

## What color absorbs the most heat from the sun?



**Getting ready:** Ask students to think about being outside on a hot sunny day. Explain that the sun gives off heat and our clothing absorbs some of it. Wonder aloud whether certain colors of clothing absorb more heat than others. Guide students to make a hypothesis and then test it with the experiment below.

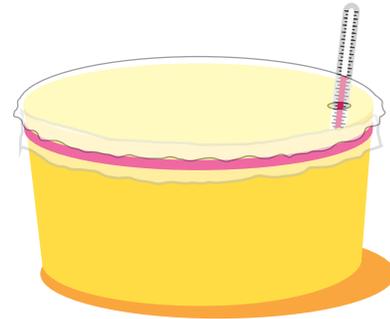
### PROCEDURE

**Materials for each group:** thermometer, plastic margarine tub without a lid, clear plastic wrap, sheet of Rainbow® Super Value Construction Paper (#162672), scissors, rubber band

**Note:** The groups should use a variety of colors of paper, including black, white, blue, and yellow.

### Steps:

1. Cut a sheet of paper to fit in the bottom of the container and place it inside.
2. Place the lower part of the thermometer in the container.
3. Cover the container with plastic wrap and secure it with a rubber band, allowing the thermometer to stick out.
4. Put the container, along with those of the other groups, in direct sunlight for 30 minutes.
5. Determine the temperature of your group's container.



### RESULTS AND CONCLUSION

List the colors of paper and the corresponding temperatures on the board. With student input, rank the temperatures from hottest to coolest. (*The containers with black and blue paper should have the highest temperatures. The container with white paper should have the lowest temperature.*) Help students relate this information to why they may feel hotter or cooler when they wear certain colors.

### DISPLAY

Showcase the question, hypothesis, procedure, results, and conclusion on an Office Depot® 72% Recycled Tri-Fold Corrugate Display Board (#434415). Label each section and incorporate photos, diagrams, or a chart.

## What makes sounds lower or higher?



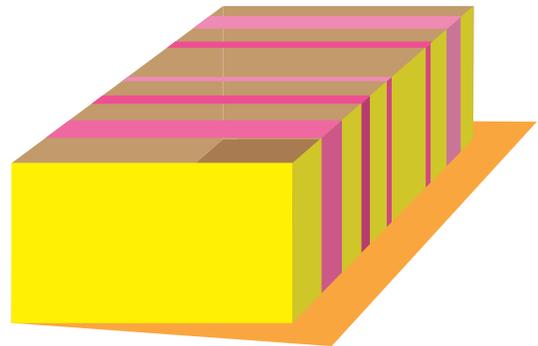
**Getting ready:** Invite students to describe ways in which sounds are different. Guide them to realize that one way sounds differ is by pitch, the degree of highness or lowness of the sound. Explain how pitch is different from volume. Then place a rubber band around an empty shoebox and pluck it. Wonder aloud what would change the pitch. Invite students to share their ideas and then guide them in the steps below.

### PROCEDURE

**Materials for each group:** shoebox (no lid), Alliance® Rubber Brites® rubber bands (#531578) in different lengths and widths, paper

#### Steps:

1. Place several rubber bands of the same width but different lengths around the box. Pluck the rubber bands. Write your observations.
2. Remove all but one rubber band. Pluck it. Then tighten the band by pulling on it from the bottom. Pluck it again. Write your observations.
3. Remove the rubber bands. Put rubber bands of the same length but different widths around the box. Then pluck each one. Write your observations.



### RESULTS AND CONCLUSION

Ask students to refer to the observations they wrote as you guide them to make the following conclusions:

- Short rubber bands have a higher pitch than long ones.
- Tight rubber bands have a higher pitch than loose ones.
- Narrow rubber bands have a higher pitch than wide ones.

### DISPLAY

Showcase the question, hypothesis, procedure, results, and conclusion on an Office Depot® 72% Recycled Tri-Fold Corrugate Display Board (#434415). Label each section and incorporate photos, diagrams, or a chart.

## Is your sense of taste reliable?



**Getting ready:** Ask students whether or not food tastes as good to them when they have a cold. Discuss their opinions. Then wonder aloud whether the sense of taste is reliable. Explain that *reliable* means *dependable* or *likely to be correct*. Poll students to determine whether or not they think they can count on their sense of taste to always be accurate. Then lead them in the experiment below.

### PROCEDURE

**Materials for each group:** pieces of peeled apple and potato on labeled paper plates (cut pieces to be the same size); two disposable cups of water; blindfold; two copies of a recording sheet like the one shown

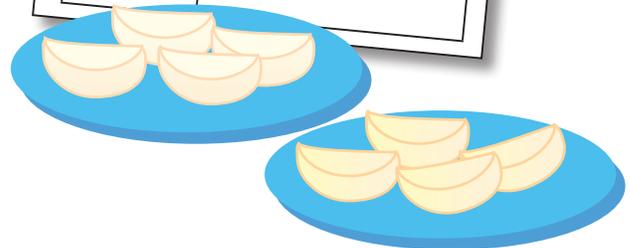
#### Steps:

1. Partner 1 puts on a blindfold or closes her eyes.
2. Partner 2 scrambles the plates and helps Partner 1 take a piece of food. Partner 2 tastes it and identifies the food. Partner 1 records the response by drawing a tally mark on her recording sheet without telling her partner whether or not she was correct.
3. Partner 2 takes a drink of water.
4. The partners do Steps 2 and 3 two more times. Then they switch roles.
5. The partners repeat the steps, this time holding their noses when they sample the food.



Name \_\_\_\_\_

Recording Sheet	
Nose Open	Correct Incorrect
Nose Closed	Correct Incorrect



### RESULTS AND CONCLUSION

Help students compare the number of correct responses under both conditions: nose open and nose closed. (*More correct responses are likely with the nose open.*) Guide them to conclude that the sense of taste is influenced by smell and sight.

#### DISPLAY

Showcase the question, hypothesis, procedure, results, and conclusion on an Office Depot® 72% Recycled Tri-Fold Corrugate Display Board (#434415). Label each section and incorporate a chart.