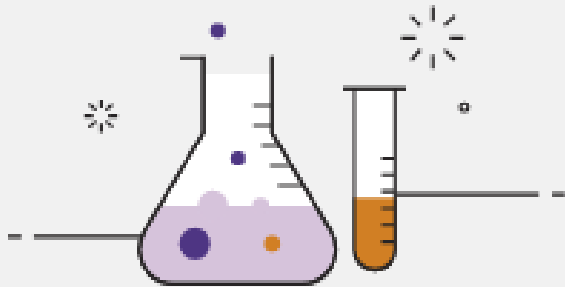
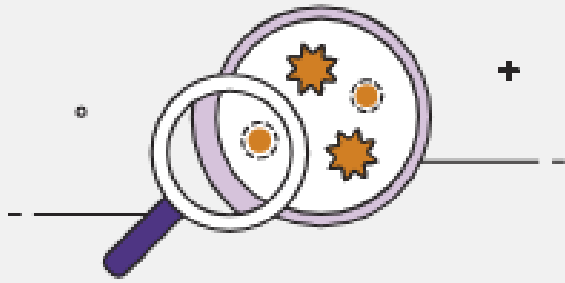
**CCEA
Double
Award >**

Edexcel >

Eduqas >

**OCR 21st
Century >**

**OCR
Gateway >**



gy (Combined ce) >

Cell biology

Organisation

Infection and response

Bioenergetics


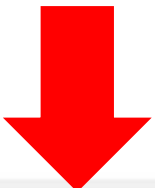
Homeostasis and response


Inheritance, variation and evolution


Ecology


Practical skills






 **Revise**

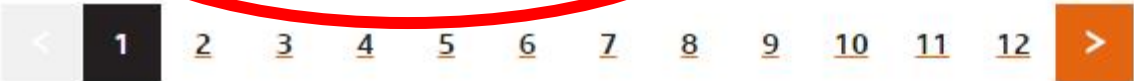
 **Video**

 **Test**

Sign in, save time

We'll remember what you've looked at so you can jump back in.

 **Sign in** or [Register](#) to personalise your Bitesize now.



More Guides

Cell structure - AQA

[Cell division - AQA](#) >

[Transport in cells - AQA](#) >

[Sample exam questions - Cell biology - AQA](#) >

Cell measurement



Struggling to get your head round revision and exams?

Our team of exam survivors will get you started and keep you going.

[Meet them here](#)

A3 Quiz sheet / Knowledge Organiser

P3 Particle Model of Matter PHYSICS PAPER 1

1 How much mass a substance contains compared to it's volume is...	1 density
2 State the equation which links density, mass and	2 density = mass/ volume,
3 Name the change of state when a liquid becomes a	3 freezing
4 Name the change of state when a solid becomes a	4 melting
5 Name the change of state when a liquid becomes a gas	5 evaporation
6 Name the change of state when a gas becomes a liquid	6 condensation
7 Name the change of state when a solid becomes a gas (without passing through liquid form)	7 sublimation
8 Changes of state are caused by the amount of a substance has	8 energy
9 State changes are examples of change	9 physical
10 Physical changes are ones which can be	10 reversed
11 A change which creates new products and cannot be reversed is change	11 chemical
12 The energy stored inside a system by the particles which make it up is known as energy	12 internal
13 What is internal energy?	13 The total kinetic energy + total potential energy of all the particles in a system
14 Energy stored within moving objects is	14 kinetic
15 Energy stored in particles because of their position is...	15 potential energy
16 Particles which are further apart have potential energy	16 more
17 The energy needed to raise the temperature 1 kg of a material by 1°C is the	17 specific heat capacity, c
18 The average kinetic energy of particles is known as the	18 temperature
19 The amount of energy required to change the state of one kilogram of a substance with no change in temperature is the ...?	19 specific latent heat, c
20 Latent heat of fusion is for changing...?	20 solid to liquid
21 Latent heat of vaporisation is for changing...?	21 liquid to vapour (gas)
22 Increasing temperature pressure in a gas if volume is constant	22 increases
23 The force exerted by gas on a surface as the particles collide with it is known as...?	23 gas pressure
24 State the units of density	24 kg/m ³
25 State the units of volume	25 ml or m ³
26 Why doesn't temperature increase during melting?	26 Energy is being used to weaken forces between
27 Why doesn't temperature increase during evaporation	27 Energy is being used to weaken forces between
28 Why does temperature of a substance increase as it is heated?	28 Particles gain more kinetic energy and temperature is a measure of kinetic energy
29 Particles are arranged regularly in a ...?	29 solid
30 Particles are arranged randomly, but touching in a ...?	30 liquid
31 Particles move around randomly in a ...?	31 gas
32 Latent Heat	32 Energy needed to change the state of 1kg of material without changing the

