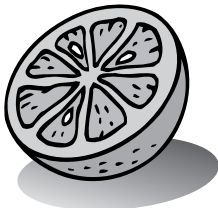
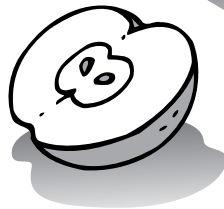


Finding Water in Our Food

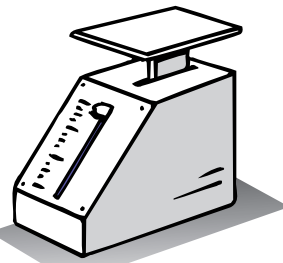
WHAT YOU NEED



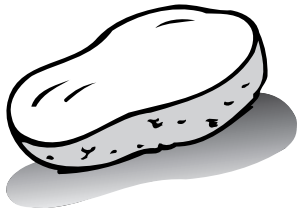
half of an orange



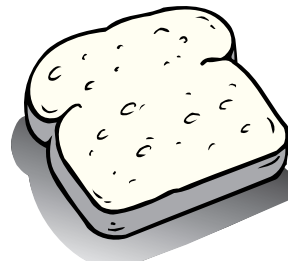
half of an apple



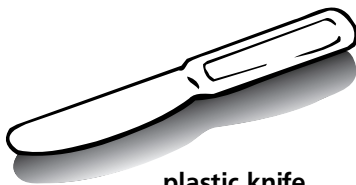
food scale



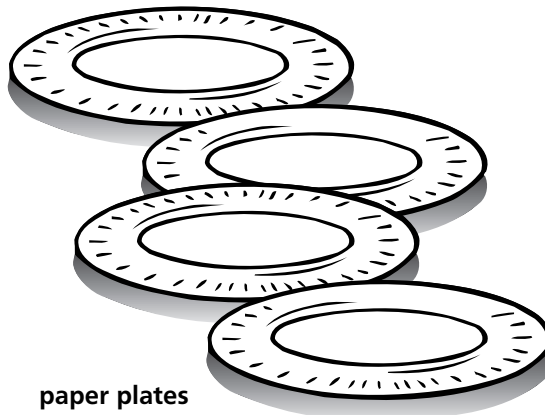
half of a potato



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



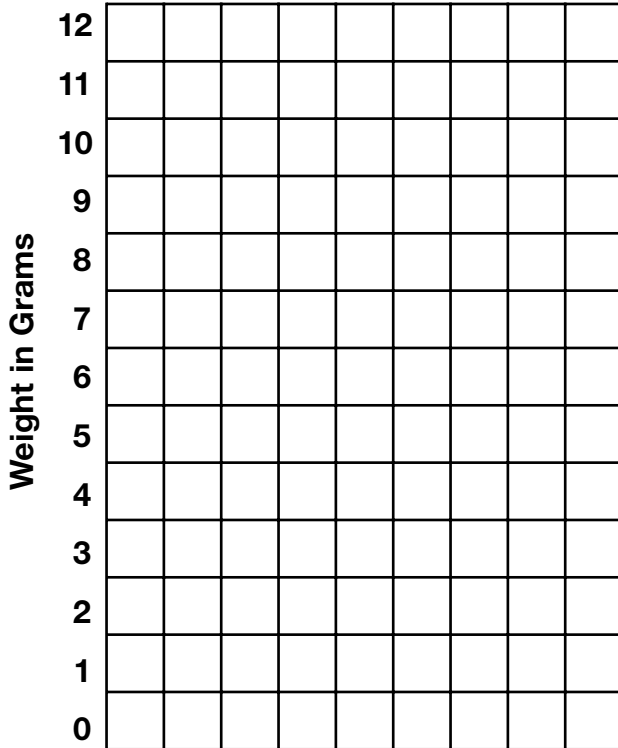
WHAT TO DO

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.



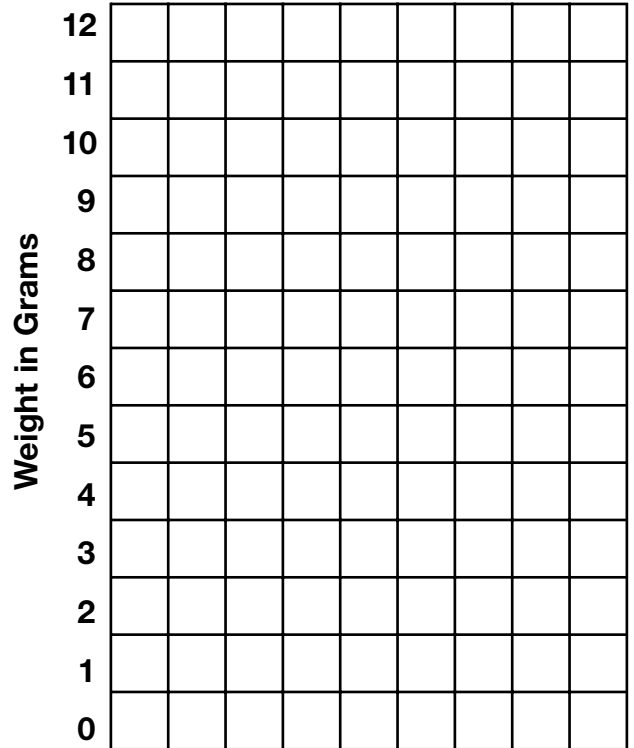
Students with asthma and allergies may be bothered by food left out.

Water Loss in the Apple



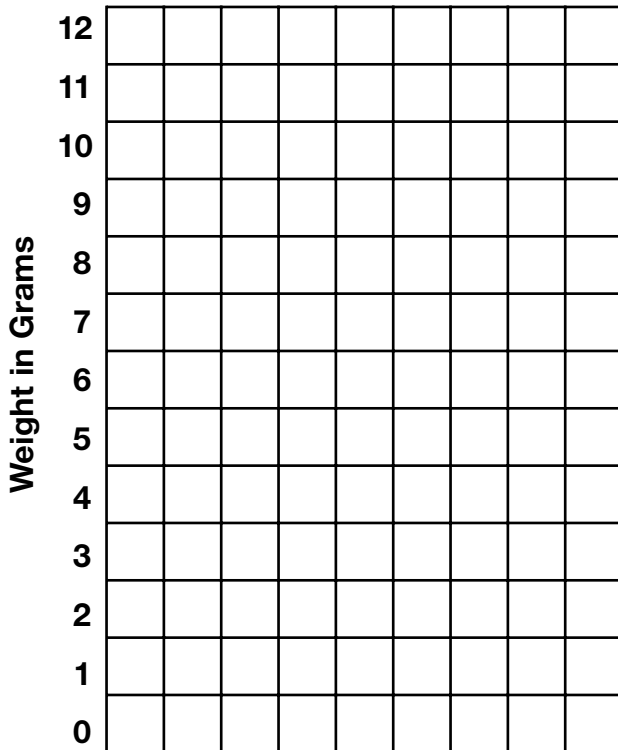
Dates I Weighed the Foods

Water Loss in the Orange



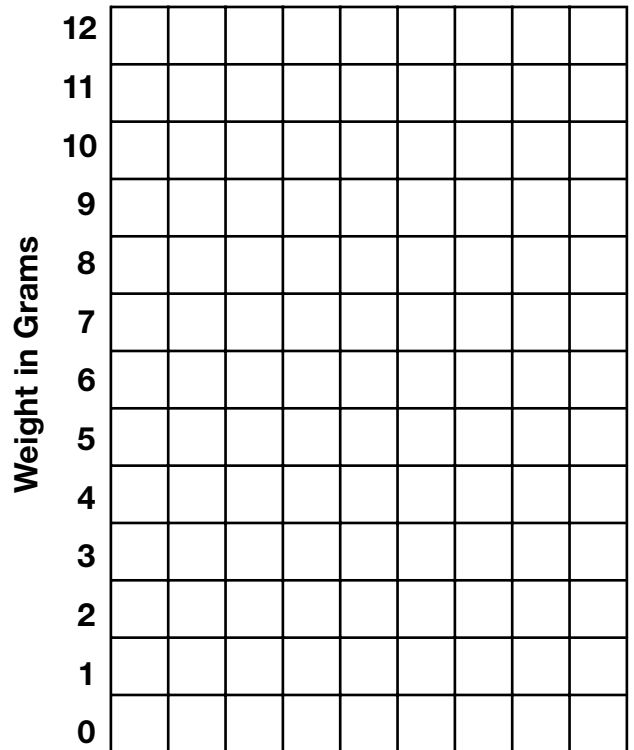
Dates I Weighed the Foods

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?

Answers will vary depending on data. The orange lost the most water.

2. Which food lost the least water?

bread

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?

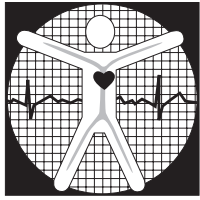
Answers for more water may include but are not limited to melons especially watermelons, tomatoes, berries, grapes, and lettuce. Foods with less could be crackers, cereals, carrots, or popcorn.

2. How do you think animals in the desert get most of their water?

Answers may vary but should include that animals in the desert get most of their water by eating food such as plants.



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.

Answers will depend on the foods tested. Possible high-fat examples include: potato chips, cheese, chicken nuggets, peanut butter.

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

Answers will vary. Possible high-starch examples include potatoes and bread.

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

Answers will vary.

Name of Food	Will Food Have Fat?	Will Food Have Starch?	Does Food Have Fat?	Does Food Have Starch?

Activity Journal

Lesson 1 • Carbohydrates, Fats, and Proteins

Name _____

Conclusions

- 1** Which foods were high in fat? How can you tell?
Answers will vary depending on foods tested. High fat foods can be mayonnaise, a potato chip, and peanut butter. Students can tell high fat foods because the brown paper will have grease on it and light will shine through it easily.

- 2** Which foods were high in starch?
Answers will vary based on foods tested.

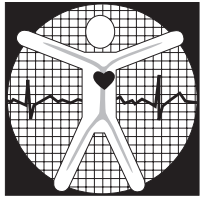
- 3** Compare your predictions with your observations.
Answers will vary based on foods tested.

Asking New Questions

- 1** How else could you find out if a food has fat or starch in it?
Answers will vary. One possibility is to read food labels.

- 2** Why should you know how much fat is in a food?
It is important to know because a person should eat only a certain amount of fat each day.

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.

Answers will vary.

Label	Vitamins	Minerals	Grams of Fat	Grams of Carbohydrates
1				
2				

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

Answers will depend on the foods compared.

Name _____

Conclusions

1 How are the food labels similar?
the way they are designed, or set up

2 What is different about the food labels?
the amount of each nutrient

3 Why is it important to read food labels?
Reading food labels helps people keep track of how much of each nutrient they are getting.

Asking New Questions

1 If you have a food allergy, why can food labels be important?
Some foods may have ingredients that could make you sick or give you an allergic reaction.

2 Should all people eat the same foods?
No. Nutrition requirements depend on your age, size, health, gender, and so on.