

# Middle School Science

Name:

Date:

## What are Circuits Worksheet

This worksheet accompanies slide 4 of *What Are Circuits.ppt*

### What is an electrical circuit?

Use this role play to explore the concepts behind electrical circuits.

#### Role play

Work in a group of 6-10 students.

Each student must take on one of the following roles:

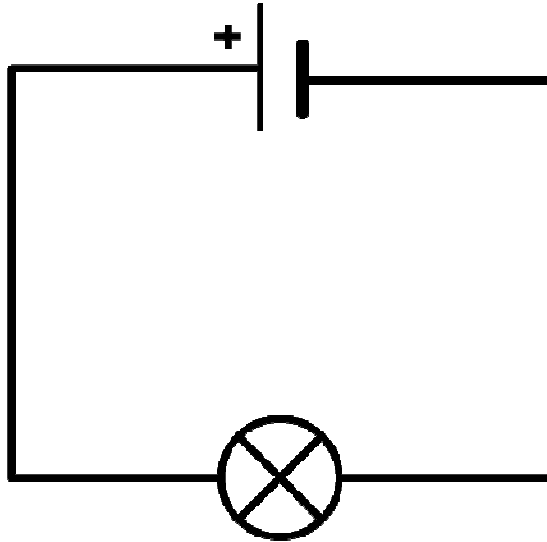
1 student is **the cell**

1 student is **the bulb**

The remaining students are **electrons**.

At the start of the role play, the cell should hold a number of “packets of energy.” You will need at least twice as many as the number of electrons in your group.

Now arrange yourselves so that you best represent a simple circuit containing a cell and a bulb.



You need to decide the following:

- Where will the cell stand?
- Where will the bulb stand?
- What path will the electrons take?
- What will happen to the packets of energy?

Now perform your role play.

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## Questions:

1. What happens to the energy when it reaches the bulb?

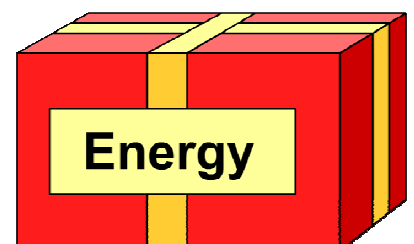
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2. Electrons in the circuit start moving at the same time and travel at the same speed.  
How could you alter your role play to show this?

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3. What would happen if the electrons were blocked from returning to the cell?

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