

Lesson 2 - Solar Panels and Shade (shadow)

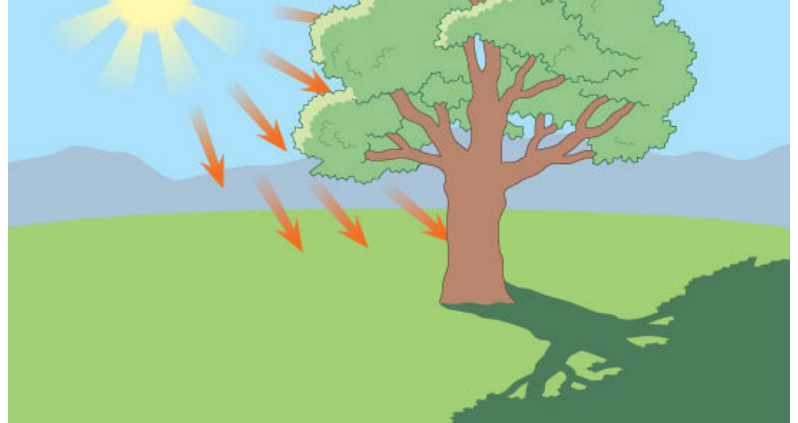
Purpose - Show how solar panel output is affected by shade.

1. Introduce Kits - Write - Respect and Responsibility
 - a. Respect is...
 - b. Responsibility is...
2. Draw and Label - Kit Parts and function
 - a. Photovoltaic Cell - converts light to electric energy
 - b. Multimeter - measures electricity levels
 - c. Protractor - to measure angles
 - d. Cardboard - use to block light (create a "shadow")



3. Write - What is shade (shadow)?

Shade is when _____ is
blocked by _____.

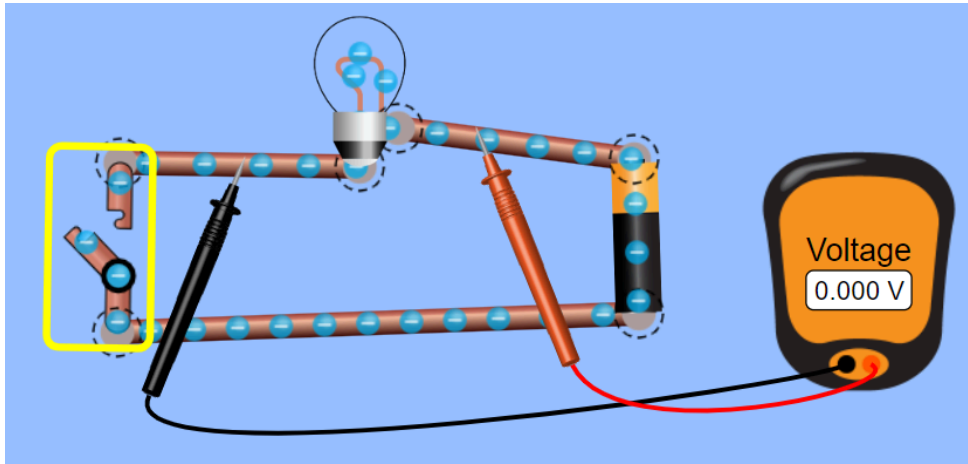


4. Write - What are the advantages and disadvantages of using the sun for electricity (solar power)? (write on the board)

Advantage (good)	Disadvantage (bad)



5. What is voltage? (show with [DC circuit sim](#)) Set this up with the sim.



6. Experiment - [Solar panels and shade](#) (in class or outside) - Assign teams of 3. About 20 min.

Select lesson 2 or 3 lab for a "B - Lab Design Grade"

Get houses from Heather.

Wire up circuits to test solar panels. Can they add a switch?