| · 3V coin battery   |
|---|
| · aluminum foil or copper tape  |
| · an LED light  |
| · tape  |
| <ul> <li>various materials to test out (i.e., a paper clip, a pencil, a bottle cap, a pipe cleaner, a magnet, your finger, paper, coin, etc.). If you do not have some of these materials, choose something similar.</li> <li>paper circuit template or a piece of paper</li> </ul> |
|   |
|   |

#### **Procedure**

- 1. Use the provided circuit template or recreate the image.
- 2. Lay the aluminum foil and tape it down, following a path on a piece of paper.
- 3. When laying down the conductive material, use a continuous piece of tape until you reach the point where you will insert your LED and battery.
- 4. Fold through the corners until you reach the end of a section.
- 5. Test your closed circuit.
- 6. Leave or create a gap where you will place a finger and a conductor or insulator to complete the circuit.

Optional: If possible, try this experiment with different types of conductive materials.

| Observations  *Remember observations can be recorded with pictures, numbers, and/or words! | Create a diagram of what you have built. Indicate where the electrons are traveling in the circuit using arrows. |
|--|--|
| Conclusions  |  |

#### **Questions**

Re-examine the list you previously created of conductors and insulators. If possible, test some of the materials on your list and re-classify if needed.

Use the words electrons, circuit, energy source, flow, and load to describe what happens in conductive materials and what happens when using insulators.

Explain in context how your simple circuit functions.