Lesson 29

# Open and Closed

# LET'S TRY!

Imagine, what will happen if the necklace loses its lock? if the fence loses its gate or one of its posts? if the dam loses one of its walls? Why is it important for these things to be completely connected?

# IMPORTANT QUESTION

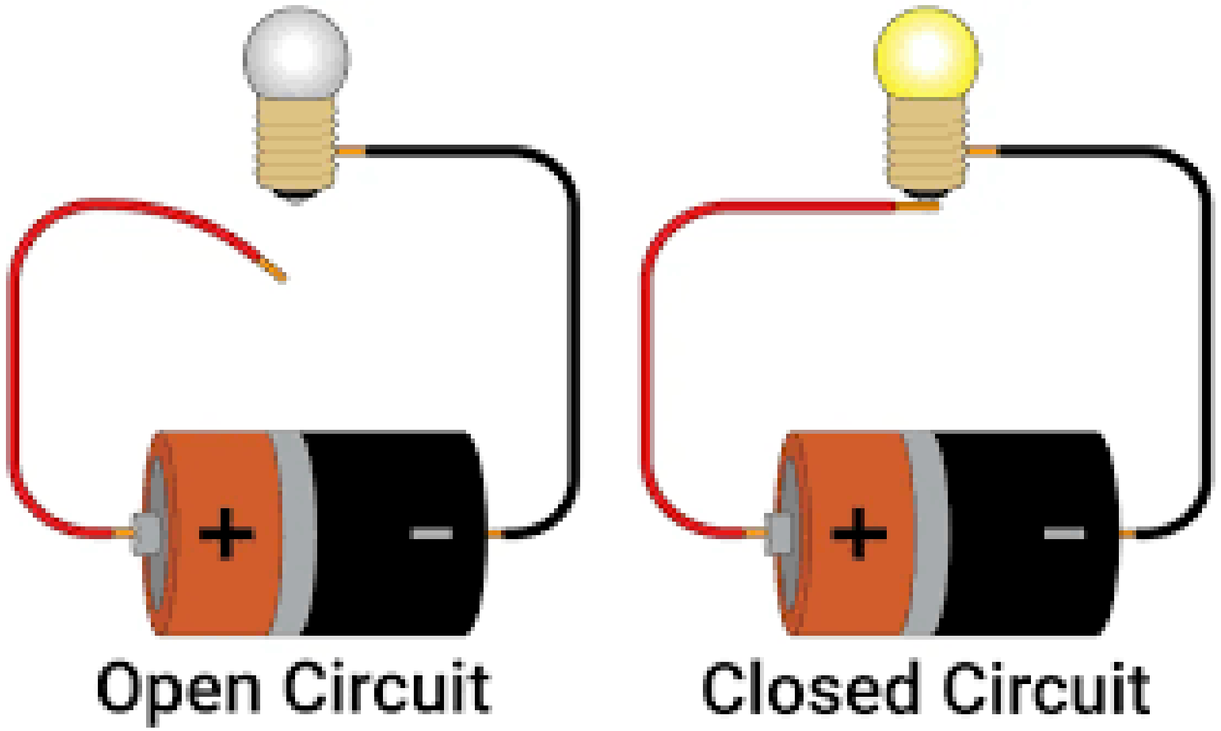
Imagine, what will happen if the necklace loses its lock? if the fence loses its gate or one of its posts? if the dam loses one of its walls? Why is it important for these things to be completely connected?

Look around your house. How many appliances do you have?
How many are currently plugged into your wall outlets?
Most households have several devices that make use of electricity.
The number of appliances that you have at home shows how important electricity is in our everyday lives.

How does electricity flow to your appliances?

Two conditions must be met in order for electricity to flow: first, there must be a source of electricity; second, there must be a complete path for the electricity to flow through.

What are the components of this complete path?




The picture above shows an electricity. An electrical circuit has four parts: a source, light bulb, wires, and, switch.

In the setup, a wire is attached to the negative end of the battery, while the others wire is attached to the positive end. Both wires are attached to the bulb. Such a circuit is called a **closed circuit**.

A closed circuit makes the bulb light up because the path of electricity is complete, allowing electricity to flow through it. Electricity flows from the negative to the positive terminal of the dry cell.

Another kind of circuit is an **open circuit.** Electricity does not flow in this kind of circuit because there is a gap or no complete path from one end of the circuit to the other end.

So what makes a circuit open? The switches that you see around our homes are electrical components that can make the circuits of the light in our homes open or closed. So to turn on the lights, you have to close the circuit by pushing the switch on. To turn off the lights, you have to open the circuit again by pushing the switch off.