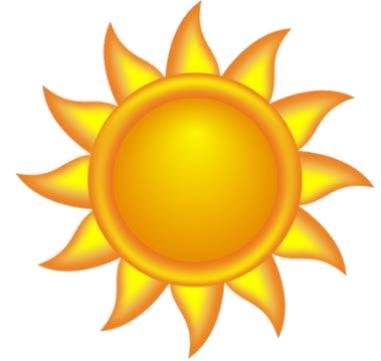


Age: 8+

# S is for...Solar



**What does solar mean?** It is driven or caused by the sun

- A **solar cell** is a flat device that uses an electronic material called a **semiconductor** to convert **photons** into electrical energy
  - **Photons**= particles of light energy
  - **Semiconductor**= creates a voltage, or difference in electrical potential energy between two surfaces when exposed to light

In solar cells, electrons are excited into motion by exposure to energy from light. The solar cell is designed to make the electrons flow in a specific direction, creating a negative pole on the side where there are more electrons and a positive pole on the side where there are fewer electrons.

- A **solar still** cleans water by using the heat of the sun to evaporate water where it is purified. Solar stills can be used in areas where drinking water is not available.

## **Experiment: Create your own solar still**

### **Materials:**

- Glass Jar
- Wide plastic bucket or bowl
- Plastic wrap
- Rock
- Rubberband
- Water
- Dirt

### **Instructions:**

- Pour 2 cups of water into the large plastic bucket/bowl. Add a dash of dirt to the water and mix.
- Place the glass jar in the center of the bucket. Be careful not to get the dirty water inside the jar
- Next, cover the big bucket/bowl with plastic wrap and seal. If it doesn't seal tight, use a large rubber band to tighten the plastic wrap to form a seal around the bowl.
- Place the rock on top of the plastic wrap over the glass jar.

- Next, place your “solar still” in the sun for at least 2 hours+
  - The sun will cause the water to evaporate and collect onto the plastic wrap. Water droplets will run toward the center because of the rock and fall into the glass jar, therefore creating clean water.
- After completing this, try using salty water in the bucket and repeat the same steps with the glass jar in the center, plastic wrap, and a rock. Next, test the water in the jar. Is it salty still?



To learn more about this lesson and activity, please visit:  
<https://theresjustonemommy.com/simple-summer-science-solar-still/>  
Solar Mechanics by Thames & Kosmos (2017)