

## **Dietary Intake and Exercises for School Age Children of Various Ethnicities**

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### **INTRODUCTION**

“You can eat anything you want when you are young.” This is an old saying that is not necessary true. The person who first stated this adage did not take into consideration that one’s lifestyles also affect one’s weight, even for young people.

I remember when I was a little girl in the sixties. I had to walk to school, to the community corner store, and to the neighborhood fun spot. I did not expect my parents to drive me to school unless there was inclement weather. I knew I had to walk to get where I needed to go. Little did I know that extensive walking was good for my health and my and my entire body! Also as a child, I knew that when I came home from school, I had to perform certain chores that my mom had given to me the day before or at the beginning of the week. I did the chores without thinking about them. I knew that my home chores had to be completed before I could do my homework.

Children today are different. They commonly do not do many physical chores when they come home from school. Overall, they are not very active. When it comes to eating, they are not privileged to have a mother who was a housewife and who cooked homemade meals everyday, as I did. On the other hand, I can say “I received a balanced home cooked meal every day.”

Time brings about changes in people’s lifestyles. Today, many children do not have home chores because the parents do not require such tasks to be done. Instead, they are going home playing on a computer or video game. They either eat alone or with a friend while they watch TV. Many children are not as physically active as they should be.

### **This Unit Will Teach**

This unit is intended for use as part of the health science curriculum in my classroom. The lesson will focus heavily on the TEKS Strands Health and Physical Education. Before students analyze or calculate their body mass index (BMI), students will be asked to complete a family assessment survey. Examples of questions students will be asked are: Who is cooking and shopping for the food in your household? What is the family’s attitude toward food? What foods are you eating at home? Are the parents or the grandparents cooking the meals in the household? Is dinner eaten the same time each day and with whom are you eating at dinner? After we discuss and identify the six major nutrients that are contained in food, students will be given the opportunity to help plan diets or menus that are nutritionally balanced and delicious. Students will work in cooperative groups to accomplish these tasks.

After students discuss and elaborate on the food nutrients and their functions in the human body, students will focus on one of the treatment regimen for obesity, which is physical activity. Obesity is an excess amount of subcutaneous body fat in proportion to lean body mass. Physical activity is defined as body movement produced by the contraction of skeletal muscles that result in energy expenditure above the basal level. Physical activity consists of athletic, recreational, housework, transport or occupational activities that require physical skills and utilize strength, power, endurance, speed, flexibility, range of motion, or agility. With the aid of a survey and

journal notes, we will examine how one's dietary habits and lifestyle affects his or her body weight.

### **Why It Is Important to Teach This Unit**

Our society is sitting on a time bomb because childhood obesity is a serious nationwide health problem. It requires immediate attention and a population-based prevention approach so that all children will mature and develop physically and emotionally healthy. The concern is that obese children are more likely to become obese adults. One can only guess that an obese adult will increase the risk of heart disease, high blood pressure, diabetes, and certain types of cancer, pancreatitis, liver problems, orthopedic disorders (problems with foot structure), respiratory disorders such as upper airway obstruction and chest wall restriction resulting in sleep apnea, reflux, gallstones and other stomach conditions and eating disorders such as Bulimia (*Better Health Channel*).

If Johnny is obese as a child, chances are the longer Johnny remains obese as a child, the more likely Johnny will become an obese adult. Do not forget that obesity is defined as an excessive accumulation of body fat. How much fat is an "excessive" correlates with an individual's height and weight. Research studies reveal that excessive weight around the middle in obese children and adolescents can also increase cardiovascular risks, abnormal glucose tolerance that leads to diabetes, hypertension and lipid profile (cholesterol) abnormalities. One can readily get an overview that the prevention of obesity in childhood or adolescence will greatly have an impact on an individual's health status as an adult. It is very important to teach young children and adolescent the importance of maintaining an appropriate body weight the importance of participating in various physical activities in order to maintain an excellent health status in childhood, adolescence, and in adulthood.

### **Teaching Strategies used to Teach Information: Nutrition Advice**

I will explain to my students that nutrition is a science that consists of the relationship of growth, development, and overall health to the intake of nutrients (*Education for Self-Responsibility*). Student will be made cognizant that nutrition is the foundation to good health, and they will comprehend the basic principles of nutrition such as identifying food as a source on nutrients needed for growth, energy, and health. Hopefully, students will identify different foods, name food sources, nutrients, describe the relationship of food energy, growth, and health and identify the functions of nutrients as they relate to growth and health.