Radius of an atom $1 \times 10^{-10}\text{m}$

Atom	Same number of protons and electrons
Ion	Unequal number of electrons to protons
Mass number	Number of protons and neutrons
Atomic number	Number of protons

Electrons gained: Negative ion
Electrons lost: Positive ion

Isotope: Different forms of an element with the same number of protons but different number of neutrons

AQA ATOMIC STRUCTURE

Atomic structure

Particle	Charge	Size	Found
Neutron	None	1	In the nucleus
Proton	+	1	In the nucleus
Electron	-	Tiny	Orbits the nucleus

Atoms and Isotopes

Atoms and Nuclear Radiation

Decay	Range in air	Ionising power	Penetration power
Alpha	Few cm	Very strong	Stopped by paper
Beta	Few m	Medium	Stopped by Aluminium
Gamma	Great distances	Weak	Stopped by thick lead

Nuclear decay

Decay	Emitted from nucleus	Changes in mass number and atomic number
Alpha (α)	Helium nuclei (${}^4_2\text{He}$)	-4, -2
Beta (β)	Electron (${}^0_{-1}\text{e}$)	0, +1
Gamma (γ)	Electromagnetic wave	0, 0
Neutron	Neutron	-1, 0

${}^{238}_{92}\text{U} \rightarrow {}^{234}_{90}\text{Th} + {}^4_2\text{He}$

${}^{14}_6\text{C} \rightarrow {}^{14}_7\text{N} + {}^0_{-1}\text{e}$

${}^{235}_{92}\text{U} \rightarrow {}^{141}_{54}\text{Xe} + {}^{90}_{38}\text{Sr} + 2{}^1_0\text{n}$

Discovery of the nucleus

Scientist	Discovery
Democritus	Suggested idea of atoms as small spheres that cannot be cut.
J J Thomson (1897)	Discovered electrons - emitted from surface of hot metal. Showed electrons are negatively charged and that they are much less massive than atoms.
Thomson (1904)	Proposed 'plum pudding' model - atoms are a ball of positive charge with negative electrons embedded in it.
Geiger and Marsden (1909)	Directed beam of alpha particles (He^{2+}) at a thin sheet of gold foil. Found some travelled through, some were deflected, some bounced back.
Rutherford (1911)	Used above evidence to suggest alpha particles deflected due to electrostatic interaction between the very small charged nucleus, nucleus was massive. Proposed mass and positive charge contained in nucleus while electrons found outside the nucleus which cancel the positive charge exactly.
Bohr (1913)	Suggested modern model of atom - electrons in circular orbits around nucleus, electrons can change orbits by emitting or absorbing electromagnetic radiation. His research led to the idea of some particles within the nucleus having positive charge; these were named protons.
Chadwick (1932)	Discovered neutrons in nucleus - enabling other scientists to account for mass of atom.

Appendix B: Physics Equations

In problems, students should be able to recall and apply the following standard SI units.

Higher Tier papers only are indicated by HT in the left-hand column.

