

Science Knowledge Organiser

Topic: Electricity	Year: 6	Strand: Physics																																																				
What should I already know? Electricity is a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices. Sources of light and sound may need electricity to work. Where electricity comes from Which appliances need electricity What a circuit is, the components of a circuit and how it works. What electrical conductors and insulators are. What happens when a switch is added to a circuit. What forces and resistance are.			Vocabulary <table><tr><td>ammeter</td><td>measures the current in a circuit</td></tr><tr><td>appliances</td><td>a device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical.</td></tr><tr><td>battery</td><td>small devices that provide the power for electrical items such as torches</td></tr><tr><td>bulb</td><td>the glass part of an electric lamp, which gives out light when electricity passes through it.</td></tr><tr><td>buzzer</td><td>an electrical device that is used to make a buzzing sound</td></tr><tr><td>cell</td><td>a synonym for battery</td></tr><tr><td>circuit</td><td>a complete route which an electric current can flow around</td></tr><tr><td>component</td><td>the parts that something is made of</td></tr><tr><td>conductor</td><td>a substance that heat or electricity can pass through or along</td></tr><tr><td>current</td><td>a flow of electricity through a wire or circuit</td></tr><tr><td>device</td><td>an object that has been invented for a particular purpose</td></tr><tr><td>electricity</td><td>a form of energy that can be carried by wires and in used for heating and lighting, and to provide power for devices</td></tr><tr><td>energy</td><td>the power from sources such as electricity that makes machines work or provides heat</td></tr><tr><td>fuel</td><td>a substance such as coal, oil, or petrol that is burned to provide heat or power</td></tr><tr><td>generate</td><td>cause it to begin and develop</td></tr><tr><td>insulator</td><td>a non-conductor of electricity or heat</td></tr><tr><td>mains</td><td>where the supply of water, electricity, or gas enters a building</td></tr><tr><td>motor</td><td>a device that uses electricity or fuel to produce movement</td></tr><tr><td>power</td><td>Power is energy, especially electricity, that is obtained in large quantities from a fuel source and used to operate lights, heating, and machinery.</td></tr><tr><td>resistance</td><td>a force which slows down a moving object or vehicle</td></tr><tr><td>resistor</td><td>a part of an electric circuit that provides resistance to some of the current</td></tr><tr><td>source</td><td>where something comes from</td></tr><tr><td>switch</td><td>a small control for an electrical device which you use to turn the device on or off</td></tr><tr><td>voltage</td><td>the force of an electric current as measured in volts</td></tr><tr><td>wires</td><td>a long thin piece of metal that is used to fasten things or to carry electric current</td></tr></table>		ammeter	measures the current in a circuit	appliances	a device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical .	battery	small devices that provide the power for electrical items such as torches	bulb	the glass part of an electric lamp, which gives out light when electricity passes through it.	buzzer	an electrical device that is used to make a buzzing sound	cell	a synonym for battery	circuit	a complete route which an electric current can flow around	component	the parts that something is made of	conductor	a substance that heat or electricity can pass through or along	current	a flow of electricity through a wire or circuit	device	an object that has been invented for a particular purpose	electricity	a form of energy that can be carried by wires and in used for heating and lighting, and to provide power for devices	energy	the power from sources such as electricity that makes machines work or provides heat	fuel	a substance such as coal, oil, or petrol that is burned to provide heat or power	generate	cause it to begin and develop	insulator	a non- conductor of electricity or heat	mains	where the supply of water, electricity , or gas enters a building	motor	a device that uses electricity or fuel to produce movement	power	Power is energy , especially electricity, that is obtained in large quantities from a fuel source and used to operate lights, heating, and machinery.	resistance	a force which slows down a moving object or vehicle	resistor	a part of an electric circuit that provides resistance to some of the current	source	where something comes from	switch	a small control for an electrical device which you use to turn the device on or off	voltage	the force of an electric current as measured in volts	wires	a long thin piece of metal that is used to fasten things or to carry electric current
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Investigate! Match circuit symbols to their meanings and their words. Predict, then investigate what happens when more batteries are added to a circuit. Explain why this happens. Predict, then investigate what happens when more bulbs, motors are added to a circuit. Explain why this happens. Systematically identify the effect of changing one component at a time in a circuit. Use circuit symbols when representing a simple circuit in a diagram. Design and make a set of traffic lights, a burglar alarm or some other useful circuit. Investigate what happens when the voltage of the battery changes. Investigate what happens when the length of the wires changes. Investigate what happens when you add a resistor to a circuit. Use ammeters to measure the current in a circuit.																																																						