### **Healthy Eating Strategies**

The importance of creating a healthy eating environment for school age children is that it affects their eating habits for life. Some strategies that parents could implement are to select some healthy diet (rich in fruits, vegetables, and grains) for the entire family, not just for selected individuals. They should make plans to prepare meals or dinners with their children. Children enjoy participating and can learn about healthy cooking and food preparation. Encourage family members to eat together at the dinner table at regular times, and avoid rushing to complete meals. When an individual eats too quickly, it affects the way food is digested, creating a feeling of fullness. Try to avoid other activities such as watching T.V. during mealtimes. As a parent, one should avoid preparing or allow children to eat foods that are high in calories, fats or sugar. Instead, provide snack foods that are low-calorie and nutritious such as fruits and vegetables. Provide food portions that are not too large for your child or avoid forcing your child to eat if he/she is not hungry. Parents should not allow their children to eat no more than once a week to eat at fast-food restaurant. Try to avoid using food as a reward or the lack of food as a punishment.

## **Increase Activity**

As a rule, children imitate their parents' actions rather than what their parents say. Therefore, parents should set an excellent example by doing activities with their children. Such activities may be walking, bicycling, soccer or any sport-related activities that the family enjoys. Make plans to attend active family-outings such as camping, bowling or water sports. Create neighborhood activities such as football, basketball or soccer for active community sports. Find and enroll your child in structured activities such as dancing, swimming classes, baseball or soft ball games. Encourage children to join sport activities at school or the neighborhood community centers. Schedule and assign home chores such as washing dishes, washing laundry, mowing the lawn, and shopping for groceries. Limit the amount of T.V. watching your child view at home.

## **My Students**

I instruct or work with children with special needs. Some of these children are slow learners, children who are visually impaired, children with severe social skills, autistic, and children who are borderline mentally retarded. These children are very capable of learning information but at a much slower pace than the average student in a classroom setting. As an instructor, I will implement various teaching strategies to accommodate deficiencies that my students may exhibit.

Autism is a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, which adversely affects a child's educational performance. Autistic children engage in repetitive activities and resist environmental change or changes in daily routine and unusual responses to sensory experiences.

Special considerations and teaching tips for autistic students are to monitor them closely for safety because some students have no fear, utilize the Premack principle (pairing something liked with something disliked, teach to the preferred modality, create a highly structured environment, use transitions that depicts activities between each activity, use the same organization and equipment each day, redirect inappropriate behavior and utilize sensory stimulation to increase attention span and decrease self-stimulation).

Visual impairment including blindness is impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness.

Teaching tips for the student with visual impairments include optimal lighting in all possible situations to ensure use of residual vision, provide opportunities for movement experience, encourage the individual to explore the environment, keep texts and equipment in the same place, use brightly colored objects and boundaries, and modify the texture of manipulatives and textbooks.

Obesity is considered a current medical problem with many school age children. Obesity is defined as the presence of an abnormally large amount of body fat or adipose tissue. An individual who is obese is considered to be 20% or more above his/ her body weight. Overweight is defined as body weight above an established standard, which is related to height. An individual who is overweight is considered to be 10% or more above his/ her ideal weight. The most common reason for being overweight is that the individual's food and caloric intake is greater than energy expenditure.

Teaching and programming for individuals with obesity are to encourage the individual, introduce a variety of activities to reduce boredom, create an environment to enable the individual to have successful experiences, develop an individualize regularly scheduled progressive exercise program, conduct a program with compatible, supportive social group, conduct a weight control program and design a progress chart for students to chart his/her behavior.

Emotional disturbance is defined as a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance:

1. An inability to learn that cannot be explained by intellectual, sensory, or health factors.
2. An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
3. Inappropriate types of behaviors or feelings under normal circumstances.
4. A general pervasive mood of unhappiness or depression.
5. A tendency to develop physical symptoms of fears associated with personal or school problems.

Some teaching tips for the student with emotional disturbance are to build on successful experiences, develop and follow progression, create a structured and routinized learning environment, establish control, stress positive reinforcement, repeat and review often, be calm and work in small areas.

Mental retardation is significantly sub-average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.

Teaching strategies and tips for teaching students who are mentally retarded are to shorten instruction periods, teach in small groups, use few and simple words and maximize demonstrations, over teach the cognitive information, provide opportunities for choices of activities, use peer partners, offer activities that provide initial success, and program systematic, age-appropriate behaviors that include all domains of development including psychomotor, social, vocational, and academic objectives.

