

Solar Oven Pizza Box S'mores

What You Need

empty deep cardboard pizza box

aluminum foil

plastic wrap

tape

small wooden dowel or a wooden ruler

scissors

box cutter (adult supervision is needed)

ruler

pen

large marshmallows

chocolate chunks or a chocolate bar

graham wafers or plain cookies

black construction paper

oven mitts

What You Do

1. On the top of the pizza box, use the pen and ruler to measure and mark points that are 4 centimetres from the edge of the box on all 4 sides.
2. Use the pen and ruler to connect the marks to make a frame on the box top.
3. With the box cutter, cut along the left side, right side, and front of the frame. Do not cut the back of the frame. This will be the oven lid. Bend the lid open carefully along the back part of the frame.
4. Line the entire inside of the pizza box with aluminum foil and tape it in place. Make sure the shiny side of the foil is facing up. Line the oven lid separately, so it can be opened.

Solar Oven Pizza Box S'mores (continued)

5. Close the pizza box. Lift the oven lid and stretch the plastic wrap over the opening. Tape it tightly on all 4 sides so heat won't escape. You may need an adult's help to do this. You may wish to put on 2 layers of plastic wrap.
6. Take a piece of foil and fold up the sides to make a small rectangular trap. Place the tray in the solar oven.
7. Put together the s'more ingredients. (If you have never made a s'more, put a piece of chocolate on top of a graham wafer or cookie, then top it with a marshmallow.) Close the lid of the pizza box.
8. Take the solar oven outside and place it in the sunshine. Choose a spot that is protected from wind. A porch, driveway, or deck would be good spots for the solar oven.

Use the dowel or ruler to prop up the lid of the oven, as shown in the video. Make sure you angle the lid so the sunshine is being reflected down into the oven and onto the s'more. Tape the dowel or ruler in place if necessary.

10. Record the time you started. Depending on the temperature outside, it will take about an hour for the first s'more to melt. Check every 15 minutes to see when it is finished. Lift the pizza box lid and use oven mitts to take the tray out. Be careful! It might be hot.
11. Record the length of time it took for the s'more to melt. Record the appearance of the chocolate and the marshmallow. Are they soft? Melted? Record what you see. You may place a second graham wafer or cookie on top and eat the s'more now, or wait for the second s'more to be made.
12. After the first s'more is done, put the sheet of black construction paper in the bottom of the solar oven.
13. Reuse the foil tray or make a new tray. Repeat steps 7 to 11.