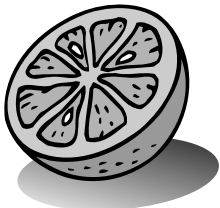


# Finding Water in Our Food

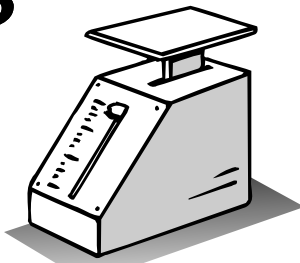
## WHAT YOU NEED



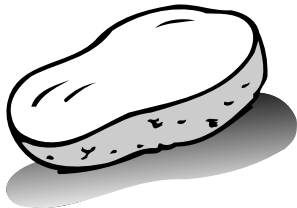
half of an orange



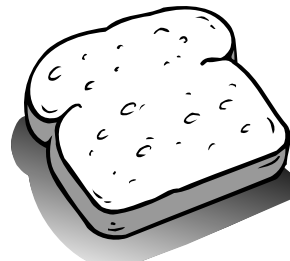
half of an apple



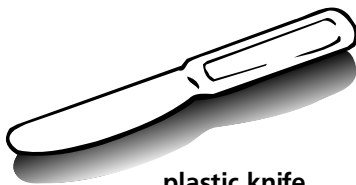
food scale



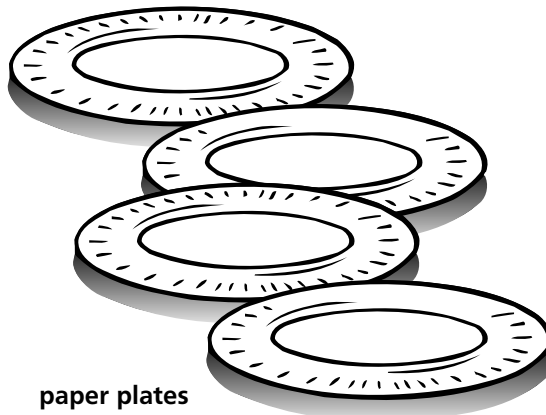
half of a potato



one slice of bread



plastic knife



paper plates



one crayon, any color



metric ruler

## Find Out

Do this activity to see how much water foods contain.

## Process Skills

Measuring  
Observing  
Using Numbers  
Interpreting Data  
Communicating  
Experimenting  
Predicting

## Time

- 40 minutes the first day
- 20 minutes every other day for three weeks

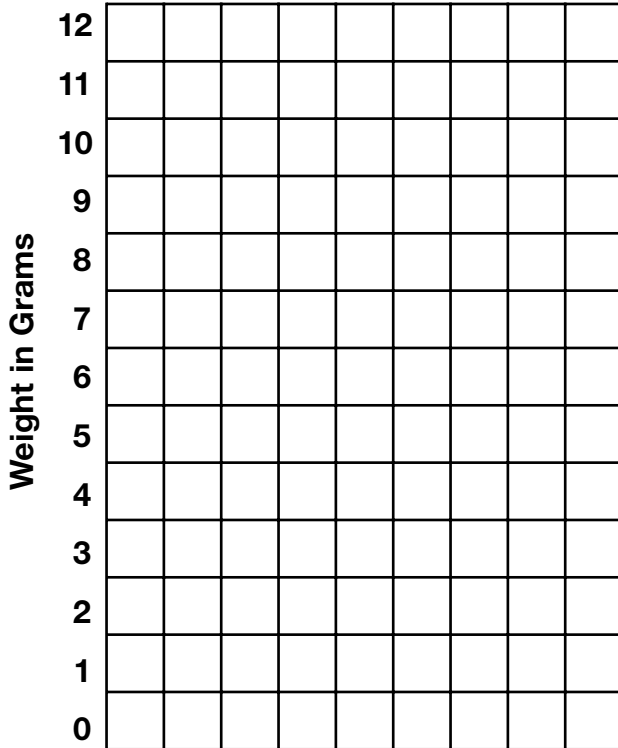


## WHAT TO DO

1. **Estimate** and then **weigh** the apple half.
2. **Record** the apple half's weight on the graph. Under the first row of squares, below the line numbered "0" **write** today's date. **Color** the squares above that date until they show the weight of the apple on this date.
3. Repeat Steps 1 and 2 for the other foods.
4. **Predict** which food sample has the highest percentage of water. Write your prediction.
5. Carefully cut or have your teacher cut the foods into approximately 2-cm squares. Place each food on four separate paper plates. Leave them for two or three days.
6. Every other day **weigh** your foods, including all the pieces, but not the plate. **Record** the date and **color** the graph to show your findings.
7. **Observe** the graphs over the three weeks. **Compare** the weights over the time periods.

