

## 9. Needles

**Purpose** To demonstrate how crystals form.

**Materials** measuring cup, 1 cup (250 ml)

Epsom salts

measuring spoon, tablespoon (15 ml)

scissors

black construction paper

lid from a large jar

### Procedure

- Cut a circle from the black paper that will fit inside the lid. Place the paper in the lid.
- Fill the measuring cup with water (250 ml).
- Add 4 tablespoons (60 ml) of Epsom salts to the water and stir.
- Pour a very thin layer of the mixture into the lid.
- Allow the lid to stand undisturbed for one day.

**Results** Long needle-shaped crystals form on the black paper.

**Why?** The Epsom salts molecules move closer together as the water slowly evaporates from the solution. The salt molecules begin to line up in an orderly pattern and form long needle-shaped crystals. The salt molecules stack together like building blocks, and the shape of the molecules determines the resulting shape of the crystal.

