

Hot or Cold?

Reporting Category	Measurement
Topic	Comparing two events, using direct comparison, according to temperature (hotter, colder)
Primary SOL	K.10 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, and block.
Related SOL	K.8

Materials

- Different types of thermometers, including a large demonstration thermometer
- Pictures depicting the various seasons of the year
- Three clear plastic glasses
- Water at three temperatures: ice cold, hot, room-temperature

Vocabulary

measure, temperature, hotter, colder, thermometer, season, calendar, month

Student/Teacher Actions (what students and teachers should be doing to facilitate learning)

1. Display different kinds of thermometers, including a demonstration thermometer that can be manipulated. Talk about how people use thermometers to measure temperature. Discuss the term *temperature*. Using the demonstration thermometer, show students where the “red line” would be if it were hot. Have students describe what it feels like when it is hot. Have them describe what it is like when it is cold. Show students seasonal pictures from summertime (e.g., swimming at the beach, wearing summer clothes, playing in a pool), and ask whether these pictures show a day when it is hot or when it is cold. Explain that the thermometer would show a higher temperature when it is hot. Using wintertime pictures, go through the same process, explaining that the thermometer would show lower temperatures when it is cold.
2. Place a real thermometer on a window for the students to observe each day as part of the calendar activities. Have students relate the reading on the thermometer to the temperature in the room at different times of the year.

Assessment

- **Questions**
 - “What can you tell me about some things that are hot? What can you tell me about some things that are cold?”
 - “How do you know if it will be hot or cold outside?”

- **Journal/Writing Prompts**

- “Draw a picture of what you do when it is hot outside.”
- “Draw a picture of what you wear when it is hot. Draw another picture of what you wear when it is cold.”

- **Other**

- Distribute pictures of hot and cold events. Have students sort the pictures by placing the “hot pictures” under a picture of a thermometer with the mercury near the top and placing the “cold pictures” under a picture of a thermometer with the mercury near the bottom.
- Label three clear plastic glasses A, B, and C. Line them up on a table, and fill one with ice-cold water (no actual ice), one with hot water (caution: not too hot!), and one with room-temperature water. Divide the class into small groups of three or four, and supervise each group in using a thermometer to determine which water is hottest and which is coldest. Have students confirm the measurements by feeling the outsides of the glasses. Direct students to record the results on a recording sheet.

Strategies for Differentiation

- Have students create a T-chart of illustrations and/or sentences that describe hot and cold weather or items.
- Have students play a matching game of concept cards. The game may be student-made, teacher-made, or a commercial game.