Celebration Circuits

Simple Science Activity

Purpose:	In this activity, students will create a series circuit.
Standard(s):	**S5P2. Obtain, evaluate, and communicate information to investigate electricity.** b. Design a complete, simple electric circuit, and explain all necessary components.
Materials:	For each group: • Holiday lights (cut apart and stripped) • Aluminum foil • Scissors • File folder or piece of thin cardboard • Tape • 1 brass fastener • 1 paperclip • 9v battery
Procedures:	1. Prepare the holiday lights by cutting the strand apart. Then, strip the plastic coating from the ends revealing the wire. 2. Cut a piece of aluminum foil into strips. 3. Create a border using the foil strips and holiday lights. Be sure to tape the holiday lights' exposed wires on top of the foil. Be sure to leave a small space for the battery and for the switch. 4. Create the switch by sliding the paper clip onto the brass fastener. Then, push the brass fastener through the foil on one side of one of the gaps in the foil. Flip the folder/cardboard over and open the fastener to secure it. Complete the circuit, spin the paper clip to touch the other side of the foil. 5. Using the 9v battery, bridge the other gap in the foil. 6. Observe.
Science Behind It:	A circuit is a path for electricity to move through. As electricity moves, or flows, the electricity could light a bulb, turn a fan, or charge your phone. All circuits have the same basic parts, called components. One component is the power source. The power source pushes the electricity through the circuit. Circuits also have connectors. Connectors connect all the parts of the circuit and create the path or

	loop that the electricity travels through and are usually made of wire or another conductive metal. Another component is the load, or the thing being powered by the electricity in a circuit. It could be a light bulb, a fan, or any of the many electronic gadgets we use every day. Finally, most circuits have a switch that completes and breaks the circuit.
Questions to Ask:	• What are the components of a circuit and what do they do? • How does the switch complete the circuit? • In this activity, you created a series circuit. How could you modify it to create a parallel circuit?