

Lesson 2

What Turns Water Into Ice?

Key Idea

Colder temperature makes water turn into ice by slowing molecules.

Activity

Students will study water in its liquid and solid forms and discover why ice melts.

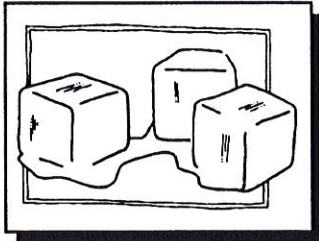
Materials

One ice cube per child
One paper towel per child

Procedure

- 1** Distribute materials and ask the children to examine and explore their cubes.
- 2** Ask the following:
 - What happens if you squeeze hard? (some melting because of warm fingers and pressure)
 - How did the water in the cube get so hard? So solid? How is solid water different from liquid? (See Key Ideas for Lesson 1: Why do we call water a liquid?) Touch and name some other solid things around us. (floor, walls, furniture) List some other common solids.
 - Why is water a special kind of solid? (Ice melts readily, can be refrozen and stored, melted, and reused without losing much of its original quantity.) How could we prove this? (Put some water back in the freezer.)
 - How can you make water freeze faster or slower? (Change the temperature of the freezer.)
- 3** Discuss the following:

When water gets very cold, it turns into solid form. What if water didn't turn into ice or snow? How is ice or snow a kind of water "bank"?



Extension

Have the students discover which is heavier, liquid water or solid ice.

Materials needed are: a tray of ice cubes, a tray full of water, and a kitchen scale.

Explain that water is made up of many atoms (small particles). When two hydrogen atoms attach themselves to one oxygen atom, it forms a single water molecule. Each drop of water contains several molecules.

Weigh each form of water. Why is the solid heavier? (Molecules are more compact.)