

Members' Advice Sheet

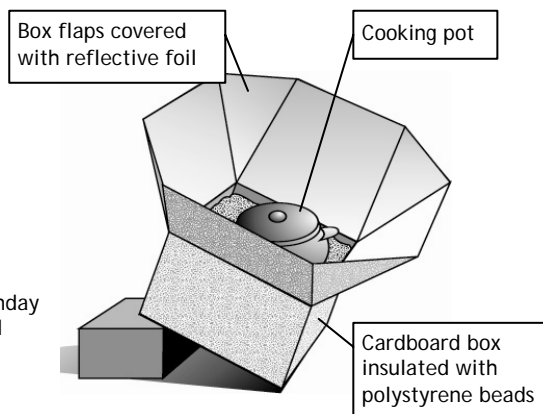
Solar cooking

Solar cooking is a fun and memorable way to demonstrate the power supplied by the sun.

Schoolgrounds-UK is one of the membership services from Learning through Landscapes. For more information about memberships visit www.ltl.org.uk or call 01962 845811.

It is not difficult to cook food using solar energy, but it is important to use foods which can safely be eaten cold or uncooked. Solar ovens need to be positioned to ensure that the device collecting the solar energy is in the best position to collect the most heat from the sun.

A solar oven



The Schoolgrounds-UK Advice Line is open Monday to Friday all year round

tel: 01962 845811

email: member@ltl.org.uk

You can make a solar oven using a wooden or cardboard box with a piece of glass, plastic or clingfilm over the front, an insulated back and sides, and a solar collector made of the box flaps covered in foil. Suitable insulation might be polystyrene tiles or beads, or polystyrene packing from electrical goods.

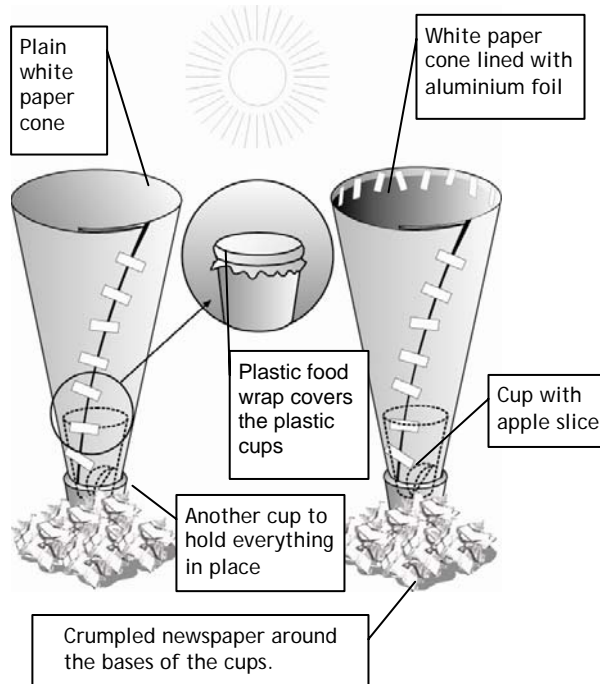
It will work best if the glass faces the sun. Set up a test by comparing two identical pots with the same amount of water in each, one in the solar oven and one just placed in the sun.

Apple baking

Challenge children to design an apple baker to bake slices of apple. An apple baker is simply a solar oven which is not completely covered. For each apple baker you will need two plastic cups and a white paper cone. You will also need plastic food wrapping, aluminium foil, black paper or non-toxic paint and newspaper or some other insulating material.

Build a control model following these instructions; children can then experiment with different versions, for example with foil glued to the inside of the cone, or with different types of insulation.

- Line the inside of a plastic cup with black paper or paint it black inside.
- Place an apple slice inside the cup and cover it with plastic food wrap.
- Make a large paper cone and wrap it round the cup.
- Place cone and cup inside another cup to hold everything together.
- Then add insulating material around the bottom of the cup, and stand it in the sun, aiming the cone at the sun by propping it at an angle.



These activities have been adapted from *Teaching about energy*, written by Clare Eastland, published by Southgate Publishers in association with the Centre for Alternative Technology. To order this publication, visit www.southgatepublishers.co.uk or call 01363 776888.