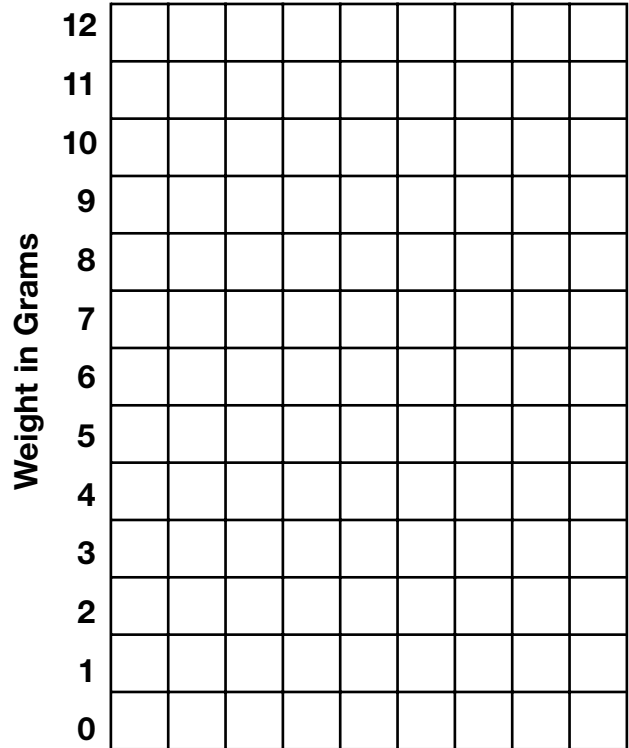


### Water Loss in the Apple



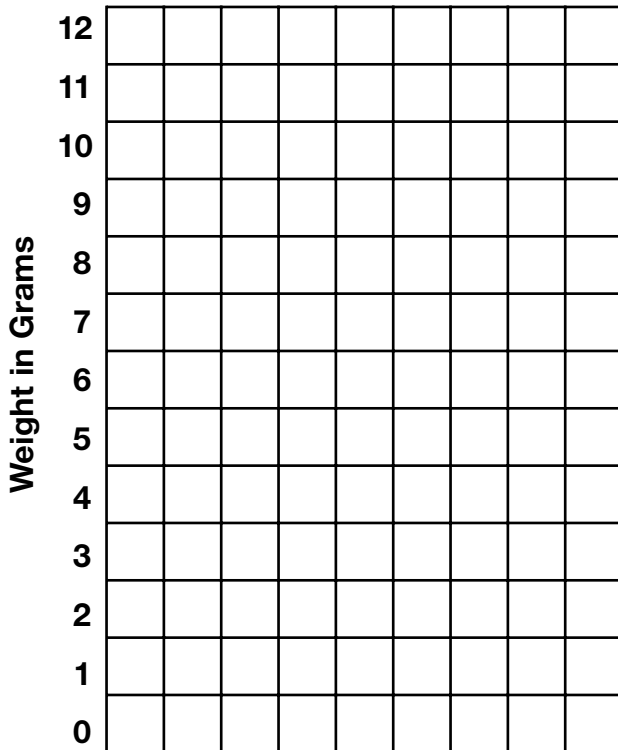
Dates I Weighed the Foods

### Water Loss in the Orange



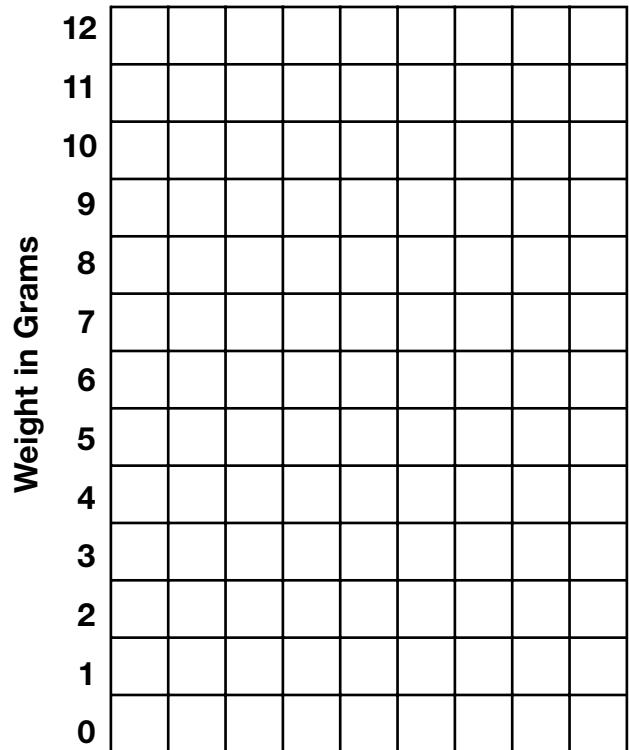
Dates I Weighed the Foods

### Water Loss in the Bread



Dates I Weighed the Foods

### Water Loss in the Potato



Dates I Weighed the Foods

## Conclusions

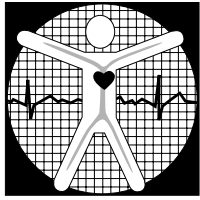
1. Compare the graphs. Remember it doesn't matter how high or low the bar on the graph went. It is more important to notice the difference between the beginning bar and the ending bar. Did the food lose  $\frac{1}{4}$ ,  $\frac{1}{3}$ ,  $\frac{1}{2}$ , or more of its original weight? Which food lost the most water?
  
2. Which food lost the least water?

## New Questions

1. What types of food do you think would have more water than the foods in this investigation? What types of food might have less water?
  
2. How do you think animals in the desert get most of their water?



Name \_\_\_\_\_



# ACTIVITY

## Finding Fats and Starch in Foods

Rub each food on a square of brown paper bag.

**Predict** which foods will have fat. Write **Yes** or **No** in the chart.

**Predict** which foods will have starch. Write **Yes** or **No** in the chart.

Put a drop of iodine on each food. **Record** your observations.

<b>Name of Food</b>	<b>Will Food Have Fat?</b>	<b>Will Food Have Starch?</b>	<b>Does Food Have Fat?</b>	<b>Does Food Have Starch?</b>

