



RANDOM ACTS OF SCIENCENESS

Lesson: Solar Oven

CURRICULUM REFERENCE: Properties of Liquids and Solids

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. How does this experiment use the properties of liquids and solids?
2. How did the solid (chocolate) in this experiment change?
3. What variables can we change to make this experiment more effective?

LEARNING OUTCOMES

- Describe the properties of solids.
- Identify conditions in which the states of liquids and solids remain constant (e.g., solids remain solid when broken; liquids remain liquid when poured) and conditions that can cause their states to change.



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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

