

Me---A Wonderful Eater

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Overview

This nutrition curriculum unit is appropriate for an audience of kindergarteners through third graders. Minor changes to the unit will make the lessons more appropriate for any elementary grade. This specific curriculum unit was designed for first graders during a 45 minute class period over nine days. The intent of this unit is to educate the children about their ability to choose the foods they need to enable them to maintain healthy bodies and to be successful in school. This unit will reach across the curriculum into such subject areas as reading, writing, math, science, and social studies. The children's background information regarding nutrition must be ascertained, through stories, dialogue, and brainstorming sessions. Once prior knowledge has been assessed the food pyramid will be introduced. Students will then analyze and classify foods, using the food pyramid as a guide. The teacher will guide students in making the connection that their bodies need the proper fuel to function properly, similar to a battery operated toy car. Once the foundation has been laid, the students will analyze and classify foods as a "need" or "want" for their body. Hopefully, this will enable them to make the best nutritional choices for their bodies when given choices. Making the appropriate food choices will be practiced in class using a variety of foods (pictures, play food, or actual food). These lessons will be supported using various materials and activities, such as children's literature, writing assignments, charts, worksheets, and nutritional games.

Rationale

Childhood obesity is at epidemic levels in the United States. Children are being diagnosed as obese in greater numbers and at earlier ages. Predictably, this trend will only get worse. All indications are that the current generation of children will grow into the most obese generation of adults in US history (1). According to the Mayo Clinic, in

just two decades, the frequency of overweight children has more than doubled (2). The prevalence of obesity in children aged 2-5 years old has increased from 5.0 percent to 13.9 percent. Obesity in children aged 6-11 years old has increased from 6.5 percent to 18.8 percent. The obesity in children aged 12-19 years old has increased from 5.0 percent to 17.4 percent (3). A child is determined to be obese if the Body Mass Index (BMI) is in the ninety-fifth percentile or higher for age and health. BMI is measured in relation to a child's height and weight. This method is used because it is non-invasive and easy to calculate. Basically children are consuming more calories than they are expending. This imbalance is caused by various influences such as behavior, environment, and genetics. Due to this consistent increase in childhood obesity, some people feel that it is the medical crisis of our era. Obesity and all the complications that come with it are being seen in industrialized countries all over the world.

Increasingly, adult diseases are being diagnosed in younger and younger children, as a result of childhood obesity. This chronic condition takes a toll on the physical and mental condition of the body. One of the most prominent diseases on the increase among children is Type 2 Diabetes. This illness can cause blindness, heart and kidney disease, and loss of limbs (4). Obese children also suffer from asthma, high blood pressure, and sleep apnea. Asthma is a respiratory disease that results in coughing and wheezing. This condition is treated with various medications. High blood pressure is diagnosed more often in obese children. Continued high blood pressure can lead to coronary artery disease. This condition is also treated with various medications. Sleep apnea is an illness that disrupts sleep, due to blocked airways. It has been shown that sleep apnea is associated with decreased learning and memory functions (5). Most of these illnesses follow children into adulthood. These long term chronic conditions and the medicines that are used to treat the illness will compound health problems in the future for obese children. Hopefully, treatment and prevention of childhood obesity will help reduce the diseases and illnesses that seem to come hand-in-hand with childhood obesity.

Children's poor nutrition is also linked to their family life. Many children learn their eating and exercise habits from their parents. If parents are setting a poor example regarding nutrition and physical activity, chances are high their children will follow in their footsteps. Another component of childhood obesity and the family is working parents. The demands on working parents' time are huge. Time must be planned very carefully to meet all the needs of the family. A hectic family schedule prevents parents from spending more time with their children. Dr. Alex McIntosh conducted a study that found the amounts and quality of time parents spent with their children has a direct effect on children's rates of obesity (6). Eating outside the home has increased dramatically in

today's families. Since so many meals are eaten outside of the home there is less control over ingredients and portion control. These scenarios all have an impact on childhood obesity.

