

Squishy Circuits

1. Starting with two pieces of conductive dough, connect a wire from the battery into each piece. Place an LED between the two pieces to bridge them together.

Did the LED light up? (Circle the answer) **Yes No**

2. Remove the LED from the dough and flip the LED. Place the legs of the LED back into the conductive dough so that the legs are in the opposite pieces of dough that they were in.

Did the LED light up? (Circle the answer) **Yes No**

The LED only works one way. The longer of the two legs has to be connected to the positive (red) wire of the battery to create a closed circuit.

3. Take one of the legs of the LED out of the conductive dough.

Did the LED light up? (Circle the answer) **Yes No**

By taking out one of the LED legs from the dough, the flow of electricity is being broken. This is called an open circuit.

4. Place the LED legs back into the dough so that it lights up. Once it's lit, push the two pieces of conductive dough together.

Did the LED light up? (Circle the answer) **Yes No**

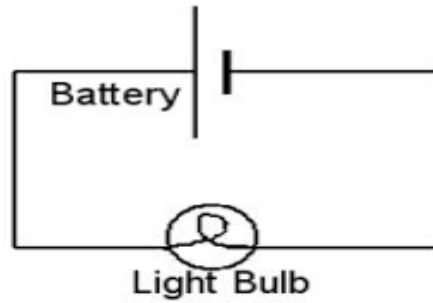
By pushing the dough together, we created a short circuit. The electricity doesn't flow through the LED.

5. Separate the two pieces of dough so that electricity flows through the LED again. Sandwich the insulating dough between the two pieces of conductive dough.

Did the LED light up? (Circle the answer) **Yes No**

The insulating dough does not allow electricity to easily flow through it, effectively acting as a wall. As a result, the electricity has to flow through the conductive dough and the LED to complete the circuit.

Circuit diagram for this circuit:



Can your group:

1. Create a circuit that has at least two LEDs light up? Use the appropriate schematic symbols for your drawing.

2. Create your own circuit! Draw your circuit using the appropriate schematic symbols.