Name _____

Tech Ed

Electric Circuit Experiment Sheet

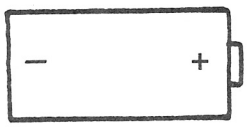
Experiment to find ways to light a light bulb. You may only use one battery, one length of 20-cm wire, and one light bulb. Illustrate each successful method you discover to light the bulb. Also, draw three methods that failed.

Successful Ways to Light a Light Bulb!

Unsuccessful Ways to Light a Light Bulb!

Conclusions

Study your drawings carefully. Decide what conditions are necessary for lighting a bulb. You should find that to light a bulb, two places on the battery must connect with two places on the bulb. Draw arrows to show the location of these special contact points.



Further Study

Working in small groups, continue to investigate circuits. Use any of the available electrical materials to build circuits. During your investigation, use one, two, and three batteries to light a bulb; use a switch to turn a light on and off; and, connect a motor to a circuit that can be turned off and on. Remember, there must be a continuous flow of electrons with no gaps to create a complete circuit. On the back of this sheet draw the electric circuits you made. Explain in detail what happens in the circuits.

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Electrical and Electronic Symbols

Circuit diagrams show how electrical components interconnect. In a schematic diagram, each part of the electric circuit is represented by a symbol. Some commonly used symbols are shown below. Use this sheet as a reference when drawing your own schematic diagrams.

Symbol	Electrical Component	Comments
	Wire	
	Wires not connected	
+	Positive polarity	
–	Negative polarity	
	Battery	Short Line Negative Long Line Positive
	Two Batteries	
	Bulb	
	Switch	Open
	Switch	Closed
M	Motor	