



Credit: NASA

Plant first aid

This long-term activity is designed to concentrate energy from the Sun for the benefit of any ailing house plants that may not be getting enough sunlight. Similar techniques are being used in the design of some new buildings in order to bring in more natural light and thereby cut down on electricity usage.

You will need

- 2 large sheets of cardboard
- 2 similar house plants, or batches of growing seedlings
- Aluminium foil
- Adhesive tape
- Black paint or art paper
- Assorted paints
- Scissors
- About two months!

Steps

1

Find two house plants of the same type that are similar in appearance, with about the same height and number and size of leaves. Find a location in your classroom that gets good light but not direct sunlight.

2

Cut a sheet of cardboard big enough to go around three sides of one house plant and be as tall as the plant. Bend the cardboard in two places to make 'wings' that can be angled so the cardboard can stand by itself. In the same way, construct a second three-sided cardboard sheet. (To make the sheets more attractive – since the project will take some time – use your paints to decorate the back of the cardboard, the convex side that will be facing away from the plants.)

3

Line the inside (the concave side) of one of the cardboard sheets with aluminium foil (shiny side up), using pieces of adhesive tape or glue to keep it in place. Paint the inside of the other cardboard sheet black, or cover it with black art paper.

4

Set up the plants and cardboard sheets so that one plant is surrounded by the cardboard sheet and the other by the sheet lined with reflective foil. Position the wings of the cardboard sheets mostly open, but closed enough so that the cardboard will stand on its own. Place each plant inside its cardboard stand so that both will receive the same amount of normal lighting and not be shaded. The plants must also be cared for equally and receive an identical amount of water. (The CONSTANTS are the room temperature and the amount of water they receive. The VARIABLE is the amount of reflected light each plant receives.)

Analysis/ discussion

Plants need light. But did the plant exposed to more light (via the reflector) grow better than the one that did not have a reflector?