Chapter Science Investigation Name _____

Building a Weather Station

What You Need

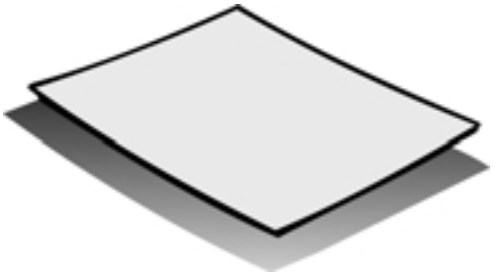
outdoor thermometer

rain gauge

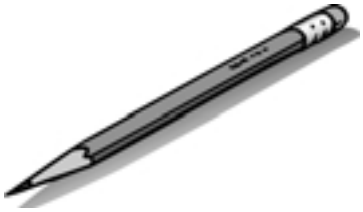
straw

tape

straight pin



construction paper



pencil with eraser

Find Out

Do this activity to see how weather changes from day to day.

Process Skills

Measuring
Communicating
Observing

Time

- 30 minutes to get started
- 10 minutes twice a day for three weeks

What to Do

1. Put the thermometer in the shade and the rain gauge in a place away from buildings and trees.

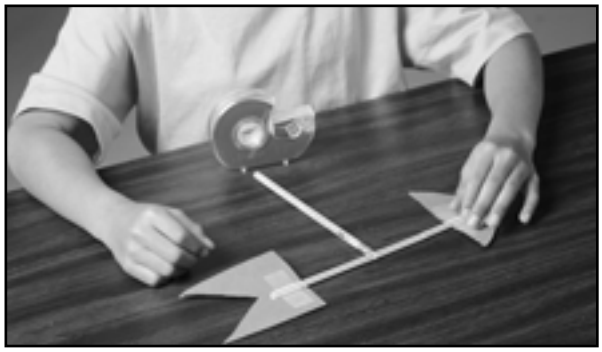
2. Make a weather vane. Cut a triangle shape out of the construction paper. Cut out a shape like the end of an arrow. Tape a cutout to each end of the straw. Push a pin through the middle of the straw and into the eraser end of the pencil.

Safety! **Be careful with sharp objects.**

3. Make a chart like the one shown.

4. **Measure** the temperature and the rainfall each morning and afternoon at the same time. **Record** the measurements.

5. Take the weather vane outside each morning and afternoon at the same time. **Observe** what happens when the wind blows. Which direction is the wind blowing? Is it a light, strong, or very strong wind? **Record** what you find out.



Assist students in determining the direction of the wind.

Make a chart like the one below. **Record** what you find out about the weather.

Date	Time of Day	Temperature	Rainfall	Wind Direction	Wind Speed
	morning				
	afternoon				
	morning				
	afternoon				
	morning				
	afternoon				

Student data will vary. Students can observe and record the weather throughout the year. If a computer is available, students can use a spreadsheet to record their data and they can construct a bar graph to represent the data.

Conclusions

1. What weather changes did you observe?

Answers will vary depending on the kind of weather in your area.

2. Did you see any patterns in the weather? Describe the patterns.

Answers will vary depending on the kind of weather in your area.

New Questions

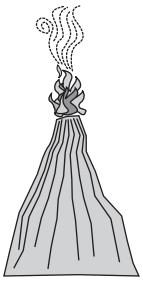
1. What could you find out if you took weather measurements all year long?

You could find out what the weather is usually like (climate).

2. Write a new question you have about weather.

Accept all questions.

Name _____



ACTIVITY

Observing the Water Cycle

Draw what you see after the hot water is poured into the jar.

Drawings should show the water vapor on the inside of the jar.

Draw what you see after you put the ice cube on the lid.

Drawings should show an ice cube on top, water, and water droplets, and/or a cloudlike sketch.

Name _____

What Happened

1. What formed inside the jar?

water droplets

2. Where did it come from?

Water vapor rises from the warm water to the top of the jar, and then cools

when the ice cube is placed on the lid, forming the water droplets.

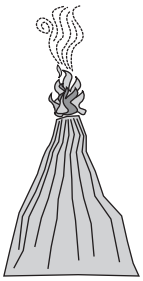
What If

What would happen if you used salty water instead of tap water? Would the drops on the side be salty?

No, the salt would be concentrated on the bottom of the jar and water droplets

would form on the side of the jar.

Name _____



ACTIVITY

Describing Earth's Resources

Draw a picture of one of Earth's natural resources.

Drawings may include water, soil, rocks, air, trees, or other examples of natural resources.

Draw a picture of a way that people use a natural resource.

Drawings may include plastic containers, houses, building materials, appliances, food, and so forth.

Name _____

What Happened

1. What natural resources did you find?

Answers will vary based on the images selected.

