





Lesson	3 of 5	Key Unit Question:	What is electricity?	Key Lesson Question:	Will the bulb light?
Learning Objective	NC Links		Resources		
I can identify if a bulb will light up in a circuit.	<ul style="list-style-type: none">construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzersidentify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a batteryrecognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit		<ul style="list-style-type: none">PresentationDifferentiated activity sheet (easy/medium)Challenge activity sheetNext stepA class set of batteries, battery holder, crocodile clips, bulbs, switches, wires, motors and buzzers.iPad or cameras		
Teaching Input					
<ul style="list-style-type: none">Recap on previous learning - what is an electrical component? Can you name some electrical components? In pairs, children identify the components on PPT slide 2/PDF p1. Review as a class using the next slide.Before turning to PPT slide 4/PDF p3, ask the children what a circuit is. What equipment would I need to make a light bulb light up? Explain to the children, sometimes circuits don't work even though you have the correct equipment, why might this be? Discuss in pairs and take feedback.Use PPT slide 4/PDF p3 to review possible reasons why circuits won't work.Mini-task – in pairs, ask the children to make 2 circuits (one that works and one that doesn't). Take a photo of the two circuits and ask other children to predict which one will work and which one won't, giving reasons for their choices. Alternatively, rather than taking a photo, children could leave their circuits on their tables and rotate around the class.Once the children have had experience at predicting which circuits will work and which won't, introduce the independent activity. You may need to model how to write an explanation.Once the children have completed the activity, review their answers and discuss any misconceptions.Plenary – to finish the lesson, complete the recap quiz on PPT slides 7 -12/ PDF p6 -11. <p>BACKGROUND INFORMATION FOR TEACHERS Most circuits are simply 'on' or 'off'; if a circuit is complete, the bulb or other component will light up, if the circuit is broken, it won't. A switch is a way of completing or breaking a circuit. A circuit can be series or parallel. In a series circuit, the electricity has to flow through all the components in order to complete the circuit. If any of the components are broken, then the electricity will not flow. In a parallel circuit, there are alternative routes for the electricity to take.</p>					
Differentiated Activities					
 (working below)		  (working at)			
Children are presented with three different circuits and asked to predict if they will work; giving reasons for their choices. If necessary, children could work with an adult to construct the circuits to support their predictions.		Children are presented with five different circuits and asked to predict if they will work; giving reasons for their choices.			
Challenge Activity		Next Step Activity			
Children are asked to construct two different circuits. They predict if they will work and then test them.		One of the bulbs is missing from the string of Christmas tree lights. If they are plugged into the mains electricity, will the lights work? Explain your answer.			
Assessment Questions		Self Assessment		Key Vocabulary	
Can you predict if a circuit will work? Can you give reasons why a circuit may not work? What is a complete circuit? What happens if the circuit is broken?		I can predict if a circuit will work. I can name all of the components needed to make a circuit work. If a circuit doesn't work, I can give reasons why.		<ul style="list-style-type: none">complete circuit/ incomplete circuitcurrentcomponentcircuitflow of electricitymotor, switch, buzzer, wire, crocodile clip, battery <div> www.grammarsaurus.co.uk</div>	