Equation	Symbol equation
Weight = mass \times gravitational field strength (g)	$W = m g$
Work done = force \times distance (line of action of the force)	$W = F s$
Force exerted on a spring = spring constant \times extension	$F = k e$
Distance travelled = speed \times time	$s = v t$
Acceleration = $\frac{\text{change in velocity}}{\text{time taken}}$	$a = \frac{\Delta v}{t}$
Force = mass \times acceleration	$F = m a$
Momentum = mass \times velocity	$p = m v$
Kinetic energy = $0.5 \times \text{mass} \times (\text{speed})^2$	$E_k = \frac{1}{2} m v^2$
Gravitational potential energy = mass \times gravitational field strength (g) \times height	$E_p = m g h$
Power = $\frac{\text{energy transferred}}{\text{time}}$	$P = \frac{E}{t}$

AQA formula sheet

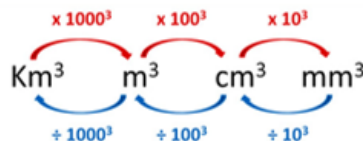
11	power = $\frac{\text{work done}}{\text{time}}$	$P = \frac{W}{t}$
12	efficiency = $\frac{\text{useful output energy transfer}}{\text{total input energy transfer}}$	
13	efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
14	wave speed = frequency \times wavelength	$v = f \lambda$
15	charge flow = current \times time	$Q = I t$
16	potential difference = current \times resistance	$V = I R$
17	power = potential difference \times current	$P = V I$
18	power = (current) $^2 \times$ resistance	$P = I^2 R$
19	energy transferred = power \times time	$E = P t$
20	energy transferred = charge flow \times potential difference	$E = Q V$
21	density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$

Numeracy Placemat



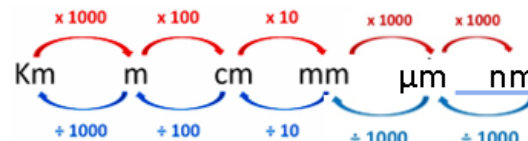
mass

1 kg in g = $1 \times 1000 = 1000\text{g}$



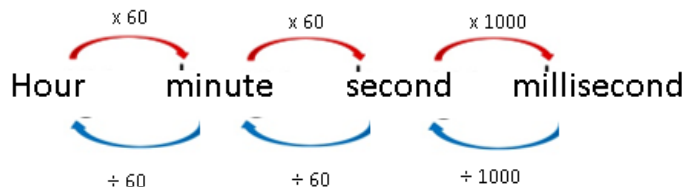
volume

1 cm^3 in $\text{m}^3 = 1 \div 100^3 = 0.000001\text{m}^3$



length

1mm in $\mu\text{m} = 1 \times 1000 = 1000 \mu\text{m}$



time

1 hour in seconds = $1 \times 60 \times 60 = 3600\text{s}$

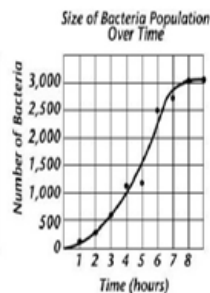
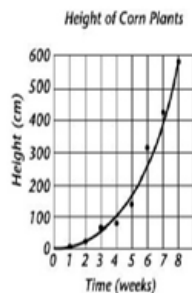
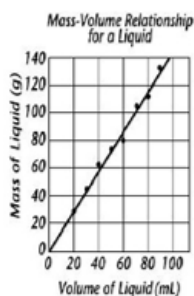
Symbol	Prefix	Example	Value
M	Mega-	Megahertz, MHz	$1,000,000 \ 10^6$
k	Kilo-	Kilogram, Kg	$1,000 \ 10^3$
c	Centi-	Centimetre, cm	$100 \ 10^2$
m	Milli-	Milligram, mg	$1 / 1,000 \ 10^{-3}$
μ	Micro-	Micrometre, μm	$1 / 1,000,000 \ 10^{-6}$
n	Nano-	Nanometre, nm	$1 / 1,000,000,000 \ 10^{-9}$

Line of best fit (L.O.B.F.)

Line might pass through some, all or none of the points

Can be straight...

