

BANANAS HANDOUT

Simple Sun Experiments for Children



Sun-Cooked Strawberry Jam:

- You will need:
- table
 - four cans
 - netting
 - strawberries
 - sugar
 - big pot

On a blistering, hot, sunny day, set up a table in the full sun with the table legs set in cans or small pans of water. The water will keep crawling creatures from raiding your jam while it is cooking. Have netting handy to keep flying creatures from making an air attack on your jam.

Wash and hull berries, measure the berries to see how much sugar you should use. Put a layer of berries in the bottom of a big pot, cover with an equal number of cups of sugar (example: 3 cups of berries plus 3 cups of sugar). Repeat this layering until the berries are all used up. Set aside for about 30 minutes to let the berries “weep.” Cook the berries over very low heat to bring slowly to simmer, and stir constantly to prevent scorching, until the sugar has dissolved.

Pour syrupy berries 1/2 inch deep into large plates and set on the table in strong sun. As the fruit cooks in the sun, turn it over with a spatula 2 or 3 times during the day. When it has jelled, pour it into sterilized jars and seal. (If the sun is not strong or it's windy, jelling can take 2 or 3 days. In that case, bring the plates indoors each night.)

Make a Rainbow:

- You will need:
- garden hose
 - small mirror
 - glass of water
 - CD
 - white paper

Turn the hose on to a fine spray. Stand with your back to the sun. You'll see a rainbow in the fine spray of water. Another way to make a rainbow is to put a small mirror in a glass of water and place the glass so the sun can shine on the

mirror. Turn the glass until the rainbow is reflected against the wall or the ceiling.

You can also use a compact disk (CD) to make a rainbow. Hold the CD in the sun. (Or, if it's cloudy, shine a flashlight at the CD.) Hold a piece of white paper so that the light reflecting off the CD shines on the paper. The reflected light will make rainbow colors on the paper. Like water drops in rain or in the hose spray, the ridges on the CD separate white light into all the colors that make up light.

Sun Goggles:

- You will need:
- corrugated cardboard box
 - string
 - white glue
 - ruler
 - pencil
 - penknife

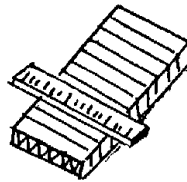


Figure 1



Figure 2

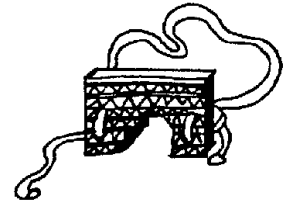


Figure 3

Cut off a large, flat, undamaged piece of the corrugated cardboard box. Mark off ten or twelve strips 1/2 inch wide and 6 inches long. The corrugations must go across the length of the strips. Cut the strips with a penknife or razor blade (see figure 1).

Glue the strips together, one on top of another (figure 2). When the glue has dried, cut out a hole for your nose. Tie one end of a piece of string to one side of the goggles by threading it through the corrugations. Loop the free end of the string through the other side of the goggles, but don't tie a knot – this way the goggles can be adjusted to fit different people (figure 3).

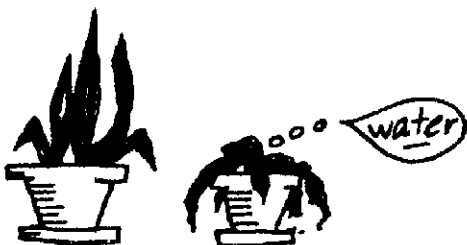
Wear the sun goggles on a bright sunny day and they will change the way you view the world. Since you can only see out of the goggles when looking straight ahead, don't wear them while riding a bike.

Sundial:

Find an existing erect pole (telephone pole, flagpole, street light, basketball pole, tree, fence post, street sign) or put a large stick into the ground.

Make sure there is plenty of clearing around the pole so that buildings, trees and other objects don't interfere with the sunlight. Now mark off the hours around the pole – using sticks or pebbles on grass and chalk or paint on concrete.

Sun Experiments with Seeds:



You can do a simple experiment which shows how important sun is for growth by planting a seed and putting it in a closet. If you compare this plant to one grown in the sun, you will see the difference that sunlight makes. Following are some more simple experiments with seeds:

What Do Plants Need?

1. Do plants need water? To find out, put two similar potted plants in the sunlight. Water one daily. Don't water the other at all. After several days, notice one plant thriving, and the other. . . ?
2. Do plants need air? To find out, take two similar potted plants and place each in a small dish of water. Cover one with a jar or a plastic bag. Press the jar or bag into the soil so that no air can reach the plant. Place both plants in the sunlight. Observe what happens after several days.
3. Do plants need sunlight? Again, take two similar plants and cover one with a large box. Make several holes in the box to let air in. Water both plants daily. After several days compare the plants.

Sun-Dried Fruit:

Raisins –

- You will need:
- firm, seedless grapes
 - a scale
 - large pan or bowl of water
 - paper plates
 - netting or wire screen to cover the plates
 - glass container with tight-fitting lid

Weigh the grapes and write down the weight to be able to compare with the dried fruit. Then wash the grapes in a container of water. Blot dry with a towel. Remove the grapes from the stem and spread them evenly in one layer on paper plates (or trays). Cover the plates with netting or a screen and fasten it down. Place the grapes in the full sun to dry.

After four days, test the grapes for dryness by squeezing them – if there's no moisture left on your hand and the grapes spring apart when you open your hand, the grapes are dry enough. Weigh the dried grapes (raisins!) to compare with the weight before drying. What was the substance which made the grapes heavier than the raisins? It is also interesting to note the changes in color, form and texture. And, finally, taste!

Fruit Leather –

- You will need:
- fruit
 - 2 Tsp water
 - 1/4 tsp honey
 - lemon rind
 - pinch of cinammon

Blend 1/2 cup sliced apple or other fruit and 2 Tablespoons water and 1/4 tsp honey, a bit of lemon rind and a pinch of cinnamon. Spread the mixture on a piece of plastic wrap on a screen. Dry in the sun for 48 hours. Peel off and eat!

