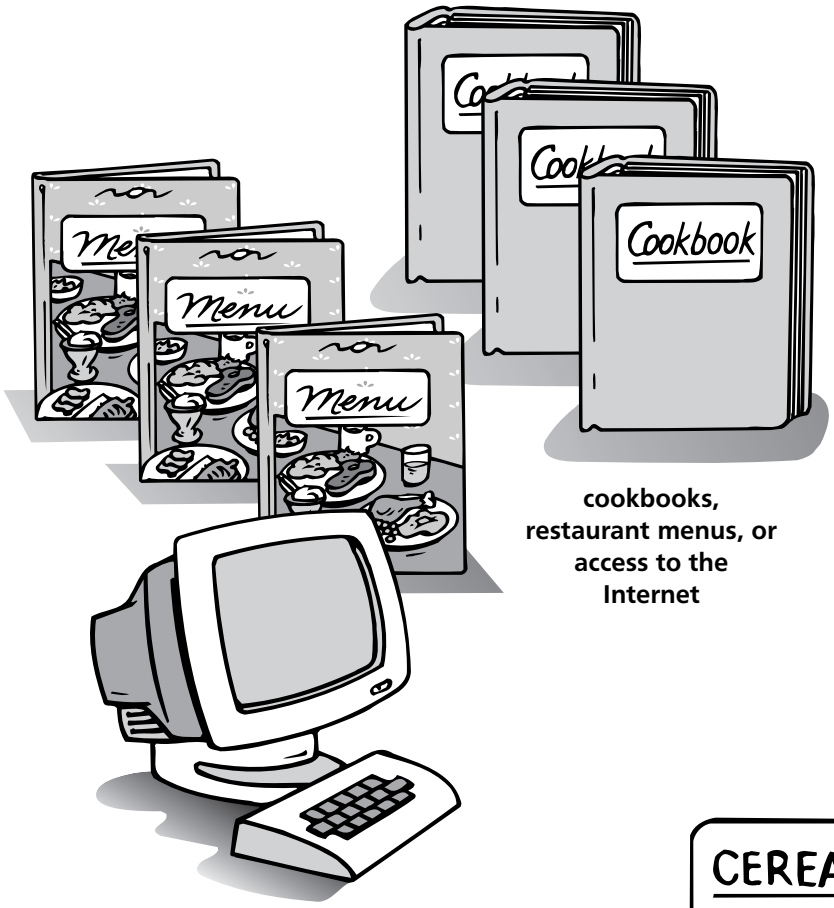
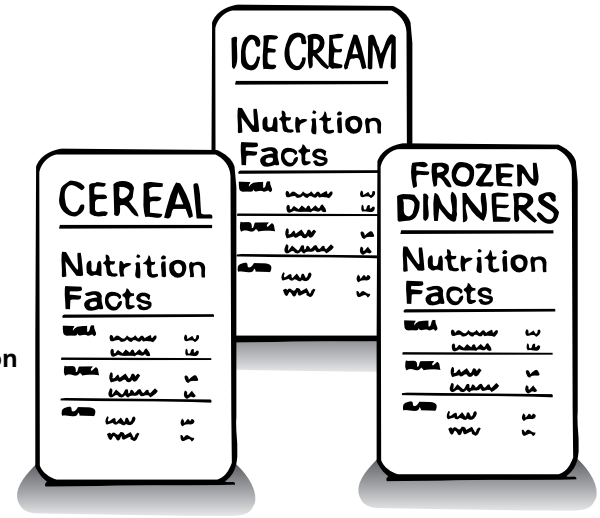
Chapter Science Investigation Name _____

Researching Global Diets

What You Need



cookbooks, restaurant menus, or access to the Internet



nutrition information from various food packages

Find Out

Do this activity to see what people from cultures around the world eat.

Process Skills

Interpreting Data
Predicting
Using Numbers

Time

- One hour once a week for three weeks

What to Do

1. Choose three world cultures, such as Korean, Nigerian, and German, and find out which foods are common in those cultures. You may investigate the cultures by looking in cookbooks, using the Internet, or getting menus from restaurants that serve those particular types of food.

2. Each week, plan a meal that represents typical food from one of the cultures that you chose. Each meal should include a variety of foods.

3. For each meal, **predict** how much total fat, protein, carbohydrates, sodium, calcium, vitamin A, and vitamin C are present.

4. Make a nutrition inventory of each meal that you plan. First, **add** the amount of total fat, protein, carbohydrates, sodium, calcium, vitamin A, and vitamin C in each serving of each type of food. This information is found on all food packages. Then, **add** the amounts for each category to get the total amounts for each meal. **Record** the total amounts on the chart.

5. **Compare** the nutritional value of the three meals.

6. Find the nutritional value of a typical American meal. **Compare** it to the nutritional value of the three meals that you planned.