### **My Own Inspirations for This Unit**

I was motivated to organize this unit because a parent called at school and informed me that her child was to be placed a strict diet regimen and that I might have to help the child enforce it while at school. The parent also informed me that her child was gaining too much weight per month, and the child's physician had given the parent a choice of helping the child lose weight or lose her child to death if the weight was not controlled. That was very shocking news to me as the child's instructor. At first, I thought that I would do exactly as the parent asked of me as the child's classroom teacher, and I would not address the obesity issue more than I should. I later realized that I could have a great impact on educating this student and many other students who may have similar problems in their lives. I must implement some type of curriculum or lesson plan whereby students can take ownership and pride in maintaining their health status and nutritional intake. I also realize that I must be creative and use non-degrading techniques to teach students what foods are important for their rapidly developing bodies. I must be culturally sensitive to the needs of my students while I try to implement nutritious, balanced diets into the curriculum. I will use a survey to learn what foods are relevant to the various cultures that I encounter in my classroom. I hope that the strategies and techniques that I implement will meet the needs of the student that I encountered in my classroom regardless of their cultural background or ethnicity.

### **Materials Students Must Learn Before Beginning Their Unit**

According to Houston Independent School District Curriculum Guide, Project CLEAR, students will:

#### **Fourth Grade Curriculum**

1. recognize ways to enhance and maintain health throughout the life span.

2. identify the importance of taking personal responsibility for developing and maintaining a personal health plan for nutrition.
3. identify the benefits of six major nutrients contained in food.
4. identify information on menus and food labels.
5. identify the importance of taking personal health plan such as fitness and nutrition.

### **Fifth Grade Curriculum**

1. know ways to enhance and maintain personal health throughout the life span.
2. examine and analyze food labels and menus for nutritional content.
3. apply information from the food guide pyramid to making healthy food choices.
4. calculate the relationship between caloric intake and energy expenditure.
5. apply information from the food guide pyramid to making healthy food choices.

The following list is the vocabulary terms that the students will learn in order to understand how nutrition or the lack of proper nutrition affects one's dietary intake. They are obesity, physical activity, self-esteem, food pyramid, prevention, overweight, weight loss, heart disease, nutrition, BMI, dietary cholesterol, dietary guideline, sedentary, caloric, Type 2 Diabetes, epidemic, dietitian, and behavior modification.

### **The Types of Assignments the Teacher Will Give**

Students will make a mural to identify food as the source of nutrients needed for growth, energy, and health. They will also define nutrients. They will use a nutrition chart that names six nutrients, their functions, and foods that are good sources of the nutrient. Cut the chart on the dotted lines to make six strips. Give the strips to six groups of students. Instruct each group of students to use the information on their strip to design a puzzle piece illustrating the nutrient functions and food sources. The six puzzle pieces will be put together to create a mural.

Students will use a chart to classify items from their food diaries, such as vegetables, fruits, bread, cereal, rice, pasta, milk, yogurt, cheese, meats, poultry, fish, dry beans, eggs, nuts, fats, oils, and sweets. Students will keep a record of the foods they eat and classify them according to the Food Guide Pyramid food groups. For a home activity, they will record what their families eat for dinner for several days and classify the foods according to the Food Guide Pyramid.

In order to identify the building blocks of health or nutrients, students will solve some multiplication problems. They will use the correct answers to find the names of the building block of health in numbers 1-6. Example:  $2 \times 2 = 4$ , A=4

The teacher will teach basic nutrition information on food labels so the students can use wise consumer food-buying skills. The teacher will make a transparency of a typical food labels. Students will identify ingredients and other information on packages.

Other activities and assignments that will be used are a collage of nutritious foods, food drawings, classroom exhibits of food in the food pyramid, flip book on nutrients, poem on foods, a nutrient mobile, design a pamphlet, and role play about exercises and eating out.

Hopefully, when student comprehends all concepts and strategies used to explain why nutrients are important for their proper growth and development, they will write and act out a skit on the topic.

## **LESSON PLANS**

### **Week 1: Nutrition Overview**

Objective: Identify the six classes of nutrients, their functions, and food sources.

Nutrients are materials that the human body cannot supply in sufficient amounts to meet its need. They are nourishing substances that can be found in food. Nutrients can be broken down into six classes. Each has specific functions in maintaining the body.

Proteins help the body repair itself, make tissue and blood cells, and provide energy.

Examples of food containing proteins are meat, poultry, fish, eggs, nuts, seeds, dry beans and peas.

Carbohydrates provide energy for all body functions. Examples of food containing carbohydrates are bread, biscuits, muffins, barley waffles, pancakes, cereal, rice, macaroni, spaghetti, noodles, fruits, vegetables, corn, and potatoes.

Fats provide energy for all body functions and carry fat-soluble vitamins A, D, E and K. Examples of food containing fats are oil, butter, margarine, nuts, olives, mayonnaise cheese, meat, whole milk, avocado, and coconut.

Vitamins help the body function properly and they are found in nearly all foods.

Examples of a few vitamins and some of their sources:

- Sources of Vitamin A are carrots, sweet potatoes, spinach, and broccoli.
- Sources of Vitamin C are oranges, grapefruit, and potatoes.
- Sources of Vitamin D are sunlight & some fortified products.
- Sources of B vitamins are bread, cereal, grains, meat, and milk.

