

Subject: Science (Physics)		Unit: Electricity		Year: 6			
What do we know already: *I know how to construct a simple series circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers. *I can compare and group together everyday materials based on their properties, including ...conductivity (electrical ...) conductor, insulator, metal. *I know the name of appliances that use batteries and mains electricity. *I know a break in a circuit will cause the energy to flow back to its source and the bulb will not light up.		Vocabulary:					
What's next: *I will learn that sometimes the battery voltage isn't enough to light a bulb and a bigger battery or another battery may need to be added to the circuit. * I will learn if a switch is turned off or the circuit is broken, a component will not function. *I will learn to name the electric symbols. *I will learn to create different circuits with different voltages and compare bulb brightness.		Tier 1 Battery Brightness Circuit Diagram	Tier 2 Amp Cell Component Conductor Current Insulator Switch Symbols Volume	Tier 3 Ammeter - Used to measure electric currents in amps. Voltage - The amount of electricity flowing through the circuit. Measured in amps using an ammeter.			
What are electrical conductors and insulators?		How can we make a light bulb shine brighter?		What happens if we add more bulbs to a circuit?			
<u>What are electrical conductors and insulators?</u> An electrical conductor lets electricity pass through it. They are often metal (e.g. iron, copper and gold) but also include carbon and water. As our bodies are 18% carbon, electricity is very dangerous to us and because water is a very good conductor of electricity we mustn't use electrical appliances near it! An insulator doesn't let electricity pass through it, e.g. wood, leather and plastic. Plastic is used to cover electrical wires because it is a good insulator. Electrical Conductors Electrical Insulators		Adding more cells to a circuit makes a bulb brighter: The bulb in this circuit will be brighter. If you use a battery with a higher voltage, the bulb would also be brighter.		Adding more bulbs to a circuit will make each bulb less bright. If we add a motor into a circuit with a single bulb, the bulb will be less bright. If we then add more motors to the circuit, each motor will spin more slowly.		BULB BUZZER MOTOR WIRES BATTERY/CELL SWITCH	