Children today are a lot less active than they were years ago. This sedentary lifestyle is caused by many variables. Most children ride to school in cars and buses and no longer walk to school. Low-income neighborhoods are usually unsafe; therefore children are unable to play outside. Physical education has either been trimmed or cut from schools. The lure of television, video games, and the Internet win out over physical exercise. Time spent in front of the television seems to be the one thing that has a direct relationship to childhood obesity. When children are either watching television or playing video games they are not expending any calories. Children's television programs have numerous advertisements for high calorie, high sugar, low nutrition foods and beverages. Center for Science in the Public Interest issued a report stating that parental authority is undermined by food marketing directed at children and helps to fuel the epidemic of childhood obesity(7). The Children's Food and Beverage Advertising Initiative has gotten McDonald's, PepsiCo, Coca-Cola, and General Mills to agree to limit how they market to children under twelve. These companies are responsible for two-thirds of the television food advertisements (8). A randomized controlled study was completed with third and fourth graders which required reduced television and video time. This study determines that reducing time spent in front of the television does reduce childhood obesity (9). Reducing childhood obesity can start with reducing time in front of the television, but can't stop there.

Mental health also suffers when a child is obese. The medical problem evolves into a social problem. Obese children are teased, harassed, and made to feel like outcasts in many social settings, including school. This harassment causes low self-esteem. The Journal of Pediatric Psychology reported obese children were less liked and rejected more often by peers and reported more depression and a lower self-concept (10). Low self-esteem now puts them in danger of emotional damage. The Mayo Clinic found that social isolation and low self-esteem create overwhelming feelings of hopelessness in some overweight children (11). Obese adolescents are more likely to report increased levels of loneliness, sadness, and nervousness and are also more likely to smoke and drink alcohol (12). As you can see, preventing childhood obesity would help to prevent psychological issues associated with weight gain.

Preventing a disease is easier than treating an illness. Therefore educating children concerning proper nutrition will lead to a healthier lifestyle. Educators should begin to

teach children about nutrition as soon as they enter school. Better to teach the children at an early age before bad habits take hold and make it more difficult to change later.

Objectives

Students will complete various assignments and assessments in alignment with the Pennsylvania Academic Science Standards, Science 3.1.4 Unifying Themes, Science 3.2.4 Inquiry and Design, Science 3.3.4 Biological Sciences, Science 4.2.4 Renewable and Nonrenewable Resources, Science 4.4.4 Agriculture and Society, Science 4.8.4 Humans and the Environment. Students will analyze and determine that a snack is smaller in size than a meal.(3.1.4) Students will identify foods that provide their bodies with nutrition and fuel.(3.1.4). Students will draw and describe foods in each one of the five food groups.(3.2.4) Using the food pyramid as a guide, students will analyze and choose the food that their bodies “need” to function properly. (3.3.4, 4.2.4, 4.4.4). Students will match the needed foods to where they come from.

This unit will reach across other areas of Pennsylvania Curriculum Standards. The Literacy Standards that will be utilized are Literacy 1.1 Learning to Read Independently, Literacy 1.2 Reading Critically in all Content Areas, Literacy 1.3 Reading, Analyzing, and Interpreting Literature, Literacy 1.4 Types of Writing, Literacy 1.5 Quality of Writing, Literacy 1.6 Speaking and Listening. Using children’s literature students will preview and predict stories about nutrition, use picture clues, and monitor comprehension strategies, and participate in guided discussions. Students will use the computer to access various nutritional children websites and view a nutritional video. Students will write three facts about good nutrition and write riddles using descriptions of food from the food pyramid.

This unit will also incorporate Math and Social Studies Pennsylvania Curriculum Standards. Students will create bar graphs and tally charts to visualize the foods that they consume. This is Math Standard 2.6 Statistics and Data Analysis. Students will also analyze and determine which foods they will eat as a “need” or a “want” for their body. This is Social Studies Standard 6.3 Scarcity and Choice.

Strategies

In order to begin a discussion and determine what the children know about nutrition we will complete a brainstorming activity centered on the word nutrition. On chart paper the teacher will write the word nutrition and the students will then tell what they know about nutrition. Their ideas will be recorded on the chart paper. This chart paper should remain hanging in the class throughout the unit. You may refer back to this chart to

confirm facts the children already know. This will provide them with confidence and encourage them to participate in the lessons.

Next, chart paper will be used to create a bar graph. On the chart paper the teacher will write the words apple, chocolate bar, and oatmeal raisin cookie across the bottom of the paper. Along the side of the paper the teacher will write numbers in increments of 2, 3, or 5, whichever is appropriate for the size of the class. Students will then be asked to decide which snack they would prefer to eat an apple, chocolate bar, or oatmeal raisin cookie. The students' answers will be recorded onto the bar graph. The teacher may provide the students with a similar graph to fill in with the teacher. The students will then answer the following questions as a class: Which food item received the most votes?, Which food item received the least amount of votes?, How many more votes did _____ get than _____? After the graph has been analyzed and discussed ask the students which food item do they think would be the very best for their body and why. Then ask which food item would be the worst for their body and why. Finally ask the students which food item would just be ok for their body and why. This will help the students to visualize and analyze food choices for their body.

