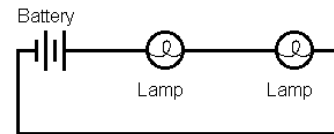


SERIES CIRCUITS (6-8)

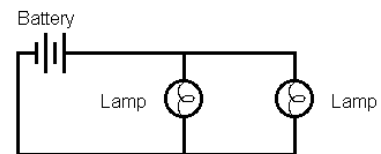
KEY CONCEPTS:

- A **circuit** is a path that allows electrons (electricity) to flow and provide power to components.
- All items are connected to each other directly in a **series** circuit. If one component fails, the entire circuit fails.
- In a **parallel** circuit, each component has its own path – meaning if one fails the entire circuit does not fail.

SERIES



PARALLEL



LITERACY CONNECTION:

[The Miscalculations of Lighting Girl](#) by Stacy McAnulty tells the tale of a girl who became a numbers genius after being struck by lightning!

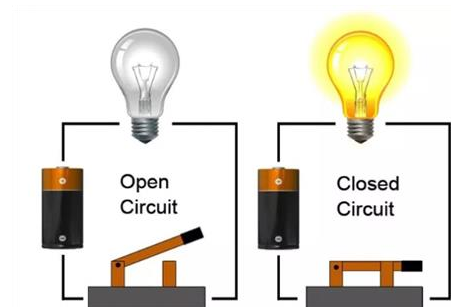
Don't have the book? Look online for [access to the story](#).

ACTIVITY: SERIES CIRCUIT

Materials: 2 sets of wires (open end or alligator clips), a flashlight, 1 battery [OPTIONAL: [SNAP Circuit kit](#)]

1. Take apart the flashlight and remove the battery
 - a. Look inside the flashlight – what do you see? (metal spring or tab)
2. Carefully take the bulb out of the flashlight
 - a. Draw a picture of the battery and another of the bulb.
How do you think they are connected to make a complete circuit?
3. Take 1 wire, 1 battery and the bulb. Can you make the bulb light up? Finish your picture to show your circuit. Try it again with 2 wires and draw the new circuit.

What is happening? In order for electricity to flow, a circuit must be *closed*. An open circuit, like when a light switch is in the OFF position, will not allow electricity to move.



EXPLORE: Now try to light the bulb with 2 batteries. What did you observe? Visit [FPL's Energy Related Activities](#) for more cool projects!

For an example of this activity, watch the video: [Simple Circuit STEM Activity](#)

This at-home educational activity is from the Literacy Coalition of Palm Beach County's literacy-based Stories & STEM program. Stories & STEM is made possible with support from Prime Time Palm Beach County, Inc., which receives significant funding from the Children's Services Council of Palm Beach County, Inc.

Having fun? Send pictures or video links of you and your Stories & STEM projects to csharkey@literacypbc.org