

Revision Checklist: GCSE AQA Combined Science: Trilogy (Foundation Tier)

1

2

3

4

5

No understanding

Exam-ready

	1. CELL BIOLOGY	<u>Rate topics 1 to 5</u>
a.	Eukaryotes & prokaryotes	
b.	Animal & plant cells	
c.	Cell specialisation	
d.	Microscopy	
e.	The cell cycle	
f.	Stem cells	
g.	Diffusion	
h.	Exchange surfaces	
i.	Osmosis	
j.	Active transport	

	2. ORGANISATION	<u>Rate topics 1 to 5</u>
a.	Cells, tissues, organs & systems	
b.	Enzymes	
c.	Human digestive system	
d.	The lungs	
e.	The heart	
f.	Blood vessels	
g.	Blood	
h.	Coronary heart disease	
i.	Health & disease	
j.	Risk factors for non-communicable diseases	
k.	Cancer	
l.	Plant tissues	
m.	Transpiration & translocation	
n.	Adaptations of plant cells	
o.	Rate of transpiration	

	3. INFECTION & RESPONSE	<u>Rate topics 1 to 5</u>
a.	Communicable diseases	
b.	Viral diseases	
c.	Bacterial diseases	
d.	Fungal diseases	
e.	Protist diseases	
f.	Human defence systems	
g.	Vaccination	
h.	Antibiotics & painkillers	
i.	Discovery of drugs	
j.	Drug tests & trials	

	4. BIOENERGETICS	<u>Rate topics 1 to 5</u>
a.	Photosynthesis	
b.	Rate of photosynthesis	
c.	Uses of glucose	
d.	Aerobic & anaerobic respiration	
e.	Body's response to exercise	
f.	Metabolism	

	8. ATOMIC STRUCTURE & THE PERIODIC TABLE	<u>Rate topics 1 to 5</u>
a.	Elements, compounds & mixtures	
b.	Separating mixtures	
c.	Development of atomic model	
d.	Mass & atomic number	
e.	Relative atomic mass	
f.	Electronic structure	
g.	Groups & periods	
h.	Development of periodic table	
i.	Metals & non-metals	
j.	Group 0 elements	
k.	Group 1 elements	
l.	Group 7 elements	

	12. ENERGY CHANGES	<u>Rate topics 1 to 5</u>
a.	Exothermic & endothermic reactions	
b.	Reaction profiles	

	9. BONDING, STRUCTURE & THE PROPERTIES OF MATTER	<u>Rate topics 1 to 5</u>
a.	Ionic bonding	
b.	Covalent bonding	
c.	Dot & cross diagrams	
d.	Metallic bonding	
e.	States of matter	
f.	Properties of ionic compounds	
g.	Properties of small molecules	
h.	Polymers & giant covalent structures	
i.	Properties of metals	
j.	Alloys	
k.	Diamond & graphite	
l.	Graphene & fullerenes	

	10. QUANTITATIVE CHEMISTRY	<u>Rate topics 1 to 5</u>
a.	Balancing chemical equations	
b.	Conservation of mass	
c.	Relative formula mass	
d.	Percentage by mass	
e.	Estimating uncertainty	
f.	Concentration	

	11. CHEMICAL CHANGES	<u>Rate topics 1 to 5</u>
a.	The reactivity series	
b.	Extracting metals by reduction	
c.	Reacting acids with metals	
d.	Neutralisation of acids & naming salts	
e.	pH	
f.	Electrolysis of molten ionic compounds	
g.	Electrolysis of aqueous solutions	

	18. ENERGY	<u>Rate topics 1 to 5</u>
a.	Energy stores	
b.	Changes in energy	
c.	Kinetic energy	
d.	Gravitational & elastic potential energy	
e.	Specific heat capacity	
f.	Power & work done	
g.	Conduction	
h.	Unwanted energy transfers	
i.	Efficiency	
j.	Energy resources (renewable & non-renewable)	
k.	Energy resources (environmental impact)	

	19. ELECTRICITY	<u>Rate topics 1 to 5</u>
a.	Circuit diagram symbols	
b.	Charge & current	
c.	Current, resistance & potential difference	
d.	I-V characteristic curves	
e.	LDR & thermistor	
f.	Series & parallel circuits	
g.	D.C. & A.C.	
h.	Mains electricity	
i.	Power in circuits	
j.	Energy transfers in electrical appliances	
k.	The national grid	
l.	Role of transformers	

	20. PARTICLE MODEL OF MATTER	<u>Rate topics 1 to 5</u>
a.	Density	
b.	Changes of state	
c.	Internal energy	
d.	Specific heat capacity (<i>again</i>)	
e.	Specific latent heat	
f.	Particle motion in gases	

	21. ATOMIC STRUCTURE	<u>Rate topics 1 to 5</u>
a.	Structure of an atom	
b.	Mass number, atomic number & isotopes	
c.	Development of atomic model	
d.	Radioactive decay	
e.	Properties of nuclear radiation	
f.	Nuclear equations	
g.	Half life	
h.	Contamination & irradiation	

PRACTICALS	<u>Rate topics 1 to 5</u>
RP 1: "Make use of a light microscope to observe, draw and label plant and animal cells."	
RP 2: "Investigate the effect of different concentrations of salt or sugar solutions on the mass of plant tissue."	
RP 3: "Make use of reagents to test for the presence of different carbohydrates, lipids and proteins."	
RP 4: "Investigate the effect of pH on the rate of reaction of amylase."	
RP 5: "Investigate the effect of light intensity on the rate of photosynthesis of an aquatic plant."	
RP 8: "Prepare a pure, dry sample of a soluble salt from an insoluble oxide or carbonate."	
RP 9: "Investigate the electrolysis of aqueous solutions (a hypothesis must be formed and developed)."	
RP 14: "An investigation to determine the specific heat capacity of one or more materials."	
RP 15a: "Investigate how the length of a wire at constant temperature affects the resistance of electrical circuits."	
RP 15b: "Investigate how combinations of resistors in series and parallel affect the resistance of electrical circuits."	
RP 16: "Use circuit diagrams to investigate the I-V characteristics of a filament lamp, a diode and a resistor at constant temperature."	
RP 17: "Determine the densities of regular and irregular solid objects and liquids."	