

ACTIVITY

Nutrients for Good Health

Directions: Match each nutrient in the left column with the correct function or functions from the right column. Write the letter(s) of the function(s) in the space provided. Each function will be used at least once. Some nutrients will require more than one letter.

Nutrients	Functions
_____ 1. Carbohydrates	A. Regulating how body tissues grow
_____ 2. Fats	B. Transporting nutrients and waste
_____ 3. Proteins	C. Aiding digestion
_____ 4. Vitamins	D. Supplying energy
_____ 5. Minerals	E. Regulating the process of using energy
_____ 6. Water	F. Repairing injured body tissue
	G. Promoting growth in all body parts
	H. Helping regulate body temperature

Directions: On the lines provided, write the nutrients that perform the functions indicated. Then give an example of a specific activity that involves or is an example of that function.

7. Give energy. _____

Example: _____

8. Build and repair body tissue. _____

Example: _____

9. Keep body processes going. _____

Example: _____

Directions: On the lines provided, give an example of a problem that might result from each of the following during the teen years.

10. Not eating enough fats and carbohydrates. _____

11. Not eating enough calcium. _____

ACTIVITY

Calorie Counting

Directions: For each pair of people described, mark an X in the space next to the person who is most likely to need more calories. Then answer the question that follows.

Pair 1	_____ Rosina is 6. She is growing $1\frac{1}{2}$ inches a year and plays soccer.	_____ Raymond is 52. His weight is stable, and he does not exercise.
Pair 2	_____ Shalauna is 17. Her height and weight are stable. She walks to school.	_____ Malik is 28. He plays professional basketball.
Pair 3	_____ Caitlin is 9. She rides the bus to school and watches a lot of television.	_____ Jeremy is 15. He is on his school's track and tennis teams.
Pair 4	_____ Latesha is 27. She is expecting twins.	_____ Jason is 69. He lives in a nursing home and uses a wheelchair.
Pair 5	_____ Jennifer is 32. She is a National Park ranger and hikes trails daily.	_____ Brett is 21. He is a store clerk. His hobby is computers.

6. What characteristics indicate a need for more calories? _____

Directions: Several people are listed below with their ages and level of activity. Their typical diets have been analyzed to show how many calories they take in each day from carbohydrates, fats, and proteins. Add the calories to find each person's total daily calorie intake. Enter the totals in the spaces provided.

	Josh, 14, active	Robin, 8, active	Rona, 19, active	Carmine, 45, inactive
Carbohydrates	1,200	1,200	700	1,500
Fats	700	700	800	1,100
Proteins	500	350	400	700

7. Josh's total calories: _____ 9. Rona's total calories: _____
 8. Robin's total calories: _____ 10. Carmine's total calories: _____

Continued

Calorie Counting continued

Directions: In the space provided, answer each question using the total calories that you have just calculated and the information in the chart, "Average Calorie Needs," on page 84 of your textbook. (Remember that health experts recommend that 45 to 65 percent of your total calories should come from carbohydrates, 20 to 35 percent from fats, and 10 to 35 percent from proteins.)

11. Who is eating more calories than needed? _____
12. Who is not getting enough calories? _____
13. Whose total calorie intake is about right? _____
14. Who gets the highest percentage of calories from carbohydrates? _____
15. Who gets the lowest percentage of calories from fats? _____
16. Whose diet does NOT have the recommended balance of carbohydrates and fats? _____

Directions: Read the sentences below, and write *nutrient deficiency* or *malnutrition* to indicate which term best describes the situation.

- | | |
|-------|--|
| _____ | 17. Yung-mei suffers from poor teeth and her bones break easily. Her doctor has prescribed pills containing vitamins and minerals. |
| _____ | 18. Karim won't eat citrus fruits or many vegetables that have lots of vitamin C. |
| _____ | 19. A flood has ruined the harvest in a region of Asia. There is little food for anyone, children weigh much less than they should, and many people are very sick. |
| _____ | 20. Shari has cut nearly all fat from her diet. She is very tired and her skin is dry and flaky. |
| _____ | 21. Roberto has been very sick for a long time. He has trouble keeping food down. He has no energy and has lost a lot of weight. |

ACTIVITY

Many Foods, Many Nutrients

Directions: On the line following each of the nutrients below, write the effect that nutrient is likely to have on the body. Then, on the next line, list two food sources containing the nutrient.

1. **Complex carbohydrates:** _____
Sources: _____
2. **Simple carbohydrates:** _____
Sources: _____
3. **Saturated fats:** _____
Sources: _____
4. **Unsaturated fats:** _____
Sources: _____
5. **Complete proteins:** _____
Sources: _____
6. **Incomplete proteins:** _____
Sources: _____
7. **Vitamins A, C, and E:** _____
Sources: _____
8. **Minerals:** _____
Sources: _____
9. **Water:** _____
Sources: _____

ACTIVITY

Good Things in Small Quantities

Directions: Too much of a good thing can have unwanted effects! Match each cause in the left column with the correct possible effect from the right column. Write the letter of the effect in the space provided. Do not use any effect more than once.

