

What's For Lunch?

*By Sarah Hornung
Mifflin Elementary School*

Overview
Rationale
Objectives
Strategies
Classroom Activities
Annotated Bibliography/Resources
Appendices-Standards

Overview

This unit is written for a class of students in special education learning support. It could be adapted for various grade levels and developmental stages including general education students. It can be used across various curriculum areas including, but not limited to: Reading, Science, Social Studies classes, Math, etc. This unit will address a brief history relating to the various food pyramids and governmental guidelines on nutrition. The emphasis of the unit will be for students to actively observe eating patterns within their homes and school. Students will use their knowledge of nutrition to determine healthy food diets for themselves and family members. The class will explore the food served in the school lunches and make judgments on the nutritional value of these meals. Within the classroom, students will experiment by creating a healthy menu and cooking a nutritionally sound meal for their peers, teachers, and parents to enjoy.

Many of the youth receiving special education services are on medication, so we will explore the effect medication can have on appetite. The students will also be exploring personal choice and cultural differences among food choices. They will enjoy learning about and tasting food from various cultures. Students will research a food group of their choice. The students will create a visual aid to explain the food group and why it is important, or not so important to the functioning of the body. Students will research and present recipes for healthy food that they can make with their families. The students will create a simple power point presentation to give an oral report to the class.

Rational

My earliest food memory is of picking a special meal for my birthday. Against the cries and wails of my brothers, I always chose clam sauce; which in my house meant mom's homemade spaghetti with clam sauce. The birthday meal, once created, was nothing overly special—a pound of pasta, chopped and sautéed onion and garlic, 2 cans of clam juice, 2 cans of chopped clams, and parsley for added color. This meal was more than a meal—it was created for me, in celebration of my birth and existence with my family celebrating together with food and laughter. It reinforced my place within my family. This food was only an excuse for us to come together and be a family. Therefore, our birthday meals were special times for my brothers and me. We knew that we were loved and cherished by our parents and each other on that day, and the meal was the tie that brought us together. I hope that when I have children, they will get the same joy out of picking a birthday or special meal for our family to share and relish.

Unfortunately, I think that the children I teach do not have a special food time with their families. Family dinners are a thing of the distant past. Food is not used as a gift, as a celebration. In many cases I see food being used to fill an emotional void, not as an accent to enhance a strong emotional and loving tie to family. Children come home from school and more often than not, the television is used as a surrogate parent. Children watch hours upon hours of television daily. On a recent weekday afternoon, I clocked eight food or snack related commercials during a half-hour cartoon show. These couch potatoes stuff their faces with food high in calories and low in nutritional value, much as they see commercialized families doing every day.

According to Wootan, from 1979-1999, annual hospital costs for treating obesity-related diseases in children rose three-fold (from 35 million in 1979 to 127 million in 1999) (27). What are children putting into their bodies? What are we feeding our youth that is exacerbating this problem of obesity in our students? There is a strong relationship between childhood obesity and adult obesity, especially in children 3 years and older. Dr. Myron Winick, of the U.S. Department of Agriculture noted in a 1988 publication that an obese 3-year old has 60 percent greater chance of becoming an obese adult (Cooper, 273). If we don't do something in our classrooms to teach a healthy lifestyle to kids now, we will have lost another generation to the dangers of living as an overweight child and adult.

I have chosen to develop the unit "What's for Lunch" for several reasons. Children today are bombarded with television shows and advertisements that depict snack foods, processed foods, microwave meals, candy, chips, pop, and hundreds of other food items as healthy choices. Then these same students come into school, where they are greeted with soda machines in their cafeterias and

vending machines laden with treats full of fat and sugar by the lockers. In a study completed in September and October of 2003 by the *Center for Science in the Public Interest*, 120 volunteers in 24 states participated in a survey of 1,420 vending machines located in 251 schools. These schools included 105 middle and junior high schools, and 25 schools with a combination population (ex. 7th-12th grades). The survey showed that in both middle and high schools, 75% of beverage options and 85% of snacks were of poor nutritional quality (Wootan 3). The most available options for students are soda, imitation fruit juices, candy, chips, cookies, and snack cakes. These vending machine offerings do not give students' options to make healthy food choices nor does it give parents support to feed their children well when away from home. The trend is of concern because as 74% of middle/junior high schools and 98% of senior high schools have vending machines, school stores or snack bars, obesity rates continue to rise (Wootan 1).

