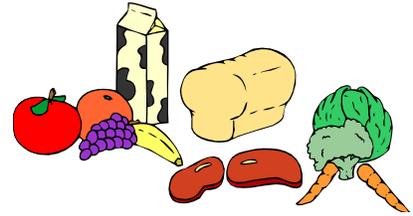


# A HEALTHY MIX

**THEME:** Balance Your Day With Food and Play

**NUTRITIONAL FOCUS:** Food Groups

**GRADE LEVEL:** 6



## **OBJECTIVES:**

1. Students will gain an understanding of the *Dietary Guidelines for Americans* and the *Food Guide Pyramid* by reading, participating in class discussions, and completing activities.
2. Students will demonstrate problem-solving ability by using information to solve problems.
3. Students will demonstrate writing skills by writing paragraphs.
4. Students will be able to locate information by using research skills.
5. Students will include more activity in their day as a result of becoming aware of the importance of activity in a healthy lifestyle.
6. Students will choose a variety of healthy foods from each of the food groups in their daily diet as a result of becoming aware of the recommendations of the *Dietary Guidelines for Americans* and the *Food Guide Pyramid*.

**CURRICULUM CONNECTION:** Health, Math, Physical Education, Reading, Writing

## **Health Education Standards**

**Standard Three:** Students will understand the benefits of practicing health-enhancing behaviors which reduce health risks.

**Indicator One:** Students will evaluate health-enhancing behaviors which promote wellness.

**Indicator Two:** Students will evaluate strategies for achieving and maintaining personal health goals.

**Indicator Three:** Students will evaluate the role of personal responsibility in health-related decisions.

## **Listening and Viewing Standards**

The students will:

3. summarize, respond to, and evaluate group activities.

## **Measurement Standards**

The students will:

2. convert units of measure within a measurement system.
3. explore the formulas that assist in measurement situations.
8. apply units or combinations of units for various measurement situations.

## **Number Sense Standards**

The students will:

1. represent numbers in a variety of equivalent forms.
4. solve problems involving arithmetic operations with fractions and mixed numbers.

### **Patterns, Relations, and Functions Standards**

The student will:

4. recognize, describe, and extend a variety of numeric and geometric patterns.

### **Physical Education Standards**

**Standard Five:** Students will understand that physical activity provides opportunities for enjoyment, challenge, self-expression, social interaction, and employment.

**Indicator One:** Students will evaluate how physical activity serves as a vehicle to provide opportunities for self-expression and personal growth.

### **Reading Standards**

The student will:

3. ask questions and make predictions about information or the message found in text.
5. use background knowledge and experience to comprehend text.
16. determine the quality of literary works based on established criteria.
20. read to acquire information for different purposes.

### **Speaking Skills**

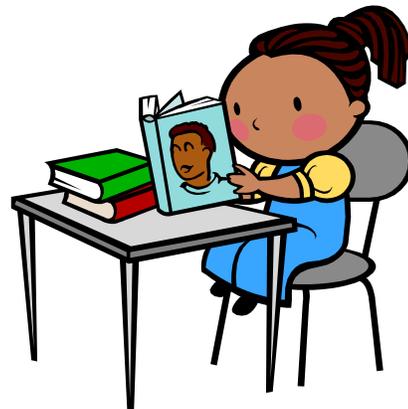
The student will:

1. emphasize important points to assist the learner in following main ideas and concepts.
2. select a focus, organization, and point-of-view for oral presentations.
3. present informative reports that pose relevant questions and develop the topic with facts, details, and examples.
6. present information in conversational and small group settings.

### **Writing Standards**

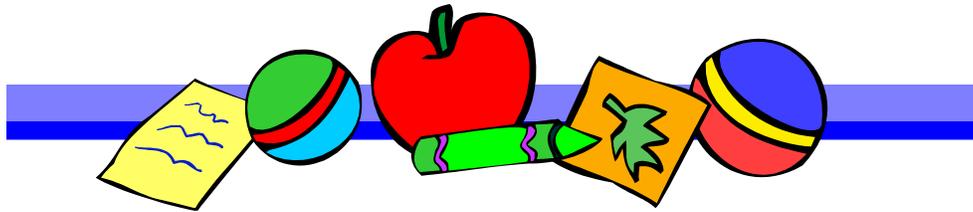
The students will:

3. use writing as a means to paraphrase/summarize what is read/heard.
6. use words that are expressive, appropriate, and precise to provide clarity and focus for the reader.
17. edit final copies for correct spelling, capitalization, and punctuation.



**MATERIALS NEEDED:**

- Parent Letter (included in lesson)
- Student Handout *Mixing the Six* (included in lesson)
- Student Handout *Chart the Six* (included in lesson)
- Student Handout *Don't Forget the Water* (included in lesson)
- *Food Guide Pyramid* (included in lesson)
- Student Handout *Food Celebrations* (included in lesson)
- Student Handout *Celebration Problems* (included in lesson)
- Student Handout *Hamburgers Made to Order* (included in lesson)
- Student Handouts (2) *Let's Make a Hamburger* (included in lesson)
- Construction paper in yellow, brown, red, white, and green
- Rulers
- Scissors
- Paper clips
- Compass
- Glue
- *Cheese Facts* (sentences included in lesson)
- 25 four- inch squares of yellow construction paper for making *Cheese Facts Puzzle*
- Transparent tape
- *Little House in the Big Woods* by Laura Ingalls Wilder
- Student Handouts (2 pages) *Think Tasks* (included in lesson)
- Parent Survey (included in lesson)



## BACKGROUND INFORMATION:

The *Dietary Guidelines for Americans* recommend letting the *Food Guide Pyramid* guide your food choices. Different foods contain different nutrients and other healthful substances. No single food can supply all the nutrients in the amounts you need. To make sure you get all the nutrients and other substances you need for good health, build a healthy base by using the *Food Guide Pyramid*. Choose the recommended number of daily servings from each of the five major food groups. Most of the daily calories should come from grains, fruits and vegetables, low-fat or non-fat dairy products, and lean meats or meat substitutes.

Choose a variety of foods for good nutrition. Since foods within most food groups differ in their content of nutrients and other beneficial substances, choosing a variety helps you get all the nutrients and fiber you need. It can also help keep your meals interesting from day to day.

The *Dietary Guidelines for Americans* recommend choosing a diet that is low in saturated fat and cholesterol and moderate in total fat. Additionally, the dietary guidelines recommend trimming fat from meat to reduce the amount of saturated fat. Ground meat and fatty processed meats, marbled steaks, and cheese should be limited. Eating foods high in saturated fat for a special occasion can be followed by returning to foods that are low in saturated fat the next day.

