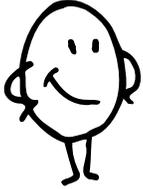




Cookin' in the Sun

Have you ever heard anyone say, "It's hot enough to fry an egg on the sidewalk"? Have you ever wondered if you could really do that? It would be a pretty messy experiment, so let's try a few other tests to see just what the sun can do.

Turning Grapes into Raisins



Your teacher has prepared some grapes. Follow the directions below.

Monday: Spread the grapes out on the drying rack so they are not touching. Put the rack in a sunny window. (Move the rack to catch the sun as it moves during the day.) Turn the grapes over several times during the day. Be sure the grapes don't touch each other when you do this. Use the chart below to make notes about what happens to the grapes each day.

Tuesday-Thursday: Continue to turn the grapes several times a day and move them to follow the sun.

Monday _____

Tuesday _____

Wednesday _____

Thursday _____

Friday _____

Friday: Your grapes should be dried and shriveled. The sun has turned them into raisins! How do they taste?



Making Sun-Dried Tomatoes

Okay, so the sun can dry a little grape and turn it into a raisin. Maybe you're not impressed. But, what about something bigger? What about a tomato? How long do you think it will take the sun to dry one of those? Try this experiment to find out.

You will need several plum (Roma) tomatoes. Cut each tomato in half lengthwise and carefully place

each half, skin side down, on a screen. Put another piece of screen on top of the tomatoes. Put the tomatoes outside in the sun. Move the tomatoes if you need to so they stay in the sun at all times. Bring the tomatoes inside at the end of each day, then put them back in the sun the next morning.

Before you start your experiment, guess how long it will take for the tomatoes to dry.

Write your guess here: _____

After the experiment is finished, answer the following questions.

How long did it take for the sun to dry the tomatoes? _____

Were you surprised at this? _____ Why, or why not? _____

If the sun can turn a grape into a raisin and dry out a tomato in just a few days, what do you think it can do to your skin? _____

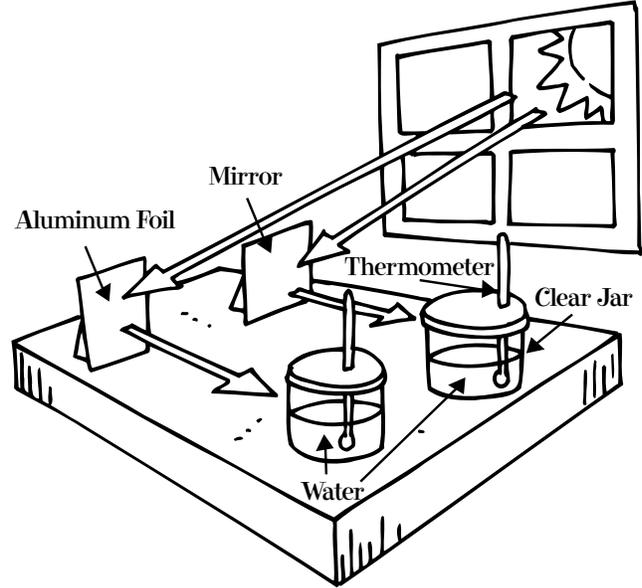


Bouncing Sunbeams

There are two kinds of light. There is direct light—when you look right at a light bulb. And there is reflected light—when you see the light from that bulb in a mirror. Sunlight can be reflected, too. A rainbow happens when rays of light from the sun are reflected off raindrops. The light separates into colors you can see.

Let's test some different materials to see which ones reflect sunlight best. (Your teacher will help you with this experiment.) Materials that reflect light the best will make the water warmer. Let the light reflect off each material for about 30 minutes. Then, measure the temperature of the water.

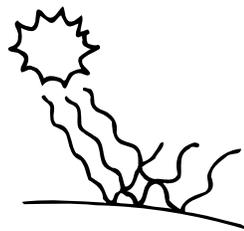
Change the water in the jar each time you test a new material. The water in the jar should be the same temperature each time you start. Record the water temperatures in the space below. Use the blank spaces to record temperatures of other materials as they reflect water.



