

Lesson 9: How Does The Voltage in a Circuit Affect the Brightness of a Light?

Activity 9.1

+ Safety

Do not leave the lights on longer than is required as it will deplete the batteries.

Purpose

Conduct an experiment with your partner that measures the change light output as read on a lux meter of a light bulb, as you add more batteries.

Your Progress:

- Mastery
- Proficient
- Developing
- Beginning

Word Wall:

Electrical Energy: _____

Light Energy: _____) _____

Variables

What is the independent variable (manipulated) for this experiment?

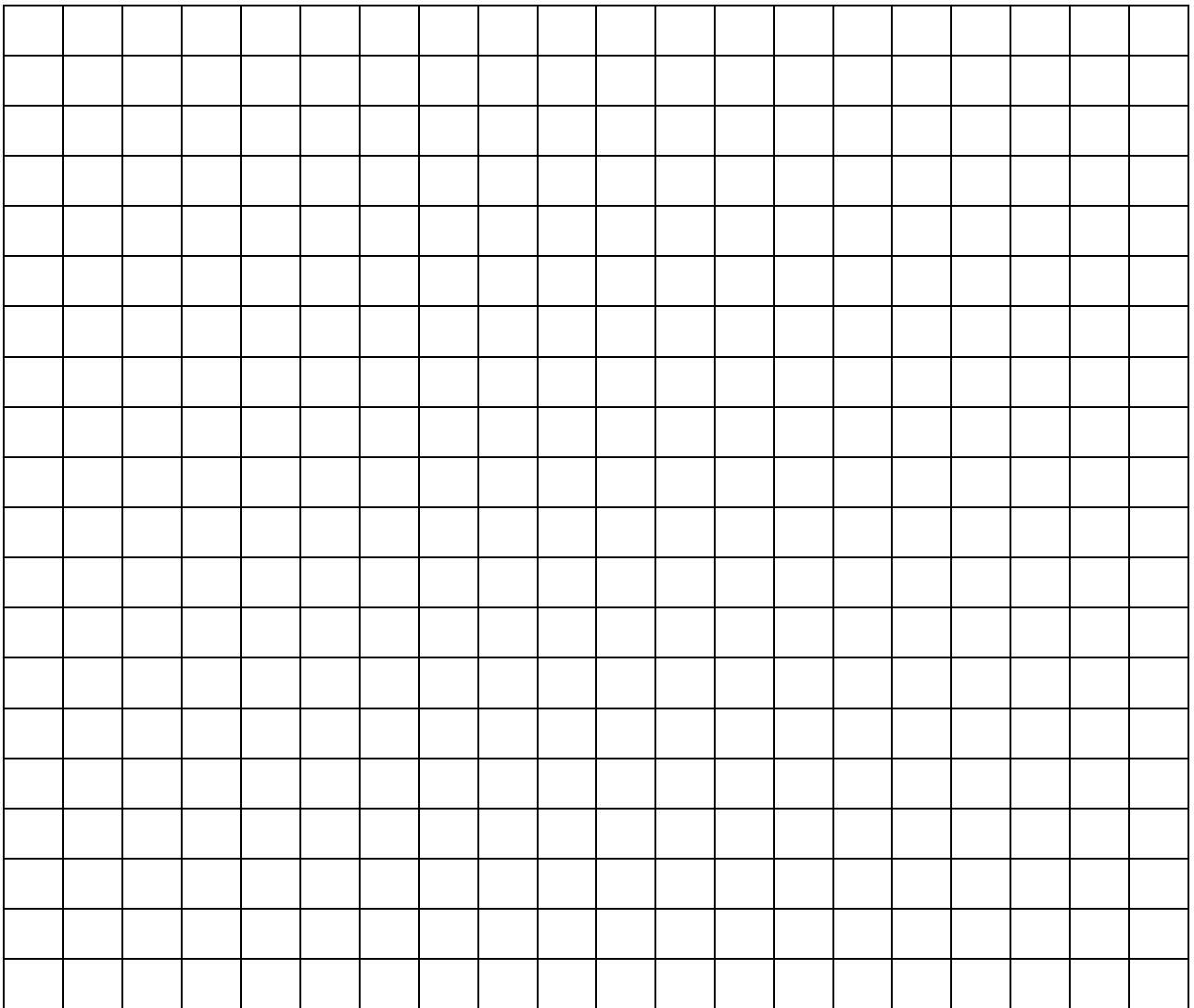
What is the dependent variable (measured/ responding) for this experiment?

What are the controlled variables (stays the same) of this experiment? (State at least 3)

Data

Number of batteries	Voltage	Trial 1	Trial 2	Trial 3	Average
Zero	0 Volts				
One	1.5 Volts				
Two	3.0 Volts				
Three	4.5 Volts				
Four	6.0 Volts				

Use this grid to create a graph of your data.



What happens to the amount of light energy coming from the light bulb as you increase the voltage in the circuit? Explain why you think this happens.