The *Dietary Guidelines for Americans* has recommendations concerning both salt and sugar in the diet. They emphasize choosing and preparing foods with less salt. At present, the firmest link between salt intake and health relates to high blood pressure. Additionally, eating less salt may decrease the loss of calcium from bone. One way to decrease daily salt intake is to go easy on condiments such as ketchup, mustard, pickles, and olives. These can add a lot of salt to your food. Additionally, beverages and foods that are high in added sugars should be limited.

The *Eat Smart. Play Hard.*<sup>TM</sup> campaign sponsored by the United States Department of Agriculture places special emphasis on the importance of balancing each day with food and play. Healthy eating habits and physical activity work together for better health. Making healthy food choices helps kids to grow, develop, and be ready to learn. Being physically active is fun and helps you feel good, too!

## PROCEDURES:

1. Share the Background Information with the class. Emphasize that just as a variety of foods are mixed together to make a balanced diet, food and activity should be mixed together for a healthy lifestyle.
2. Inform the class that they will be studying a unit called *A Healthy Mix*. Ask students to state what they already know about this topic and ask students to discuss what they will expect to learn in the unit.
3. Provide students *Mixing the Six* to read and answer the questions at the bottom of the page. Discuss the content of the selection.
4. Ask students to use information from *Mixing the Six* to complete *Chart the Six*. Ask students to analyze the advantages of charting the information as compared to reading it in the text.
5. Provide *Don't Forget the Water* and review converting the measurements listed in the box. Review fractions and decimals. Assign students to solve the problems for homework. Encourage students to use calculators and get their parents check their work.
6. Lead the class in discussing the importance of choosing a variety of foods in order for the body to have the appropriate amounts of the six nutrients. Why is the *Food Guide Pyramid* an important guide to follow when choosing foods each day? Distribute a *Food Guide Pyramid* and review the food groups and the recommended number of servings from each group.
7. Provide *Food Celebrations* to students. Allow students to work together in learning pairs to complete the chart. In the activity, students have certain guidelines to follow concerning when they can celebrate foods. Instruct students to complete the chart.
8. Since there are no celebrations on the calendar for December, challenge students to identify a food that is important in South Dakota to celebrate in December. The food choice may be one that is already on the calendar or one that has not been included. Suggestions include soybeans and corn. Challenge students to research the production of these and other food products in the state.
9. Ask students to write a persuasive paragraph on their own paper to defend their decision to celebrate a special South Dakota food in December. Provide reminders to students:
  - ✓ Put thoughts in order.
  - ✓ Provide enough supporting detail.
  - ✓ Be descriptive.
  - ✓ Think about what you want others to know and feel after reading the paragraph.
  - ✓ Check for sentence structure and mechanics.
10. Discuss the importance of editing a paragraph. Lead the class in comparing editing a paragraph to making changes in decisions. The first plan is not always the best plan. Instruct students to edit their paragraphs for complete sentences, capitalization, punctuation, organization, and style.

11. Allow students to read their paragraphs in class. As each paragraph is read aloud, write the suggested food to be celebrated on the chalkboard. After all paragraphs have been read, ask students to consider the information provided in the presentations and vote for one food that should be celebrated in December in South Dakota.
12. Provide *Celebration Problems* for students to solve after completing the *Food Celebrations* activity. Allow students to compare answers and check with a partner for accuracy.
13. Lead the class in discussing how food choices often include a mix of foods from different food groups. Ask students to name examples such as pizza, sandwiches, and casseroles.
14. Identify the hamburger as one of many foods that includes a combination of foods from the food groups. Discuss the food groups represented in a hamburger.
15. Share the following information with the class:

Meat, which is part of the “Meat, Poultry, Fish, Dry Beans, Eggs, & Nuts Group” is an excellent source of protein and several other nutrients. Although there are many kinds of meat, Americans eat more beef than any other meat. Some common types of beef are ribs, roast, steak, and ground beef. On the average, Americans consume about 64 pounds of beef each year. Of the 64 pounds of beef consumed each year, almost one-half of the beef consumed is in the form of ground beef. Ground beef is sometimes called hamburger meat but it can be used in many ways besides for making hamburgers.

About one-fourth of all the beef consumed in the United States is in the form of hamburgers. Americans consume 25 billion hamburgers every year. Americans crave these patties of ground beef on a bun. The demand for hamburgers is so high that food chains specialize in producing them!

Beef comes from cattle. Cattle and calves are the top agricultural commodity in the United States according to the cash value. Cattle and calves are also important in South Dakota. In terms of cash value, this is a leading agricultural commodity in the state. South Dakota ranks as the eighth leading cattle-producing state in the nation.

16. Discuss different combinations of foods that can be used to make a hamburger. Provide *Hamburgers Made to Order* for students to complete.
17. Lead the class in discussing how the tomato is officially defined as a fruit but commonly used as a vegetable. Challenge students to use research skills to find out why!
18. Share information with the class to consider when making food choices for a hamburger.

The *Dietary Guidelines for Americans* emphasize choosing and preparing foods with less salt. At present, the firmest link between salt intake and health relates to high blood pressure. Additionally, eating less salt may decrease the loss of calcium from bone. One way to decrease daily salt intake is to go easy on condiments such as ketchup, mustard, pickles, and olives. These can add a lot of salt to your food.

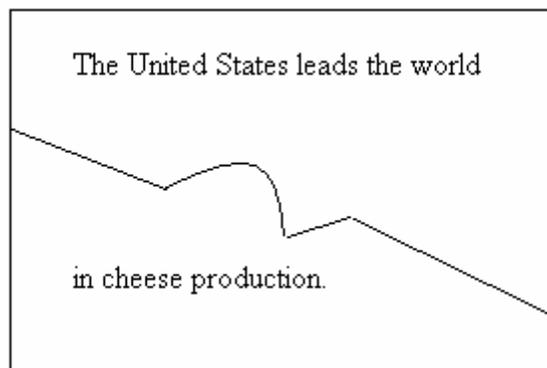
19. Allow each student to choose a partner to complete the two *Let's Make a Burger* tasks. Provide each set of partners the two tasks for the assignment and allow time for the completion of the hamburgers.

**Note:**

The cheese on *Task One* should be 3 X 3 ½ inches.

The cheese on *Task Two* should be a 3 ½ inch square.

