



Queen Elizabeth's Girls' School

Educating Women of the Future

Combined Science - Physics Key Stage 4 Curriculum 2022/23

	Topic/Big Question	Focus
Year 10	Energy: Electricity transfers energy	Electric circuits Students will learn about current and charge, potential difference and resistance, component characteristics, series circuits and parallel circuits.
	Energy: Electricity transfers energy	Electricity in the home Students will learn about alternating currents, cables and plugs, electrical power and potential differences, electrical currents and energy transfer, appliances and efficiency.
	Matter: Structure determines properties	Molecules and matter Students will learn about density, states of matter, changes of state, internal energy and specific latent heat.
	Forces: Forces predict motion	Motion Students will learn about speed and distance time graphs, velocity and acceleration, velocity-time graphs and analysing motion graphs.
	Forces: Forces predict motion	Forces in Balance Students will learn about vectors and scalars, forces between objects, resultant forces, centre of mass, the parallelogram of forces and resolution of forces.
	Forces: Forces predict motion	Force and Motion Students will learn about force and acceleration, weight and terminal velocity, forces and braking, momentum, and forces and elasticity

	Topic/Big Question	Focus
Year 11	Forces: Forces predict motion	Force and Motion Students will learn about force and acceleration, weight and terminal velocity, forces and braking, momentum, and forces and elasticity
	Energy: Radiation transfers energy	Wave properties Students will learn about the nature of waves, the properties of waves, reflection and refraction.
	Energy: Radiation transfers energy	Electromagnetic waves Students will learn about the electromagnetic spectrum, lights, infrared, microwaves and radio waves, communications, ultraviolet waves, x-rays and gamma rays and X-rays in medicine.
	Energy: Radiation transfers energy	Electromagnetism Students will learn about magnetic fields, magnetic fields of electric currents and the motor effect.