Review P2.3 Currents in electrical circuits

Can you…?	☺	😐	☹
P2.3.1 Static electricity			
Describe how some insulating materials can become electrically charged			
Explain how this charge (positive or negative) depends on the material losing or gaining electrons			
Describe the forces exerted by electrically charged objects on each other			
State that electrical charges can move easily through some substances (e.g. electrons moving through metals, or ions moving through a solution)			
P2.3.2 Electrical circuits			
Describe an electric current as flow of electric charge			
Calculate the size of an electric current (*I*) from charge (*Q*) and time (*t*)			
Describe potential difference (voltage) as the work done per coulomb of charge as it passes between two points			
Calculate the potential difference (*V*) from work done (*W*) and charge (*Q*)			
Recognise circuit symbols (see P2.2 checklist)			
Describe how thermistors are use in circuits (e.g. in thermostats)			
Describe how LDRs are used in circuits (e.g. switching lights on in the dark)			
Recognise and sketch the current-potential difference graph for a resistor at a constant temperature			
Recognise and sketch the current-potential difference graph for a filament bulb			
(HT) Explain how the resistance changes in terms of ions and electrons			
Recognise and sketch the current-potential difference graph for a diode			
Describe how to find the resistance of a component by measuring the current through, and the potential difference across, the component			
Describe the relationship between the current through and potential difference across a resistor (at a constant temperature) as directly proportional			
Calculate potential difference (*V*) using current (*I*) and resistance (*R*)			
Calculate the potential difference of a number of cells connected in series			
Calculate the resistance of a number of components connected in series			
Describe and predict the current through and potential difference across components connected in series and parallel circuits			
Explain why light emitting diodes (LEDs) are increasingly popular			
Describe how the resistance of an LDR changes as light intensity changes			
Describe how the resistance of a thermistor changes as the temperature changes			
Apply the principles of basic electrical circuits to practical situations			
Evaluate the use of different forms of lighting, in terms of cost and energy efficiency (e.g. filament bulbs, fluorescent bulbs and LEDs)			