20. Discuss cheese as a food choice for a hamburger.
21. Ahead of time, make "slices of cheese" by cutting yellow construction paper into four-inch squares. Cut apart the sentences on *Cheese Facts*. Cut each sentence strip into two sections. Using transparent tape, tape the two sentence sections on a construction paper square. Cut each cheese square into a jigsaw puzzle shape so the sentence is divided in two parts. Randomly, pass out cheese puzzle pieces to students. They must circulate in the classroom to find the matching pieces of cheese. When everyone has located the matching pieces, ask students to read to read the sentence facts from their pieces of cheese to the class.



22. Assign students to accompany their parents to the grocery store and compile a list of the various kinds of cheese marketed. Allow a week for students to complete this activity and follow with a sharing of findings. List the kinds of cheese named by students on the chalkboard and provide others as follows:

Cottage Cheese	Cheddar	Swiss	Parmesan
Cream Cheese	Romano	Mozzarella	Monterey Jack
Blue Cheese	Roquefort	Münster	American

23. Ask each student to choose one kind of cheese to research. Research may include using the Internet, encyclopedias, books and general reference materials in the library. Each student should give an oral presentation to the class to share the information.

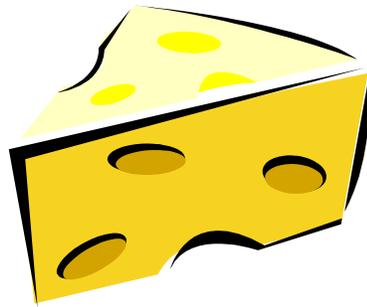
24. Share with the class that Dr. Louis Pasteur was a scientist who discovered the process of pasteurization. Milk and milk products use this process today. Ask students to research his discovery. Direct students to find answers to these questions:
  - A. What diseases can be transmitted through unpasteurized milk?
  - B. Describe the modern pasteurization process.
  - C. What other food groups use the pasteurization process?
  - D. What other discoveries did Dr. Pasteur make that are important to us today? (Rabies vaccine)
  - E. Describe the effects of his discovery on society.
25. When students have collected information on Dr. Louis Pasteur, allow time for class presentations.
26. Ask the class to define *rennet*. Read pages 186-190 of *Little House in the Big Woods* by Laura Ingalls Wilder to the class. As the selection is read, ask students to listen for the definition of *rennet* in the selection. (Rennet is a substance that contains enzymes from a calf's stomach that is used to make cheese.) Lead the class in discussing the steps in making cheese in the story. Encourage them to read the complete book on their own.
27. Discuss other Laura Ingalls Wilder books that the students may have read. Encourage students to read any of her books that they may not have read in earlier grades. Discuss the variety of foods (or lack of a variety) that students can recall from any of the stories. How did the daily diet differ in pioneer days to what it is today?
28. Ask students to recall activities in any Laura Ingalls Wilder books that they may have read. Encourage students to read any of her books that they may not have already read in earlier grades to find examples of physical activities in the stories. Lead the class in comparing daily chores and the work required in pioneer days to modern day.
29. Review the importance of including activity in each day. Inform the class that kids need at least one hour of physical activity each. Discuss ways that more activity can be included. Write suggestions on the board as students identify activities. Emphasize that activity does not always have to be playing a game. Activity can also be working. Ask the class to name ways that they can include more activity in their day by helping out with chores at home such as walking the dog, mowing the grass, or cleaning the house.
30. Assign students to select a chore to do at home that includes physical activity. After doing the chore for a few days, ask students to write a descriptive paragraph about the work and physical activity involved in the chore. The paragraph should concentrate on the benefits of doing the chore in terms of activity and responsibility in helping at home.

31. Divide the class into learning pairs. Provide each learning pair with one set of *Think Tasks*. Ask the students in each learning pair to cut apart the tasks making four separate tasks to complete. One student should solve *Task #1* and the other student should solve *Task #2*. One student should solve *Task #3* and the other student should solve *Task #4*. When the problems are completed, ask students to share their problems and solutions with each other. Each student should teach the other one what processed was used to determine the answer.
32. To celebrate *A Healthy Mix*, provide hamburger samples from two different fast food chains. Cut the hamburgers into sample-size pieces. Provide each student with a sample of each hamburger. After tasting the hamburgers, direct students to write a paragraph comparing the two hamburgers. Instruct students to use supporting details to compare the two hamburgers.
33. Send home the Parent Survey to evaluate the success of the *A Healthy Mix* unit.

#### **EXTENSION ACTIVITIES:**

1. Provide students the Background Information as a handout. Instruct students to read the information and identify main ideas and supporting details.
2. Ask students to analyze a week's menu from the school cafeteria. What conclusions can be draw concerning the variety of foods? What conclusions can be drawn concerning the food groups on the menu?
3. Plan a field trip to a local fast food chain to observe the production of hamburgers. Ask students to collect information to answer the following:
  - A. Notice the sales of hamburgers. What conclusion can be made based on the demand for the hamburger?
  - B. Analyze the menu. How many varieties of sandwiches, beverages, vegetables, fruits, and dessert items are offered? Does the restaurant offer a menu according to the recommendations of the *Food Guide Pyramid*?
  - C. What types of advertising are evident?
  - D. Are there toys or free items being offered? Why or why not?
4. Ask students to vote for their favorite hamburger chain and construct a graph of the results. Display the graph with the caption "Hamburger Choices." Discuss with the class the individual taste preferences involved.
5. Lead the class in discussing food preservation. Discuss drying food as an important method of food preservation used by Native Americans as well as the early settlers of the United States. Make beef jerky in class to demonstrate meat preservation in the early years. To make the beef jerky, use very lean flank steak that is partially frozen so it will be easier to cut. Cut the meat into thin strips and dip in teriyaki sauce. Arrange the strips in a food dehydrator and process until they are thoroughly dry. They should be shriveled and brittle when cooled. This will take several hours to complete.