Then read the story Gregory, the Terrible Eater written by Mitchell Sharmat. The cover of the story and the pictures will be displayed to the children. The students will preview and predict what the story will be about. Students will be asked guided questions throughout the story. At the conclusion of the story, the students will get into groups of four and be given a large piece of construction paper. The students will create a T-chart as the teacher demonstrates. The students will then be asked to work together and list the foods that a goat needs and list the foods that people need. When the groups have been given a sufficient amount of time to complete this activity, they will share their chart to the class. This story is a Reading Rainbow story therefore a video of the story should be available at your local library.

The students will be introduced to the food pyramid using a poster in class. Both posters will be shown since both pyramids can be seen in society. The class will discuss what the posters are displaying. From their responses the teacher will guide the children in determining that the food pyramid is used to help us determine which foods we should eat to help fuel our bodies and keep them healthy. The class will then play Food Pyramid Bingo. This activity is a fun way to help youngsters classify foods into the appropriate class in the food pyramid.

The story The Edible Pyramid, Good Eating Every Day by Loreen Leedy will be shared with the children. Before sharing the story the children will preview and predict the story. This story will help reinforce the previous lesson of grouping foods into the correct section of the food pyramid. Children will participate in a guided discussion throughout the story. At the conclusion of the story, students will design and create their

own menu. The cover of the menu should be the name of the restaurant, the inside of the menu should contain foods grouped into the appropriate food group.

The teacher will tell a short little story about a car that stops functioning. The students will determine that it ran out of gas. A discussion will then ensue that will help the youngsters determine that fuel is energy for a car. The teacher will then ask the students questions to help them determine that *proper* food is fuel for their bodies. The teacher will then write three different times on the board (7:00AM, 12:00PM, 5:30PM). Children will be asked what meal is eaten at those times. These meals will be written next to the times. The children will then focus on the time lapse between these meals, particularly dinner and breakfast. It will be determined that a snack can be eaten in between meals. The size of a snack and the size of a meal will be discussed, and children will draw a picture of a snack and a meal. The students will use the food pyramid to help guide their drawings. Remind students the drawing of the snack should be smaller than the meal.

The teacher will display five brown bags from a supermarket. One brown bag large enough to carry a lunch. The five brown bags will be labeled “Grains”, “Vegetables”, “Fruits”, “Milk”, “Meats” and “Beans”. The small brown bag will be labeled “Other”. Food store circulars will be distributed to the class. The children will find and cut out an item from the circular to put into each food group bag. After each child has had a turn, we will take the items out of the “other” bag and discuss why these items are not what your body needs. These items do not provide the proper fuel or energy for your body so should be eaten sparingly.

Students will classify things into “the best”, “ok”, and “the worst”. We will start with summer vacations; as a class we will classify swimming in your backyard pool, going to the shore, or going to Disney World. Then classify having a half-day of school, having one day off, or having five days off. Students will then help the teacher classify certain foods as “the best”, “ok”, and “the worst”. Some items may include: soda, milk, iced tea, or box of raisins, an oatmeal raisin cookie, chocolate covered pretzel, or potato chips, string cheese, cheese its. This activity will help the children to analyze and choose better foods. This is very important since most children spend more time eating outside of the home than ever.

There are also various websites the children can access to help reinforce good nutritional practices. These sites will be listed in the appendix.

Classroom Activities

Lesson One: What does the word nutrition mean to you? (30 minute class period)

- I. Objectives
 - A. Students will identify and define the word nutrition

- II. Content
 - A. Pennsylvania Standards
 - 1. Literacy
 - a. 1.1 Learning to Read Independently
 - 1. Identify new vocabulary learned in various subject areas
 - b. 1.6 Speaking and Listening
 - 1. Use correct vocabulary and word usage when speaking
 - 2. Participation in small and large group discussions with assigned roles

- III. Materials
 - A. Chart Paper
 - B. Markers
 - C. Nutrition Books
 - D. Food pyramid

- IV. Activities
 - A. Display books and food pyramid
 - B. Write the word nutrition on the chart paper
 - C. Brainstorm the meaning of the word nutrition

