

# CAMPS AT HOME

## Solar Oven

### Materials:

- Aluminum foil
- Cardboard box (pizza boxes work nicely but any box will work!)
- Marshmallows
- Graham crackers
- Chocolate
- Extra supplies to make your oven fancy (upgrades) - popsicle sticks, plastic wrap, construction paper.

### Did you know?

Solar energy travels to Earth in the form of radiation waves. The Earth's atmosphere absorbs or reflects some (25%) of the spectrum. For example, the ozone filters out some UV light. Clouds also reflect solar energy (20%) and the Earth's surface deflects a certain portion of it (7%). In all, only half of the Sun's radiation directed at the Earth makes it to the surface and the ocean absorbs about 75% of this! But the rays are still a strong source of heat and energy and we can utilize this to cook (or heat our homes, create energy)

### Steps:

1. Discuss with someone each material and how it might interact with the Sun's radiation waves. Does it reflect light? Can light pass through it? Does the material make a good insulator?
2. The challenge is to combine these materials and their different properties to build a solar oven that will cook our smores.
3. You are free to experiment with designs and prototypes. It is also a good idea to remember that the oven should be able to open and close in some way....after all what good is an oven you cannot put your food in!
4. After construction time, move outside to find some sunshine. Place your smores inside and on a summer day and depending on the clouds, cooking should only take 5-10 min.



Enjoy your smores!