6. Take a field trip to the farms to learn about cattle production in South Dakota. As an alternative, ask a farmer or rancher to speak to the class about cattle production. Contact the county extension office for additional resources.
7. Conclude the cheese research with a tasting party. Provide samples of cheese for students to taste. Students will then vote for their favorite cheese and construct a class bar graph from the results. Using information from the completed graph, discuss the following questions:
  - A. How many students participated in the cheese- tasting party?
  - B. Expressed as a fraction, what part of the class voted for each selection?
  - C. Which category has the greatest fraction of the class?
  - D. Expressed as a fraction in simplest form, what part of the class voted for each selection?
  - E. Expressed as fractions in simplest form, arrange the results of the survey from least to greatest. (Example: If there were 17 members of the class and the frequencies were 2,3,4,8 in the categories, the fraction of the class choosing each category would be  $\frac{2}{17}$ ,  $\frac{3}{17}$ ,  $\frac{4}{17}$ ,  $\frac{8}{17}$ )



## EVALUATION:

## Participation

- Did students read *Mixing the Six*?
- Did students work together in learning pairs to complete the *Let's Make a Hamburger* tasks?
- Were students able to locate matching puzzle pieces to complete sentences about cheese?
- Did students participate in the class discussions?
- Did students create hamburgers using different combinations of food?
- Did students listen attentively to reading selections?
- Did students participate in class presentations based on researched topics?

## Skills/Knowledge

- Were students able to provide correct responses to *Mixing the Six*?
- Were student able to correctly complete *Chart the Six*?
- Were students able to accurately solve problems about water consumption?
- Did students accurately complete *Food Celebrations*?
- Did students accurately complete *Celebration Problems*?
- Were students able to write, edit, and revise paragraphs?
- Were students able to find solutions to *Think Tasks* and explain solutions to the class?

## Behavior

- Did students include more physical activity in their day as determined by the Parent Survey?
- Did students make smart decisions in their daily food choices as determined by the Parent Survey?
- Did students perform a chore at home?

## ACKNOWLEDGMENTS:

*Nutrition and Your Health: Dietary Guidelines for Americans*

U. S. Government Printing Office  
Superintendent of Documents  
Mail Stop: SSOP  
Washington, D.C. 20402-9328

### **Eat Smart. Play Hard.™**

USDA Food and Nutrition Service  
3101 Park Center Drive RM 1014  
Alexandria, VA 22302-9943

### *Farm Facts*

American Farm Bureau Federation  
225 Touhy Avenue  
Park Ridge, IL 60068

National Cattlemen's Beef Association

<http://www.teachfree.com/student/dryingfd.html>

Oklahoma Ag in the Classroom, Department of Agricultural Education,  
Communications and 4-H Youth Development, Oklahoma State University,  
Stillwater, OK 74078

### *The Problem Solver*

Creative Publications  
Two Prudential Plaza  
Chicago, IL 60601



Dear Parents,

Our class is beginning a study called *A Healthy Mix*. Our study will concentrate on choosing a variety of foods from the *Food Guide Pyramid* and including more physical activity in each day.

Kids need at least one hour of physical activity each day. Adults need at least  $\frac{1}{2}$  hour of physical activity each day. Being physically active each day has many benefits:

- It increases fitness levels and keeps the heart and lungs healthy.
- It builds and maintains healthy bones, muscles, and joints.
- It help control weight to decrease the risk of many diseases.
- It boosts energy and promotes sound sleep.
- It helps everyone feel good about themselves and happier in general.

*Eat Smart. Play Hard.™*

If you would like to become involved in this study, read the suggestions and check the ones that you are willing to do to help reinforce our lessons.

\_\_\_\_\_ Your child has been assigned to visit a grocery store to locate the names of different varieties of cheese. This assignment will require that you take your child with you when you shop for groceries. Taking your children with you when you shop for groceries is a good way to encourage kids to help plan healthy meals and will also give them the opportunity to use knowledge learned in this study.

\_\_\_\_\_ We will mention some of the foods that are important to agriculture in South Dakota. Perhaps you could help arrange a field trip to a farm or know someone that could speak to the class about agriculture in our state. Please let me know if you can help.

\_\_\_\_\_ At the end of our study, we have a hamburger-tasting party planned. We will have sample-size pieces of hamburgers from two different food chains. Students will be asked to taste and compare the two kinds of hamburgers. Students will be asked to write a paragraph comparing the two hamburgers. If you would like to be one of the sponsors for the hamburger party, please let me know. We will need one hamburger for each student in the class. Perhaps, you might enjoy visiting with us on that day, also.

\_\_\_\_\_ Make family time an active time and plan activities for all family members to enjoy.

\_\_\_\_\_ Encourage less TV watching and more activity.

\_\_\_\_\_ Your child has a homework activity that includes selecting a chore to do at home. Please be prepared to offer suggestions for helping at home if your child asks for your advice. Your child will be assigned to do the chore for a few days before writing a paragraph that describes the chore and the benefits of helping at home.

We are looking forward this study. Thank you for being a part of our learning team!

Sincerely,

## MIXING THE SIX

People need many different nutrients to stay healthy. No one food supplies all the essential nutrients in the amounts you need so it is important to eat foods from each of the five major food groups each day to stay healthy. There are six nutrients that the body needs:

1. Protein— Protein is the main component of cells in the human body. It is needed for growth, maintenance, and replacement of body cells. Protein also provides energy for the body. Some food sources for protein are meats, eggs, dried peas and beans, and nuts.
2. Carbohydrates— Carbohydrates include starches, sugars, and dietary fiber. They supply the body with energy, fiber, and aid in the digestion of fats. Some food sources of carbohydrates are bread and cereal.
3. Fats— Fats provide energy. They also transport and absorb some vitamins, cushion vital organs in the body, serve as protection for nerves and blood vessels, and makeup part of the structure of body cells. Some food sources of fats are oils, salad dressings, and meats.
4. Vitamins— Vitamins help release energy from carbohydrates, fats, and proteins. They also fight infection and disease. Vitamins help keep us healthy. Some food sources are fruits and vegetables.
5. Minerals— Minerals are used to build strong bones and teeth. They help regulate body processes. Some food sources are milk products, vegetables, meats, and enriched cereals.
6. Water— Water is often called the “forgotten nutrient.” Water helps to transport nutrients, remove wastes, and regulate body temperature. We get water from beverages we drink and from foods we eat. In addition, it is recommended that the daily diet include at least eight 8-ounce glasses of water per day.

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### Answer the questions after reading about *The Big Six*:

1. Which three nutrients provide energy for the body?
2. What is the main component of cells in the human body?
3. Which nutrient cushions vital organs in the body?
4. Which nutrient helps to regulate body temperature?
5. Which nutrient supplies fiber?
6. Which nutrient helps release energy from other nutrients?

