Activity 11: Testing for Conductors

How do you make a circuit?

Materials

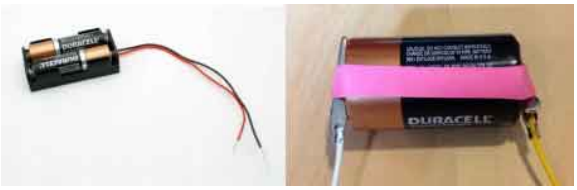
• Electricity Kit Items: battery holder, lamp holder and lamp, three connecting wires
• 1.5 V - 2 AA batteries or D-cell battery
• Common items you find around the home, such as: thick rubber band, or small rubber band, pencil lead, metal and plastic bottle caps, masking tape, plastic straw, wax, wood stick, paper clip, metal foil, paper, plastic bag, cloth, metal ring etc

Instructions

1. First, construct a testing circuit.

2. If you have the battery holder from the electricity kit, insert 2 AA batteries. Two wires are already connected to the battery holder.

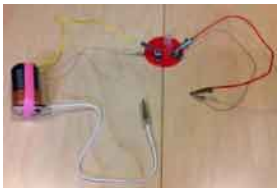
3. Or, connect two connecting wires to a D-cell battery, one to each end. Use the heavy rubber band to hold the ends of the connecting wires to the battery. Put the rubber band on the battery first, and then slide the connecting wire ends underneath.



4. Connect one of the connecting wires from the battery to one of the metal clips on the lamp holder. Connect a third connecting wire to the other metal clip on the lamp holder. You should now have an open loop that has three connecting wires, a battery, and a lamp connected together.

5. You will use the two free connecting wire ends to clip onto test materials. This can also be your first test: touch the two connecting wire ends together. If the circuit is working properly, the lamp should glow brightly because wire is a conductor. This result has been recorded for you in the *Conductor Testing Chart*.

6. One by one, test all the items you have by clipping the free ends of the two connecting wires to them. After each item, record the result in the *Conductor Testing Chart*.



Conductor Testing Chart		
Test Item	**Results**	**Is the Item a Conductor?**
Connecting wires	Lamp glows brightly	Yes, wire is a good conductor
wood stick		
paper clip		
metal foil		
small rubber band		
plastic bag		
cloth		
metal ring		