.... or curved



Give your final answer as a **decimal** NOT a fraction

You can leave your answer in standard form e.g. 1×10^{-7}

Remember you need to learn equations in each subject for your exams

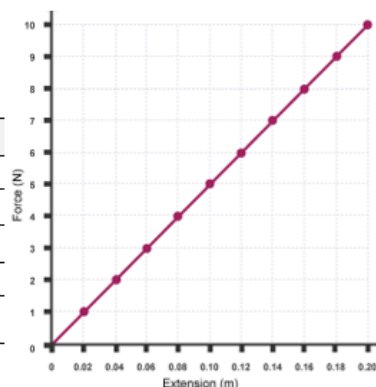
Maths in Science

Numeracy Placemat

Check your units!
These are some of the common ones

Quantity	Unit
Time	s
Distance	m
Mass	kg
Energy	J
Volume	cm ³ ml
Amount of substance	mole
Concentration	mol dm ⁻³ or M
Speed or Velocity	m/s
Temperature	K °C
Current	A
Potential difference	V
Resistance	Ω
Power	W
Pressure	Pa
Density	kg/m ³
Force	N

Remember DIDO for percentage change
D for difference
D for divided by
O for original
X 100



Graph checklist

- ✓ Evenly spaced scale
- ✓ Labelled axis with units
- ✓ Takes up more than 50% of page
- ✓ Points plotted accurately
- ✓ Line of best fit

Equation = formula

Doesn't have to start at zero!

Always show your workings...

- S – Star the quantities in the question
- U – Underline the units and quantities
- C – Copy the quantities and the units
- C – Convert units if needed
- E – Re-write the equation and re-arrange if needed.
- S – Substitute
- S – Solve (and then add units)

Do you need to quote your answer to a certain number of significant figures?

Estimate and use common sense to check your final answer

Not significant: zero for "cosmetic" purpose
0

Not significant: zeros used only to locate the decimal point
0.004000

Significant: all zeros between nonzero numbers
0.004000

Significant: all nonzero integers
4000

Significant: zeros at the end of a number to the right of decimal point
4.000

Rearranging equations

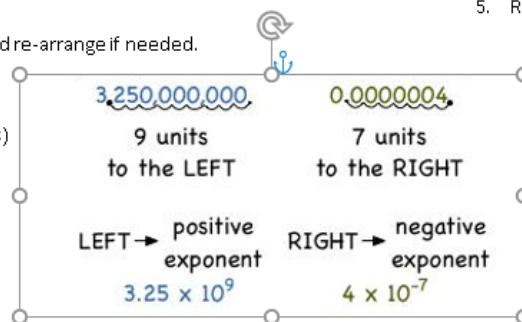
1. Write equation
2. Circle what you want to know
3. Do the inverse to cancel out
4. Do the same on both sides
5. Rewrite equation

$$\Delta E = m \circledast c \Delta \theta$$

$$\div m \quad \frac{\Delta E}{m} = c \Delta \theta$$

$$\div \Delta \theta \quad \frac{\Delta E}{m \Delta \theta} = c$$

$$c = \frac{\Delta E}{m \Delta \theta}$$



All info on handout available at the end

Science information sheet for Yr 11 Parents evening

The November mocks will be on just Paper 1

Number of Science GCSEs	Science Courses	Exams
Two	AQA Science <u>Trilogy</u> <u>Foundation</u> Tier AQA Science Trilogy <u>Higher</u> Tier	6 exams all 1 hour 15 mins: Biology Paper 1 and 2 Chemistry Paper 1 and 2 Physics paper 1 and 2

Content in Each exam

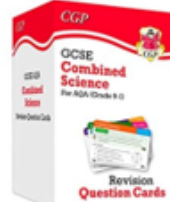
Exam	Content
Biology 1	1 Cells 2 Organisation 3 Infection and response 4 Bioenergetics Working scientifically
Biology 2	5 Homeostasis and response 6 Inheritance variation and evolution 7 Ecology Working scientifically
Chemistry 1	1 Atomic structure and periodic table 2 Bonding 3 Quantitative chemistry 4 Chemical changes 5 Energy Changes Working scientifically
Chemistry 2	6 Rates of reaction 7 Organic chemistry 8 Chemical analysis 9 Chemistry of the atmosphere 10 Using resources Working scientifically
Physics 1	1 Energy 2 Electricity 3 Particle model of matter 4 Atomic Structure Working scientifically
Physics 2	5 Forces 6 Waves 7 Magnetism and electromagnetism Working scientifically

Science February Mocks will all be on Paper 2 topics (see list above).

All pupils can borrow a revision guide from the library that they can be using at home to revise. All classrooms have them to use at school.

