Chapter Science Investigation Name _____

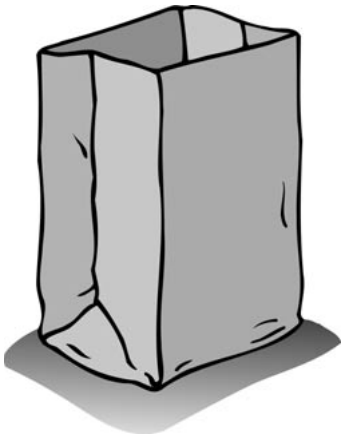
Investigating Light

What You Need

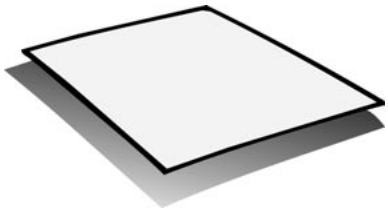
flashlight

aluminum foil

plastic wrap



brown paper bag



typing paper

waxed paper

Find Out

Do this activity to see what happens when light hits different kinds of objects.

Process Skills

Observing
Communicating
Predicting

Time

- one hour

What to Do

1. Hold up the aluminum foil and shine the flashlight onto it. **Observe** the light. **Record** what happens.

2. Repeat Step 1 with the plastic wrap, the brown paper bag, the waxed paper, and the typing paper.

3. Look around the room for other materials to test. **Predict** what will happen when you shine the light onto each material.

4. Shine the light onto them, **observe** the light, and **record** what happens.

Circle *Yes* or *No* to answer each of the questions.

Material	Light passed through	Some light passed through	No light passed through	Some light was reflected
aluminum foil	Yes No	Yes No	Yes No	Yes No
plastic wrap	Yes No	Yes No	Yes No	Yes No
brown paper bag	Yes No	Yes No	Yes No	Yes No
waxed paper	Yes No	Yes No	Yes No	Yes No
typing paper	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No
	Yes No	Yes No	Yes No	Yes No

Conclusions

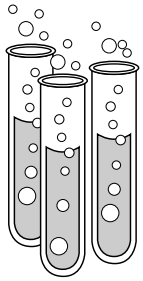
1. Which materials allowed light to pass through? Which materials only allowed some light to pass through?

2. What happened when the light could not pass through some of the materials?

New Questions

1. Which of the materials you tested would make the best window?

2. Write a new question you have about light.



Name _____

ACTIVITY

Investigating Light

Record what happened when the light was shined into the first hole.

_____

Record what happened when the light was shined into the hole from the side.

_____

Predict what will happen to the light when you move the cards, so that you cannot see straight through the holes.

_____

Record what happened when the cards were moved, so that you could not see straight through the holes.

_____

_____

Name _____

What Happened

1. What changed when you moved the cards?

_____

_____

_____

2. How did you make the light travel through the holes in all three cards at the same time?

_____

_____

_____

What If

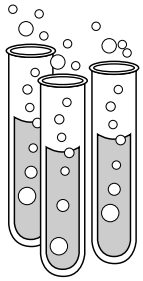
Would you see any light if you shined the flashlight on index cards that did not have holes?

