

## Activity 9

### Conductors and non-conductors of electricity

#### Materials:

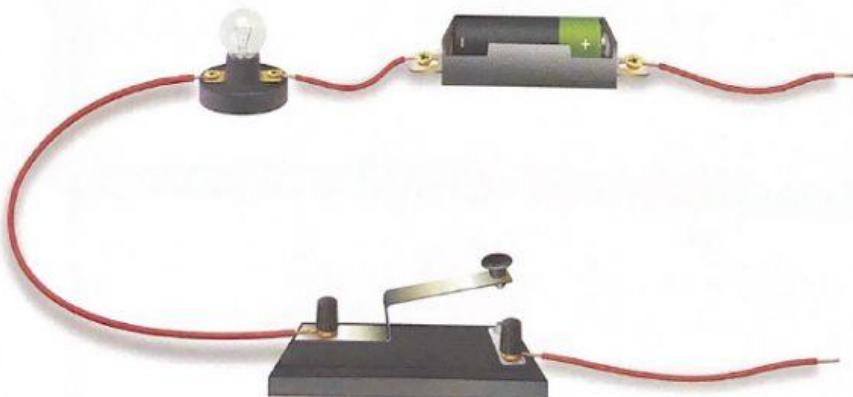


#### Predict:

In the table on page 25, predict which objects are conductors of electricity and which are non-conductors of electricity.

#### Method:

- 1 Set up an electric circuit as shown below.



- 2 Connect the paper clip to the free ends of the wires. Turn the switch to the 'on' position and observe if the light bulb lights up.
- 3 Repeat Step 2 using the other objects.

**Results:**

4 Record your observations in the table below.

| Object        | Material:<br>metal or<br>non-metal? | Prediction:<br>Will the light bulb<br>light up?<br>(✓) or (✗) | Observation:<br>Does the light<br>bulb light up?<br>(✓) or (✗) | Conductor or<br>non-conductor<br>of electricity?<br>(✓) or (✗) |
|---------------|-------------------------------------|---|--|--|
| Paperclip     |                                     |   |  |  |
| Toothpick     |                                     |   |  |  |
| Rubber band   |                                     |   |  |  |
| Key           |                                     |   |  |  |
| Screw         |                                     |   |  |  |
| Nail          |                                     |   |  |  |
| Wooden ruler  |                                     |   |  |  |
| Metal ruler   |                                     |   |  |  |
| Plastic spoon |                                     |   |  |  |

5 Based on your observations in this investigation, which material allows electricity to pass through it?

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6 What is the name given to an object that allows electricity to pass through it?

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7 Based on your observations in this investigation, which materials do not allow electricity to pass through them?

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8 What is the name given to an object that does not allow electricity to pass through it?

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