Minerals that regulate the body are found in nearly all foods.

Examples of a few minerals and some of their sources are iron--meat, poultry, fish, bread, and calcium--milk, cheese, and spinach.

Water transport materials through the body helps the body eliminates waste.

### **Activities and Strategies**

Make a copy of a chart that lists the nutrients, their functions, and their food sources.

Explain to the class that there are invisible substances in food called nutrients that their bodies need to help them grow and have energy for work and play.

No single food contains all of the nutrients, so it is necessary to eat a variety of foods. Nutrients provide the framework for good health. It is important to eat a variety of foods to maintain health and adequate growth.

Cut a large piece of newsprint or butcher paper into six puzzle pieces. Divide the class into six groups. Distribute a nutrient strip and a newspaper puzzle piece to each group. Give the following instructions to the group:

1. Write the name of the nutrient in large letters on the puzzle pieces.
2. Design a creative puzzle piece to illustrate the functions and food sources for that nutrient.
3. Ask each group to explain their puzzle piece, including the nutrient name, functions, and food sources.
4. Put the puzzle pieces together to make a mural.
5. Display the mural in the cafeteria for all of the students to enjoy.

### **Resources and Materials**

Teacher resource: Information on nutrients

Supplies to design a puzzle:

Large piece of newsprint or butcher paper  
Crayons  
Markers

## Evaluation

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

- Three points:** strong grasp of the subject matter, above-average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.
- Two points:** on-grade understanding of the subject matter, average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.
- One point:** weak understanding of the subject matter, had difficulty applying knowledge to their own experience, and did not participate in class discussions.

## Week 2

Objective: Identify basic nutrition information on food labels.

Discuss wise consumer food-buying skills.

### Activities and Strategies

Display several cans with the labels covered. Lead a class discussion about the importance of food labeling. Use the following questions to begin the discussion:

1. What is in the cans?
2. How do we usually know what is in the cans?
3. What other information do you find on the food label?

Use a transparency and enlarge a food label to emphasize that food labels show the ingredients and other information in packages.

The following information is required by the United States Food and Drug Administration (FDA) for all products:

1. The common product name and its form
2. The net weight of the contents, including liquid
3. The manufacturer, packer, or distributor's name and address

Additional required food labeling information includes:

1. Ingredients for most products
2. Nutrition information if:
  - a. nutrients are added to fortify or enrich a product
  - b. a nutritional claim is made such as low-calorie, low-fat, cholesterol-free, or no preservatives added
  - c. UPC (Universal Product Code)

Explain that ingredients are listed by weight with the heaviest listed first, second heaviest next, and so on.

### Resources and Materials

Example of a food label

Handout: Label Logic

### Label Logic Questions

Use a food label and answer the following questions:

1. What is the name of the product?
2. What is the net weight?
3. What is the name of the manufacturer, packer, or distributor?
4. How many servings in the container?
5. What is the serving size?
6. What ingredient is listed first?
7. What ingredient is listed last?
8. How many calories per serving?
9. How many grams of protein per serving?
10. Is the nutrition information on this product required or is it voluntary? Why?

### Evaluation

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

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### Week 3 (Food Pyramid)

#### *Objective*

Identify foods that are in the various food groups.

#### Grain Group

Any food made from wheat, rice, oats, cornmeal, barley or another cereal grain is a grain product. Bread, pasta, oatmeal, breakfast cereals, tortillas, and grits are examples of grain products. Grains are divided into two subgroups, whole grains and refined grains.

Whole grains contain the entire grain kernel—the bran, germ, and endosperm. Examples include: whole-wheat flour, bulgur (cracked wheat), oatmeal, whole cornmeal, and brown rice.

Refined grains have been milled, a process that removes the bran and germ. This is done to give a finer texture and improve their shelf life, but it also removes dietary fiber, iron, and many B vitamins. Some examples of refined grain products are white flour, degermed cereal, white bread, and white rice. The daily allowance for boys ages, 9-13 years olds are 6 ounce equivalents and 3 ounces of daily minimum amount of whole grains. The daily allowance for girls age 9-13 is 5 ounces equivalent and 3 ounces of daily minimum amount of grains.