_____

_____

_____

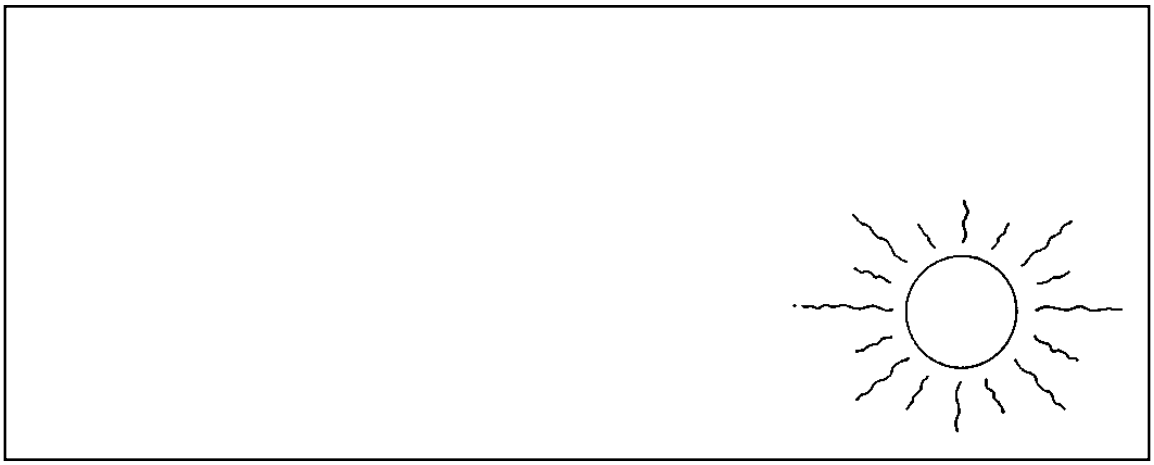
Name _____



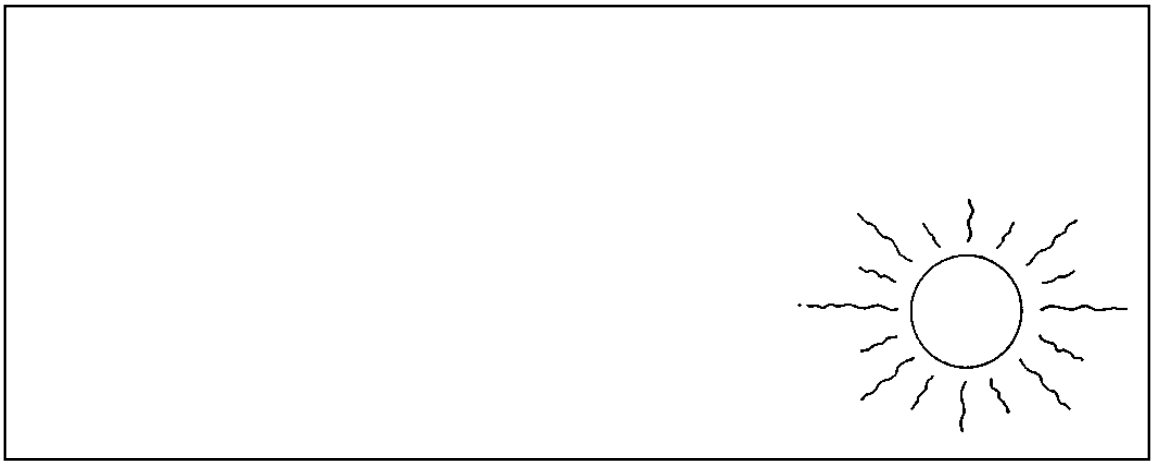
ACTIVITY

Using the Sun's Heat

Draw your foil mitten.



Draw your paper mitten.



Circle the mitten you predict will feel warmer in the sunlight.

Foil Paper

Name _____

What Happened

1. Which of your hands felt warmer?

_____

_____

_____

2. Why is this so?

_____

_____

_____

What If

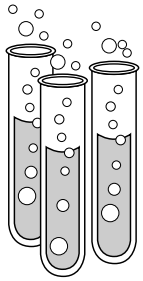
What would happen if you used plastic wrap instead of aluminum foil?