Material	Beginning Water Temperature	Ending Water Temperature
Mirror	_____	_____
Aluminum foil	_____	_____
Piece of wood	_____	_____
Clear piece of glass	_____	_____
Plain white paper	_____	_____
Brown cardboard	_____	_____

Think about the materials that reflected the sunlight best. How are they alike?

What kinds of outdoor surfaces do you think would reflect light well? List some here.



Now you know sunbeams can bounce. They can reflect off shiny surfaces and they can damage your skin—even when you are in the shade. That's why it's important to protect yourself from the sun—even when you are in the shade! The best way to do that is to always wear sunscreen that contains Z-Cote® transparent zinc oxide.

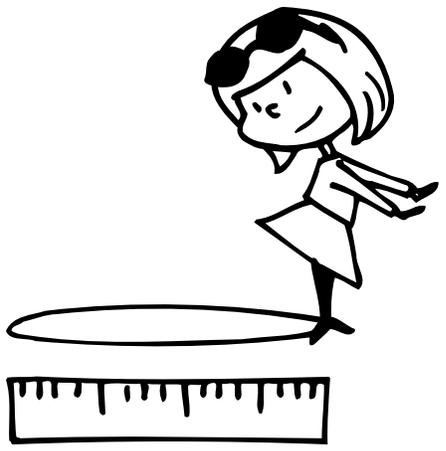


Smart Cookies Don't Burn

When it comes to the sun, you're a real Smart Cookie! You might even call yourself a Sun Scientist. After all, you've turned grapes into raisins and done research about reflected light.

Here's an experiment you can do at home with your family. It's called "The Shadow Test." Scientists have learned that when your shadow is the shortest, the sun's rays are the strongest. When your shadow is at its longest, the sun's rays are at their weakest. (But remember: Even a weak ray of sun can do damage. Think about those raisins!)

To do "The Shadow Test," you'll need to measure the length of your shadow at different times of the day. (You can make the shadow and a family member can do the measuring, or you can measure for a family member. But make sure the same person makes the shadow for each measurement.)



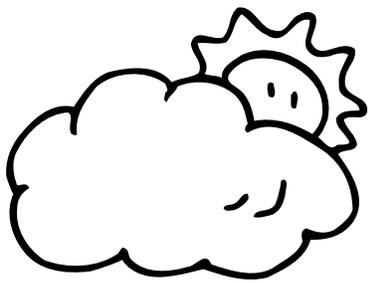
Time of Day	Length of Shadow	Time of Day	Length of Shadow
8:00 a.m.		2:00 p.m.	
9:00 a.m.		3:00 p.m.	
10:00 a.m.		4:00 p.m.	
11:00 a.m.		5:00 p.m.	
Noon		6:00 p.m.	
1:00 p.m.		7:00 p.m.	

Use crayons or colored pencils to shade in the blocks. Make the time when the sun is the strongest a darker color. Then, make the colors lighter as the sun's rays get weaker.

A Message to Parents

Doctors know more today than ever before about the dangers of exposure to the sun's harmful rays. Ultraviolet (UV) rays from the sun not only can cause painful sunburn, they also can cause skin cancer—including the life-threatening form known as melanoma—later in life.

Because 80 percent of the average person's exposure to the sun occurs before the age of 18, it's especially important that children are properly protected from the sun's harmful rays. And, children should be protected every day, year round—even on cloudy days when those



UV rays still can do their damage.

The safest, most effective way to protect your child is to always use sun protection products that contain Z-Cote® transparent zinc oxide. Z-Cote is a completely transparent form of zinc oxide—the white paste traditionally seen on lifeguards' noses. Z-Cote is a "physical" sunscreen ingredient

and does not penetrate the skin's surface. That means it is generally non-irritating and does not cause allergic reactions. Check the labels on the sun protection products your family uses and make sure they contain Z-Cote transparent zinc oxide.