## **MIXING THE SIX**

1. Which three nutrients provide energy for the body?  
*protein, carbohydrates, fat*
2. What is the main component of cells in the human body?  
*protein*
3. Which nutrient cushions vital organs in the body?  
*fat*
4. Which nutrient helps to regulate body temperature?  
*water*
5. Which nutrient supplies fiber?  
*carbohydrates*
6. Which nutrient helps release energy from other nutrients?  
*vitamins*

### CHART THE SIX

Directions: Read *The Big Six* to find information to fill in the chart.

Nutrient	Purpose of Nutrient	Some Food Sources

## CHART THE SIX

**Directions:** Read *The Big Six* to find information to fill in the chart.

<b>Nutrient</b>	<b>Purpose of Nutrient</b>	<b>Some Food Sources</b>
<i>Protein</i>	<i>growth, maintenance, and replacement of cells provides energy main component of cells</i>	<i>meats, eggs, dried peas and beans, nuts</i>
<i>Carbohydrates</i>	<i>supply energy, fiber, aid in digestion of fats</i>	<i>bread and cereal</i>
<i>Fats</i>	<i>provide energy, transport and absorb some vitamins, cushion vital organs, protect nerves and blood vessels, makeup part of the structure</i>	<i>oils, salad dressings, meats</i>
<i>Vitamins</i>	<i>help release energy fight infections and disease help keeps us healthy</i>	<i>fruits and vegetables</i>
<i>Minerals</i>	<i>build strong bones and teeth regulate body processes</i>	<i>milk products, vegetables, meats, enriched cereals</i>
<i>Water</i>	<i>transports nutrients, removes wastes, regulates body temperature</i>	<i>foods we eat, beverages we drink and from drinking water</i>

**DON'T FORGET THE WATER**

**Directions:** Use the information in the box to solve each problem. Show your work.

Water is often called the “forgotten nutrient.” It is recommended that the daily diet include at least eight 8-ounce glasses of water per day.

**Water Measurement**

8 ounces = 1 cup

2 cups = 1 pint

2 pints = 1 quart

2 quarts = 1 gallon

4 quarts = 1 gallon

1. Sam and Andrew took a five-gallon cooler full of water with them on a camping trip. Sam drank 12 cups of water each day from the cooler. Andrew drank 2 quarts each day from the cooler. They returned home when they have consumed all of the water. How many days were Sam and Andrew camping?
2. There are 30 days in November and 31 days in December. If each member of a family of five drinks the recommended amount of water each day, how many gallons of water will the family consume in all during November and December? Give the answer using decimals and change the decimal to a fraction.
3. If a person drinks the recommended amount of water each day, how many gallons of water will be consumed in 15 days? Give the answer using decimals and change the decimal to a fraction.
4. A year has 365 days. If a person drinks the recommended amount of water each day, how many gallons of water will a person consume in one year? Give the answer using decimals and change the decimal to a fraction.

## DON'T FORGET THE WATER

**Directions:** Use the information in the box to solve each problem. Show your work.

Water is often called the “forgotten nutrient.” It is recommended that the daily diet include at least eight 8-ounce glasses of water per day.

### Water Measurement

8 ounces = 1 cup

16 ounces = 1 pound

2 cups = 1 pound

2 cups = 1 pint

2 pints = 1 quart

4 quarts = 1 gallon

1. Sam and Andrew took a five-gallon cooler full of water with them on a camping trip. Sam drank 12 cups of water each day from the cooler. Andrew drank 2 quarts each day from the cooler. They returned home when they had consumed all of the water. How many days were Sam and Andrew camping?

*2 quarts + 3 quarts = 5 quart used each day*

*5 gallons in all X 4 quarts in a gallon = 20 gallons to start with*

*20 gallons ÷ 5 quarts used each day = 4 days*

2. There are 30 days in November and 31 days in December. If each member of a family of five drinks the recommended amount of water each day, how many gallons of water will the family consume in all during November and December? Give the answer using decimals and change the decimal to a fraction.

*5 people X 8 cups per day = 40 cups per day*

*40 cups per day X 61 days = 2440 cups in November and December*

*2440 cups ÷ 16 cups in one gallon = 152.5 gallons or 152 ½ gallons in all*

3. If a person drinks the recommended amount of water each day, how many gallons of water will be consumed in 15 days? Give the answer using decimals and change the decimal to a fraction.

*8 cups per day = 2 quarts per day*

*2 quarts per day X 15 days = 30 quarts in 15 days*

*30 quarts ÷ 4 quarts in a gallon = 7.5 gallons in 15 days*

*7.5 gallons = 7 ½ gallons*

4. A year has 365 days. If a person drinks the recommended amount of water each day, how many gallons of water will a person consume in one year? Give the answer using decimals and change the decimal to a fraction.

*365 days X 8 cups per day = 2920 cups in a year*

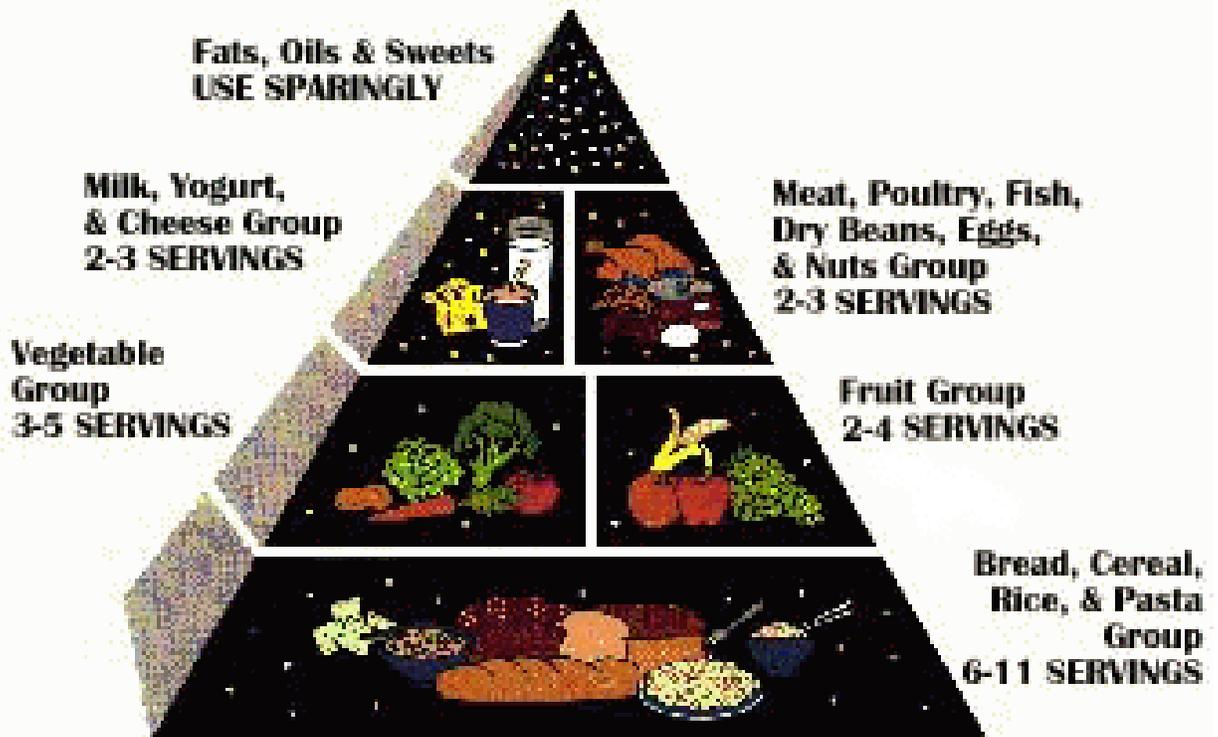
*2920 ÷ 4 cups in a quart = 730 quarts in one year*