_____

_____

_____

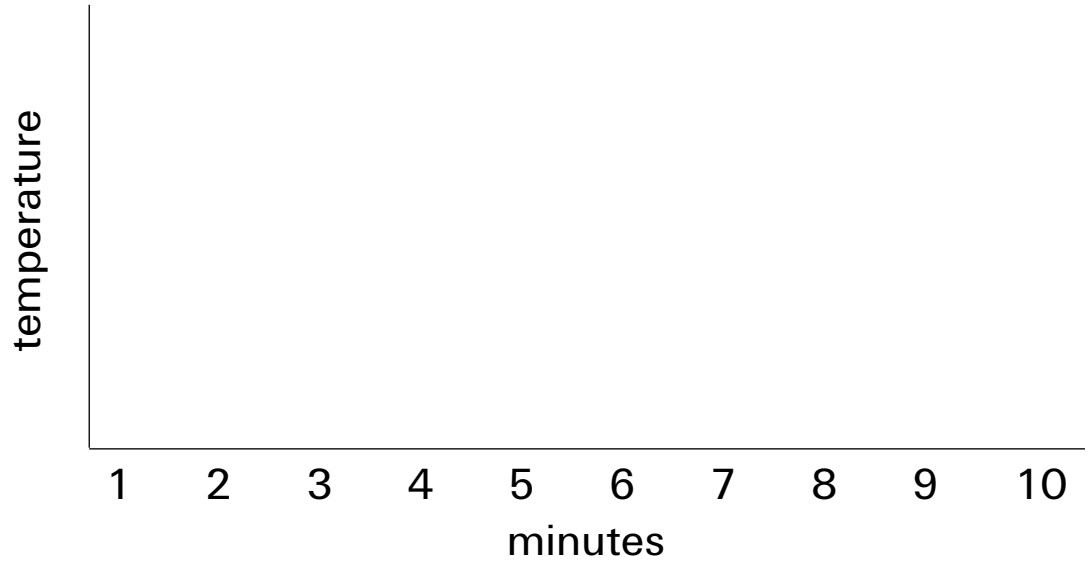
Name _____



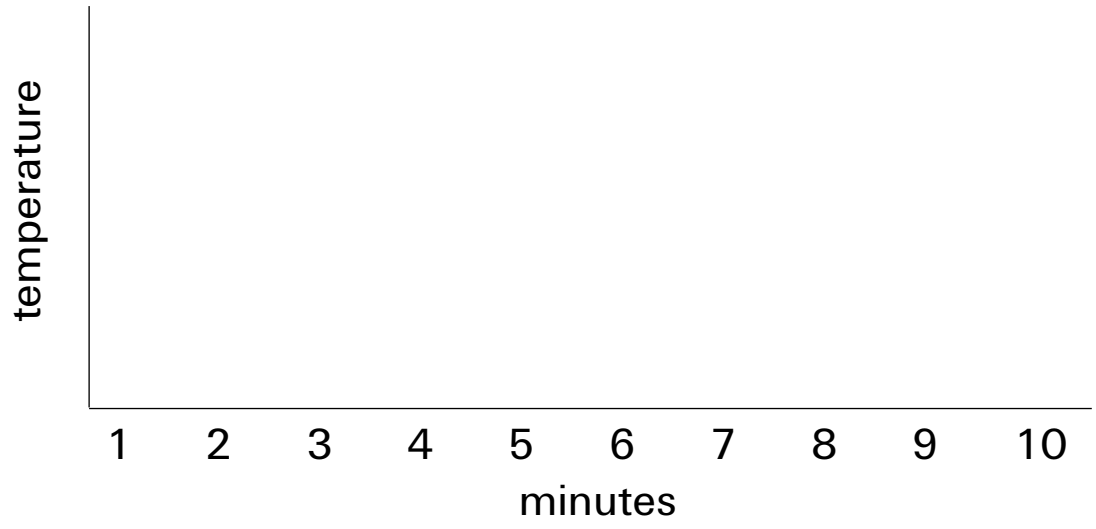
ACTIVITY

Observing Heat Transfer

Make a graph to show how the temperature in cup A changed.



Make a graph to show how the temperature in cup B changed.



Name _____

What Happened

1. How did the temperature in cup A and cup B change?

_____

2. Why do you think the temperatures changed?

_____

_____

What If

Would an ice cube melt faster if left out in the open air or put into a cup of warm water?

_____

_____

_____