#### Vegetable Group

The vegetable group is any vegetable or 100% vegetable juice counts as a member of the vegetable group. Vegetables may be raw or cooked; fresh, frozen, canned or dried/ dehydrated; and may be whole, cut-up or mashed. Vegetables are organized into 5 subgroups, based on their



nutrient content. Some commonly eaten vegetables in each subgroup are: dark green vegetables such as broccoli, mustard greens and spinach; and orange vegetables, such as acorn squash, carrots, and pumpkin. Dry beans and peas are vegetables such as black eye peas, kidney beans and pinto beans. Starchy vegetables are corn, green peas, and potatoes. Other vegetables include cauliflower, celery, green beans, mushroom onions and tomatoes. The daily allowances for boys age 9-13 is 2½ cups and the daily allowance for girls are 2 cups.

Eating vegetables provides health benefits. People who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Vegetables provide nutrients vital for health and maintenance of your body.

### Fruit Group

The fruit group is any fruit or 100% fruit juice counts as part of the fruit group. Fruits may be whole, cup-up, or pureed. Some commonly eaten fruits are apples, bananas, strawberries, cherries, grapefruit, mangoes, fruit cocktail, oranges, peaches, plums and raisins. The daily allowances for boys and girls ages 9-13 is 1½ cups.

Eating fruits provides health benefits. People who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Fruits provide nutrients vital for health and maintenance of your body.

### Dairy or Milk Group

The milk group consists of all milk products, and many foods made from milk are considered part of this food group. Foods made from milk that retain their calcium content are part of the group, while foods from milk that have little to no calcium, such as cream cheese, cream, and butter, are not. Some commonly eaten choices in the milk, yogurt, and cheese group are milk, fat-free (skim), low fat (1%), reduced fat (2%) and whole milk. Milk-based desserts are puddings made with milk, ice milk, frozen yogurt, and ice cream. Other milk products are cheese and yogurt. The daily recommendation from the milk group for boys and girls ages 9-13 is 3 cups.

Consuming milk and milk products provides health benefits. People who have a diet rich in milk and milk products can reduce the risk of low bone mass throughout the life cycle. Foods in the milk group provide nutrients that are vital for health and maintenance of your body. These nutrients include calcium, potassium, vitamin D, and protein.

### Meat and Bean Group

The meat and bean group includes meat, poultry, fish, dry beans or peas, eggs, nuts and seeds. Dry beans and peas are part of this group as well as the vegetable group. Some meats are beef, ham, and pork. Poultry foods are chicken, duck, and turkey. Eggs consist of chicken and duck eggs. Dry beans and peas are black beans, kidney beans and pinto beans. Nuts and seeds are almonds, cashews, and mixed nuts. Fish foods include catfish halibut and salmon. The daily recommended allowances for boys and girls ages 9-13 are 5 ounce equivalents.

Foods in the meat, poultry, fish, eggs, nuts, and seeds group provide nutrients that are vital for health and maintenance of your body.

### Oil and Fat Group

The oil group consists of oils and fats that are liquid at room temperature, like vegetable oils used in cooking. Oils come from many different plants and from fish. Some common oils are canola oil, corn oil, cottonseed oil, olive oil, safflower oil, soybean oil and sunflower oil.

Solid fats are fats that are solid at room temperature, like butter and shortening. Some common solid fats are butter, beef fat (tallow, suet), chicken fat, pork fat (lard), stick margarine, and shortening. The daily allowance of fats for boys and girls ages 9-13 is 5 teaspoons.

## **Activities and Strategies**

### ***Objective***

Student will learn nutritional information while participating in physical activities

Review the food pyramid with the class prior to beginning the activity. Place various posters or drawings of the pyramid in sight of each group.

1. Place six hula hoops at one end of the gym.
2. At the opposite end, place six Food Pyramid charts.
3. Have students, in groups of four to five, form a line behind the charts at one end, and place a set of food cards in each hoop at the opposite end.

### ***Resources and Materials***

1. Food cards representing each component of the food pyramid
2. Six hula hoops
3. Six Food Pyramid charts

### ***Evaluation***

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

**Three points:** strong grasp of the subject matter, above-average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**Two points:** on-grade understanding of the subject matter, average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**One point:** weak understanding of the subject matter, had difficulty applying knowledge to their own experience, and did not participate in class discussions.

## **Week 4**

### ***Objective***

Discuss family food preferences.

### ***Activities and Strategies***

Tell the students that they will look more closely at the factors that influence what they eat. They will also learn how to start heading toward healthier eating.

Discuss how students can make changes in their eating habits.

Change is not easy for anyone, student or adults.

Be aware of all the external and internal factors that influence our food choices such as what we usually eat, when and where we eat it, and how we feel when we eat it.

It is best to begin with small changes. Some things can make it hard to change, even when you really want to; for example, it would be difficult to change the foods your family eats. It is important to know the things that are hard to change, and think of ways to deal with them.

Tell the students to brainstorm some ways to making future changes towards better health.

Explain that the students are going to interview a family member food and eating. Point out that they will want to learn as many interesting facts as possible because they will use the information in the interviews to write an essay.

