



The Solar Cooker

Materials

1 How would you like to cook food using the free, renewable energy of sunlight? Solar cookers are used in a number of countries where cooking fuel is too expensive. Solar cooking doesn't cost anything, and you can set it up anywhere the sun shines. This saves money and helps the environment at the same time. It is a great camping idea. Many solar cookers are boxes, but this one folds flat so it is easy to carry.

- 2
 - A cardboard box taller than it is wide
 - Enough aluminium foil to line the box
 - Scissors
 - Wood glue
 - Glue brush
 - A black cooking pot with a lid
 - A plastic oven bag
 - Metal tie for oven bag
 - Several pebbles or a cardboard ring
 - Stones to hold the panels upright
 - Oven mitt
 - Sunglasses

How long will it take?

5 This depends on whether it is cloudy or windy, and how much food you have put in to cook. Small amounts of food will cook faster. For large meals, leave to cook for one to two hours.

TIP: If you want to keep the food warm for later on, you can insulate it by wrapping the cooked meal and its container in an old towel or blanket.



Food Ideas

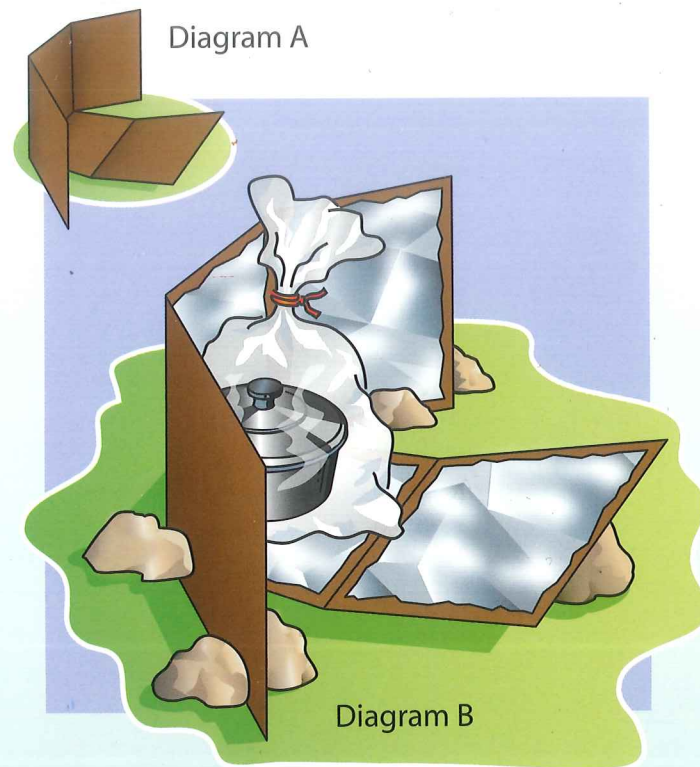
- 6
 - **Beans:** mix a cup of dried beans and a stock cube with water.
 - **Hard-boiled eggs:** just wrap eggs in clean, old, black socks or underpants and put them in the box!
 - **Savoury rice:** add rice, pasta sauce, water and herbs or a stock cube.
 - **Baked potatoes:** prick potatoes and oil them. Melt grated cheese on top when they are cooked.

Questions

- 1 Solar cookers are used in countries where
 - a all fuels are free.
 - b cooking fuel is expensive.
 - c it is always cloudy.
- 2 What do you line the cardboard box with?
 - a wood glue
 - b a plastic oven bag
 - c aluminium foil
- 3 What do you use three pebbles for?
 - a to raise the pot for even heat
 - b to keep the box upright
 - c to keep the aluminium on the panels of the box
- 4 What does insulating do?
 - a keeps cooked food warm for later
 - b makes food tastier
 - c protects your eyes from the sun
- 5 What part of the solar cooker don't you need all the time?
 - a aluminium foil
 - b cooker pot
 - c oven mitt
- 6 Why would the cooker be great for camping?
 - a It makes really tasty food.
 - b It works like a campfire.
 - c It is very portable.

Making the Cooker

- 1 Cut the top flaps off the cardboard box.
- 2 Cut down along two of the side edges of the box, and back along two of the base edges. Open the box out as shown in diagram A.
- 3 Glue aluminium foil to the panels that form the inside of the box.
- 4 Arrange the cooker so it faces the sun.
- 5 Use stones to hold the cooker upright and to angle the side panels as shown in diagram B.



Cooking

- 4 **SAFETY NOTE:** Always wear your sunglasses while you are working with the cooker. This will protect your eyes.
- 1 Half-fill the cooking pot with food and water. You can cook rice, meat, vegetables, fruit or even bread in a solar cooker. See ideas next page.
- 2 Place the lid on the cooking pot and put it inside the oven bag. Close the bag with the tie.
- 3 Angle the cooker so sunlight falls on the aluminium panels.

- 4 Set the cooking pot in the middle of the bottom foil panel.
- 5 Place the three pebbles or the cardboard ring under the pot so it is raised off the bottom panel. This will help to even the heat. Always use the oven mitt to handle the pot, because it will become very hot.
- 6 You may need to turn the cooker to keep it gathering sunlight as the sun moves.
- 7 Once your food is cooked, remove the pot from the cooker and enjoy a meal cooked by the sun!

Vocabulary

Match the words from the text to the clues. The brackets show the text sections ().

upright herbs environment
gathering insulate

- 7 The surroundings where people and animals live (1)
- 8 To stand up and be straight (3)
- 9 Collecting (4)
- 10 Do this to stop heat from escaping (5)
- 11 Plants used to flavour food (6)

Grammar

Articles (*the, a, an*) are words that are situated before a noun to show a specific or general thing. E.g. *the cat, a table, an apple.*

Add an article to the sentences below from the text.

- 12 Use stones to hold ____ cooker upright.
- 13 A black cooking pot with ____ lid.
- 14 Close ____ bag with the tie.
- 15 Wrap in ____ old towel or blanket.

Back To The Text...

- 16 The cardboard box should be
a taller than it is wide.
b wider than it is tall.
- 17 The writer suggests you try
a savoury rice.
b fried potatoes.
- 18 The purpose of this text is
a to instruct. b to recount.

Sequencing

Look back through the card to find what you should do first. Choose **a** or **b**.

- 19 a Use stones to hold the cooker upright.
b Glue aluminium foil to the panels.
- 20 a Put the cooking pot on the middle panel.
b Put your sunglasses on.
- 21 a Place the lid on the cooking pot.
b Put the pot inside the oven bag.

Think About This

- 22 The images on the front of the card refer to which section?
a Materials
b Making the Cooker
c Cooking
- 23 How does the illustrator draw the reader's attention to safety issues?
a with colour and capitals
b with size and numbers

Challenge Option

Writing: Write about a camping trip you have been on.

