



RANDOM ACTS OF SCIENCENESS

Lesson: Solar Oven

CURRICULUM REFERENCE: Heat in the Environment

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 heat conducted from the sun transmit?
2. What is the best way to conduct heat?
3. How does it escape? From where?

LEARNING OUTCOMES

- Investigate the effects of heating and cooling on the volume of a solid, a liquid, and a gas.
- Identify ways in which heat is produced.



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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

