

# ***Keeping Cool***

## **Activity one: Evaporation**

### **Objective**

To discover how much cooler water gets if we speed up the evaporative process.

### **Materials**

Three flat pans (aluminum pie pans work well), fan, newspapers, edible oil, warm (40° - 50° C) water, three thermometers.

### **Procedure**

Put newspapers underneath pans for insulation. Put a thermometer and equal amount of warm water in all three pans (you need enough water to cover the thermometers). Let the fan blow across pan #1 only. Add a few drops of oil to pan #2 only. Do nothing to pan #3.

### **Discussion points**

Which pan is coolest?

What is the purpose of the oil?

How much liquid is left in each pan?

How could you use this idea to keep things cool on a hot or humid day?

## **Activity two: Insulation**

### **Objective**

To make a container that will keep ice from melting.

### **Material**

Uniformly sized ice cubes, small plastic bags, assortment of materials to make ice cube boxes (foil, plastic foam cups, plastic foam chips, tin cans, plastic cups, fiberglass, foam, newspaper, fabric scraps, etc.), various types of insulating materials, metric measuring cup.

### **Procedure**

Build a container large enough to hold one ice cube in a plastic bag. After one hour or longer, open the containers. Measure the water in the bags.

### **Discussion points**

What types of materials were the best insulators?