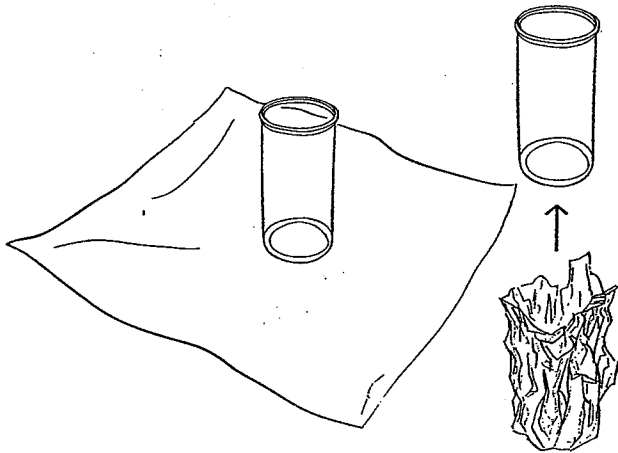


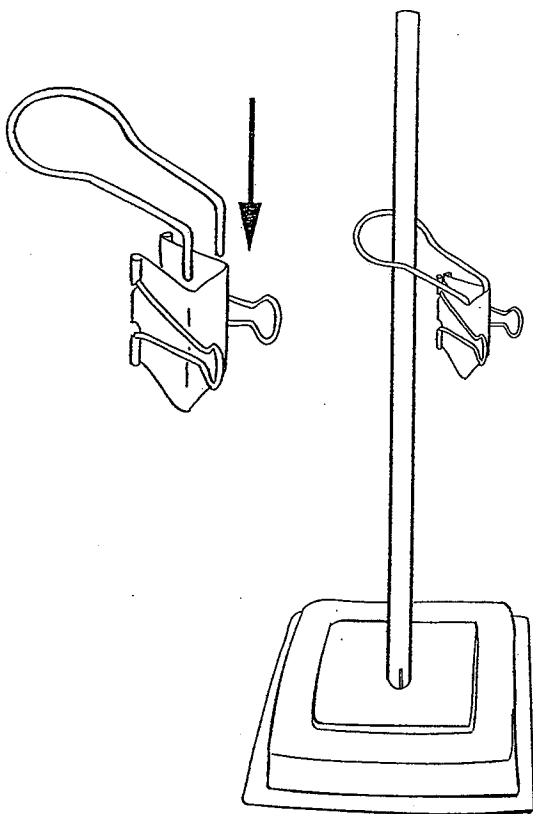
# WATER-HEATING SETUP

Assemble this apparatus for measuring the energy in a cheese ball.

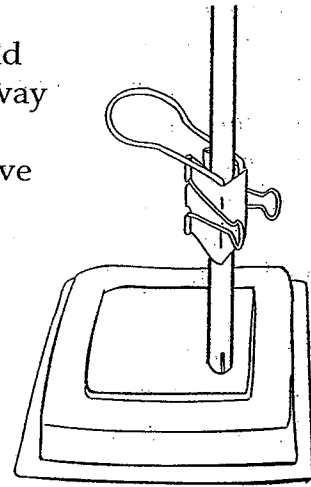
- a. Form an aluminum cup by carefully molding the aluminum-foil square around a vial.



- b. Squeeze the ring a bit and insert the downward tines into the binder clip. Slide the ring down over the dowel.

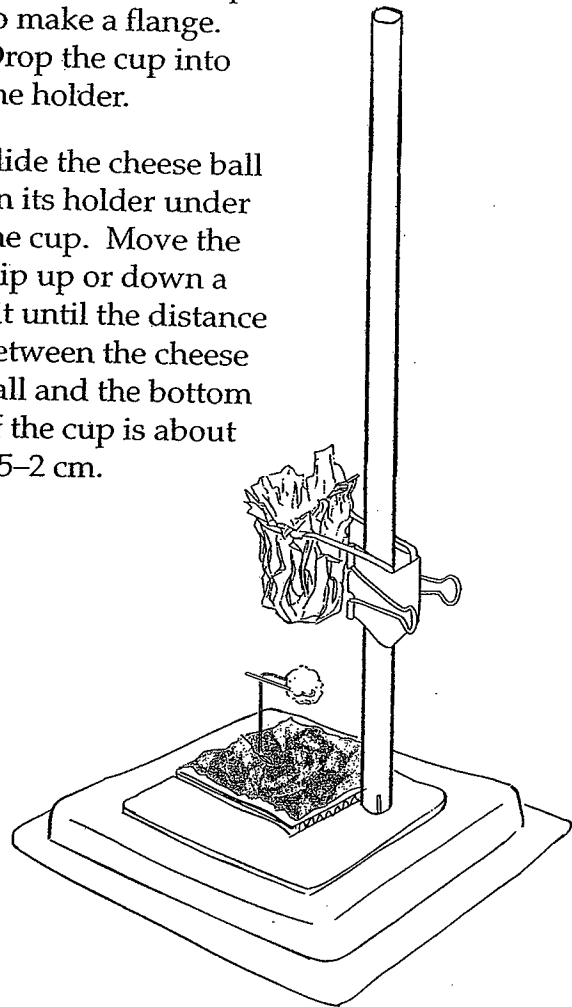


- c. Open the clip and clamp it all the way onto the dowel about 10 cm above the base.



- d. Spread the top of the aluminum-foil cup to make a flange. Drop the cup into the holder.

- e. Slide the cheese ball on its holder under the cup. Move the clip up or down a bit until the distance between the cheese ball and the bottom of the cup is about 1.5–2 cm.



Name \_\_\_\_\_

Period \_\_\_\_ Date \_\_\_\_\_

## MEASURING FOOD ENERGY

The snack food we burned was \_\_\_\_\_

Fill in the data table.

Volume of water	
Final temperature	
Starting temperature	
Temperature change	

1. The unit used to measure heat energy is the calorie. One calorie (c) is the amount of heat needed to raise the temperature of 1 ml of water 1°C. Therefore, it would take 10 calories to raise the temperature of 1 ml of water 10°C. It would also take 10 calories to raise the temperature of 10 ml of water 1°C.

Calculate the number of calories your sample of snack food produced when it burned.

2. If your suggested daily intake of calories is about 2000 calories a day, how many pieces of this snack food would you have to eat each day to meet your requirement?
3. Food calories are measured in kilocalories or Calories. A food Calorie is equal to 1000 calories. How many pieces of your snack food would you have to eat to get your suggested daily requirement of 2000 food Calories?