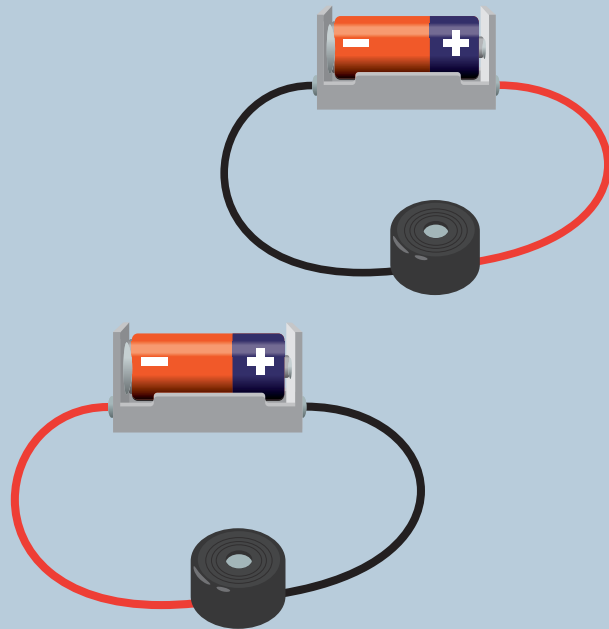


Changing Circuits

- 6 Look closely at these two pictures of circuits. What is the difference between them?
- 7 The buzzer only works in one of the circuits. Why do you think this happens?



Quietest buzzer challenge

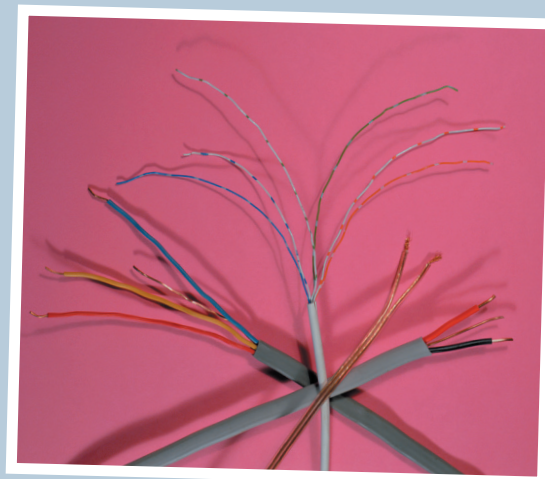
You will need: a buzzer, a 3V cell, a switch, and other electrical components including bulbs, wires, motors

- 1 Work in a small group and compete with other groups in the class to make a buzzer sound as quietly as possible. You must still be able to hear the buzz. Include a switch in your circuit so you can turn the buzzer on and off.
- 2 Draw a circuit diagram showing how you made the volume of the buzzer very quiet.
- 3 Explain why you chose to make the circuit in the way you did.
- 4 Compare your buzzer volume with other groups.
- 5 Record the circuit diagram for another group that has made the buzzer volume very low in a different way.

Science Skills

Wires – Investigate it!

Look closely at the wires in this picture. They are not all the same.



1 What are the similarities and differences between them?

Xavier thinks that changing the types of wires in a circuit will alter the brightness of a bulb.

2 Do you agree with him? Explain why to a classmate. Record your ideas.

Questions relating to changing wires

You will need: a selection of different types of wire of different lengths and thicknesses

1 Work in a small group and look closely at the samples of different wires. Xavier's group chose to investigate changing the length of the wire.

Their question is "How does changing the length of the wire affect the brightness of the bulb?"

2 List other properties of the wire that could change.

3 What could Xavier's group measure or observe? Use your ideas to write some other questions for Xavier's group.

4 Xavier says they will have to simply observe the brightness of the bulb as there is no way to measure brightness. Is he correct?