

TIER	TOPIC	SUB HEADING	KEYWORDS	WJEC UNIT 1	WJEC UNIT 2	WJEC UNIT 3
F/H	Thermal energy	Temperature and heat	joules, degrees			
F/H	Thermal energy	Kinetic theory	changes of state			
F/H	Thermal energy	Conduction	energy transfer	y		y
F/H	Thermal energy	Convection	energy transfer	y		y
F/H	Thermal energy	Radiation	infra-red	y		y
F/H	Thermal energy	Rate of energy transfer	surface area	y		
F/H	Thermal energy	Energy saving	insulator, U-value, double glazing	y		
F/H	Thermal energy	Solar energy	solar heating, solar cell, solar panel	y		
F/H	Thermal energy	Specific heat	specific heat capacity			
F/H	Using and generating electricity	Generating electricity	fossil fuels, biofuels, renewable, non-renewable, turbine, power station, greenhouse gases, climate change, deforestation, habitats, nuclear waste	y		
F/H	Using and generating electricity	Nuclear power	uranium, turbine, radioactive, fission, power station		y	
F/H	Using and generating electricity	National grid	step-up transformer, step-down transformer	y		
F/H	Using and generating electricity	Transformers	step-up transformer, step-down transformer, induced	y		y
F/H	Using and generating electricity	Cost of electricity	appliance, power, kWh, energy saving	y		
F/H	Using and generating electricity	What is electricity	ac, dc, mains	y		
F/H	Using and generating electricity	Cables and plugs	3-pin plug, 3 core cable, fuse, earthing			
F/H	Using and generating electricity	Electrical power	watt, fuse, appliance	y		
F/H	Using and generating electricity	Efficiency	Sankey diagram	y		
F/H	Static electricity	Static electricity	attract, repel, charge, electrostatic			
F/H	Electrical circuits	Current, voltage & resistance	ammeter, voltmeter, potential difference, charge, coulomb		y	
F/H	Electrical circuits	Series and parallel circuits	components		y	
F/H	Electrical circuits	Ohms law	resistance, voltage, current		y	
F/H	Electrical circuits	Resistance	current, voltage, resistor, filament lamp, diode, LED, thermistor, LDR		y	
F/H	Electricity and magnetism	Motors and generators	inducing, electricity and magnetism			y
F/H	Waves	Waves	electromagnetic, longitudinal, transverse, sound, light, amplitude, wavelength, frequency	y		y
F/H	Waves	Wave equations	frequency, wavelength, amplitude, speed	y		
F/H	Waves	Electromagnetic spectrum	electromagnetic, transverse, light, microwave, radio wave, X-ray, gamma wave, radiation, UV, IR	y		
F/H	Waves	Lasers	light			
F/H	Waves	Ultrasound	echo, reflection, longitudinal, depth			
F/H	Earth	Seismic waves	crust, mantle, plate, earthquake, P wave, S wave			y

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F/H	Optics	Reflection & refraction	angle of incidence, angle of reflection, ray diagram, refractive index, total internal reflection, optical fibre, endoscope, spectrum			y
F/H	Optics	Diffraction	interference			
F/H	Optics	Lenses	real, virtual, concave, convex, magnification, ray diagram, power, focal length			
F/H	Optics	The eye and sight	focusing, retina, lens, long sight, short sight			
F/H	Motion and forces	Forces	friction, weight, Newton		y	
F/H	Motion and forces	Friction	force			
F/H	Motion and forces	Stopping distance	thinking time, braking time, safety		y	
F/H	Motion and forces	Motion graphs	distance-time graphs, speed, acceleration, velocity - time graph		y	
F/H	Motion and forces	Terminal velocity	air resistance, acceleration, balanced forces		y	
F/H	Motion and forces	Mass and weight	gravity		y	
F/H	Motion and forces	Momentum	velocity, collision, explosion			y
H	Motion and forces	Change of momentum	car safety, speed			y
F/H	Motion and forces	Collisions	elastic, inelastic			
F/H	Motion and forces	Circular motion	centripetal force			
F/H	Work, forces, energy and power	Energy transfer	potential, kinetic, chemical, GPE, KE, Sankey diagram	y		
F/H	Work, forces, energy and power	Work	force		y	
F/H	Work, forces, energy and power	Power	watts			
F/H	Work, forces, energy and power	GPE	gravitational potential energy		y	
F/H	Work, forces, energy and power	Kinetic energy	KE		y	y
H	Work, forces, energy and power	Energy transfer calculations	conservation of energy			y
F/H	Solar system	Solar system	galaxy, planet, star, comet	y		
F/H	Solar system	Life of a Star	black hole, red giant, white dwarf, fusion			y
F/H	Solar system	Origin of the Universe	big bang, CMBR, red-shift, Doppler effect	y		y
F/H	Atoms and radioactivity	Atomic structure	electron, proton, neutron, mass number		y	
F/H	Atoms and radioactivity	Nuclear radiation	ion, alpha, beta, gamma, ionising, penetrating power, background	y	y	
F/H	Atoms and radioactivity	Half-life	decay		y	
F/H	Atoms and radioactivity	Uses of radiation	danger, tracers, ionising, dating, C-14		y	
F/H	Atoms and radioactivity	Fission and fusion	uranium, chain reaction		y	y