To help students revise for November mocks

1. PIXIL KNOWIT booklets to complete. All answers and Powerpoints with theory needed on class charts. Pupils can complete and then self assess. There are GRASPIT worksheets for pupils aiming for 5+. All on TEAMS
2. GCSE bitesize: Website on parent help sheet. Remember to focus on practical skills (20% of papers)
3. Revision guide – need to make flashcards, answer the test yourself questions. Available in the library both HT and FT
4. A3 Quick Quiz questions for each of the 13 topics on the Paper 1 mocks in November
5. Knowledge organisers: Read cover write check. These have been given in class and are on TEAMS
6. Physics data Sheet / Numeracy help sheet.
7. Flashcards



Useful other revision websites:

- GCSE pod <https://www.gcsepod.com/>
- Kerboodle resources <https://www.kerboodle.com/users/login>
- GCSE Bitesize website for GCSE Trilogy: <https://www.bbc.co.uk/bitesize/examspecs/z8r997hs>
- Seneca learning Free Homework & Revision for A Level, GCSE, KS3 & KS2 (senecalearning.com).
- Physics data sheet (over 20 formula that need to be learnt)
- Numeracy help sheet

Maths Support for Year 11

Mrs Hart

Maths - 3 papers make up the GSCE

November Mocks: 3 Papers

Paper 1: Non-Calculator 80 marks

Paper 2 & 3: Calculator 80 marks

Foundation Paper:

50% Using and Applying

25% Reasoning skills

25% Problem Solving

Higher Paper:

40% Using and Applying

30% Reasoning skills

30% Problem Solving

Key Areas

Number

Algebra

Geometry

Statistics

Ratio & Proportion

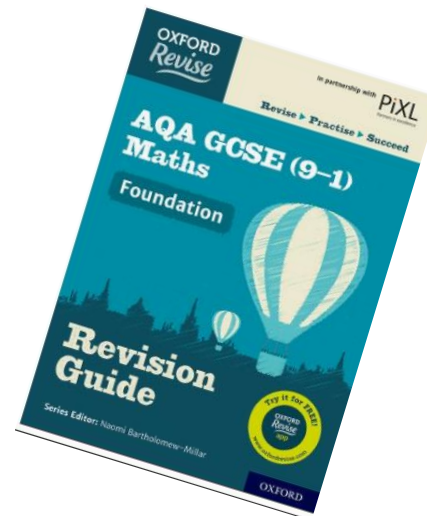
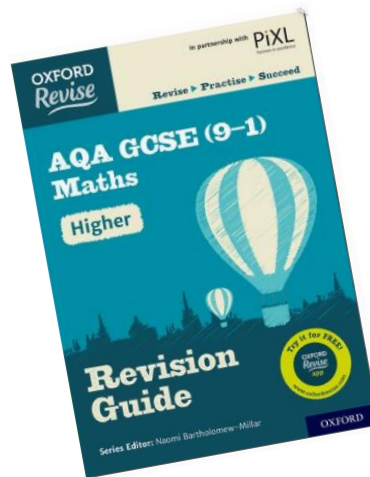
You will have a formulae booklet
for your Mocks

Practice is the best revision!



Flash Cards

Students now have to remember more formulae for their exams.



Revision Guides

AQA Website: www.aqa.org.uk

Past Papers and Mark Schemes available.

