

# RANDOM ACTS OF SCIENCENESS

## Lesson: Solar Oven

**CURRICULUM REFERENCE:** Light and Sound

### LESSON OBJECTIVE

Create an “oven” out of household materials to harness the sun’s energy to make the chocolate melt.

**VIDEO:** <https://youtu.be/l-bsyizAuew>

### THE SCIENCE BEHIND

The sun constantly provides energy to the earth in the form of its rays. Plants harvest this energy in their leaves, while people can harness this energy by using solar panels to convert it into electricity. However, we can also use the heat from the sun and try to concentrate it enough to cook our food!

**VIDEO:** <https://youtu.be/KvymYghXuk0>

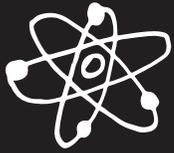


### FOLLOW-UP QUESTIONS

1. What challenges did you encounter during this experiment?
2. How could you change the results?
3. Why do some sources of light work better to melt the chocolate than others?

### LEARNING OUTCOMES

- Use technological problem-solving skills to design, build, and test a device that makes use of the properties of light.
- Identify a variety of natural light sources (e.g., the sun, a firefly) and artificial light sources.
- Distinguish between sources of light that give off both light and heat (e.g., the sun, a candle, an incandescent light bulb) and those that give off light but little or no heat.



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#### MATERIALS (PER PERSON)

- Aluminum foil
- Tape
- Dixie cups
- Scissors
- Elastic bands
- Chocolate
- Construction paper
- Pipe cleaners
- String
- Markers
- Cotton balls
- Clothespins
- Sandwich bags
- Cardboard

#### INSTRUCTIONS

1. Using the household items in the materials list, design and create an oven-like container where your chocolate sits in the middle. The aim is to have the chocolate melt from the heat of the sun.
2. TIP: Using aluminium foil will help focus the sun's warm rays.

**VIDEO:** [https://youtu.be/f\\_rb8onumw4](https://youtu.be/f_rb8onumw4)

