



## Science Activity

### Make a solar oven

Time to prepare: 10 minutes



□ Please, stay safe and ask a grown up to supervise you

#### Resources/ things you need

- **A sunny day** 😊
- Pizza box (or any box)
- Foil
- Scissors
- Cellotape
- Paper plate or paper towel (or something to cook your food on)
- Stick or sturdy straw to anything to prop open your oven.
- You choose what to cook - digestives with chocolate on the top work well, or any sort of chocolate on any biscuit.
- **Optional** - Black paper the size of the bottom of your box but this is not necessary.

#### What to do

1. Take a pizza box (or any box), and with an adult cut out a big flap on the top of the box, as shown in the first picture. Cut along 3 sides to make the flap, leaving one side still attached to the box.
2. **Cover all of the inside of the box with foil and on the inside of the flap**, as shown in the first picture. Secure the foil with cellotape. Optional - cover the outside with foil or decorate it with your own design.
3. **Optional - (but it works just fine without)**, place a piece of black paper on the bottom of your box as shown in the picture.
4. Choose your food to cook, some ideas are in the second picture below. Pieces of chocolate on a digestive (or any biscuit) works very well.
5. Put your food on something like paper towel, small plate, piece of cardboard or paper plate.
6. Prop open your lid with a sturdy straw or stick.
7. Outside in a safe spot and with an adult, face the solar oven towards the sun. **(DO NOT look directly at the sun.)** The sunlight will reflect on the shiny foil lid and cook your food.
8. Depending on the weather leave your solar oven to do its job. On a sunny day, you may have a result in 30 minutes but on a cooler cloudy day it may take 2 hours. Enjoy 😊

### Background and the link to learning

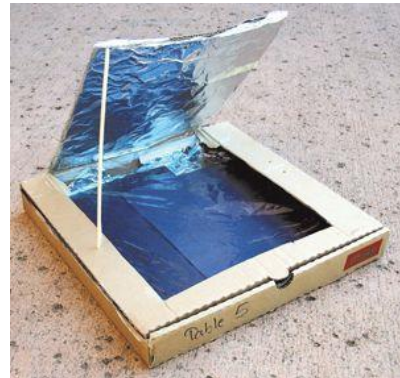
Solar ovens use solar energy—light and heat emitted from the sun—to cook food. **How does a solar oven work?** The simple answer is that it is designed to absorb more heat than it releases.

The foil is shiny and flat and reflects the light and heat energy from the sun onto your food to cook it.

#### Optional

At the bottom of the box, you might have placed black paper. This will act as a heat sink that absorbs direct and reflected sunlight to warm it, which will heat food placed on top of it.

### Pictures



[Link to other similar activities](#) - Please see rainbows for recycling and make a water turbine.

