

Topic	Sub-heading	Keywords	AQA Combined Science (Trilogy)	AQA Combined Science (Synergy)	AQA Physics
Thermal energy	Temperature and heat	joules, degrees, temperature, heat, changes of state, thermal energy, thermometer, kinetic energy, heating graph, cooling graph	6.3.2.1 6.3.2.3	4.1.1.4	4.3.2.1 4.3.2.3
Thermal energy	Kinetic theory	changes of state, kinetic theory, particles, solids, liquids, gases, thermal energy, temperature	6.3.1.2	4.1.1.4	4.3.1.2
Thermal energy	Conduction	energy transfer, conduction, conductor, insulator			
Thermal energy	Convection	energy transfer			
Thermal energy	Radiation	infra-red, emission, absorption, radiation			4.6.3
Thermal energy	Rate of energy transfer	surface area, energy transfer, thermal energy, thermal gradient			
Thermal energy	Energy saving	insulator, U-value, double glazing	6.1.2.1	4.8.2.6	4.1.2.1
Thermal energy	Solar energy	solar heating, solar cell, solar panel			
Thermal energy	Specific heat	specific heat capacity	6.1.1.3 6.3.2.2	4.1.1.4	4.1.1.3 4.3.2.2
Using and generating electricity	Generating electricity	fossil fuels, biofuels, renewable, non-renewable, turbine, power station, greenhouse gases, climate change, deforestation, habitats, nuclear waste	6.1.3	4.8.2.4	4.1.3
Using and generating electricity	Nuclear power	uranium, turbine, radioactive, fission, power station, nuclear chain reaction			
Using and generating electricity	National grid	step-up transformer, step-down transformer, National Grid	6.2.4.3	4.7.2.9	4.2.4.3
Using and generating electricity	Transformers	step-up transformer, step-down transformer, induced	6.2.4.3	4.7.2.9	4.7.3.4
Using and generating electricity	Cost of electricity	appliance, power, kWh, energy saving			
Using and generating electricity	What is electricity	ac, dc, mains electricity	6.2.3.1	4.7.2.5	4.2.3.1
Using and generating electricity	Cables and plugs	3-pin plug, 3 core cable, fuse, live wire, earth wire, neutral wire	6.2.3.2	4.7.2.6	4.2.3.2
Using and generating electricity	Electrical power	power, kilowatt, watt, fuse	6.2.4.1 6.2.4.2	4.2.2.7 4.2.2.8	4.2.4.1 4.2.4.2
Using and generating electricity	Efficiency	Efficiency, Sankey diagram	6.1.2.2	4.8.2.7	4.1.2.2
Static electricity	Static electricity	attract, repel, charge, electrostatic			4.5.2.1
Electrical circuits	Current, voltage & resistance	ammeter, voltmeter, potential difference, charge, coulomb	6.2.1.2	4.7.2.1	4.2.1.2
Electrical circuits	Series and parallel circuits	series circuit, parallel circuit, components	6.2.2	4.7.2.3	4.2.2
Electrical circuits	Ohm's law	Ohm's law, resistance, voltage, current, resistor	6.2.1.3	4.7.2.2	4.2.1.3