Comparing the Nutritional Value of a Typical Meal from Four Cultures								
Culture	**Meal Items**	**Total Fat**	**Protein**	**Carbohydrates**	**Sodium**	**Calcium**	**Vitamin A**	**Vitamin C**
American								

Conclusions

1. Analyze which of the four meals contains the most and least fat. Repeat for each nutrition category.
   Answers will vary based on foods studied.

2. Which culture's typical meal seems to be the most healthful overall?
   Answers will vary. Conclusion will depend on amount of fat in a culture's diet, and on the balance in the diet.

New Questions

1. What can we learn about healthful diets from other cultures?
   We can learn new ways to balance our diets. We can learn about new foods.

2. How do you think the way food is prepared affects its nutritional value?
   Accept all reasonable answers. Students should recognize that using fats and oils to prepare foods adds fat and Calories to the food. For example, steamed beans are a good source of low-fat protein. Fried beans have a lot of extra fat in them.

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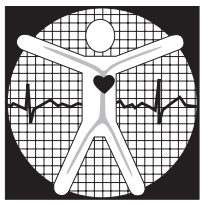

ACTIVITY

Balancing Act

My Menu for One Day

Nutrients	Breakfast	Lunch	Dinner	Snacks
water	Students' menus should include a healthful ratio from all the food groups.			
fat				
carbohydrates				
protein				
minerals				
vitamins				

What I Ate Yesterday

Nutrients	Breakfast	Lunch	Dinner	Snacks
water	Students' menus should accurately reflect what they ate.			
fat				
carbohydrates				
protein				
minerals				
vitamins				

Name _____

Conclusions

1. Which food group provides the most Calories for the day?
Answers will vary, depending on students' menus.

2. Which food group provides the most servings for the day?
Answers will vary, depending on students' menus.

3. Which food group provides the fewest Calories for the day?
Answers will vary, depending on students' menus.

4. Which food group provides the fewest servings for the day?
Answers will vary, depending on students' menus.

5. How healthful are the choices you made for the day's meals?
Answers will vary, depending on students' menus.

Asking New Questions

1. **Compare** your menu with your diet of the day before. How healthful is your normal diet?
Answers will vary, depending on students' diets.

2. **Share** your poster with other class members to see if you can come up with a week or more of healthful meals.
Answers will include a variety of foods.

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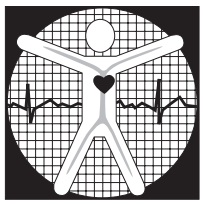

ACTIVITY

Finding Fat, Salt, and Sugar in Your Food

Food Ranking

1. Most Healthful

2. Healthful

3. Least Healthful

Answers will depend on which foods students examine. Most healthful foods will be those with the lowest levels of fat, unsaturated fat, sodium, and sugar.

Name _____

Conclusions

1. Which foods contained the most saturated fat?
Students probably will mention high-fat cookies and pastries, or high-fat snack foods.

2. Which foods contained the most unsaturated fat?
snacks such as pretzels, low-fat cereals

3. Which foods contained the most sodium and sugar?
Foods high in sodium might include: prepared foods such as frozen dinners, regular as opposed to low-salt microwave popcorn, and crackers. Foods high in sugar might include: "junk" cereal, certain fruit juices, and soda.

4. Were foods with high amounts of fat, sodium, and sugar in the least healthful part of your list?
Answers should reflect an understanding that foods high in these ingredients may be unhealthful.

Asking New Questions

1. How did your food rankings compare with your classmates' rankings?
Answers should reflect students' results.

2. Why do you think some products contain large amounts of salt and sugar?
Students probably will say that people are used to foods high in salt and sugar and think they taste better.

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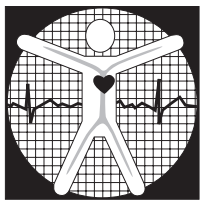

ACTIVITY

Watering Soil

Material	How Much Water Drained Through the Material
sand	Students should find that about the same amount of water drained through the sand as was poured on it; the topsoil sould retain some of the water.
topsoil	

Describe the difference in the amount of water that drained through the sand and the soil.

Student answers should indicate that more water drained through the sand.

Name _____

Conclusions

1. Which material had more water in the bottle after two minutes? Explain why more water passed through that material.
The sand had more water in the bottle. Sand does not retain water very well.

2. **Infer** which material would be better for plants to grow in.
Soil would be better because it retains more water, which plants need for growth.

Asking New Questions

1. What evidence did you use to **infer** which material was better for plant growth?
Answers will vary, but should mention water retention rates.

2. How could plant roots slow the flow of water through the soil or the sand?
Plant roots would absorb some of the water.

3. What could be done to the sand to better allow plants to grow in it?
Nutrients, such as nitrogen and phosphorus, could be added to the sand.