*730 quarts ÷ 4 quarts in a gallon = 182.5 gallons*

*182.5 gallons = 182 ½ gallons*

# Food Guide Pyramid

A guide to daily food choices.



Use the Food Guide Pyramid to help you eat better everyday... the Dietary Guidelines way. Start with plenty of Breads, Cereals, Rice, and Pasta; Vegetables; and Fruits. Add two to three servings from the Milk Group and two to three servings from the Meat Group. Each of these food groups provide some, but not all, of the nutrients you need. No one food group is more important than the others—for good health you need them all. Go easy on the fats, oils, and sweets, the foods in the small tip of the Pyramid.

## FOOD CELEBRATIONS

**Directions:** You have decided to plan special food celebrations for each month of the year. Read the information presented in the chart below. Fill in the number of days that your family will have special foods celebrated each month according to the guidelines.

Month	Total Days	Guidelines for Special Breakfasts	Days Used to Celebrate Food
January	31	Oatmeal will be celebrated on three-fourths of the odd-numbered days.	Oatmeal —
February	28	One-fourth of the month will be used to celebrate bananas. Meat can be celebrated three days more than bananas.	Bananas — Meat —
March	31	Beef will be celebrated on one-third of the even-numbered days. Cereal will be celebrated on one-half of the odd-numbered days.	Beef — Cereal —
April	30	One-third of the month will be used to celebrate nuts. Two-thirds of the month will be used to celebrate bread.	Nuts — Bread —
May	31	Strawberries will be celebrated on one-fourth of the odd-numbered days. Eggs will be celebrated on three-fourths of the odd-numbered days.	Strawberries — Eggs —
June	30	Milk products will be celebrated on five-sixths of the total days in the month. Waffles will be celebrated on one-fifth of the even-numbered days.	Milk — Waffles —
July	31	Peaches will be celebrated on two-fifths of the even-numbered days. Blueberries will be celebrated on three-fifths of the even-numbered days.	Peaches — Blueberries —
August	31	Cheese will be celebrated on all the even-numbered days and one-half of the odd-numbered days.	Cheese —
September	30	Grapes will be celebrated on all the even-numbered days. Honey will be celebrated for five fewer days than grapes. Rice will be celebrated for one-half the number of days as honey.	Grapes — Honey — Rice —
October	31	Apples will be celebrated on one-eighth of all the odd-numbered days. Oranges be celebrated on seven-eighths of all the odd-numbered days.	Apples — Oranges —
November	30	Five foods will be celebrated equally during the month. All the days of November will be celebrated.	Each food —
December	31		

## FOOD CELEBRATIONS

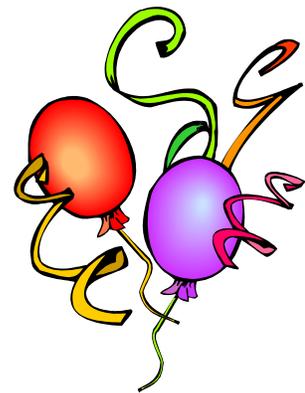
**Directions:** You have decided to plan special food celebrations for each month of the year. Read the information presented in the chart below. Fill in the number of days that your family will have special food celebrations each month according to the guidelines.

Month	Total Days	Rules for Celebrating Foods	Days Used to Celebrate Food
January	31	Oatmeal will be celebrated on three-fourths of the odd-numbered days.	Oatmeal — 12
February	28	One-fourth of the month can be used to celebrate bananas. Meat can be celebrated three days more than bananas.	Bananas — 7 Meat — 10
March	31	Beef will be celebrated on one-third of the even-numbered days. Cereal will be celebrated on one-half of the odd-numbered days.	Beef — 5 Cereal — 8
April	30	One-third of the month will be used to celebrate nuts. Two-thirds of the month will be used to celebrate bread.	Nuts — 10 Bread — 20
May	31	Strawberries will be celebrated on one-fourth of the odd-numbered days. Eggs will be celebrated on three-fourths of the odd-numbered days.	Strawberries — 4 Eggs — 12
June	30	Milk products will be celebrated on five-sixths of the total days in the month. Waffles will be celebrated on one-fifth of the even-numbered days.	Milk — 25 Waffles — 3
July	31	Peaches will be celebrated on two-fifths of the even-numbered days. Blueberries will be celebrated on three-fifths of the even-numbered days.	Peaches — 6 Blueberries — 9
August	31	Cheese will be celebrated on all the even-numbered days and one-half of the odd-numbered days.	Cheese — 23
September	30	Grapes will be celebrated on all the even-numbered days. Honey will be celebrated for five fewer days than grapes. Rice will be celebrated for one-half the number of days as honey.	Grapes — 15 Honey — 10 Rice — 5
October	31	Apples will be celebrated on one-eighth of all the odd-numbered days. Oranges will be celebrated on seven-eighths of all the odd-numbered days.	Apples — 2 Oranges — 14
November	30	Five foods will be celebrated equally during the month. All the days of November will be celebrated.	Each food — 6
December	31		

**CELEBRATION PROBLEMS**

**Directions:** In *Food Celebrations*, only one food is celebrated each day in a month. Refer to the completed *Food Celebrations* to find information to solve the problems.

