**Exploration with Solar Cells**

Name (s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Perform some experiments with the cells and panels provided. Try different angles, different light sources, combinations in series and parallel, running a motor or car. Measure the output in volts and milliamps.

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| --- | --- | --- | --- |
| Solar Cells Used | Conditions | voltage | amperage |
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Conclusions – Based on your experiments what rules can you state about solar cells and circuits:

**Solar Panel Design**

Requirements and Constraints

What do you want to do with your solar panel and under what conditions?

1.

2.

3.

4.

5.

6.

Cell type to be used \_\_\_\_\_\_\_\_\_\_\_\_\_\_ number of cells to use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Selected single cell voltage\_\_\_\_\_\_ amperage \_\_\_\_\_\_\_\_\_

Designed panel predicted voltage \_\_\_\_\_\_\_\_\_ amperage \_\_\_\_\_\_\_\_\_ power \_\_\_\_\_\_\_\_\_\_

Draw the schematic of the layout of your cells in the space below

Panel Testing

Under flood light voltage \_\_\_\_\_\_\_ amperage \_\_\_\_\_\_\_\_\_\_\_

In full sunlight voltage \_\_\_\_\_\_\_\_ amperage \_\_\_\_\_\_\_\_\_\_\_