Lesson Two: Create a bar graph of your favorite food (45 minute class period)

- I. Objectives
 - A. Students will graph and analyze their favorite food
- II. Content
 - A. Pennsylvania Standards
 - 1. Math
 - a. 2.6 Statistics and Data Analysis
 - 1. Gather, organize and display data using pictures, tallies, charts, bar graphs and pictographs
- III. Materials
 - A. Create a large graph using chart paper, and markers.
 - 1. Write the words apple, chocolate bar, and oatmeal raisin cookie along the horizontal line of the graph.
 - 2. Write the numbers along the vertical side of the graph.
 - B. Provide students with one post-it note
 - 1. Have students write his/her name on the post-it note
 - C. Have students come to the graph and place his/her post-it note above his/her food choice
 - D. Analyze the data
 - E. Option: Generate a graph for each child to complete along with the teacher
- IV. Activities

- A. Lead a class discussion about their favorite snacks
- B. Display graph on chart paper, read the choices (apple, chocolate bar, and oatmeal raisin cookie)
- C. Give children a Post-It Note. Have them write their name on it
- D. Have children place their Post-It Note above their choice on the graph. This will create a bar graph
- E. In addition to the large chart paper graph, the teacher may create a similar bar graph to distribute to each student. The students will then replicate the large bar graph and answer analytical questions about the graph.
- F. The teacher will then lead a discussion with students to decide which food choice would be the best for his/her body (apple, chocolate bar, or oatmeal raisin cookie)

Lesson Three: Identify and analyze nutritious foods (45 minute class period)

- I. Objectives
 - A. Students will listen to the story Gregory, the Terrible Eater by Mitchell Sharmat
 - B. Students will answer comprehension questions orally.
 - C. Students will compare and contrast the foods needed by goats and people.
 - D. Students will work in groups to create a T-chart identifying “goat food” and “people food”
 - 1. students will share their chart with the class
 - 2. teacher will guide the focus to the healthy “people food”
- II. Content
 - A. Pennsylvania Standards
 - 1. Science
 - a. 3.2.4 Inquiry and design
 - 1. identify and use the nature of scientific and technological Change
 - b.4.2.4 Renewable and Nonrenewable Resources
 - 1. identify the needs of people
 - c. Agriculture and Society
 - 1. know the importance of agriculture to humans
 - 2. Literacy
 - a. 1.1 Learning to read independently
 - 1. identify the purpose of text using illustrations and text format clues
 - 2. preview text to identify title, author and parts of a book
 - 3. identify new vocabulary learned in various subject areas
 - 4. identify the characteristics of fiction and nonfiction text

5. answer questions based on material read
- b. 1.2 Reading critically in all content areas
 1. discuss content of informational items in text
 2. describe the characters and setting indicating impact on the main idea of the story
- c. 1.3 Reading, analyzing, and interpreting literature
 1. read a variety of works of literature, and participate in guided discussions
 2. describe the characters and setting indicating impact on the main idea of the story
 3. read both fiction and nonfiction
- d. 1.6 Speaking and listening
 1. listen to others when they are speaking and demonstrate an understanding of the message
 2. listen to selections of literature
 3. use correct vocabulary and word usage when speaking
 4. relate real experiences to a specific topic
 5. participate in small and large group discussions with assigned roles.

III. Materials

- A. Gregory, the Terrible Eater by Mitchell Sharmat
- B. Chart paper
- C. Construction paper

III. Activities

- A. Display the book Gregory, the Terrible Eater by Mitchell Sharmat preview and predict the story
- B. The teacher will read the story and ask comprehension questions.
- C. Group children into groups of four. Give each group a 12x18 piece of construction paper. Make a T-Chart
- D. Have students list the food the goat needs on one side and list the food people need on the other side.
- E. Have students share their T-Charts with the class
- F. Guide a discussion to analyze the differences in the food needs for a goat as compared to people
- G. Provide students with drawing paper. Fold it in half. On one side illustrate a goat eating “food” on side and a person eating food on the other side. Write one sentence for each picture.
- G. This story is a Reading Rainbow story, therefore you may find a video of this story at your local library.