Causes	Possible Effects
_____ 1. Too much sodium	A. Body stores excess and substance builds to harmful levels
_____ 2. Too much saturated fat	B. Kidneys overworked
_____ 3. Too much of water-soluble vitamins	C. High blood pressure
_____ 4. Too much of fat-soluble vitamins	D. Increased blood cholesterol

Directions: Each of the following terms describes a group of several vitamins. On the lines provided, list the vitamins that make up each group.

- 5. Antioxidants: _____
- 6. Water-soluble vitamins: _____
- 7. Fat-soluble vitamins: _____

Directions: Answer the following questions in the spaces provided.

- 8. Which minerals help you build healthy bones?

- 9. If you do not get enough of these minerals when you are young, what condition can result in later life?

- 10. What are four good sources of these minerals?

ACTIVITY

Living on Bread and Water and a Lot More!

Directions: To meet your body’s need for water, health experts recommend that you consume about 8 cups of fluid each day. You get some of it from foods you eat, but most of it must come from liquids that you drink—including plain water, fruit juices, milk, and soups. In the spaces provided, record your plan to get enough water in the course of one day.

	Sources of Water	Estimated Amount
Breakfast		
Mid-morning		
Lunch		
Mid-afternoon		
Evening meal		
Mid-evening or bedtime		

Directions: Read the paragraph below about Nina’s health problems. Select words from the list that fit in each numbered space. Write the words in the numbered answer blanks at the bottom of the page.

- amino acids calcium incomplete osteoporosis
- anemic dietary supplements iron phosphorus

Nina was not feeling well. Her doctor performed several blood tests and asked her about her eating habits. He told Nina that her poor diet caused many of her problems. Her bones were not strong, so she needed to increase her intake of (1), (2), and magnesium, or she risked developing (3) when she grew older. Nina’s red blood cells lacked enough oxygen. She was (4) and needed more (5). Since Nina is a vegetarian, the doctor explained that plant protein is (6) because each plant source lacks some (7). To improve Nina’s health, the doctor prescribed some (8) and made an appointment for her to see a registered dietitian.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____

Energy and Calories

Calorie Math



Directions: Read the following descriptions of food. Refer to the chart on page 47 of the textbook. Do the necessary calculation and write the answer on the lines provided.

1. A serving of bagel chips contains 20 grams of carbohydrate, 3 grams of fat, and 3 grams of protein. How many calories would be in the serving of chips?

2. A hamburger has 445 calories. If you add a slice of cheese with 50 calories, how many calories would be in the cheeseburger?

3. A serving of cranberry oat cereal contains 200 calories per serving. Each serving contains three grams of fat. How many calories in the serving come from protein and carbohydrate?

4. A pizza contains 780 calories and serves two people. How many calories are in a serving?

5. A $\frac{1}{2}$ -cup serving of ice cream contains 140 calories. How many calories would be in a $\frac{3}{4}$ -cup serving?

6. A box mix of macaroni and cheese makes three one-cup servings. Each serving is 410 calories. If a person ate half of the prepared mix, how many calories would that serving contain?

7. A $\frac{1}{2}$ -cup serving of prepared stuffing contains 170 total calories. The serving gets 134 calories from protein and carbohydrate. How many grams of fat are in a serving of the stuffing?

Energy and Calories

Exercise and Calories

Directions: Read each situation described below. Assume all students in the situations below weigh about 140 pounds. Answer the questions on the lines provided.

1. Katrina has been studying all evening. She wonders if she burned any calories just sitting at a desk. How would you calculate how many calories she used? How would her basic metabolic rate (BMR) affect the answer?

2. How many calories will Damon use if he runs fast for 30 minutes?

3. How many calories will Dana use if she walks briskly for 10 minutes to warm up, then plays an hour of basketball?

4. Louie has been cleaning his family's apartment and garage for the last two hours. He gets out two bagels to eat as a snack. He notices that the bagels each contain 150 calories. He wonders if he burned off more calories than that cleaning. Did he? Explain your answer.

5. Moira and her cousin have started riding their bikes after school. They ride for about 25 minutes on Tuesdays and Thursdays. Moira assumes she can have a high-calorie snack, such as chocolate cake, on those days, in addition to her regular meals and snacks. She assumes the exercise cancels out the chocolate cake calories. Is she correct?