Many school districts support the claim that these vending machines are a needed income source to offset the rising cost of education, and annual budget crises. When, in fact, only a small percentage of total budgets actually come from these machines. For example, soft drinks generate between \$3.00 and \$30.00 per student per year, providing less than .5% of a school's annual budget. Furthermore, although in the short run, districts may see themselves as solving immediate financial problems, the long term effects of this overeating and indulgence will surely lead to more money being spent on the treatment of obesity and diet-related illness and disease, such as diabetes, heart disease, and cancer (Wootan 2).

A number of schools have begun to replace soda and other high sugar drinks with healthy beverages and have not lost revenue. Another for schools is to sell non-perishables or host a fund raiser to raise money as opposed to always supporting the quick and easy candy sales and relying on vending machine revenues for cash (Wootan 3).

The students are served lunches that are marketed as well balanced meals, but which very often fall short of the mark. A recent lunch in my own school cafeteria, which serves federally approved breakfast and lunch meals, included over 941 calories. The sodium levels were calculated at 1,234 mg., carbohydrates at 96 grams, protein was 34 grams, and fat at an astonishing 49 grams. This lunch was a random sample of chicken nuggets, hash brown potatoes, and a 3ounce bag of raw baby carrots. The students washed this meal down with a pint of chocolate milk and believed they had indeed "done a body good."

The National School Lunch Program was created in 1946 under the Truman administration. It was a "measure of national security, to safeguard the health and well being of the Nation's children and to encourage the domestic

consumption of nutritious agricultural commodities and other food.” The United States Department of Agriculture has also had a large hand in the functioning capacity of the school lunch. The USDA sets the standards and requirements for foods provided in the lunch program -including “which foods are served, portion sizes, and amounts of specific nutrients that school meals must provide over the course of a week” (Wootan 10). Conversely the USDA has a very limited ability to regulate foods sold in vending machines and other areas outside of the school meals program.

I feel that we, as educators, need to give our students the factual knowledge about nutrition and guide them in making choices for themselves. Instead of serving pre-packaged meals full of empty calories, we should allow them choices of fresh salads and fruit, steamed vegetables, lean meats, whole grain breads, water, and fruit juices. These options are vital to create and sustain a healthy diet, and we routinely don’t offer this simple education in our school systems. The Children’s Nutrition Research Center recommends all children, especially girls, intake at least 1,200 mg daily of calcium by age 8, not 11 as was previously recommended. Between the ages of 11 and 24, women should consume 1,500 mg of calcium per day. This will greatly reduce the chances of osteoporosis occurring in old age. Our girls do not have enough calcium in their daily diets. They don’t drink milk or other dairy products, and they surely don’t take a daily vitamin. This is another branch of education that needs to be explored at the classroom level to encourage our students to make healthy choices now that will have a positive impact on their future lives.

A few of my students bring a dollar to school to purchase an additional snack from the school store. Usual purchases include a quart of iced tea, and bags of chips or ice cream bars. These additional calories quickly add up to unneeded pounds and lethargic behaviors. Some of the luckier students are told by caring adults to eat healthy, and to make good choices. These same adults then regularly stop at the McDonald’s drive-thru on the way home from work. The message that we send kids is clear: “Do what we say, not what we do.” And they get that message loud and clear by consuming the “nutritious” lunches and purchasing the “healthy” snacks we feed them in school.

To put caloric information into reference, I will explain how nutritionists recommend developing sound physical health. According to *Kid Fitness*, in order to develop maximum physical potential-for every 2.2 pounds of body weight-children should be consuming these levels of calories each day:

Age	Calories
Infants	120
Age 1 to 2	100
Age 3 to 5	90
Age 6 to 8	85

From about ages 9 to 12, the requirements range from about 55 to 65 calories for every 2.2 pounds of body weight. At this age and older, the individual needs vary greatly, depending on the child's activity levels, developmental stages, and natural metabolism (169). As shown above, a lunch alone of over 1,000 calories far exceeds any notion of a healthy and well balanced diet.

On my way to work on a recent weekday morning, I listened to a report on a new Arkansas initiative that weighs and tracks the weight of every single child in the state. A letter of BMI-Body Mass Index-is then sent to the parents of each child. The letter quite simply categorizes each child into one of three areas; underweight, average or normal weight, and overweight. Overwhelmingly, a large number of parents have received letters indicating that their child is overweight. This has brought mixed reactions from the parents, who are concerned about the health and well being of their children. I personally am unsure of the practice or of the state's intent in this endeavor. Surely, the state must feel some responsibility for these obese children. Are they hoping for a proactive response to the literature on the part of the families, or is the state and legislature simply attempting to cover future bases in the health related field of personal lawsuits?