Lesson 4: Food Pyramid: Foods to Fuel your Body (45 minute class period)

I. Objectives

- A. Students will identify the food pyramid
- B. Students will identify the various foods in the food pyramid

- (grains, vegetables, fruits, milk, meats and beans, and oils)
- C. Classify foods into the appropriate food groups according to the food pyramids

II. Content

A. Pennsylvania Standards

1. Science

a. 3.1.4 Unifying themes

1. know that scale is an important attribute of natural and human made objects, events and phenomena

b. 3.2.4 Inquiry and design

1. identify and use the nature of scientific and technological Knowledge

2. Describes objects in the world using the five senses

c. 4.2.4 Renewable and Nonrenewable Resources

1. identify the needs of people

d. 4.4.4 Agriculture and Society

1. know the importance of agriculture to humans

2. know that food and fiber originate from plants and animals

e. 4.8.4 Humans and the Environment

1. Identify the biological requirements of humans

III. Materials

A. Two food pyramid posters

B. Food Pyramid Bingo game

IV. Activities

A. Compare both food pyramids

B. Analyze the food groups

C. Describe the food in each food group using the five senses

D. Food Pyramid Bingo game cards

Lesson 5: Good Eating Every Day (two 45 minute class periods)

I. Objectives

A. Students will preview and predict the story by looking at the title and illustrations.

C. Students will listen to the story The Edible Pyramid, Good Eating Every Day by Loreen Leedy.

D. Students will answer comprehension questions.

E. Students will analyze and group foods into the various food groups.

F. Students will design and create their own menu. The foods on the menu will be grouped into the food groups.

II. Content

A. Pennsylvania Standards

1. Science

a. 3.1.4 Unifying themes

1. know that scale is an important attribute of natural and human

made objects, events and phenomena

b. 3.2.4 Inquiry and design

1. identify and use the nature of scientific and technological knowledge

c. 4.2.4 Renewable and Nonrenewable Resources

1. identify the needs of people

d. 4.4.4 Agriculture and Society

1. know the importance of agriculture to humans
2. know that food and fiber originate from plants and animals

e. 4.8.4 Humans and the Environment

1. identify the biological requirements of humans

2. Literacy

a. 1.1 Learning to read independently

1. identify the purpose of text using illustrations and text format clues
2. preview text to identify title, author and parts of a book
3. identify new vocabulary learned in various subject areas
4. identify the characteristics of fiction and nonfiction text
5. answer questions based on material read

b. 1.2 Reading critically in all content areas

1. discuss content of informational items in text
2. describe the characters and setting indicating impact on the main idea of the story

d. 1.3 Reading, analyzing, and interpreting literature

1. read a variety of works of literature, and participate in guided discussions
2. describe the characters and setting indicating impact on the main idea of the story
3. read both fiction and nonfiction

d. 1.6 Speaking and listening

1. listen to others when they are speaking and demonstrate an understanding of the message
2. listen to selections of literature
3. use correct vocabulary and word usage when speaking
4. relate real experiences to a specific topic

III. Materials

- A. The Edible Pyramid, Good Eating Every Day by Loreen Leedy
- B. Construction paper, crayons and/or markers

IV. Activities

- A. Display the story The Edible Pyramid, Good Eating Every Day by Loreen Leedy
- B. Read the title, do a picture walk, make a prediction
- C. Students will answer comprehension questions about the story.

- D. Students will analyze and group the foods into food groups.
- E. Students will be given a piece of 12x18 construction paper. The construction paper will be folded in half. Students will think of a name for his/her restaurant. This name will be put on the cover of the menu. Students will decide which foods will be offered on his/her menu. These foods will be grouped on the menu according to the food groups.

Lesson 6: Fuel For Your Body (45 minute class period)

- I. Objectives
 - A. Students will listen to a short story made up by the teacher.
 - B. Students will draw conclusions about the story.
 - C. Students will conclude proper food is body fuel.
 - D. Students will determine that the size of a snack is smaller than a meal.
- II. Content
 - B. Pennsylvania Standards
 - 1. Science
 - a. 3.1.4 Unifying themes
 - 1. know that scale is an important attribute of natural and human made objects, events and phenomena
 - b. 4.2.4 Renewable and Nonrenewable Resources
 - 1. identify the needs of people
 - c. 4.4.4 Agriculture and Society
 - 1. know the importance of agriculture to humans
 - 2. know that food and fiber originate from plants and animals
 - d. 4.8.4 Humans and the Environment
 - 1. identify the biological requirements of humans
 - 2. Literacy
 - a. 1.6 Speaking and listening
 - 1. listen to others when they are speaking and demonstrate an understanding of the message
 - 2. relate real experiences to a specific topic
 - 3. Social Studies
 - a. 6.3 Scarcity and choice
- III. Materials
 - A. Pictures of snacks and meals
 - B. Food pyramid
- IV. Activities
 - A. The teacher will make up a story about a car that runs out of gas.
 - 1. students will determine the car needs gas to work.
 - 2. the teacher will ask students about using a variety of materials (water, soda, milk) to get the car started again.
 - 3. students will determine gas is the only “proper” material

