

Solar Powered Oven

Background Science

The Sun is a very powerful source of energy, on a sunny day you can feel the warmth on your skin and sunlight helps us see!

We use solar panels to convert the Sun's energy into electricity powering homes and businesses. If we could capture all the Sun's energy it would only take us an hour to collect enough to power the whole planet for a year!

Solar power doesn't produce any greenhouse gas emissions and it is naturally replenished making it a renewable, sustainable alternative to coal, oil and other fossil fuels.

[Click here to learn more!](#)

Now let's see what the Sun can do by making a Solar Powered Oven!

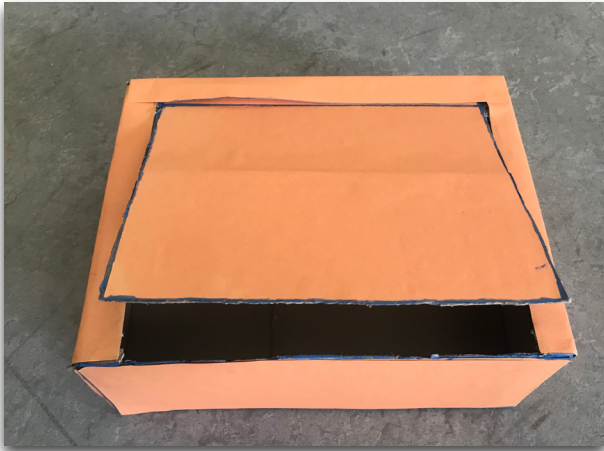


Experiment

You will need:

- A Cardboard box (Deeper than 5cm - A shoe box works great)
- Tin Foil
- Clingfilm
- Black Paper
- Stick (To prop the oven open - you can also use a ruler)
- Glue Stick / Tape
- Scissors
- The Sun!

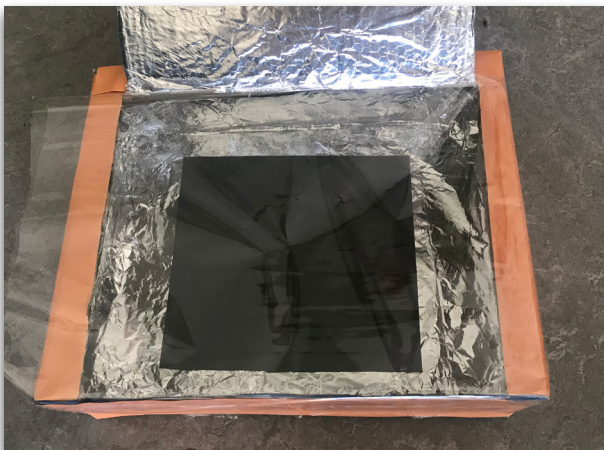
What to do:



1. Cut a three sided flap in the top of box leaving a few cm on the sides and keeping the back intact. This will create a lid, as shown in the photo.



2. Cover the inside of the box with tin foil (use glue to hold it in place), make sure you don't forget the sides and lid!



3. Cut out a piece of black paper and glue it in the base of the box.

Cover the opening of the box with two layers of Clingfilm using tape or glue to stop it from blowing away. Leave one side open so you can put your treats inside!



4. Place your oven in a sunny spot using a stick or ruler to prop open the lid. Leave it here to preheat, ours reached 28.8°C in just 30mins!

Put chocolate on some biscuits and place them in the oven, leave for another 30mins or until the chocolate has melted!

You can also try this with marshmallows – they may take a little longer to melt.