List on the board the Interviewer's Tips and include their suggestions on the list. Answer any questions or concerns.

#### Interviewer's Tips

1. Have fun and relax.
2. Read the questions to yourself before the interview.
3. Listen carefully to the person's answers.
4. Take notes for your use. They do not have to be neat as long as you can understand them.
5. Do not hesitate to ask the person to repeat their answer more slowly as you write it. This will let them know their answer is important to you.
6. Remember to thank the person being interviewed.
7. Immediately after the interview, read your notes and fill in details before you forget them.
8. Be sure to send the person a copy of the article you write about the interview.

#### *The Interview Questions*

Ask a family member the following questions. Use a separate piece of paper to record your answers.

1. How many people live in your house, and who are they?
2. Who cooks most of the meals in your house?
3. How often do you eat out?
4. How often does your family eat out?
5. Does everyone in your house like to eat the same foods?
6. How your family deals with different foods does like and dislikes?
7. Does your family often sit down and eat together, or do people mostly eat when they feel hungry?
8. What are some of your favorite foods?
9. Have your favorite foods changed over the years?
10. What foods do you like now that you did not like when you were younger?
11. Have you ever tried to change your eating habits? (Gone on a diet to lose or gain weight? Tried to cut down on some foods or eat more of others?) Please tell me about one time you tried to make an eating change.
12. What things helped you change your eating habits?
13. What things go in the way of changing your eating habits?

#### *Resources and Materials*

##### Interview Questions

“Changing the Course: Upper Elementary Curriculum” American Cancer Society

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## **Week 5**

### ***Physical Activity (Proper Lifestyle to Exhibit)***

Physical activity simply means movement of the body that uses energy. Walking, gardening, briskly pushing a baby stroller, climbing the stairs, playing soccer, or dancing are all good examples of being active. For health benefits, physical activity should be moderate or vigorous and add up to at least 30 minutes a day.

### ***Objective***

Practice physical activities that enhances ones lifestyle

### ***Strategies and Activities***

Discuss physical activities:

- Walking briskly (about 3 miles per hour)
- Hiking
- Gardening/yard work
- Golf
- Bicycling (less than 10 miles per hours)
- Vigorous physical activities include:
  - Running/jogging (5 miles per hour)
  - Bicycling (less than 10 miles per hour)
  - Swimming (freestyle laps)
  - Aerobics
  - Heavy yard work, such as chopping wood
  - Basketball (competitive)

Assess your Physical Activity

1. Do you walk to school?
2. What daily chores do you do when you arrive home?
3. Do you do daily walks around your neighborhood?
4. What activities do you do to maintain physical activity in Houston in the summer?
5. Do you participate in a wide range of sports activities?

Keep a written diary of the physical activities you are involved in a week.

### ***Resources and Materials***

Daily Journal

Assessment of Physical Activity

### ***Evaluation***

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## Week 6

### *Obesity and Health Problems Associated with Obesity*

Obesity is an excessive amount of body fat. Excess body fat adds additional weight more rapidly than and can cause a deviation from normal, one should be checked for obesity.

The BMI (Body Mass Index) is a reliable indicator of total body fat, which is related to your weight relative to your height and waist circumference measures abdominal fat. Combining these with information about your additional risk factors yields your risk for developing obesity-associated diseases.

Use the BMI calculator or tables to estimate your total body fat. The BMI scores mean the following:

	BMI
Underweight	Below 18.5
Normal	18.5-24.9
Overweight	25.0-29.9
Obesity	30.0 and Above

Causes of obesity in childhood and adolescence can be related to:

1. poor eating habits
2. overeating and binging
3. lack of exercise (i.e. couch potato kids)
4. family history of obesity
5. medical illnesses (endocrine, neurological problems)
6. medications (steroids, some psychiatric medications)
7. stressful life events or changes (separations, divorce, moves, deaths, abuse)
8. family and peer problems
9. low self-esteem
10. depression or other emotional problems

### *Objective*

Calculate your BMI and strategies to obtain weight management.

### *Strategies and Activities*

- Start a weight-management program.
- Change eating habits (eat slowly, develop a routine).
- Plan meals and make better food selections (eat less fatty foods, avoid junk and fast foods).
- Control portions and consume fewer calories.
- Increase physical activity (especially walking) and have a more active lifestyle.
- Know what your child eats at school.

- Eat meals as a family instead of while watching television or at the computer.
- Do not use food as a reward.
- Limit snacking.
- Attend a support group (e.g., Weight Watchers, Overeaters Anonymous).

***Health problems associated with obesity:***

Diabetes is a disorder of carbohydrate metabolism in which the ability to oxidize and utilize carbohydrates is lost as a result of disturbances in the normal insulin mechanism.