- to get the car started again.
- 4. students will brainstorm a list of “proper” foods for our body to fuel up.
- 5. 7AM, 12PM, and 5:30PM will be listed on the board and on students’ papers. Students will draw a picture of the “proper” foods you would eat at these times.
 - 6. Draw students’ attention to the hours between meals, particularly dinner and breakfast.
 - 7. Students will determine their bodies may need more fuel between meals.
 - 8. Students will draw pictures of “proper” snacks between meals. Making sure snacks are smaller in size than the meals and healthy snacks.
 - 9. Students will share their drawings.

Lesson 7: My Brown Bags (45 minute class period)

- I. Objectives
 - A. Students will identify the food groups.
 - B. Students will classify foods according to the food groups.
 - C. Students will identify foods that should be eating sparingly.
- II. Content
 - C. Pennsylvania Standards
 - 1. Science
 - a. 3.1.4 Unifying themes
 - 1. know that scale is an important attribute of natural and human made objects, events and phenomena
 - b. 4.2.4 Renewable and Nonrenewable Resources
 - 1. identify the needs of people
 - c. 4.4.4 Agriculture and Society
 - 1. know the importance of agriculture to humans
 - d. 4.8.4 Humans and the Environment
 - 1. identify the biological requirements of humans
 - 2. Literacy
 - a. 1.6 Speaking and listening
 - 1. listen to others when they are speaking and demonstrate an understanding of the message
 - 2. relate real experiences to a specific topic
 - 3. Social Studies
 - a. 6.3 Scarcity and choice
- III. Materials
 - A. Five brown bags from a supermarket
 - B. One lunch bag
 - C. Food store circulars
- IV. Activities

- A. Tape all the brown bags to the board.
- B. Students will help label the bags according to the food pyramid.
- C. Students will be given food circulars
 - 1. each student will cut out an item for each food group from the circular.
 - 2. each student will explain his/her selection and place in the appropriate bags.

Lesson 8: Best Choices, Best Eater (45 minute class period)

- I. Objectives
 - A. Students will classify foods using the following scale, the best, ok, and the worst.
 - B. Students will tell why one food is better than the other foods.
- II. Content
 - D. Pennsylvania Standards
 - 1. Science
 - a. 3.1.4 Unifying themes
 - 1. know that scale is an important attribute of natural and human made objects, events and phenomena
 - b. 4.2.4 Renewable and Nonrenewable Resources
 - 1. identify the needs of people
 - c. 4.4.4 Agriculture and Society
 - 1. know the importance of agriculture to humans
 - 2. know that food and fiber originate from plants and animals
 - d. 4.8.4 Humans and the Environment
 - 1. identify the biological requirements of humans
 - 2. Literacy
 - a. 1.6 Speaking and listening
 - 1. listen to others when they are speaking and demonstrate an understanding of the message
 - 2. relate real experiences to a specific topic
 - 3. Social Studies
 - a. 6.3 Scarcity and choice
 - 4. Math
 - a. 2.6 Statistics and Data Analysis
 - 1. Gather, organize and display data using pictures, tallies, charts, bar graphs and pictographs
- III. Materials
 - A. Pictures of various foods
 - B. Chart paper
- III. Activities
 - A. The teacher will begin by asking the students to grade a summer vacation and/or time off as “the best”, “ok”, or “the worst”

- a. choices: swimming in your backyard pool, going to the shore, or going to Disney World.
- b. choices: half-day of school, having one day off, or having five days off.
- B. Using a piece of chart paper draw a horizontal line with the words “the best”, “ok”, and “the worst” written under the line.
- C. Present pictures or drawings of similar foods. Have students classify foods as “the best”, “ok”, and “the worst.”
- D. Tape the pictures above the classification
- E. Choices:
 - 1. soda, milk, iced tea
 - 2. box of raisins, an oatmeal raisin cookie, and chocolate covered pretzel
 - 3. potato chips, string cheese, Cheese-Its
- F. Use this scale to discuss proper food choices with students
- G. Have students create their own scale with food choices

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This article examines associations between food insufficiency and cognitive, academic, and psychosocial outcomes with school-aged children.