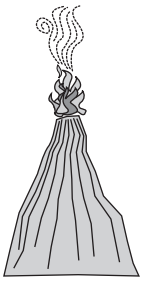
2. **Tell** where you see fossil fuels being used in your collage.

Answers will vary, but should indicate an understanding of how fossil fuels are used to change resources and power products.

What If

Draw links on your collage between resources and the materials made from the resources.

Students should be able to match the products to the appropriate resource materials they were made from.

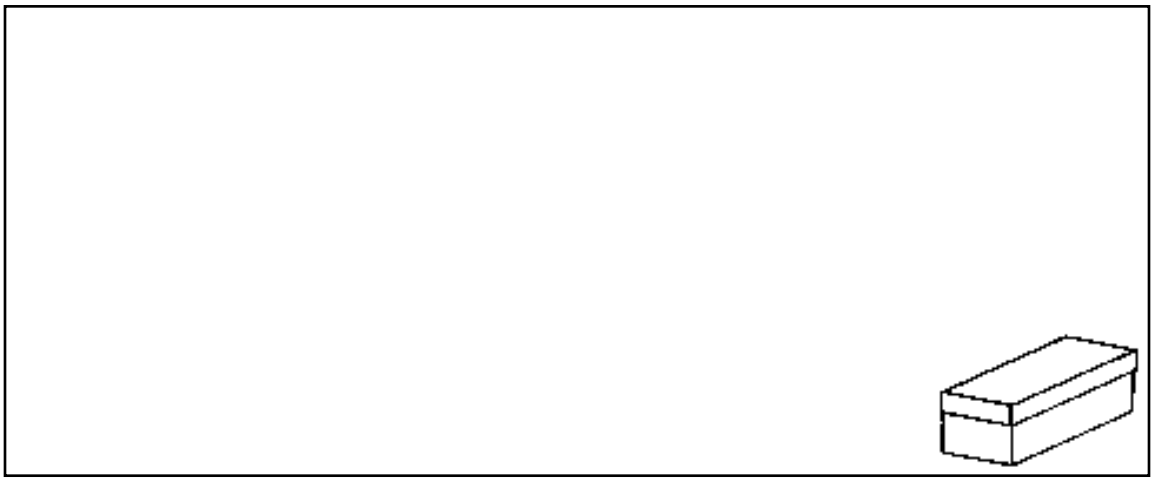


Name _____

ACTIVITY

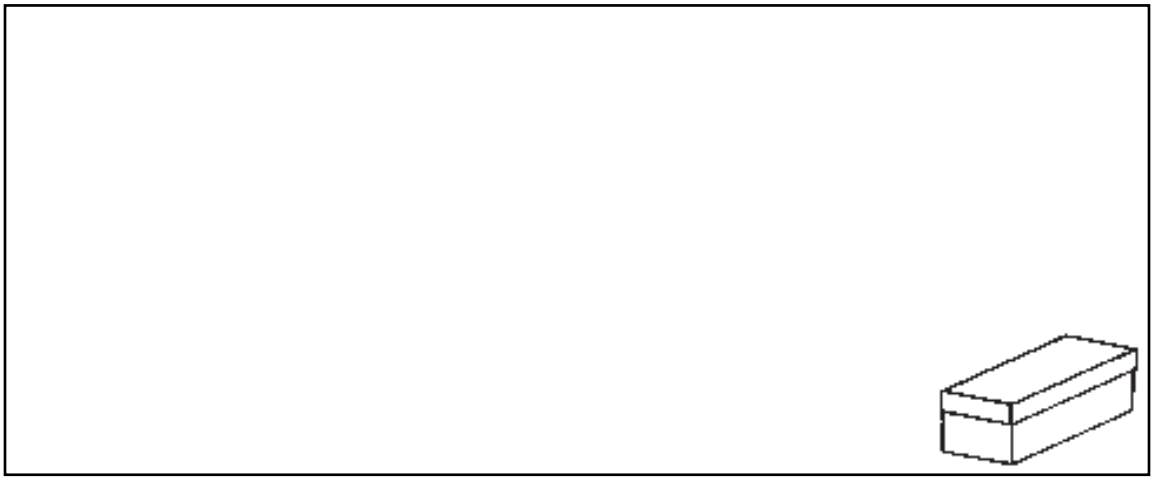
Reusing Objects

Draw a picture of an object.



Drawings will vary but may include milk cartons, plastic bottles, cardboard boxes, and so forth.

Draw a picture to show how you can use the object in another way.



Drawings will vary, but should show how the object from the previous box could be used in another way.

Name _____

What Happened

1 How did you use your object in a new way?

Student responses will vary.

2 How could reusing your object help the environment?

Reusing objects helps the environment because less trash is thrown away and fewer resources are used.

What If

What other objects could be reused?

Student responses will vary. Possible answers include toys, magazines, and clothes.