



Founded in 1888

# Queen Elizabeth's Girls' School

*Educating Women of the Future*

## Combined Science - Physics Key Stage 4 Curriculum 2023/24

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