

KS3 Physics Curriculum Overview

Year	Main Topic	Learning Outcomes	Practical Activities	Assessment Methods	Adaptive Learning	Real-Life Application	Continuity Links with AQA Trilogy Combined Science
Y7	Energy Stores & Transfers	Describe energy stores and how energy is transferred via conduction, convection, and radiation	Heat transfer experiments, bar charts, radiation demos	Topic test, graph analysis	Support with visual aids & practical setups	Understanding insulation in homes	AQA Physics: Energy changes, thermal energy
Y7	Forces: Contact & Non-Contact	Explain effects of balanced/unbalanced forces, gravity, friction	Spring extension, Hooke's Law, magnetic field mapping	Calculations, quizzes	Tiered questions for force calculation	Seat belts, sports, magnet use	AQA Forces: Resultant forces, elasticity
Y7	Motion & Speed	Interpret and draw distance-time graphs, calculate average speed	Speed-time experiments, graphing journeys	Practical write-ups	Scaffolded graph reading tasks	Vehicle speeds, traffic analysis	AQA Motion: Speed and distance-time graphs
Y7	Electricity	Construct circuits, explain current and resistance	Circuit building, ammeter use, power calculations	Lab book, practical test	Differentiated circuit tasks	Wiring home devices, fuses	AQA Electricity: Current, voltage, resistance
Y7	Matter & Particle Model	Describe states, changes of state, particle model	Heating/cooling stearic acid, density of materials	Graph analysis, quizzes	Particle model animations	Cooking, melting ice	AQA Particle Model: States, density, energy changes
Y8	Pressure & Force Multipliers	Calculate pressure, explain pressure in fluids and levers	Pressure pads, syringes, lever models	Formula calculations, MCQs	Use of force diagrams & simulations	Hydraulic brakes, diving	AQA Pressure: Gases & liquids, levers

Y8	Motion 2	Use displacement, velocity, and time graphs	Reaction time tests, graph plotting	Calculations, practical reflections	Focus on speed/distance relationship	Stopping distances, road safety	AQA Forces: Motion graphs, stopping distances
Y8	Sound & Light Waves	Compare transverse/longitudinal waves, explore reflection/refraction	Sound experiments, ray boxes, prism demos	Practical logs, literacy tasks	Wave sorting tasks & visuals	SONAR, vision, shadows	AQA Waves: Properties, sound/light behaviour
Y8	Electromagnetism	Understand fields, build electromagnets, static charges	Wire & compass, solenoid coils	Graph analysis, multiple choice	Levelled tasks on field strength	Magnetic locks, MRI	AQA Magnetism & Electromagnetism
Y8	Space Physics (Optional)	Describe planetary motion, seasons, and orbits	Globe models, solar system diagrams	Presentation or project work	Creative assignments	Satellite orbits, time zones	AQA Space Physics (for Triple Science)