## **Activity Journal**

### **Lesson 1 • Carbohydrates, Fats, and Proteins**

Name \_\_\_\_\_

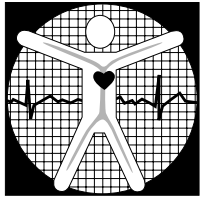
## **Conclusions**

- ① Which foods were high in fat? How can you tell?
- ② Which foods were high in starch?
- ③ Compare your predictions with your observations.

## **Asking New Questions**

- ① How else could you find out if a food has fat or starch in it?
- ② Why should you know how much fat is in a food?

Name \_\_\_\_\_



# ACTIVITY

## Reading a Food Label

**Record** your food label data in the table below. **Record** which vitamins and minerals the food contains. **Record** how much fat and carbohydrates the food contains.

<b>Label</b>	<b>Vitamins</b>	<b>Minerals</b>	<b>Grams of Fat</b>	<b>Grams of Carbohydrates</b>
<b>1</b>				
<b>2</b>				

Compare your two foods. Is one higher in iron or certain vitamins? Which has a higher protein content?

## **Activity Journal**

### **Lesson 2 • Water, Vitamins, and Minerals**

Name \_\_\_\_\_

## **Conclusions**

- ① How are the food labels similar?
  
  
  
  
  
  
  
  
  
  
- ② What is different about the food labels?
  
  
  
  
  
  
  
  
  
  
- ③ Why is it important to read food labels?

## **Asking New Questions**

- ① If you have a food allergy, why can food labels be important?
  
  
  
  
  
  
  
  
  
  
- ② Should all people eat the same foods?