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This site provides information from The American Heart Association that supports the federal government's decision to emphasize physical activity for all public school children to help reduce childhood obesity.

3. Behrman, J. The Impact of Health and Nutrition on Education. Available at: <http://wbro.oxfordjournals.org>. Accessed January 2008.

This article presents information regarding educational achievement and children's health and nutrition with hopes the government will conduct studies to determine the impact malnutrition has on academic success.

4. Cama, S., Emerson, B., Parker L., Levin, M., et al. School Wellness Policy and Practice: Meeting the Needs of Low Income Students. Food Research and Action Center. Available at: <http://www.frac.org>. Accessed February 2008.

This guide has been written to help educational institutions respond to obese low-income students who have limited or no health care to help improve nutrition.

5. Childhood Obesity Indicates Greater Risk of School Absenteeism, University of Pennsylvania Study Reveals. 2007. Available at: <http://www.upenn.edu/pennnews/article.php?id=1196>. Accessed March 2008.

This site presents information gained through researchers at the University of Pennsylvania and Temple University concerning the relationship between

overweight students and school absenteeism.

6. Childhood Obesity. The Role of Schools in Obesity Prevention. Available at: <http://www.futureofchildren.org>. Accessed January 2008.

This article discusses the relationship between weight problems and poor academic achievement.

7. Dietz, William H. Health Consequences of Obesity in Youth: Childhood Predictors of Adult Disease. PEDIATRICS. March 1998; 101: 518-525 .

This article discusses the discrimination and physical problems that obese children and adolescents encounter.

8. Food Companies to Restrict Marketing Aimed at Kids. 2007. Available at http://www.kidshealth.org/research/food_ads.html. Accessed January 30, 2008

This site provides information concerning aiming advertisements to children during television viewing. The U.S. government has convinced some big name food companies to restrict their advertising to children.

9. Hill J.O., Trowbridge F.L. Childhood Obesity: Future Directions and Research Priorities. Pediatrics. 1998;101:570-574 .

This article discusses the lack of public concern regarding the severe physical and social effects of childhood obesity and policy makers.

10. Mallory, G.B., Fiser, D.H., Jackson, R. Sleep-Associated Breathing Disorders in Morbidly Obese Children and Adolescents. Journal of Pediatrics. 1989; 115(6):902-897.

This article discusses the link between obesity and sleep-associated breathing disorders.

11. Mayo Clinic Staff. Childhood Obesity. Available at: <http://www.nlm.nih.gov/medlineplus/obesityinchildren.html>. Accessed January 30, 2008.

This is a comprehensive article about childhood obesity. It provides information such as causes, risk factors, treatments and much more.

12. McIntosh, A. Parental Time Key In Fight Against Childhood Obesity, Study. 2006. Available at <http://www.medicalnewstoday.com>. Accessed February 17, 2008.

This site provides information concerning the link between time parents spend with their children and the incidences of childhood obesity.

13. Must, A., Strauss, R.S. Risks and Consequences of Childhood and Adolescent Obesity. *International Journal of Obesity*. 1999; 23: S2-S11.

This article presents information regarding the short-term and long-term affects of childhood obesity.

14. Robinson, T. N., MD, MPH. Reducing Children's Television Viewing to Prevent Obesity. *JAMA*. 1999;282:1561-1567.

This article determines through research that reducing television, videotape, and video game use is a quick and widespread intervention that will have a Direct impact on reducing childhood obesity.

15. Speiser, P.W., Rudolf, M.C.J., Anhalt, H., et al. Consensus Statement: Childhood Obesity. *The Journal of Clinical Endocrinology & Metabolism*. 2005; 90(3): 1871-1887.

This article presents evidence that adult morbidities begin in childhood. the authors' present ways to reduce childhood obesity because they feel public policy makers have not been pro-active about addressing this issue.

17. Strauss, R.S. Childhood Obesity and Self-Esteem. *Pediatrics* 2000;105

This article focuses on low self-esteem obese children experience, particularly Hispanic and white females. Obese children with low self-esteem experience loneliness and are more likely to engage in high-risk behaviors.

18. The Center for Health and Health Care in Schools. Childhood Obesity: What the Research Tells Us. Available at www.healthinschools.org. Accessed February 18, 2008.

This article discusses the increase in childhood obesity and factors that may contribute to childhood obesity.

