

BRIGHT IDEAS

Make-It-Myself Flashlight

Materials:

- size “D” dry cell batteries
- 12-inch piece of plastic coated wire
(strip 2 inches of the plastic covering off each end of the wire)
- flashlight bulbs
- electrical tape
- aluminum foil
- cotton string

Procedure:

1. Tape one end of the wire to the bottom terminal of the battery.
2. Place the battery upright on a table.
3. Attach the other end of the wire to the bulb by coiling it around the base of the bulb.
4. Touch the base of the bulb to the top terminal of the battery.
What happens?
5. Substitute a piece of cotton string for the piece of wire. What happens?
What do you think would happen if you substituted a piece of folded aluminum foil in place of the wire?

Explanation:

When the base of the bulb makes contact with the top terminal of the battery, it creates an electrical circuit. Electricity flows, or is conducted, from the battery through the wire to the bulb, lighting it. String does not conduct electricity, so the bulb will not light up. Aluminum foil, like most metals, does conduct electricity so the bulb lights up when the foil is used in place of the wire.