

Light Bulb Circuit

Procedure

- 1. Collaborate** Work with a partner to connect the battery, wires, and two bulbs, as shown in your book. Leave one wire unconnected.
- 2. Record Data** In the space below, draw a diagram of the incomplete circuit.

- 3. Observe** Connect the loose end of the third wire to the negative terminal of the battery. Observe and record the results. Write your observations on the lines below.

- 4. Experiment** Disconnect one wire from the battery or a bulb, then reconnect it. Test the effects of disconnecting different wires from the circuit. Record the results on the lines below.

5. **Collaborate** Take apart the circuit. Reassemble it as shown in your book. Draw a diagram of the new circuit.

6. **Experiment** Repeat steps 3 and 4 for the new circuit. Record your observations on the lines below.

Conclusion

Write the answers to the questions below.

1. **Compare** Describe how the light bulbs were connected differently in two types of circuits. What effect did this have on the electric current?

2. **Use Models** Which of the two circuits would be better for powering appliances in your home?

Investigate More!

Design an Experiment How would you connect two batteries to increase the current flowing through the light bulbs? How would you connect the batteries to have one battery keep the light bulbs lit if the other battery failed? Draw diagrams. With your teacher's approval, do the experiment.

