# Utah's Energy Sources Circuit Buddy


A **circuit** is like a complete loop or pathway that allows energy to flow, like lighting up the eyes of your energy buddy! For the light to shine, this energy needs to travel in a full circle: out from the battery, into the light, and then back to the battery. If the path is broken, the energy can't flow, and the light stays off.

Here in Utah, we have different ways of creating these flows of energy, but on a much larger scale. Just like the battery provides the energy for your circuit buddy, Utah's energy sources provide the energy that powers our lives! We are lucky to have wind, hydroelectricity, petroleum, coal, solar, natural gas, and biomass. Additionally, Utah is exploring and considering options like geothermal, nuclear, and hydrogen! All of these generate energy pathways that light up our homes and cities, much like the circuit you're building with your circuit buddy!

**Supplies Needed:**

- Energy Source Buddy
- Two LED Lights
- Battery
- Copper Tape


Scan here for a video tutorial!

UTAH OFFICE OF ENERGY DEVELOPMENT

energy.utah.gov


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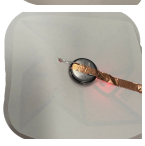
1. Push the two metal legs of one LED light through an eye on the front of your energy buddy.
2. Repeat with the other LED light.


3. Bend the longer leg of the light down so it is against the paper, leaving the shorter leg sticking up. Point the longer legs toward each other.

4. Place the smooth side of the battery face down so it covers the longer legs of the lights.

5. Bend the shorter leg of each light down to touch the rough side of the battery.

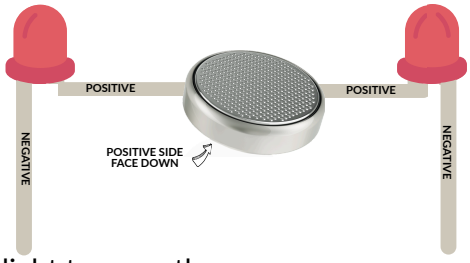


6. Tape down the shorter metal legs to the battery using the copper tape.

7. Watch the eyes light up! You've made a circuit!


## How does it work?


Both the battery and the LED light have two sides that energy needs to travel between, similar to a starting line and finish line. The battery has a "start" side, which we call positive, and an "end" side, called negative.
The LED light also has a "start" the longer leg, which is positive, and an "end" the shorter leg, which is negative.




To make the light turn on, the energy needs to flow in a loop from the battery's positive side, through the light, and back to the battery's negative side – like a tiny racetrack for electricity!