

What Is the Temperature?

Purpose

Students will make comparisons of temperature and experiment with making different objects warm or cool.

Materials

For the teacher: objects or substances that clearly differ in temperature (e.g., ice cubes, warm water; black paper that has been in the sun, black paper that has been in the shade), silver spoons, ice pack

Activity

A. Pre-Activity Preparation

Set up several different stations around the classroom (or outside) with pairs of objects or substances that clearly differ in temperature (e.g., ice cubes and warm water).

B. Pre-Activity Discussion

1. Explain to the class what is meant by temperature, and use examples (e.g., summer and winter weather).
2. Discuss with students the concepts of warmer and cooler.

C. Small Group Activity

1. Have students in groups of three or four move around the different stations, feeling each pair of objects or substances and discussing which is warmer and which is cooler.
2. Ask students to discuss with partners how each object feels.
3. Have students place a piece of black paper in the sun for approximately 10 minutes and a piece of black paper in the shade for approximately 10 minutes. This can also be done with a black paper in the sun and a white paper in the sun.
4. After the time has expired, have students feel the papers and decide which paper is warm and which paper is cool.
5. Have students put a silver spoon in the sun for 10 minutes and a silver spoon on an ice pack for 10 minutes.
6. After the time has expired, have the students feel the spoons and decide which spoon is warm or hot and which spoon is cool or cold.
7. Walk around listening to the discussions.
8. Complete the activity by comparing several additional objects or substances as a whole class.

EXTENDING THE ACTIVITY



Have students look at home for pairs of objects or substances that have different temperatures. Ask them to report their findings back to the class.

connecting across the curriculum



Science


Have students count the number of items that they found to be hot and the number of items that they found to be cold. Ask students to separate the items according to their temperatures.


Standards Links
K.3.1, K.4.2


Questions for Review


Basic Concepts and Processes

During the activity, discuss the following questions with your students to gauge their understanding of the Standard Indicator:

 What does it mean for one object to be warmer than another?

 What are some objects that are hot? What objects are cold?

 Which would be warmer: something in the sun or something in the shade?

 How did you decide if an object was warmer or cooler than another?
