



Solar Panel Experiments

Objectives: As a result of these experiments, students will understand how to make electrical circuits and solar circuits, how to increase voltage and current, how to use solar power to produce energy and more. The experiments are designed to test the many factors that go into siting solar panels at homes – angle of the panel, shading, etc.

The Solar Panel Experiments kit allows students to conduct a series of controlled experiments where only one variable is changed to learn more about how solar panels are sited. The worksheet asks students to make a hypothesis about each experiment and then reflect on the results. Results can also be related back to seasons, geography, and solar system concepts.



This kit includes boxes with the equipment needed to perform 4 experiments:

1. Distance to the Sun

Solar panel-3 1.5V cells
Jumper wires
Angle stand and base
Alligator clips
Multimeter
Tape measure

3. Percent Shading

Solar panel-3 1.5V cells
Jumper wires
Angle stand and base
Alligator clips
Multimeter
Cardboard or foam core

2. Angle to the Sun

Solar panel-3 1.5V cells
Jumper wires
Angle stand and base
Alligator clips
Multimeter
Protractor

4. Series vs. Parallel

Solar panels-3 1.5V cells
Jumper wires
Angle stands and bases
Alligator clips
Multimeter
Series/parallel circuit
pics

Each experiment box also contains a bag of accessories including:

- Motor
- Motor holder and base
- Plastic disks
- Fan
- Light bulb
- Music box
- Wrench
- Cardboard figures (birds, planes, pinwheels, and fans)

Additional Equipment Needed:

Lights (or sun)

*Any materials that are lost or broken during classroom use must be replenished before being returned.

To replenish any materials broken or misplaced, check the Elenco Website at:
http://www.elenco.com/product/productdetails/solar=MzA=/deluxe_solar_educational_kit=MzgZ