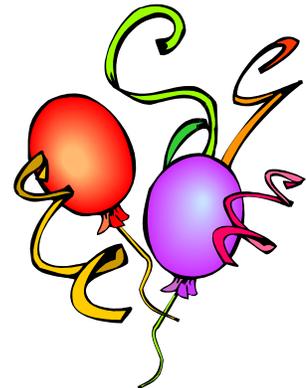
1. How many days in January will not be used to celebrate oatmeal?
2. How many days in February will not be used to celebrate meat or bananas?
3. How many days in all will foods be celebrated in January and February?
4. How many days in March will not be used to celebrate peanuts or cereal?
5. How many days in all will foods not be celebrated in March and April?
6. How many days in all will foods be celebrated in April and May?
7. How many days in all will strawberries and eggs be celebrated in May?
8. How many days in June will not be used to celebrate a food?
9. How many days in July will not be used to celebrate a food?
10. How many days in all will foods be celebrated in June and July?
11. In September, how many more days are grapes celebrated than rice?
12. How many days in all will foods be celebrated in June, July, and August?
13. How many days in all will foods be celebrated in August and September?
14. How many days in all will foods be celebrated in October and November?
15. What months celebrate foods on every day of the month?
16. Which months celebrate foods for an *odd* number of days?



## CELEBRATION PROBLEMS

**Directions:** In *Food Celebrations*, only one food is celebrated each day in a month. Refer to the completed *Food Celebrations* to find information to solve the problems.

1. How many days in January will not be used to celebrate oatmeal?  
 $31 - 16 = 15$  days
2. How many days in February will not be used to celebrate meat or bananas?  
 $28 - 17 = 11$  days
3. How many days in all will foods be celebrated in January and February?  
 $16 + 17 = 33$  days
4. How many days in March will not be used to celebrate peanuts or cereal?  
 $31 - 13 = 18$  days
5. How many days in all will foods not be celebrated in March and April?  
 $31 + 30 = 61$  days in all;  $13 + 30 = 43$  days celebrated;  $61 - 43 = 18$  days
6. How many days in all will foods be celebrated in April and May?  
 $30 + 16 = 46$  days
7. How many days in all will strawberries and eggs be celebrated in May?  
 $4 + 12 = 16$  days
8. How many days in June will not be used to celebrate a food?  
 $30 - 28 = 2$  days
9. How many days in July will not be used to celebrate a food?  
 $31 - 15 = 16$  days
10. How many days in all will foods be celebrated in June and July?  
 $28 + 15 = 43$  days
11. In September, how many more days are grapes celebrated than rice?  
 $15 - 5 = 10$  days more
12. How many days in all will foods be celebrated in June, July, and August?  
 $28 + 15 + 23 = 66$  days
13. How many days in all will foods be celebrated in August and September?  
 $23 + 30 = 53$  days
14. How many days in all will foods be celebrated in October and November?  
 $16 + 30 = 46$  days
15. What months celebrate foods on every day of the month?  
*April, September, November*
16. Which months celebrate foods for an *odd* number of days?  
*February, March, July, August*



### HAMBURGERS MADE TO ORDER

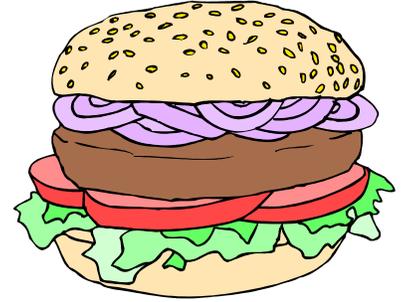
**Directions:** You have a hamburger patty and bun. Can you create twenty-five different kinds of hamburgers using different combinations of food choices? Place an **X** in each column to designate a food choice for each hamburger. The first one is done for you. It is a hamburger with lettuce and bacon.

	Lettuce	Tomato	Onion	Pickle	Mustard	Mayo	Ketchup	Bacon	Peppers
1	X							X	
2									
3									
4									
5									
6									
7									
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## Task One

# LET'S MAKE A HAMBURGER

*\*perimeter- distance around an area*  
*\*diameter- a straight line passing through the center of a circle*  
*\*radius - a straight line that goes from the center to the outside of a circle*



### Directions:

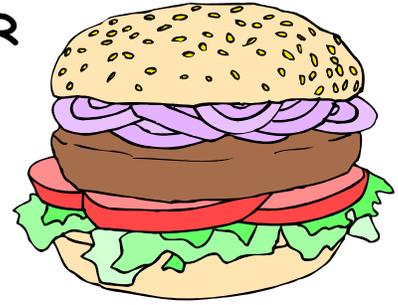
Use yellow, brown, red, and green construction paper, ruler, compass, scissors, pencil and a paper clip, to construct a hamburger according to the following directions:

1. There must be one slice of low-fat cheese. The slice of cheese is yellow and is rectangular in shape. The slice of cheese must have 4 right angles. The area of the slice of cheese must be  $10\frac{1}{2}$  square inches. Write the words "Milk Group" on the slice of cheese.
2. There must be a brown hamburger bun. The bun has two identical parts. Each part of the bun is in the shape of a circle. The diameter of the circle is 5 inches. Write the words "Bread Group" on each part.
3. There must be one beef patty inside the hamburger bun. The beef patty must be in a circle shape. It must be brown and have a radius of 2 inches. Write the words "Meat Group" on the shape.
4. There must be one slice of red tomato on the hamburger. The tomato is round and has a diameter of  $3\frac{1}{2}$  inches. Write the words "Fruit Group" on the slice.
5. One leaf of green lettuce should be on the hamburger. The leaf of lettuce should be four inches long and can be in any shape that resembles a leaf. Write the words "Vegetable Group" on the leaf.
6. The hamburger must be put together with one part on top of the other. The order must be so that the tomato does not touch the cheese and the cheese does not touch the lettuce. One part of the hamburger bun must be on top of the hamburger and one part of the bun must be on the bottom.
7. The hamburger is fastened together in proper order by a paper clip.