6. Jett is starving after football practice. Explain why he is so hungry.

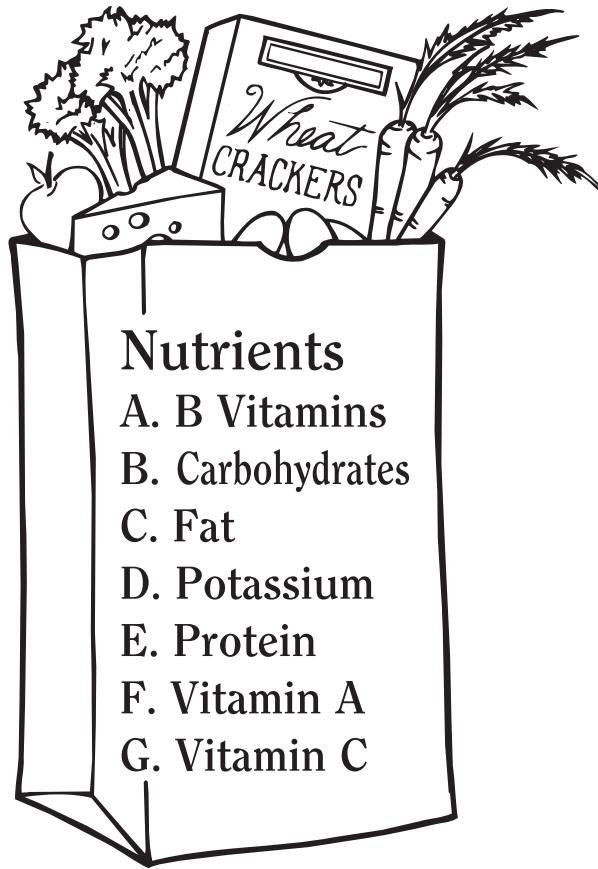
Meet the Nutrients

Nutrient Match Up

Directions: Match each nutrient function in the left column with the correct nutrient from the right column. Write the letter of the nutrient in the space provided. Each nutrient will be used at least once.

Nutrient Functions

- ___ 1. Cushions vital organs
- ___ 2. Provides energy for the body
- ___ 3. Builds new cells
- ___ 4. Heals wounds
- ___ 5. Repairs injured cells
- ___ 6. Keeps a normal heart beat
- ___ 7. Keeps skin healthy
- ___ 8. Keeps nerves and muscles healthy
- ___ 9. Helps fight off disease
- ___ 10. Insulates body from heat and cold
- ___ 11. Promotes good night vision



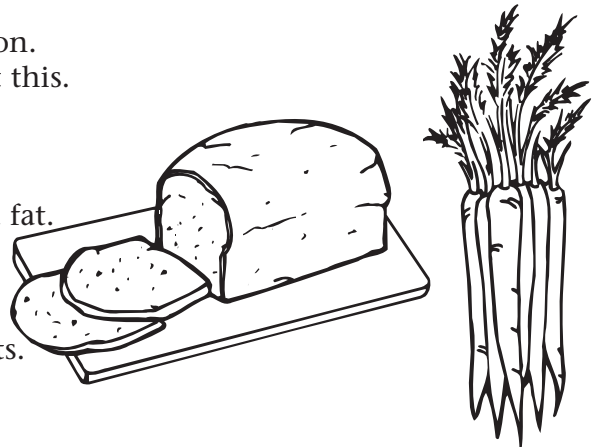
Meet the Nutrients

Puzzling Over Nutrients

Directions: Fill in the crossword puzzle by placing the answer to each clue in the appropriate space.

