

Topic:



Solar Powered Cooking **Olds**

Primary Audience: 5-11 Year

Description: Participants will witness the awesome power of the sun when they make their own solar oven and make a yummy treat.

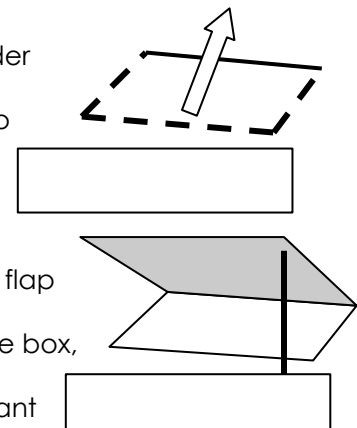
Keywords: Solar power, reflection.

Materials:

- Pizza Box
- Black Construction Paper
- Aluminum Foil
- Stick/Dowel Rod
- Tape
- Scissors
- Clear Plastic
- Magic Marker
- Ruler
- Glue
- Thermometer
- Chocolate Chips
- Oatmeal
- Anything else people might want to put in their cookies.
- Small Soufflé Cups
- Plastic Spoons

Instructions:

1. With the pizza box closed, measure and draw a one-inch border around the top of the pizza box.
2. Cut along three of the borderlines and leave one side intact to form a flap.
3. Fold the flap back along the uncut borderline.
4. Open the box, and line the inside of the flap and the inside of the box with foil.
5. Glue clear plastic over the hole in the lid of the box where the flap is. Make sure that the flap hole is sealed.
6. Place a piece of black construction paper in the bottom of the box, on top of the foil.
7. Mix some oatmeal, chocolate chips, and anything else you want in a small soufflé cup and put it in the box.



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8. Check the temperature inside of the box and then close the box, open the flap, and use a stick to hold the flap open.
9. Face the opening towards the sun for 30 min.
10. Carefully open the box and use the thermometer to check the temperature inside.
11. Compare this to your first reading.
12. As soon as your yummy concoction is melted, mix, cool and eat!

What's Going On? The foil on the inside of the flap helps to reflect sunlight into the box. The foil on the inside of the box helps to insulate it, as well as continually reflecting the light and heat that is already inside of the box. The clear plastic allows sunlight in and keeps heat from escaping. It is a good idea to try several boxes in different locations.

Relevant Ohio Science Content Standards: