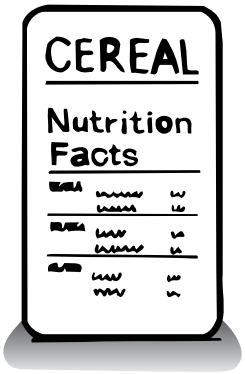
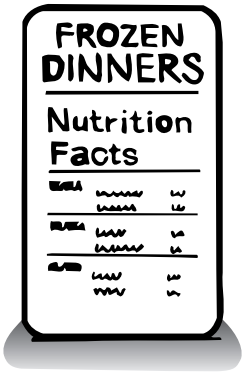
Chapter Science Investigation Name _____

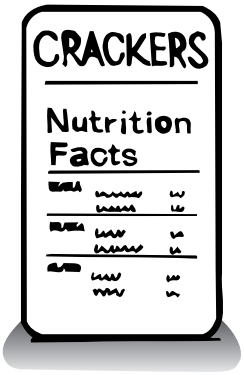
Healthful Snacking

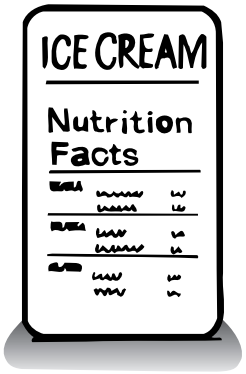
What You Need

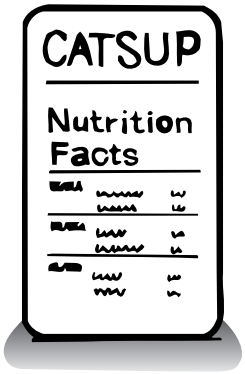


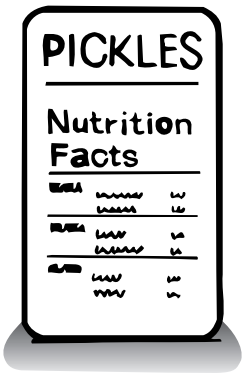
nutritional information on product labels

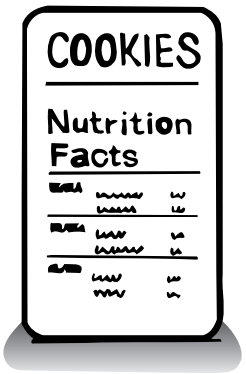


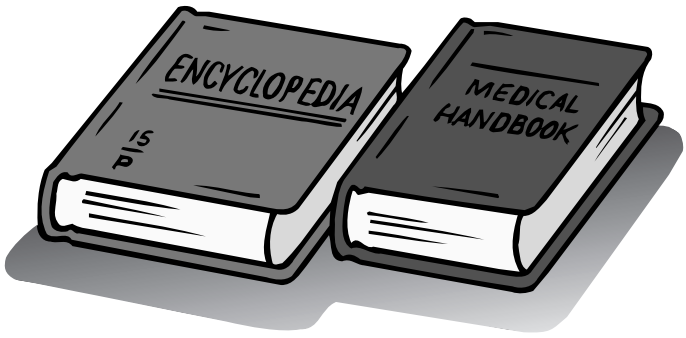












nutritional information from reference sources

Find Out

Do this activity to find out how healthful your snacks are.

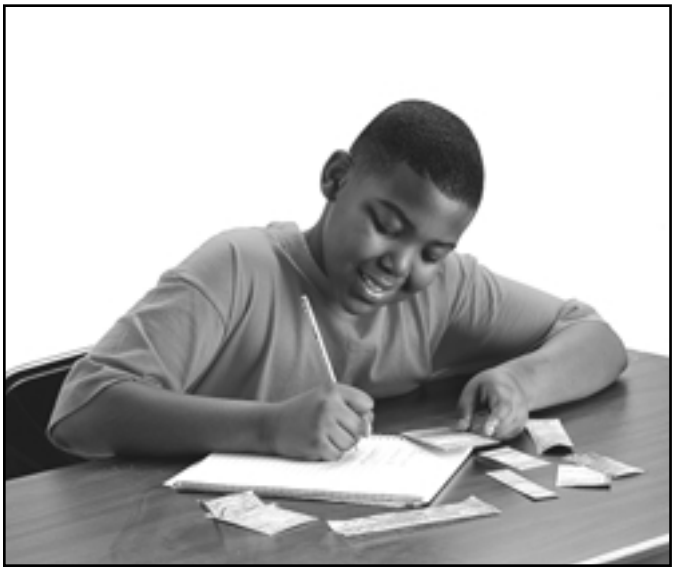
Process Skills

Communicating
Observing
Interpreting Data

Time

- 10–15 minutes daily for two weeks

What to Do



1. **Record** one snack you have each day for two weeks.

2. Find out the percentage of the Daily Value each snack has of fat, sodium, and sugar. **Record** this information on the chart. You will find that most product labels have this information. You also can check nutritional reference material in the library and on the Internet.

3. At the end of the two weeks, select your most healthful snack. Use the nutritional information you recorded in explaining your choice.

Daily Snacks				
		Percentage of Daily Value of		
Day	**Snack**	**Fat**	**Sodium**	**Sugar**
1	Answers on the chart will vary.			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				

My most healthful snack was _____, because

Answers will vary.

Conclusions

1. What was the snack with the highest percentage of the Daily Value of fat? Of sodium? Of sugar?
Answers will vary according to food choices.

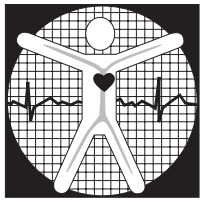
2. What problems in terms of eating a balanced diet might you have if you eat a high percentage of the Daily Value of fat, sodium, or sugar just in your snacks?
Answers should reflect an understanding that if a high amount is consumed at snack time, students may exceed the recommended daily allowance when they eat regular meals.

New Questions

1. In what specific ways could you improve your eating habits by your choices of daily snacks?
Answers may include by trying to limit the percentage of the Daily Value of fat, sodium, and sugar in snacks.

2. How might food producers and grocers help you make better snack choices?
Students may say by providing more nutritional information.

Name _____



ACTIVITY

Investigating Protein in Milk

How much milk is in the beaker?
100 mL

How much liquid was in the milk?
Answers will vary depending on the amount of protein that separates from the milk.

Describe the protein that was left in the cheese cloth. **Record** your observations.

Color	**Texture**
white	sticky or rubbery

Name _____

Conclusions

1. What do you think caused the milk to separate?
The vinegar; some students may also realize that heating the milk contributed to the separation.

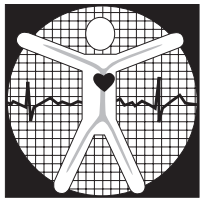
2. How much protein was in your sample of milk?
Determine the percentage of protein in your milk sample by dividing the volume of protein by the volume of milk in your sample.
Answers will vary according to the quantity of protein filtered.

Asking New Questions

1. How is protein important in your diet?
Answers will vary but may include that proteins make up large parts of body tissues and provide the body with substances needed for growth and repair.

2. **Infer** what type of mixture milk is.
colloid, because it contains undissolved particles or droplets, such as protein, that stay mixed in another substance

Name _____



ACTIVITY

Identifying Vitamin C Content

Predict what juices will have vitamin C. List the contents of each test tube in the table below. Place an X in the box for each juice you think contains vitamin C.
Answers may vary.

Which juices do you predict will contain the most vitamin C? Number the juices from 1 to 10, with 1 being given to the juice you think has the least amount of vitamin C and 10 given to the juice you think has the most vitamin C.
Answers will vary.

How many drops of each juice does it take to change the color of the indophenol solution? **Record** the numbers in the data table. Answers will vary.

Test Tube	Kind of Juice	Predict: Which Juices Contain Vitamin C?	Predict: Which Juices Contain the Most Vitamin C?	Number of Drops Needed to Change Indophenol Color
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Name _____

Conclusions

1. How did your predictions compare to what you observed?
Answers will vary.

2. Which juices contain vitamin C? How do you know?
orange, pineapple, lemon, tomato, lime; because 5–10 drops of juice changed the indophenol's color

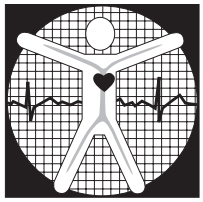
3. Which juices did not contain vitamin C? How do you know?
Because of the results obtained in the activity, they might conclude that apple, cranberry, carrot and vegetable juices contain no vitamin C. No amount of the juices could change the color of the indophenol. However, the apple, cranberry, and mixed-vegetable juices likely contain at least a small percentage of vitamin C.

Asking New Questions

1. Why do you think the amount of vitamin C varies in some fruit juices?
because the amount of vitamin C in the fruits used to make the various juices varies

2. What might be a good way to get vitamin C in your diet without taking vitamin supplements?
Eat a piece of fruit or drink fruit juice during the day.

Name _____



ACTIVITY

Investigating Sugar Content in Foods

Write a **hypothesis** that predicts which foods will contain sugar and which will not.

Hypotheses will vary.

Record the color of the test paper for each food you test.

Colors will vary on the basis of the foods used.

Food	Test Paper Color

Name _____

Conclusions

1. Compare your hypothesis with your data.
Answers will vary on the basis of the predictions made.

2. Which foods contained sugar?
Foods that turned the test paper green contained sugar.

3. Which foods did not contain sugar?
Foods that did not turn the test paper green did not contain sugar.

Asking New Questions

1. Why is it important to test foods for sugar in this activity?
Because many of the foods were being placed in water before they were tested, if the water had sugar in it then all of the other foods would appear to have sugar. The water acted as a control in the experiment.

2. What diseases are associated with sugar intake?
Answers will vary but may include heart disease, hypoglycemia, and diabetes.