Across

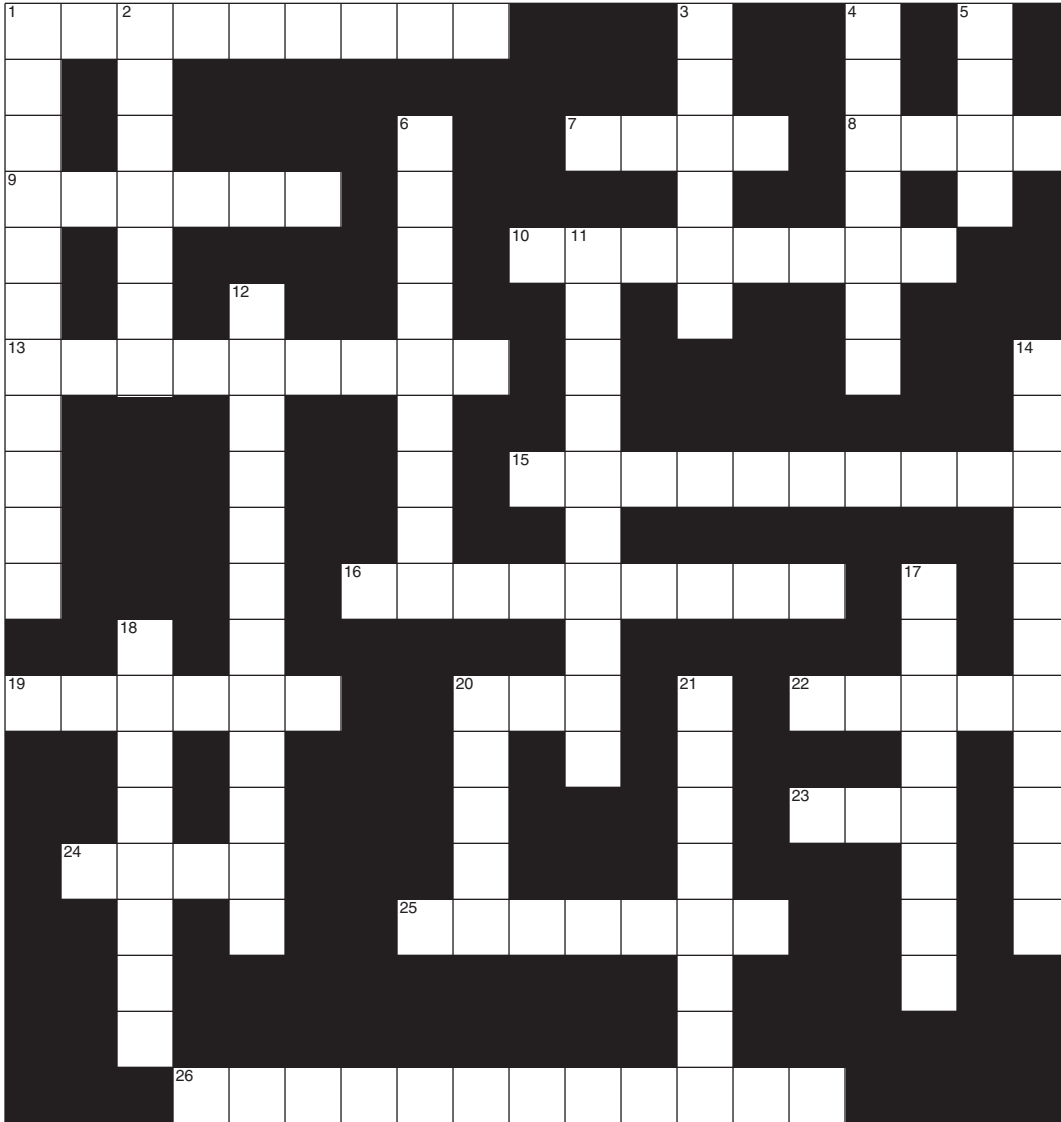
1. Fats that are usually solid at room temperature.
7. A source of protein.
8. A food that contains natural sugars.
9. Proteins from this are incomplete.
10. Nutrients used for many body processes.
13. An example of a mineral.
15. Protein is made of these.
16. What you gain by learning about nutrients.
19. A type of food high in complex carbohydrate.
20. Nutrient needed for healthy skin and insulation.
22. The body can live for only a few days without this.
23. A food high in added sugar.
24. A type of food with complete protein.
25. Nutrient that repairs body cells.
26. A kind of oil that has been turned into a solid fat.



Down

1. Pills, powders, or liquids that contain nutrients.
2. An example of a B vitamin.
3. An example of fat.
4. Type of carbohydrate found in starch.
5. An example of a saturated oil.
6. The process of breaking down food in the body.
11. Proteins that lack one or more of the essential amino acids.
12. The body's main source of energy.
14. Fats that are liquid at room temperature.
17. Nutrients that help other nutrients work properly.
18. Protein is needed to make these in the body. (2 words)
20. Plant material that does not break down during digestion.
21. A chemical the body needs to work properly.





Meet the Nutrients

Nutrients for Health

Directions: Read each situation described below. Answer the questions on the lines provided.

1. Cara's grandmother is in the hospital with a broken hip. The doctor says her grandmother's bones are very weak and brittle. Cara's mother is concerned about the strength of her bones and Cara's. What nutrients would be especially important in their diets? How might they alter their diets to help strengthen their bones?

2. Jeremy had a skateboarding accident that gave him many cuts, scrapes, and bruises. What nutrient is important in helping him heal? How could he get more of this nutrient in his diet?

3. Chandra has had trouble lately seeing at night. What nutrient in her diet might help improve her night vision? How could she get more of the nutrient in her food?

4. Derrick has been told that his cholesterol is high for a teen. If he gets it under control soon, it probably will not create health problems for him. With what nutrient is cholesterol associated? How could Derrick alter his diet to help reduce his cholesterol?