Electrical circuits	Resistance	current, voltage, resistor, filament lamp, diode, LED, thermistor, LDR	6.2.1.4	4.7.2.2	4.2.1.4
Electricity and magnetism	Motors and generators	inducing, Fleming's left hand rule, generator, motor	6.7.2	4.6.3.4 4.6.3.5 4.6.3.6	4.7.2
Waves	Waves	electromagnetic, longitudinal, transverse, sound, light, amplitude, wavelength, frequency	6.6.1.1 6.6.1.2	4.1.4.1 4.1.4.2	4.6.1.1 4.6.1.2
Waves	Wave equations	frequency, wavelength, amplitude, speed	6.6.1.2	4.1.4.2	4.6.1.2
Waves	Electromagnetic spectrum	electromagnetic, transverse, light, microwave, radio wave, X-ray, gamma wave, radiation, UV, IR	6.6.2.1 6.6.2.3 6.6.2.4	4.1.4.3	4.6.2.1 4.6.2.3 4.6.2.4
Waves	Lasers	light			
Waves	Ultrasound	ultrasound, echo, reflection, longitudinal, depth			4.6.1.5
Earth	Seismic waves	crust, mantle, plate, earthquake, P wave, S wave			4.6.1.5
Optics	Reflection & refraction	angle of incidence, angle of reflection, ray diagram, refractive index, total internal reflection, optical fibre, endoscope, spectrum			4.6.1.3 4.6.2.2
Optics	Diffraction	interference			
Optics	Lenses	real, virtual, concave, convex, magnification, ray diagram, power, focal length			4.6.2.5
Optics	The eye and sight	focusing, retina, lens, long sight, short sight			
Motion and forces	Forces	forces, friction, weight, Newton's Laws, acceleration, resultant force	6.5.1.4 6.5.4.2	4.6.1.2 4.7.1.5 4.7.1.6	4.5.1.4 4.5.6.2
Motion and forces	Friction	force			
Motion and forces	Stopping distance	stopping distance, thinking time, braking time	6.5.6.3	4.7.1.10	4.5.6.3
Motion and forces	Motion graphs	distance-time graphs, speed, acceleration, velocity - time graph	6.5.4.1	4.7.1.2	4.5.6.1
Motion and forces	Terminal velocity	terminal velocity, air resistance, acceleration, balanced forces	6.5.4.1.5	4.7.1.4	4.5.6.1.5
Motion and forces	Mass and weight	mass, weight, gravity	6.5.1.3	4.6.1.4	4.5.1.3
Motion and forces	Momentum	velocity, collision, explosion	6.5.5.1 6.5.5.2	4.7.1.8	4.5.7.1 4.5.7.2
Motion and forces	Change of momentum	car safety, speed			4.5.7.3
Motion and forces	Collisions	elastic, inelastic			
Motion and forces	Circular motion	centripetal force, circular motion, velocity, vector	6.5.4.1.3	4.7.1.3	4.5.6.1.3
Work, forces, energy and power	Energy transfer	potential, kinetic, chemical, GPE, KE, Sankey diagram	6.1.2.1 6.1.2.2	4.8.2.5 4.8.2.7	4.1.2.1 4.1.2.2
Work, forces, energy and power	Work	work done, force	6.5.2	4.6.1.3	4.5.2
Work, forces, energy and power	Power	power, watts	6.1.1.4	4.7.2.7	4.1.1.4

Work, forces, energy and power	GPE	gravitational potential energy	6.1.1.2	4.6.1.5	4.1.1.2
Work, forces, energy and power	Kinetic energy	KE	6.1.1.2	4.7.1.9	4.1.1.2
Work, forces, energy and power	Energy transfer calculations	conservation of energy	6.1.1.2	4.6.1.5 4.7.1.9	4.1.1.2
Solar system	Solar system	solar system, galaxy, planet, star, comet			4.8.1.1
Solar system	Life of a Star	black hole, red giant, white dwarf, fusion			4.8.1.2
Solar system	Origin of the Universe	big bang, CMBR, red-shift, Doppler effect			4.8.2
Atoms and radioactivity	Atomic structure	electron, proton, neutron, mass number	6.4.1	4.1.2	4.4.1
Atoms and radioactivity	Nuclear radiation	ion, alpha, beta, gamma, ionising, penetrating power, background	6.4.2.1 6.4.2.2	4.3.2.2 4.3.2.4	4.4.2.1 4.4.2.2 4.4.3.1
Atoms and radioactivity	Half-life	half-life, decay	6.4.2.3	4.3.2.3	4.4.2.3 4.4.3.2
Atoms and radioactivity	Uses of radiation	danger, tracers, ionising, dating, C-14			4.4.3.3
Atoms and radioactivity	Fission and fusion	uranium, chain reaction			4.4.4