## Task Two

# LET'S MAKE A HAMBURGER

*\*perimeter- distance around an area*  
*\*diameter- a straight line passing through the center of a circle*  
*\*radius - a straight line that goes from the center to the outside of a circle*



### Directions:

Use yellow, brown, red, white, and green construction paper, ruler, compass, scissors, pencil and a paper clip, to construct a hamburger according to the following directions:

1. There must be one slice of low-fat cheese. The slice of cheese is yellow, has four right angles, and is square in shape. The area of the slice of cheese is  $12 \frac{1}{4}$  square inches. Write the words "Milk Group" on the slice of cheese.
2. There must be a brown hamburger bun. The bun has two identical parts. Each part of the bun is in the shape of a circle. The diameter of the circle is  $4 \frac{1}{2}$  inches. Write the words "Bread Group" on each part.
3. There must be one beef patty inside the hamburger bun. The beef patty must be in a circle shape. It must be brown and have a radius of 2 inches. Write the words "Meat Group" on the shape.
4. There must be one slice of red tomato on the hamburger. The tomato is round and has a diameter of  $3 \frac{1}{4}$  inches. Write the words "Fruit Group" on the slice.
5. There must be one slice of white onion on the hamburger. The slice of onion is round and has a diameter of 3 inches. Write the word "Vegetable Group" on the slice.
6. There should be three pickles on the hamburger. The pickles are green and in the shape of a circle. The diameter of each pickle is one inch. Write the word "pickle" on each circle shape.
7. Glue the three pickles on top of the beef patty. The pickles should not touch each other.
8. The hamburger must be put together with one part on top of the other. The order must be so, that the tomato does not touch the cheese and the cheese does not touch the lettuce. One part of the hamburger bun must be on top of the hamburger and one part of the bun must be on the bottom.
9. The hamburger is fastened together in proper order by a paper clip.

## **Cheese Facts**

(From The World Book Encyclopedia)

1. Almost all of the cheese produced in the United States is made in large factories.
2. There are four main groups of cheese: soft, semisoft, hard and very hard.
3. Cheese contains the nutrients of milk in concentrated form.
4. The United States leads the world in cheese production.
5. Wisconsin makes more cheese than any other state.
6. Most cheese comes from cow's milk.
7. Cheese can be made from the milk of any animal.
8. There are more than 400 kinds of cheese.
9. The amount of moisture in a cheese determines its classification.
10. Cottage cheese is a soft cheese that is available in large or small curd.
11. Parmesan cheese is usually grated and sprinkled on foods.
12. Swiss cheese has holes called eyes.
13. Roquefort cheese is only made in France.
14. The first cheese was probably made more than 4,000 years ago in Asia.
15. Cheese making began in the American Colonies in 1611 in the Virginia Colony.
16. J.L. Kraft invented a method of making process cheese in 1917.
17. J.L. Kraft's company developed a method of wrapping individual slices of cheese mechanically.
18. Before cheese is made from milk, the milk is pasteurized.
19. Milk is processed and separated into curds and whey before cheese is made.
20. Cheese is made from the curds.
21. Whey is not used in making cheese.
22. Rennet is added to milk to thicken it before cheese is made.
23. Cottage cheese is made from skim milk.
24. Cheese is aged, or cured, for different lengths of time for a sharper flavor.
25. Process cheese is a blend of natural cheeses.

## Think Tasks

Name

- 
- 1** All of the students in the sixth grade participated in a survey to determine the favorite activities of the class. The results of the survey showed that  $\frac{1}{2}$  as many kids liked football as liked basketball. There were one-fourth as many kids who liked kickball as liked basketball. There were one-third as many kids who liked dancing as liked football. There are 24 kids who liked basketball best of all. How many kids are in the sixth grade? How many students liked each activity?
- 

-----  
Name

- 
- 2** All of the students in the sixth grade participated in a survey to determine the favorite activities of the class. The results of the survey showed swimming was the overall favorite activity with 30 students choosing this as their favorite. Three-fifths as many students voted for biking as voted for swimming. There were two-thirds as many kids who liked walking as liked biking. One-sixth as many kids liked soccer as liked swimming. How many kids were in the sixth grade? How many students liked each activity?
-

**Think Tasks**

**Name**

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**3**

Many kids have a new kind of bike that glows in the dark. More and more kids are riding these bikes. There was only one of these in the neighborhood during the first week that they were sold and two in the second week. In the third week there were four bikes, in the fourth week there were seven, and in the fifth week there were eleven. If the same pattern continues, how many weeks will it be before there are more than 100 of these new bikes in the neighborhood? Explain the pattern.

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**Name**

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**4**

There is a new Kid's Activity Club in the neighborhood. The club can have up to 75 members. The purpose of the club is to organize fun activities for kids after school. The club started with only three members. The membership grew each week with five members after two weeks, nine members after three weeks, and fifteen members after four weeks. If the membership continues to grow at the same rate, how many weeks will it be before the club reaches its maximum membership? Explain the pattern.

*Answer Key*

1. Basketball = 24

Football = 12

Kickball = 6

Dancing = 4

Total = 46 kids in sixth grade

2. Swimming = 30

Biking = 18

Walking = 12

Soccer = 5

Total = 65 kids in sixth grade

3. 15 weeks

The pattern is adding a consecutive number each week. (1,2,3,4,5,...)

Pattern: 1, 2, 4, 7, 11, 16, 22, 29, 37, 46, 56, 67, 79, 92, 106

4. 9 weeks

The pattern is adding a consecutive even number each week. The first week 2 were added, the second week 4 were added, the third week 6 were added, the fourth week 8 were added, the fifth week 10 were added, the fifth week 12 were added, the sixth week 14 were added, and the seventh week 16 were added.

Pattern: 3, 5, 9, 15, 23, 33, 45, 59, 75

## Parent Survey

Our class has completed the *A Healthy Mix* unit. In this unit, we learned about choosing a variety of foods from *The Food Guide Pyramid* and including more activity in each day. We would appreciate you helping us determine the success of our study by completing this survey. Please complete the survey and return it to school with your child.

Please write *yes*, *no*, or *maybe* in the blank before each statement.

At the end of the *A Healthy Mix* unit of study, I have noticed the following changes:

- \_\_\_\_\_ 1. My child has been interested in going to school.
- \_\_\_\_\_ 2. I have seen some changes in the daily eating habits of my child.
- \_\_\_\_\_ 3. My child has been willing to help with chores at home.
- \_\_\_\_\_ 4. My child has demonstrated more personal responsibility towards health.
- \_\_\_\_\_ 5. My child has included a variety of foods from the food groups in meals and snacks each day.
- \_\_\_\_\_ 6. My child has paid more attention to what we eat at home.
- \_\_\_\_\_ 7. My child has mentioned the *Food Guide Pyramid* at home.
- \_\_\_\_\_ 8. My child has watched TV less and included more activity in each day.
- \_\_\_\_\_ 9. My child gets an hour of physical activity on most days.
- \_\_\_\_\_ 10. I would recommend *A Healthy Mix* for other sixth grade classes.

**Comments:**