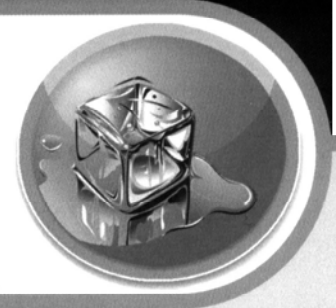
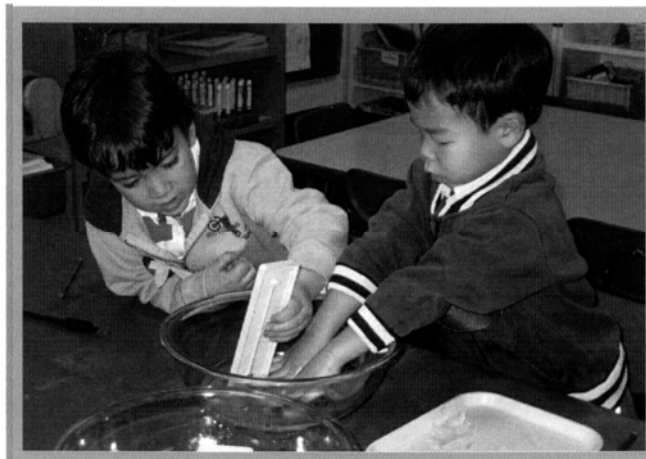
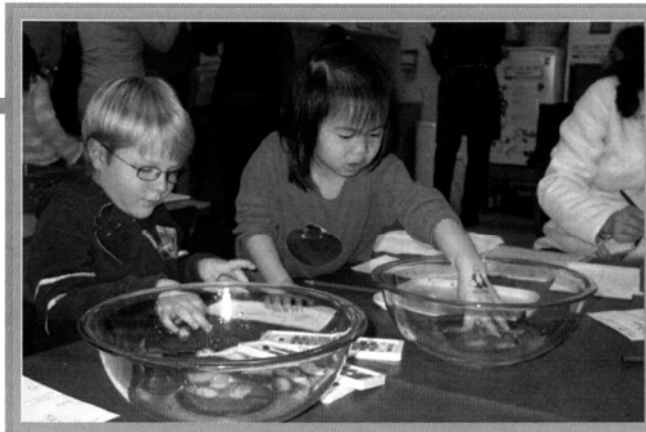


What Is Your Cold Count?



WHAT TO DO

1. Work with a small group of children. Invite each child to write with a pencil on their recording sheets. (They will write again later with a pencil when their hand is cold and compare it to this writing.) Older children can usually print their name. Younger children can make some letters or a squiggle.
2. Demonstrate the activity. Say, "I wonder how long I can hold my hand in the ice water. I *predict* I'll be able to keep my hand in the water for a count of five." Have the children count with you. It's up to you whether you keep your hand in the water for more or less time. (See Teacher-to-Teacher Tips on estimating and predicting.)
3. Invite the children to place a *thermometer* in the ice water and notice how the "skinny red line" goes down.
4. Challenge the children to predict how long they can hold their



My Cold Count Experiment				My Cold Count Experiment			
Name _____				Name _____			
Count Prediction		What Happened		Count Prediction		What Happened	
5	10	5	10	5	10	5	10

FOCUS AREAS

Science: planning and conducting a simple investigation, communicating investigations and explanations, exploring properties of objects and materials

Math: counting, estimating, communicating results

Fine Motor: writing with pencil

MATERIALS

- Bowl of ice water large enough to fit a child's hand
- Paper towels
- Pencils, 1 per child
- Sturdy child-safe *thermometers* (not mercury)
- Recording sheets, 1 per child

PREPARATION

- Prepare recording sheets for children to *predict* how long they can keep their hands in a bowl of ice water—five or 10 seconds. Make one copy for each child.

hands in the ice water. Help them circle the five or the 10. Older children may enjoy writing the number or choosing a different number.

5. The children put their hands in the ice water. They count to five or 10, or as long as they have their hands in the water.
6. The children write their names with their cold hand and circle their actual count or write the number. Is it longer or shorter than their prediction? Ask, "Is it easier or harder to write with an ice-cold hand?" (Our sense of touch doesn't work as well when we are cold.)
7. The children dry off their hands and rub them together to warm up.
8. Save the recording sheets in each child's portfolio.

MORE IDEAS

- After the children have done the first cold count, they coat an index finger in Vaseline. Ask them to feel the ice water with a bare finger and the Vaseline-coated finger. Do they feel a difference? The Vaseline is similar to blubber that Arctic animals have. Their blubber insulates them from the cold.

DISCUSSION STARTERS

Use these questions to spark children's thinking during and after the activity:

- How does your hand feel when it is in the water?
- How does it feel when you take it out?
- How does your hand look when it is cold? What changes can you see?
- How does your body feel when your hand is cold?
- How can you warm up your hands when they are cold?

SKILLS ASSESSMENT

Use these questions to determine a child's abilities and understanding:

- Is the child able to count to 10?
- Does the child know the concepts of *more than* and *less than*?
- What is the child's pencil grip?

TEACHER-TO-TEACHER TIPS

- *Predicting* and *estimating* are tough skills for children to master, especially because they want to be right. You can help children understand that it is okay not to always be right by *predicting* incorrectly yourself. Say, "I predicted that I could leave my hand in the ice water while I counted to five but the water was so cold I could only leave my hand in the bowl for three."
- Don't worry if the children are not counting at an even pace. It's natural for them to speed up or slow down to make their *prediction* accurate.
- Many children can keep their hands in the ice water much longer than a count of 10.