19. HHS Launches Childhood Overweight and Obesity Prevention Initiative. U.S. Department of Health & Human Services Web Site. 2007. Available at www.HHS.gov. Accessed February 16, 2008.

This website has a statement by First Lady Barbara Bush regarding the Department of Health and Human Services' effort in expanding the government's childhood-overweight and obesity programs of prevention.

20. Vail, K. Mind and Body: New Research Ties Physical Activity and Fitness to Academic Success. American School Board Journal. March 2006; 30-33.

This article presents a case for physical education to provide children with physical and cognitive good health.

21. Wooten, M.G., CSPI Hits Marketing Junk Food to Kids. 2003. Available at <http://www.cspinet.org>. Accessed February 18, 2008.

This website discusses the topic of marketing junk food to children due to the childhood obesity.

Annotated Student Bibliography

1. Buono, A., Nemerson, R., Silberman, B. The Race Against Junk Food (Adventures in Good Nutrition). New York; HCOM Inc.; 2003

This is an enjoyable story about eating healthy. Most characters are fruits and vegetables that help teach the benefits of good eating habits

2. Child, Lauren . I Will Never Not Ever Eat a Tomato. New York: Orchard Books; 2000

This story is about a child named Lola who is a picky eater. Her big brother Charlie tries all kinds of imaginative ways to get his little sister to try various foods. Children will easily relate to and enjoy this story.

3. Ehlert, Lois. Eating the Alphabet, New York: Harcourt, 1989.

The colorful alphabet book has various pictures and labels for various fruits and vegetables.

4. Leedy, Loreen. The Edible Pyramid: Good Eating Every Day, New York: Holiday House, 1996.

Animals order food and dine at a restaurant together. Children will learn about healthy foods and serving size.

5. McGinty Alice B. Staying Healthy: Eating Right. Franklin Watts; 1999.

This children's book has numerous colorful pictures to keep them engaged in the book and learn about healthy foods.

6. Rockwell, Lizzy. Good Enough to Eat: A Kid's Guide to Food and Nutrition. New York: HarperCollins; 1999

A book has colorful and eye-pleasing illustrations. The children in the story explain, in very simple terms, that food is fuel for our bodies.

7. Sharmat, M., Gregory the Terrible Eater. New York: Scholastic; 1985

A humorous story about a goat that eats “healthy” food rather than “goat” food much to his parents chagrin. Children will learn to identify healthy foods and enjoy the story.

Internet Sites

1. <http://www.nutritionexplorations.org>

At the bottom of the page, click on Kids Play Our Fun Food Games. This will take you to a site that allows children to choose stories or games about good food choices. It is also a great source of information for parents and teachers.

2. <http://www.dole5aday.com>

This site offers various activities for children such as games, stories, and recipes. Parents and teachers could also find a great deal of nutritional information on this site.

3. <http://www.kidshealth.org>

This site will allow children to learn about nutrition through various links.

Appendix: Pennsylvania Academic Standards

Literacy

1.1 Learning to Read Independently

- Identify new vocabulary learned in various subject areas
- Identify the purpose of text using illustrations and text format clues
- Preview text to identify title, author, and parts of a book
- Identify the characteristics of fiction and nonfiction text
- Answer questions based on material read

1.2 Reading Critically in All Content Areas

- discuss content of informational items in text
- describe the characters and setting indicating impact on the main idea of the story

1.3 Reading, analyzing, and interpreting literature

- read a variety of works of literature, and participate guided discussions
- describe the characters and setting indicating impact on the main idea of the story
- read both fiction and nonfiction

1.6 Speaking and listening

- listen to others when they are speaking and demonstrate an understanding of the message
- listen to selections of literature
- use correct vocabulary and word usage when speaking
- relate real experiences to a specific topic
- participate in small and large group discussions with assigned roles.

Math

2.6 Statistics and Data Analysis

- Gather, organize and display data using pictures, tallies, charts, bar graphs and pictographs

Science

3.1.4 Unifying themes

- know that scale is an important attribute of natural and human made objects, events and phenomena

3.2.4 Inquiry and design

- identify and use the nature of scientific and technological knowledge
- describes objects in the world using the five senses

4.2.4 Renewable and Nonrenewable Resources

- identify the needs of people

4.4.4 Agriculture and Society

- know the importance of agriculture to humans
- know that food and fiber originate from plants and animals

4.8.4 Humans and the Environment

- identify the biological requirements of humans

Social Studies

6.3 Economics

- scarcity and choice