

The Battery

Battery Metaphor

Spatial Requirements: Regular classroom setup; little or no space required

Activity Type: Object

Grades: 5-12

Group Size: 1 or more

Time: 5-10 minutes

Introduction: In this simple science experiment, students will relate the process of creating light with the channeling of their emotions into positive results. They will identify the need to use both their positive and negative emotions to achieve their goals in life.

Materials:

- A 6-volt battery
- A small bulb (the type that are used for flashlights work well)
- A one-foot length of stranded copper wire that is flexible and easy to bend - strip the insulation from each end of the wire

Activity:

Note: Practice this activity prior to using it in class. (For a demonstration of this activity, visit <https://www.youtube.com/watch?v=s6XP6pAHjvM>)

Ask for a volunteer to help you with this activity. Explain to the student that their goal is to make the light bulb light up. You have provided him or her with all the materials they need to make it work. Ask the student to make the light bulb light.

If the student is successful, immediately move to "Processing the Experience."

If the student is unsuccessful, ask for a second volunteer. Instruct the volunteer to hold one of the copper wires to the negative terminal of the battery, and touch the other end of the wire to the light bulb. Next, repeat the process by asking the student to touch the wire to the positive terminal of the battery and touch it to the bulb. Take a moment to talk about why no light occurred for each try.

Finally, assist the volunteer in creating light. Tell the student to place the wire into the negative end of the battery and touch it to the base of the light bulb. Next, place the light bulb on the positive terminal and touch the other end of the copper wire to the black base of the light bulb. This should create light from the bulb.

Processing the Experience:

- What happened when we connected only the positive end of the battery to the bulb? (No light)
- What happened when we connected only the negative end of the battery to the bulb? (No light)
- What happened when we used both the positive and negative ends of the battery? (Light!)
- How does this tie into the Battery metaphor? (Note: If you have not yet taught the metaphor, relate to the concept now. Relate the positive end of the battery to positive emotions like happiness, joy, excitement, and love. Relate the negative end of the battery to negative emotions like frustration, sadness, anger, and disappointment.)
- How is this like life? (Both positive and negative emotions have energy. We need to be able to channel both to produce the results we want in life.)