



GCSE SCIENCE

Year 10 Mock Revision Aid

It is helpful to:

- Work quietly away from distractions.
- Organise your time to include regular meals, exercise, sleep and time to relax with friends.
- Read things through with a parent or friend and test each other on facts and answers.
- Be positive attitude about what you can achieve.
- Have the equipment that you need ready for the exam day and arrive for the exam in plenty of time.

4 Methods of Retrieval Practice

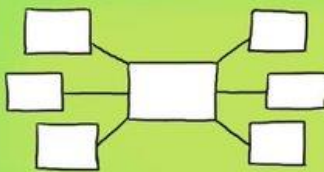
Before you start put away all your books & classroom materials.

Retrieval Practice Examples

- * Exit Tickets
- * Starter quizzes
- * Multiple choice quizzes
- * Short answer tests
- * Free write
- * Think, pair, share
- * Ranking & sorting
- * Challenge grids

BRAIN DUMP

Write, draw a picture, create a mind-map on everything you know about a topic.



Give yourself a time limit, say 3 minutes, then have a look at your books & add a few things you forgot.

QUIZZING

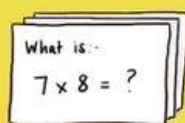
Create practice questions on a topic. Swap your questions with a partner & answer.

Question - What is a metaphor?

- A comparison using 'like, as, than'.
- A comparison where one thing is another.
- A comparison with a human attribute.

FLASHCARDS

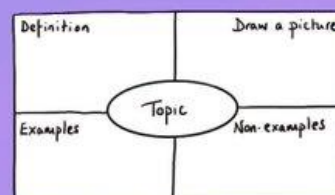
Create your own flashcards, question on one side answer on the other. Can you make links between the cards?



You need to repeat the Q&A process for flashcards you fail on more frequently & less frequently for those you answer correctly

KNOWLEDGE ORGANISERS

Complete a knowledge organiser template for key information about a topic.



You can use knowledge organisers to learn new vocab & make links in between subjects or ideas.

After you have retrieved as much as you can go back to your books & check what you've missed. Next time focus on that missing information

Bitesize: <https://www.bbc.co.uk/bitesize/examspecs/z8r997h>

Seneca: <https://app.senecalearning.com/courses?Price=Free&text=aqa+combined+science>

Save my Exams: <https://www.savemyexams.com/gcse/>

BIOLOGY



Topic	Tick when completed
Topic 1: Cell Biology	
Animal and plant cells	
Prokaryotic cells	
Specialised cells	
Microscopes and magnification	
Cell division	
Stem cells	
Diffusion and active transport	
Topic 2: Organisation	
Digestive system	
Enzyme activity	
The heart, blood and blood vessels	
Problems with the heart	
Respiratory system- the lungs	
Non-communicable diseases	
Topic 3: Infection and response	
Health and disease	
Pathogens (bacteria/viruses/protists/fungi)	
Human defence systems	
Antibiotics	
Vaccinations	
Drug development	
Topic 4: Bioenergetics	
Aerobic respiration	
Anaerobic respiration	
Response to exercise	

Chemistry



Topic	Tick when completed
Topic 1: Atomic structure and the periodic table	
Atoms, elements and compounds	
Atomic structure	
History of the atom	
Periodic table	
Development of the periodic table	
Alkali metals, halogens and noble gases	
Topic 2: Bonding structure and properties of matter	
Ionic bonding and ionic compounds	
Covalent bonding and covalent compounds	
Metals and metallic bonding	
States of matter	
Topic 3: Quantitative chemistry	
Conservation of mass	
Relative formula mass	
Moles (H only)	
Concentrations of solutions	
Topic 4: Chemical changes	
Reactivity series	
Acids and alkalis	
Metal salts	
Neutralisation	

Physics



Topic	Tick when completed
Topic 1: Energy	
Energy stores	
Kinetic, gravitational potential and elastic energy	
Power	
Efficiency	
National and global energy resources	
Topic 2: Electricity	
Circuit symbols	
Current and voltage	
Resistance and potential difference	
Series and parallel circuits	
Main's electricity	
National grid	
Topic 3: Particle model of matter	
Solids, Liquids, Gases	
Density	
Specific heat capacity	
Latent heat	
Pressure	
Topic 4: Atomic Structure	
Atomic structure	
Isotopes	
Radiation	
Radioactive contamination	



Unit 1: Energy

<u>Equations</u>	
kinetic energy = $\frac{1}{2} \times \text{mass} \times \text{speed}^2$	$E_K = \frac{1}{2}mv^2$
GPE = mass \times gravitational field strength \times height	$E_p = mgh$
power = $\frac{\text{work done}}{\text{time taken}} = \frac{\text{energy transferred}}{\text{time taken}}$	$P = \frac{W}{t} = \frac{E}{t}$
efficiency = $\frac{\text{useful energy output}}{\text{total energy input}}$	
efficiency = $\frac{\text{useful power output}}{\text{total power input}}$	
elastic potential energy = $0.5 \times \text{spring constant} \times (\text{extension})^2$	$E_e = \frac{1}{2}ke^2$
change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = mc\Delta\theta$

Unit 2: Electricity

<u>Equations</u>	
charge flow = current \times time	$Q = I t$
potential difference = current \times resistance	$V = I R$
total resistance = resistance of component 1 + resistance of component 2	$R_T = R_1 + R_2$
power = current \times potential difference	$P = I V$
power = (current) ² \times resistance	$P = I^2 R$
energy transferred = power \times time	$E = P t$
energy transferred = charge flow \times potential difference	$E = Q V$

Unit 3: Particle Model of Matter

<u>Equations</u>	
density = $\frac{\text{mass}}{\text{volume}}$	$\rho = \frac{m}{V}$
change in thermal energy = mass \times specific heat capacity \times temperature change	$\Delta E = mc\Delta\theta$
thermal energy for a change in state = mass \times specific latent heat	$E = mL$
^ for a gas: pressure \times volume = constant	$pV = \text{constant}$

These equations may come up in your paper 1 physics exam.

23 Equations

This is a great free app for practicing your physics equations.