Cardiomyopathy is a sub acute or chronic disorder of heart muscle, often with involvement of the endocardium and sometimes of the pericardium.

Pancreatitis--inflammation of the pancreas

Liver Problems

Orthopedic disorders (problems with foot structure)

Respiratory disorders such as upper airway obstruction and chest wall restriction resulting in sleep apnea

Reflux, gallstones and other stomach conditions

Eating disorders such as Bulimia

***Resources and Materials***

A registered dietician or nutritionist

Family doctor

Aussi Fit Kids, for fun activities, call the Physical Activity info line on 1.800.638.5940

***Things to Remember***

Childhood obesity, and especially adolescent obesity, can lead to adult obesity.

Obesity can result in serious health problems in later life.

Children who are obese do less well at school and can become socially isolated.

The aim with overweight children is not necessarily weight loss (unless morbidly obese) but rather to lower energy intake to allow slower weight gain relative to that expected at height and age.

Treatment usually involves nutrition advice, especially limiting energy-dense nutrient-poor snack foods and beverages and increased exercises.

***Evaluation***

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

**Three points:** strong grasp of the subject matter, above-average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**Two points:** on-grade understanding of the subject matter, average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**One point:** weak understanding of the subject matter, had difficulty applying knowledge to their own experience, and did not participate in class discussions.

## **Week 7**

### ***The Mexican Influence in Texas***

Mexico became an independent country in 1821. The Mexican government established a constitution that included the continuation of immigration to Texas. U.S. immigrants usually moved into the eastern part of the state, but the Native Mexicans moved northward from Mexico and established ranches sites or rancherías, along both sides of the San Antonio River.

Food is a major influence of the Mexican culture in Texas. Mexican food was improvised by using simple cooking facilities, techniques, and available foods. Mexican foods in Texas differ somewhat from the traditional dishes in Mexico. The most commonly used foods among Mexican Texans include beans, beef, bread, chicken, chocolate, cheese, eggs, sugar, and tortillas. The most highly used seasonings include cilantro, coriander, cumin, garlic, onions, and peppers of various types.

### ***Objective***

Explore foods from different cultures and categorize them using a food grouping system.

Investigate the customs of the Mexican Americans.

### ***Assessment***

Identify foods from different cultures.

Classify foods according to the food group.

### ***Activities and Strategies***

Briefly discuss the Mexican Americans in Texas and explain to the class that the United States is a very young country. People came to America from many different countries like Portugal, Europe, Russia, Japan, and Africa. Each group of people brought their own style of cooking and seasoning their foods.

Give the students a brief history of the Mexican Americans in Texas from their social studies and history books.

Inform the students that this lesson will help the student learn about foods from the Mexican American culture and to classify them according to the six food groups.

Write the six food groups across the top of the board as column headings.

Randomly discuss each of the foods listed in the opposite column without revealing the food group. Instruct the students to categorize the food group while the teacher writes the name of the food under the appropriate column heading on the board.

Ask the students if they have eaten any of these foods.

### ***Resources and Materials***

- My Pyramid Food Group
- Texas History Book
- Social Studies Book

## ***Evaluation***

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

- Three points:** strong grasp of the subject matter, above-average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.
- Two points:** on-grade understanding of the subject matter, average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.
- One point:** weak understanding of the subject matter, had difficulty applying knowledge to their own experience, and did not participate in class discussions.

## **Week 8**

### ***The African American Influence in Texas***

African American refers to a group of persons having origins in the black racial groups of Africa. The average African Americans in Texas did not immigrate to the United States by choice but they were brought to America as slaves. The male slaves were required to work long, hard hours in factories, cotton and tobacco fields, or sugar plantations. The female slaves and their children did the cooking and cleaning of the large plantation houses. They also worked in the cotton fields.

The African American slaves combined food customs from Africa with foods grown in the South to create their own style of cooking. Slaves were usually given unused pigs, hog jowls, and organ meats. Rabbits, squirrel, and catfish were hunted for additional meat sources. Some slaves were allowed to have small gardens to provide economical and readily available foods.

### ***Objective***

Explore foods from different cultures and categorize them using a food grouping system.

Investigate the customs of the African Americans.

### ***Assessment***

Discuss the food contribution made by African Americans.

### ***Activities and Strategies***

Briefly discuss the African Americans in Texas and explain to the class that the United States is a very young country. People came to America from many different countries like Portugal, Europe, Russia, Japan, and Africa. Each group of people brought their own style of cooking and seasoning their foods.

Give the students a brief history of the African Americans in Texas from their social studies and history books.

Discuss the contributions that the African Americans made to American food customs such as black-eye peas, hush puppies, fried fish, grits, sweet potato pie, cornbread, and okra. It is important for the students to understand that these foods appeared in the menu because of the African Americans' creativity in using the limited foods that are available to them.

