

Guiding questions: How can you change a circuit?

Learning Goal:

- 1. Create different circuits that will affect the brightness of a light.**

Agenda

- 1) DSR-Circuits introduction**
- 2) Finish Building Circuits**
- 3) My Circuits and observations**
- 4) Exit talk**

Words of the day

Series

Parallel

Circuits Again

My Created Circuits and Observations

Directions: Draw the Circuit diagram and write 1 observation you made

Challenge #1 Make a Parallel circuit with 2 bulbs

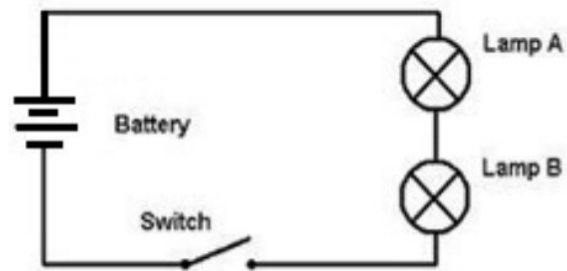
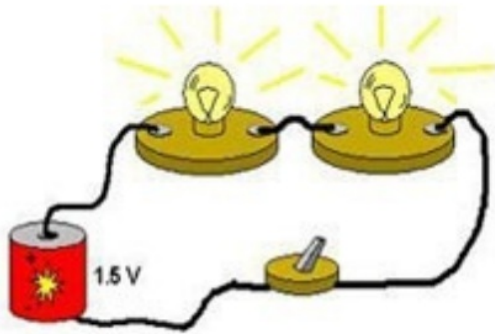
Challenge #2 Make a circuit where one bulb is brighter than another.

Challenge #3 Make a circuit where one bulb is lit and the other is out because the bulb is missing or broken.

Challenge #4 Make a circuit where one bulb is lit and the other is out but not broken or missing.

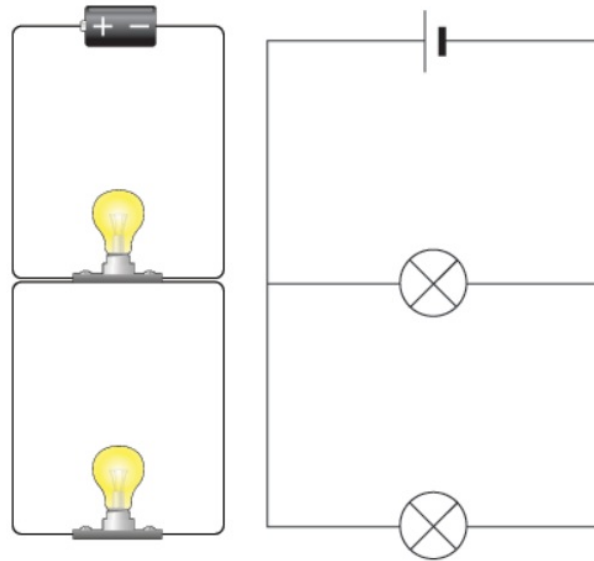
Series Circuit

Light bulbs are in a line and the charge passes through every light bulb.



Parallel Circuit

Light bulbs are **NOT** in a line and the charge only passes through 1 light bulb.



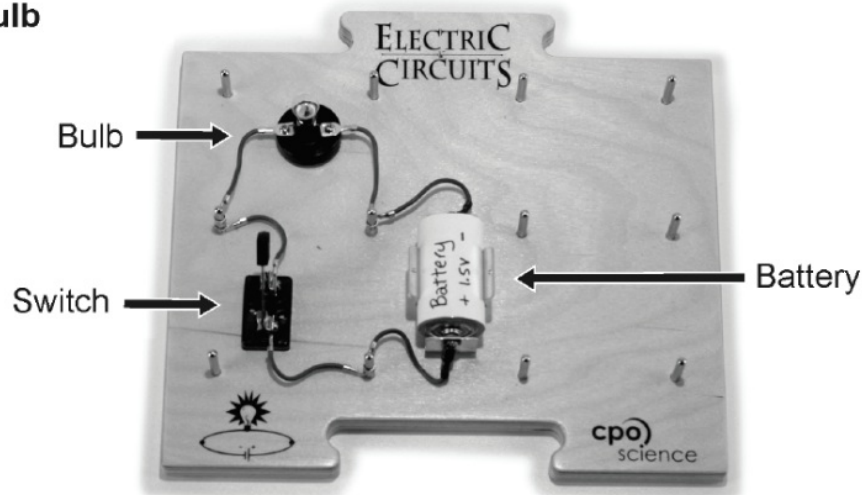
DSR Today



Part 1

1. Build the circuit shown in the diagram with one battery, a switch, and a bulb.
2. Open and close the switch and see what happens.

