

# Splitting Water

## Procedure

- 1. Collaborate** Work with a partner. Fill the cup at least halfway with water. Stir in a spoonful of baking soda. **Safety:** Wear goggles. Use a low-voltage battery only. Never place wires from an electrical outlet into water.
- 2. Experiment** Tape one end of each piece of wire to the battery terminals. Make sure the bare metal ends touch the terminals.
- 3. Experiment** Place the other ends of the two wires in the water. Tape the wires to the sides of the cup, so that they do not touch each other.
- 4. Observe** Observe the ends of the two wires in the water. Record your observations on the lines below. Note any differences you see at the end of each wire.

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- 5. Predict** Predict what would happen if you removed one of the wires from the water. Record your prediction on the lines below, then test it.

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## Conclusion

Write the answers to the questions below.

1. **Hypothesize** Water is made up of the elements hydrogen and oxygen, which are gases at room temperature. What do you think the electric current does to the water? How do you know?

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2. **Infer** Each molecule of water has two hydrogen atoms and one oxygen atom. How does this explain any differences that you observed?

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## Investigate More!

**Design an Experiment** Run the investigation without baking soda. Then try dissolving salt or sugar in place of the baking soda. Compare your results. Hypothesize what the role of the baking soda was.