These foods may or may not be part of the diet of the black students in Texas today, just as some eaten by the Native Americans are not familiar to the American Indians living today.



Lead a discussion to help the students appreciate the food contributions made by the African Americans.

Ask the following or similar questions:

How do you feel about trying new foods?

Why is it important to understand the origins of some foods in the United States?

Make a Sweet Potato Casserole from the recipe book. Serve a small portion of the casserole to each student, and discuss the taste of this new food. Note that peanuts are used in the recipe.

Discuss the contribution of George Washington Carver, an African American scientist who discovered more than three hundred uses of the peanut.

### ***Resources and Materials***

My Pyramid Food Group

Texas History Book

Social Studies Book

Sweet Potato Casserole:

6 medium sweet potatoes, peeled

1 cup brown sugar

2 tablespoon margarine

½ teaspoon cinnamon

½ teaspoon nutmeg

½ allspice

½ cloves

1 cup milk(evaporated skim)

1 teaspoon vanilla

Finely chopped peanuts

Grate potatoes. Mix all ingredients well, top with nuts, and bake in a greased 11x13 baking dish at 350 degrees until slightly brown on top.

### ***Evaluation***

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

**Three points:** strong grasp of the subject matter, above-average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**Two points:** on-grade understanding of the subject matter, average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**One point:** weak understanding of the subject matter, had difficulty applying knowledge to their own experience, and did not participate in class discussions.

## **Week 9**

### ***Asian Influence in Texas***

Asian Americans make up the fastest growing ethnic group in the United States. Asian Americans are people who have origins in the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands, which include China, Japan, the Philippine Islands, Vietnam, Cambodia, Laos, and Korea. The Asian Americans are studied as a group and they are the most diverse

minority group in the United States. Asian Americans come from more than twenty-four different countries and cultures and do not share a common language.

Rice is the most stable crop produce in Japan. Other crops produced in Japan are barley, rye, soybeans, sweet potatoes, and wheat. On the hillside of Japan, a variety of fruits and vegetables are grown which consist of mandarin oranges, peaches, pears, cherries, apples, persimmons, beans, cabbage, carrots, peas, squash, and onions. Japanese immigrants used these products when they came to Texas and also adapted other locally available products.

### ***Objective***

Explore foods from different cultures and categorize them using a food grouping system.

Investigate the customs of the Asian Americans.

### ***Assessment***

Identify foods from different cultures.

Classify foods according to the food group.

### ***Activities and Strategies***

Briefly discuss the Asian Americans in Texas and explain to the class that the United is a very young country. People came to America from many different countries like Portugal, Europe, Russia, Japan, and Africa. Each group of people brought their own style of cooking and seasoning their foods.

Give the students a brief history of the Asian Americans in Texas from their social studies and history books.

Inform the students that this lesson will help the student learn about foods from the Asian American culture and to classify them according to the six food groups.

Write the six food groups across the top of the board as column headings.

Randomly discuss each of the foods listed in the opposite column without revealing the food group. Instruct the students to categorize the food group while the teacher writes the name of the food under the appropriate column heading on the board.

Ask the students if they have eaten any of these foods.

### ***Resources and Materials***

- My Pyramid Food Group
- Texas History Book
- Social Studies Book

### ***Evaluation***

Use the following three-point rubric to evaluate how well students grasped information about nutrition, applied that information to their lives, and participated in class discussions on the topic.

**Three points:** strong grasp of the subject matter, above-average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**Two points:** on-grade understanding of the subject matter, average ability to apply knowledge to personal experience; and somewhat active participation in class discussions.

**One point:** weak understanding of the subject matter, had difficulty applying knowledge to their own experience, and did not participate in class discussions.

## CONCLUSION

Obesity is an excessive amount of body fat. Excess body fat adds additional weight more rapidly and can cause a deviation from the normal. It is important for students to learn about this topic so they can avoid being overweight as a child and an adult and decrease heart diseases and other chronic disease that come from being obese. Obesity may be due to lack of exercise or inactivity, heredity or individual eating habits. Students need to invest in their own health and help control and maintain their body weight. This can be accomplished by students learning what foods are in the food pyramid in order to prepare a balance and nutritious meal and by calculating their BMI (Body Mass Index) or a measure of one weight relative to their height and waist circumference measures abdominal fat. Physical activity such as walking and bicycling is most helpful in the prevention of weight regain.

Hopefully, students will understand that they can control their weight gain or weight loss with their eating habits and exercise.

Students will also have the opportunity to apply the same concepts and ideas about the food pyramid, physical activities and nutrition to people of other cultures and countries.

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