

Circuits and Conductors

Science

Year 4

Lesson 3 of 5

| Learning Objective | | Resources |
|---|---|---|
| To construct simple circuits. | | Slides Picture Cards 3A Worksheet 3A/3B Challenge Cards 3A Circuit Cards (FSD activity only) |
| Teaching Input | | |
| <ul style="list-style-type: none"> Explain to children that lights, washing machines and other appliances work by an electrical current flowing through a circuit. A simple circuit is made up of different components. Show children different components on the screen. Are they able to name them? Discuss how a switch works. Explain to children that a simple switch is made up of a metal lever which when pressed down meets a metal contact; this would mean the switch is on and allows the current to flow through. When the switch is turned off, the circuit is broken. Ask children to think about what they would do to power the lightbulb. Show a circuit that doesn't work. Explain to children that for a circuit to work, it needs a power source. Can they spot a power source in the circuit? How can they fix it? | | |
| Main Activity | | |
| For this activity, provide children with the components to make a simple circuit, including batteries, lightbulbs and wires. | | |
| <u>Lower ability:</u> Give children Picture Card 3A showing a simple circuit. Challenge children to create their own simple circuit using the picture cards to help them, drawing and labelling their circuit on Worksheet 3A. | <u>Middle ability:</u> Children to investigate making simple circuits and then draw a pictorial representation of their circuit on Worksheet 3A and answer observation questions. | <u>Higher ability:</u> Children to investigate making simple circuits and then draw a pictorial representation of their circuit on Worksheet 3B and answer observation questions. Challenge: children to independently investigate making circuits with more than one component. Give children Challenge Cards 3A to facilitate their learning. |
| Fancy something different...? | | |
| <ul style="list-style-type: none"> Provide children with components to make circuits. Explain to children that they will be given Circuit Cards on their tables; these circuits may or may not work. Can they predict whether the circuit will work? Is it a complete circuit? Does it have a power source? Allow children to make their predictions and then put the circuit together to see if they were correct. Can they fix the circuits that are broken? | | |
| Plenary | Assessment Questions | |
| Ask the children what is the bare minimum you would need to create a working circuit. Could a circuit be made with more than one component (in addition to the power source)? What did the children find as they explored today? | <ul style="list-style-type: none"> Can children label the components of a circuit? Are children able to construct simple circuits? Can children make observations about simple circuits? | |