WORKSHOP OVERVIEW | RENEWABLE ENERGY: SOLAR S'MORES!

Overview:

Students will create "solar ovens" using pizza boxes to cook S'mores! This is a fun activity that shows that we can cook food with the heat from the sun. Conventional ovens use a lot of electricity, which is usually generated through burning fossil fuels. Students should make connections between this activity and renewable energy.

Activity Duration: *1 hour*

ESSENTIAL QUESTIONS

- *How does sustainable energy innovation benefit environmental health?*
- *How can innovation in technology benefit human and environmental health?*

MATERIALS NEEDED

- *Printed instructions (see next page)*
- *Small pizza boxes (can be purchased from local pizza places)*
- *Aluminum foil*
- *Black Construction paper*
- *Plastic wrap*
- *Tape & scissors*
- *Sticks*
- *Graham crackers, marshmallows, and chocolate squares (check for allergies!)*

ACTIVITY DESCRIPTION

1. Gather students. Explain that the sun is a powerful source of light, heat, and energy that we can use to do lots of things. We use it to grow our food, trees, plants, flowers, etc. We also use it for generating electricity through solar panels! Using less fossil fuels is always a great thing for the environment and this activity doesn't use any at all.
2. Explain that today, we will be building solar ovens to make s'mores!
   a. Form groups of 4-6 students. Students will be working together to read instructions and assemble solar ovens.
   b. Once completed, place ovens in a sunny spot for about 10-15 minutes. Once marshmallows are soft and chocolate is melty, eat and enjoy!

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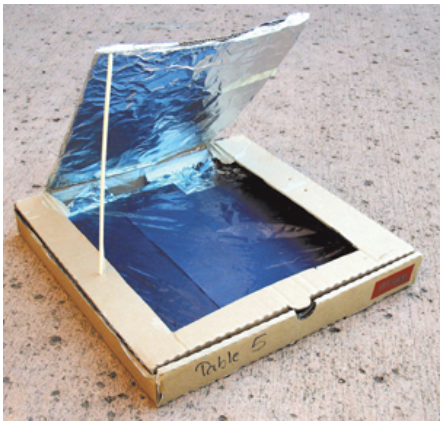

INSTRUCTIONS

1. Cut a large square flap into the top of the pizza box (like a window) keeping one side connected to the box.
2. Tape aluminum foil to the inside of the flap, facing the inside of the box.
3. Line the entire inside of the pizza box with aluminum foil and tape in place.
4. Cut a square piece of black construction paper and place it into the middle of the pizza box (on top of the aluminum foil). This square should be bigger than the square flap cut into the top of the pizza box.
5. Lay 2 graham cracker squares per person on top of the black construction paper.
6. Place a marshmallow each on top of half of the crackers and a square of chocolate on each of the other half.
7. Put a piece of plastic wrap over the square hole in the pizza box to keep bugs away Use a stick to prop up the flap in the corner.
8. Face the solar oven in the direction of direct sunlight and leave it to cook.
9. Leave in the sun for 10-15 minutes, or until the marshmallows have softened and the chocolate is melty. Enjoy!