www.mymaths.co.uk

Login: Oakbank Password: Obtuse

www.corbettmaths.com

Free worksheets; exam questions; videos

Formulae for Foundation

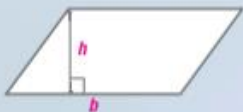
Formulae to Memorise

You will not be given these formulae in the exam

Areas



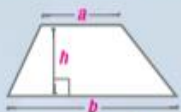
Area of a rectangle = $l \times w$



Area of a parallelogram = $b \times h$

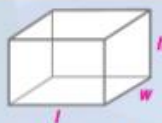


Area of a triangle = $\frac{1}{2} b \times h$



Area of a trapezium = $\frac{1}{2} (a + b) h$

Volumes



Volume of a cuboid = $l \times w \times h$



Volume of a prism =
area of cross section \times length



Volume of a cylinder = $\pi r^2 h$



Volume of a pyramid = $\frac{1}{3} \times$ area of base $\times h$

Circumference and Area of a Circle



Circumference of a circle = $2\pi r = \pi d$

Area of a circle = πr^2

Pythagoras' Theorem



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

Compound Measures

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

$$\text{density} = \frac{\text{mass}}{\text{volume}}$$

$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

Trigonometry



$$\sin x = \frac{\text{opp}}{\text{hyp}}, \cos x = \frac{\text{adj}}{\text{hyp}}, \tan x = \frac{\text{opp}}{\text{adj}}$$

Compound Interest*

Where P is the principal amount, r is the interest rate (as a percentage) over a given period and n is the number of times that the interest is compounded:

$$\text{Total accrued} = P \left(1 + \frac{r}{100} \right)^n$$

Probability*

Where $P(A)$ is the probability of outcome A and $P(B)$ is the probability of outcome B :

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

Formulae given in the Exam

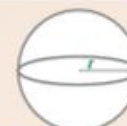
You do not need to memorise these formulae

Volume and Surface Area



Curved surface area of a cone = $\pi r l$

Volume of a cone = $\frac{1}{3} \pi r^2 h$



Surface area of a sphere = $4\pi r^2$

Volume of a sphere = $\frac{4}{3} \pi r^3$

Kinematics Formulae

Where a is constant acceleration, u is initial velocity, v is final velocity, s is displacement from the position when $t=0$ and t is time taken:

$$v = u + at$$

$$s = ut + \frac{1}{2} at^2$$

$$v^2 = u^2 + 2as$$

Formulae for Higher

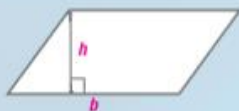
Formulae to Memorise

You will not be given these formulae in the exam

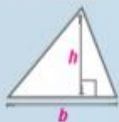
Areas



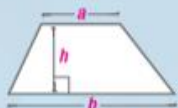
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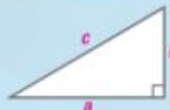
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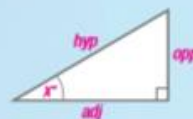
$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The Quadratic Formula

The solutions of $ax^2 + bx + c = 0$, where $a \neq 0$, are given by:

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Trigonometry



$$\sin x = \frac{\text{opp}}{\text{hyp}}, \cos x = \frac{\text{adj}}{\text{hyp}}, \tan x = \frac{\text{opp}}{\text{adj}}$$



$$\text{Sine Rule } \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\text{Cosine Rule } a^2 = b^2 + c^2 - 2bc \cos A$$

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

Compound Interest

Where P is the principal amount, r is the interest rate (as a percentage) over a given period and n is the number of times that the interest is compounded:

$$\text{Total accrued} = P \left(1 + \frac{r}{100} \right)^n$$

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Where $P(A)$ is the probability of outcome A and $P(B)$ is the probability of outcome B :

$$P(A \text{ or } B) = P(A) + P(B) - P(A \text{ and } B)$$

Conditional Probability

$$P(A \text{ and } B) = P(A \text{ given } B) \times P(B)$$

Formulae given in the Exam

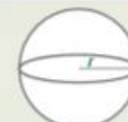
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$$v^2 = u^2 + 2as$$

Websites

Mr Barton Maths
Corbett Maths
Just Maths
Mr Carter Maths
Maths Genie
Hegarty Maths
MyMaths
Diagnostic Questions
BBC Bitesize
Revision Maths
Mathsisfun
Mr Carter Maths
Mathsbot
ck12
Khan Academy
Worksheetmaths
And many more just search for them!



Things you must look at

mrbartonmaths.com/students/gcse/mr-barton-ebook.html

www.piximaths.co.uk/revision-materials

justmaths.co.uk/blog/

solvemymaths.files.wordpress.com/2016/03/gcse-resit-top-tips-pdf.pdf

Twitter

@tesMaths
@BetterMaths
@PixiMaths
@CorbettMaths
@MrCarterMaths
@crashMATHS_CM

And many more just search for them!



Discussion Forum

www.reddit.com/r/GCSE/

YouTube Channels/ Videos

Corbettmaths
UKMathsteacher
Exam Solutions
Khan Academy
WCSCMaths
WrightMaths
Maths Partner
crashMATHS
Reg F Harding
Maths Genie
HegartyMaths
And many more just search for them!

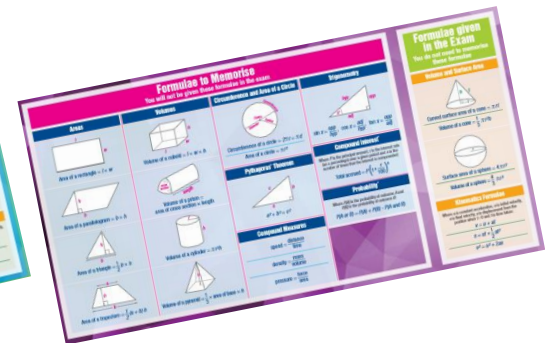
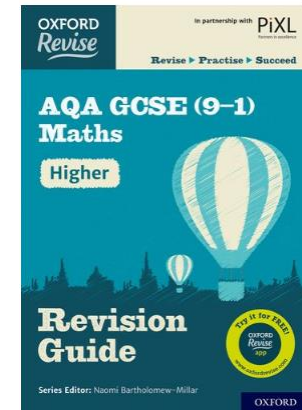
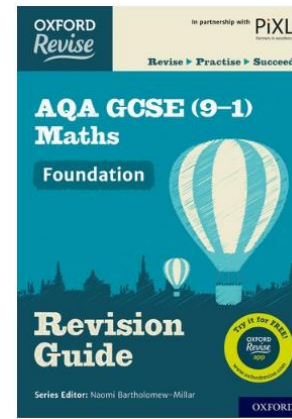


ed out in lessons

Revision Guide

Formulae Poster

Revision Checklist Poster



Sixth Form

Mr. Manny Delgado



WHY Beckfoot Oakbank Sixth Form..



Join us for our
Open Evening on
Thursday
15th December

Beckfoot
Trust **Sixth Form**

Here are 10 reasons why.....

CHECKLIST

- ✓ Excellent courses
- ✓ Quality teaching
- ✓ Bespoke tutoring
- ✓ Fantastic resources
- ✓ Excellent outcomes

CHECKLIST

- ✓ Pixl Edge -
Graduate
- ✓ Uni-frog
- ✓ UCAS
- ✓ Career guidance
- ✓ Enriching
opportunities

Post 16 at Beckfoot Oakbank



"The sixth-form provision is a strong feature of the school. It meets the needs of its students well & so they make strong progress" **OFSTED**

Sixth Form OPEN EVENING Thursday 15th December 2022 15:30-18:30

Come and see what a fantastic, top performing sixth form looks like

Why choose us?

- 100% success in securing interviews at Oxbridge
- Work experience placements in Y12
- Participation in Reach for Excellence, Realising Opportunities, Access to Leeds & Social Mobility to support university applications
- Our A* - C grades are rising faster than the national average
- Average level 3 BTEC grade is Distinction
- Bespoke tutor programme
- Student Leadership opportunities

Latest Year 13 Leavers: DESTINATIONS

A snapshot of where some of our Y13 leavers went on to continue their education

- St Andrews University- Mathematics
- Manchester University- Midwifery
- Liverpool University- Ancient History & Archaeology
- Aberdeen University- Politics & Sociology
- Bangor University- Zoology
- York University- Biomedical Science
- Northumbria University- Psychology
- Bradford University- Adult Nursing



Apprenticeships

- Business Administration- Fibrelife
- Customer Service Advisor- HMRC
- Digital Marketing- T & S Connect
- IT Sales Executive- CCS Bradford
- Graphic Designer- White Gyll



3 medics in the last 2 years!

100% of students who applied to university got in!

YEAR 13 UNIVERSITY DESTINATIONS: SUMMER 2022



Academic and Applied Routes – what combination should I choose?

Biology, Chemistry, Maths, Physics – any facilitating subjects

Health & Social Care, Applied Science, Biology.

Any facilitating subjects – especially History, English and Psychology.