Single bulb circuit



Answer the question in your notebook for Part 1

Building Circuits

Part 1: Building a circuit

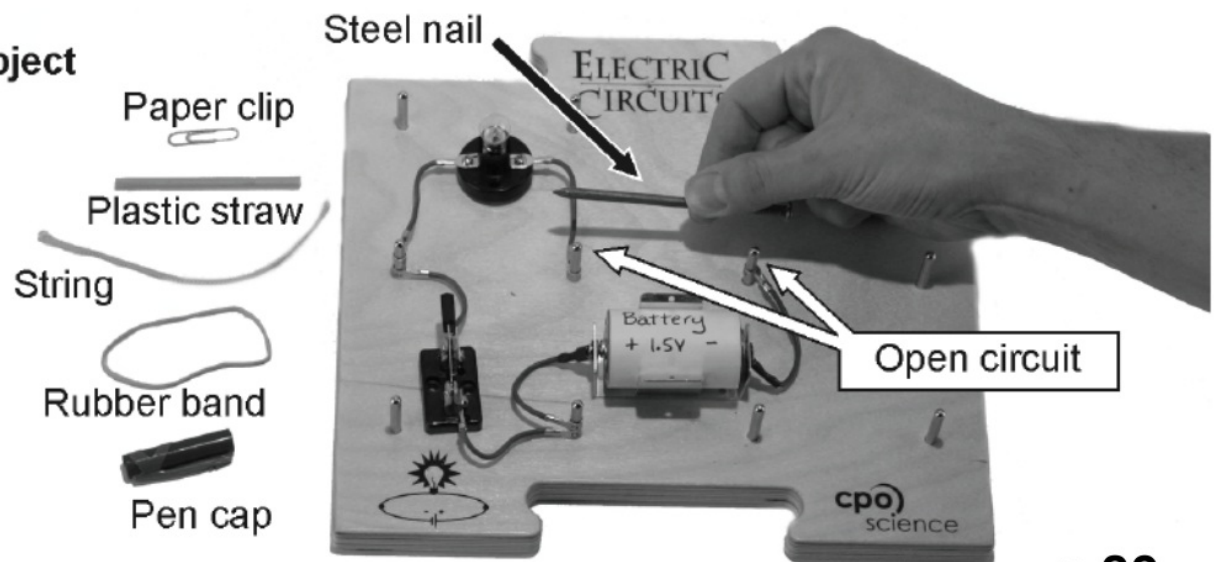
- a. How can you tell electric current is flowing in the circuit? Can you see the current flow?
- b. How does the switch cause the current to stop flowing?
- c. Why does the bulb go out when you open the switch?
- d. Draw Schematic diagram of the circuit.

- e. Label the forms of energy that appear on your diagram above (Thermal, Radiant, Electrical, Chemical)
- f. **Electrons move** from negative to positive draw the movement of electrons on your diagram with arrows. Label your arrows electrons
- g. Current Moves from positive to negative the movement of electrons on your diagram with arrows. Label your arrows current.

1. Break one connection in your one-bulb circuit.
2. Complete the circuit by touching different materials between the wire and the post.
3. Which materials allow the bulb to light and which do not?

Materials in which electric current flows easily are called conductors.
Materials that current does not flow through easily are called insulators.

Connect circuit
through each object



Answer the questions in your notebook for part 2

Part 2 Insulators and Conductors

a. Make a table listing the materials as either conductors or insulators.

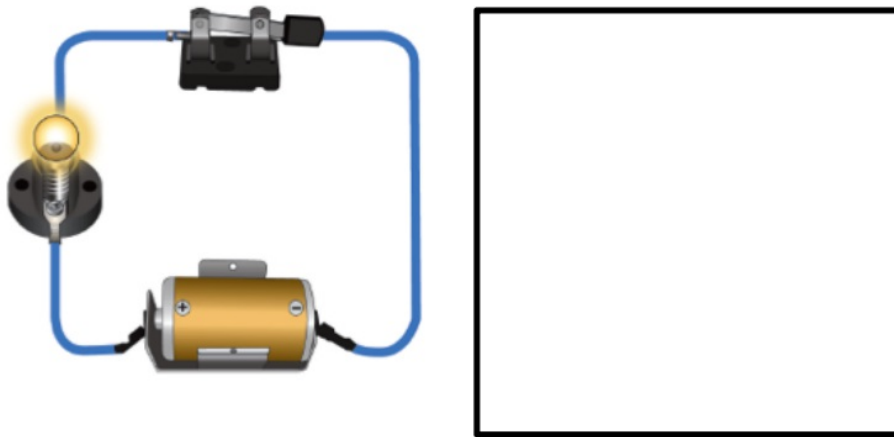
b. What characteristics are shared by the conductors you found?

c. What characteristics are shared by the insulators you found?

IF YOU ARE DONE USE THE SUPPLIES IN THE ROOM TO BUILD MORE CIRCUITS

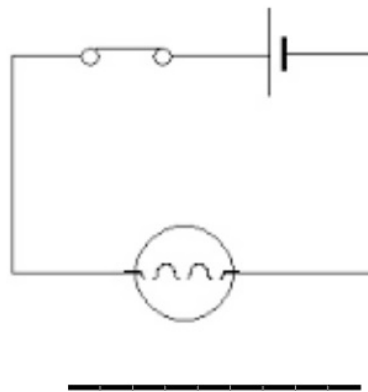
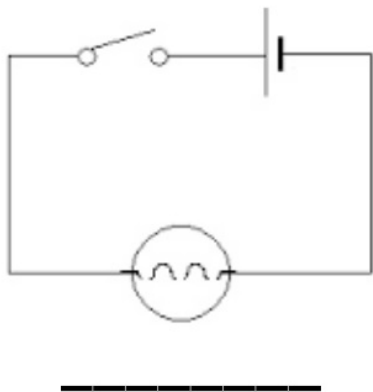
Exit Ticket: Circuits

1. Draw the circuit in symbol from your notes



Do in showbie

2. Label the diagrams as OPEN or CLOSED circuits



Then move on to My circuits and observations

My Created Circuits and Observations

Directions: Draw the Circuit diagram and write 1 observation you made

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