



WINTER | Sun Winter Harvest: Sunshine

Summary:

We might not be harvesting fresh vegetables in winter, but we can harvest fresh sunshine! Scientists all over the world are working to find new and better ways to use the sun to heat our homes and power our electrical grid.

Before Visiting the Garden:

Gather: Two clear 20 ounce soda bottles, balloons and cups, and white and black tempera paint

Explore: “The Sower” by Vincent Van Gogh: Can you spot the sun?

Read: *What Do You Do With a Problem* by Kobe Yamada and Illustrated by Mae Besom

In the Garden:

In the winter garden, our time is not spent tending plants so we have more time to pay attention to the other resources in our garden, like the sun. We’re going to spend a little time thinking about uses for the sun and then work on experimenting with solar power.

Questions to Explore:

- Do you notice anything different about the sun in winter versus the sun in summer?
- Where do you see the sun being used around your house and neighborhood?
- Have you seen any solar panels around town?
- How do you think solar panels work?
- If you could capture energy from the sun, what would you use it for?

Activity:

1. Begin by painting one bottle white and one bottle black. Dump your paint into the cups and get to work!
2. Once the paint is mostly dry, attach one balloon onto the top of each water bottle.
3. Place your bottles in a warm, sunny spot in the garden or in your home.
4. Watch the balloons, which one begins to fill first? What do you think is happening?

Beyond the Garden | Interview an Expert

Reread the book *What Do You Do With a Problem*. Using the book as a starting place, think about a problem you would like to understand more about and brainstorm someone in the community who could help you understand it. Do you know any scientists, teachers, firefighters who have solved a problem? See if you can interview them and ask how they approach problems and look for solutions. Or bring a problem you’ve been wondering about to them and ask them to think about a solution with you. Our neighborhoods are full of interesting people who have solved problems large and small so start meeting them!

Continue Exploring | Supporting Materials

Explore images from the Solar Dynamics Lab: https://www.nasa.gov/mission_pages/sdo/main/index.html

Plan a solar power movie night: <http://www.pbs.org/video/2289310391/>