



# MAKER JOURNAL

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Unit: Electrical Engineering Game Board Design Challenge

Lesson 3: Parallel &amp; Series Circuits

*Write down important terms that appear in the video and write the meaning and/or draw a picture.*

Vocabulary	Meaning
Example: Electron	Negatively-charged subatomic particle



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*Use the space below to draw pictures of your parallel and series circuits and record your observations for each one. Be sure to note the relative brightness of each bulb within the circuits.*

## Designs and Observations

A large, empty rectangular box with a black border, intended for drawing circuit diagrams and recording observations.

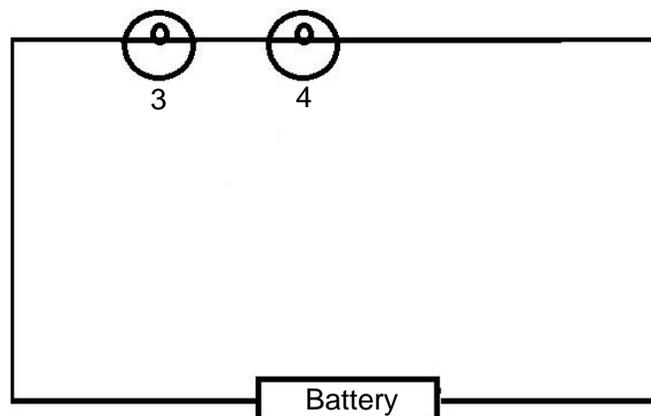
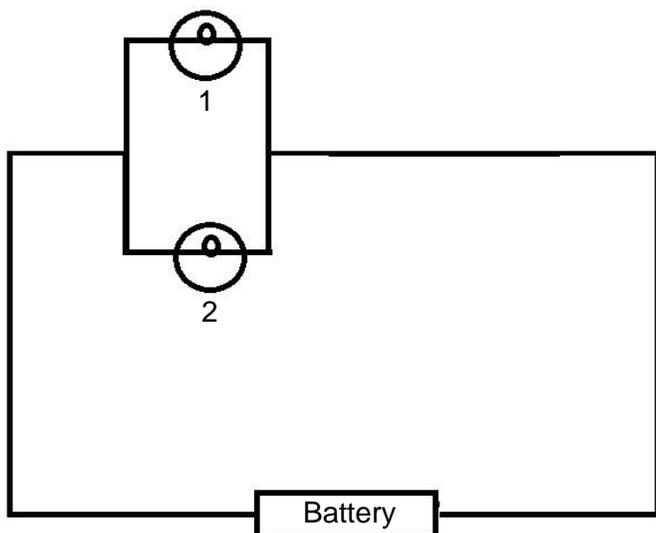
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**Self-Assessment:** Use the diagram of a circuit below to complete each task.

- Draw a **box** around the pair of lights connected in **series**
- Draw a **circle** around the pair of lights connected in **parallel**
- Assume both circuits are on and have the same voltage (batteries). Which lights will shine the brightest? (insert numbers) \_\_\_\_\_.



Based on what you learned through the activities and resources, explain the relationship between the circuit configuration (series vs parallel) and the magnitude of the electric forces moving through each circuit. How does the configuration affect the energy moving through the circuits? Use the space below. Remember to include the following terms in your explanation: power supply/battery, electric force, voltage, current, energy, parallel, and series.