Product Design, Computer Applied Science, Maths and Physics

National Curriculum subjects – any of these. But normally you would a degree in one of them.

Health and Social Care, Sociology, Child Care, Psychology, Applied Science.

Biology, Sport, Chemistry, Applied Science.

Biology, Chemistry, Maths, Applied Science.

Business, Maths, IT and other facilitating subjects

Business, Maths, IT and other facilitating subjects.

Applied Science, Criminology, Psychology, Maths, Chemistry, Sociology.

Any facilitating subjects – especially History, English and Psychology.

Criminology, Psychology, Sociology, Health and Social Care

Any media or Performing Arts related subject – English, History, IT

Health and Social Care, Sociology, Psychology, Criminology, English, History

IT, Computer Science, Business, Product Design, I Media

Course Title / Spec	Minimum expected grades	English Language Requirement	Mat Req
Facilitating Subjects (subjects most commonly asked for by Universities and allow access to the widest range)			
Biology	6-6 in combined Science or 6 in Biology (Single Science)	5	
Chemistry	6-6 in combined Science or 6 in Chemistry (Single Science)	5	
English Literature	6 in English Language or Literature	6	
French	6 in French	6	
Geography	5 in Geography	5	
History	5 in History	5	
Maths		4	
Physics	6-6 in combined Science or 6 in Physics (Single Science)	5	
Spanish	6 in Spanish	6	
Non-Facilitating A Level choices (may be required by some Universities for particular degrees)			
Art	5 in Art GCSE	4	
Computer Science	5 in Computer Science	5	
English Language	6 in English Language or Literature	6	
Psychology		5	
Sociology		5	
Applied Science <i>Level 3 BTEC</i>	4-4 in combined Science	4	
Business <i>Level 3 BTEC</i>	Level 2 Pass in BTEC Business or equivalent	4	
Criminology <i>Level 3 Applied Diploma</i>		4	
Design Technology <i>Level 3 BTEC</i>	5 in any Technology subject	4	
Sport <i>Level 3 BTEC</i>	BTEC Sport Lev 2 Pass or equivalent 4-4 in Combined Science or a 4 in Biology (Single Science)	4	
Health and Social Care <i>Level 3 BTEC</i>		4	
Performing Arts <i>Level 3 BTEC</i>	4 or higher in GCSE Drama or equivalent	4	
Music Performance <i>Level 3 BTEC</i>	4 or higher in GCSE Music or equivalent	4	

creating remarkable
where no child is left

Will I meet the Sixth Form's entry criteria?

- You have to achieve 5 x 4s or above. Including Maths and English Language. If you do not meet the basic entry requirements, then we will not be able to offer you a place.
- In order to do any Academic Subjects, you have to meet that subject's entry criteria – check the entry criteria against your current targets – are you likely to meet these targets? Do you fit that subject's academic and entry profile? If you do, and know you will achieve these grades, then apply – If, however, you know these targets are not possible, then look to the Applied Route – Be aspirational, but also realistic.
- For example, if you are currently on a 1 or 2 for Maths or Chemistry and are unlikely to get a 6 or 7 then you will not be accepted on this course – check the criteria carefully. If you are still unsure, have a chat with your teacher or a member of the Post 16 Team
- Have you considered the Applied Route – these subjects only require 4's – but you still need to have got Maths and English Language at Grade 4 – if you don't have these then we will not be able to offer you a place – this is non negotiable.
- Prior to your interview we will check all applications based on your current academic position and if we feel you have made the wrong choices or need further guidance, we will come and find you.
- We are here to make sure you make the right choices and choose the right courses.

Next Steps...

- **Open Evening on Thursday 15th December**
- **Applications open on Thursday 15th December and close on Tuesday 20th December**
- **Interview process will begin in January**
- **Re-look at all applications after your mocks in February – we may need to have another chat with you.**
- **Taster Day on Monday 13th March – did you choose the right subjects?**
- **Formal offers made at the end of March – subject to you achieving the grades and meeting the entry criteria**
- **Results Day in August – your place will be officially confirmed based on the results you receive**

Thank you for listening
We will be about to answer
any questions you may have.