

Unit	Section	Content
ENERGY	6.1.1 Energy Changes in a system, and the ways energy is stored before and after such changes	identifying the energy changes in systems -Calculate, using equations, the amount of energy associated with a moving object, a stretched spring and an object raised above ground level. -Calculate, using an equation, the amount of energy stored in or released from a system as its temperature changes -Calculate Power
	<b>Required Practical 14:</b> an investigation to determine the specific heat capacity of one or more materials.	linking the decrease of one energy store (or work done) to the increase in temperature and subsequent increase in thermal energy stored
	6.1.3 National and global energy resources	describe renewable and non-renewable energy resource -compare advantages and disadvantages of different energy resources
ELECTRICITY	6.2.1 Current, potential difference and resistance	-circuit diagram symbols -definition and units of electrical current and charge -calculating charge flow using an equation -definition and units of potential difference -definition and units of resistance -relationship between current, potential difference and resistance -calculate current, potential difference or resistance using an equation -IV graphs of resistor at constant temp, filament lamp, diode -applications of LDRs and thermistors
	<b>Required Practical 16:</b> construct appropriate circuits to investigate the I–V characteristics of circuit elements, inc. a filament lamp, diode and a resistor at constant temp.	-placing ammeter and voltmeter in the correct place in a circuit to measure the current through and potential difference across a component -Plotting graphs -Describing and explaining patterns shown in graphed data
PARTICLE MODEL	6.3.1 Changes of state and the particle model	-Define and calculate the density of a substance or object -recognise/draw simple diagrams to model the difference between solids, liquids and gases -explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules. -describe how, when substances change state mass is conserved. -Describe changes of state as physical changes
ATOMIC STRUCTURE AND	6.4.2 Atoms and nuclear radiation	-radioactive decay, types of nuclear radiation and their properties -definition and units of activity and count rate -nuclear equations -half lives -contamination and irradiation