



**NGSS Standard:** 4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents

[Check With the Experts](#) (they will read this AFTER the discussion)

**Potential Question:** Can you describe what happened to the energy when you completed the circuit?

**Competing Ideas:** Energy can change from one form to another vs. Energy always stays in the same form.

- ★ Begin the lesson by asking students to review what they did in the investigation.
  - Show the students that when the circuit is not completed the light does not turn on, but when you complete the circuit the light does turn on.
- ★ Pose the question and competing ideas above and have the students physically move next to the other students who support the idea.

#### **Potential Questions to guide the discussion**

*Begin the discussion by asking students the question: What happened to the energy when you completed the circuit? Did it stay in the same form or did the energy change forms? Explain your evidence.*

**Let the students discuss their ideas, however, if the conversation starts to slow down you can ask the following questions to keep the discussion going.**

- When you connected the circuit you could see the light come out of the bulb. Was there light inside the battery before you connected the wires or was there a different type of energy in the battery.
  - If we cut open the battery would light come out?
- When you eat food what happens to it? How does your body change food energy into energy that you use to do work?
- Have you ever touched a light bulb? What did it feel like? Where did the heat come from?

**Student learning Goal by the end of the Argumentation (after Check With the Experts):**

We can observe energy when it moves from place to place by sound, light, heat, and electricity. Energy can be converted from one form to another.