	Revised using	Practiced Exam q's
	carousel (tick)	(tick)
Energy		
Energy stores: Kinetic, potential, thermal, chemical.		
Energy transfers: Mechanically, electrically, by heating, radiation,		
Conservation of energy: Energy cannot be created or destroyed.		
Kinetic energy: Ek = $0.5 \times m \times v^2$.		
Gravitational potential energy: Ep = m * g * h.		
Power: P = E / t (power = energy transferred / time).		
Efficiency: Useful energy out / total energy in.		
Electricity		
Basic circuits: Simple series and parallel circuits.		
Current, voltage, and resistance: V = I * R.		
Power: P = V * I.		
Mains electricity: AC vs. DC, UK mains voltage (230V).		
Electrical safety: Fuses and circuit breakers.		
Particle Model of Matter		
States of matter: Solids, liquids, gases.		
Density: $\rho = m / V$ (density = mass / volume).		
Changes of state: Melting, boiling, freezing, condensation.		
Atomic Structure		
Structure of the atom: Protons, neutrons, electrons.		
Radioactive decay: Basic understanding of alpha, beta, gamma		
radiation.		
Half-life: Time taken for half of the radioactive nuclei to decay.		
Forces		
Contact and non-contact forces: Gravity, friction, electrostatic.		
Weight: W = m * g.		
Newton's Laws: Simple understanding (inertia, acceleration,		
action/reaction).		
Work done: W = F * d (work done = force * distance).		
Waves		
Types of waves: Transverse and longitudinal.		
Wave speed: $v = f * \lambda$ (wave speed = frequency * wavelength).		
Electromagnetic spectrum: Radio waves to gamma rays.		
Uses of waves: Communication, medical imaging (e.g., X-rays).		
Magnetism and Electromagnetism		
Magnets: Poles, magnetic fields.		
Electromagnets: Simple use of an electromagnet.		
Space Physics (Separate Science Only)		
Planets and solar system: Basic understanding of orbits, planets.		
Life cycle of stars: Simple understanding (nebula, main sequence star,		
white dwarf).		