Students will need to have a very basic concept of nutrition to begin this unit. They will be learning about food and the impact that different choices make on the body. I want these students to be able to make smart choices about food not only in school, but in their homes as well. The knowledge could truly transcend school curriculum and become a part of creating and maintaining a healthy life in the future. The students will be able to make informed decisions about food, and also inform others about healthy choices they can make as well.

The main food groups fall into several categories, which I will describe in detail to the students. They include the Milk/Dairy Products, the High in Protein Foods, Complex Carbohydrates, and Fats and Oils. These products are all needed in one form or another to create and sustain a healthy lifestyle.

The nutritional value found in milk and dairy products includes calcium, phosphorus, magnesium, protein, riboflavin, vitamins A, D, B6, and B12. These nutrients promote growth and development. They build and maintain healthy

bones and teeth, they build and repair body tissues, and they help nerve, muscles, and the heart to function properly.

Protein provides nutrients needed to build the structures for the body's cells, including muscles, blood, bones, and skin. All growth and development and hormone and antibody production depends on intake of protein. Beef, lamb, pork, veal, poultry, liver, fish, shellfish, peanut butter, eggs, dried beans, dried peas, lentils, tofu, cheese, milk, yogurt, vegetable protein are all good food choices.

Foods with slower burning sugars and with important nutrients such as minerals, vitamins, and fiber are known as complex carbohydrates. Vitamins A, C, thiamine, niacin, folic acid, and minerals such as iron, magnesium, and copper contain both soluble and insoluble fibers that aide in bowel movements and are a good source of energy. These complex carbohydrates are an important way to maintain healthy body tissues, increase resistance to infections, strengthen growing blood vessels in children, promote healthy vision, and enhance the nervous system. Candies, deserts, soft drinks, and other sweets contain primarily simple, fast-burning sugars, with few if any nutritive ingredients. These "empty calories" if not used for instant fuel, are converted to fat and add unwanted pounds without other benefits (Cooper 172).

Fats and Oils provide a high-energy source that is used by the body at a slower rate than many carbohydrates. Fats and Oils carry fat-soluble vitamins such as A, D, E and K into the bloodstream so they can perform their missions throughout the body. Without fats, these nutrients wouldn't make it to a final destination, and would be of no benefit to the body. Fats and Oils are also necessary for cell building that occurs in nerve and brain cells (Cooper 173).

The students will be able to incorporate some of their work from the projects into the Standard Base Portfolios. They will easily be able to include an informative report on food pyramids or nutritional guidelines. They will also be able to include pieces in response to information they researched and presented in class. The students will, at the very least, become critical of advertisements seen on television that promote unhealthy eating habits. Whether or not they choose to make healthy food choices is only a matter of presenting information in a way they can grasp.

Objectives

The first objective of the unit will be to have students simply become able to identify the nutritional value of food from different food groups and compare foods. Students will be presented with various food items throughout the unit, and a basic understanding of the main food groups will be expected. This

knowledge will increase, as students become familiar with the food pyramid(s) set-up and expectations, i.e. serving sizes and recommended daily allowances.

According to James Marti in the *Ultimate Consumers Guide to Diets and Nutrition*. 60 to 80 percent of American schoolchildren are now estimated to exceed the Recommended Daily Allowances (RDA's) for daily total fat, cholesterol, and sodium. This unit will help students identify the amount of food needed to maintain a healthy diet and lifestyle. According to the same study, children consume substantially less than the Recommended Daily Allowance of vitamin A, vitamin B12, Folate, vitamin C, Iron, Zinc, and Calcium. By identifying various food groups in class, and on their own, and by eating choices found in the food pyramid, students will inadvertently consume healthier foods, and hopefully these necessary vitamins and minerals.

The Food Guide Pyramid illustrates the research-based food guidance system developed by the USDA and the Department of Health and Human Services (HHS). It was designed to go beyond the four basic food groups to help Americans implement the Dietary Guidelines. The Food Guide Pyramid is based on USDA's research of what Americans eat, what nutrients are in these foods, and how to make the best food choices for you. It is meant to be used as a guide to assist Americans in choosing a healthy diet. The Pyramid calls for eating a variety of foods to get the nutrients needed but at the same time, to get the right number of calories to maintain a healthy weight.

The Food Guide Pyramid emphasizes foods from five food groups; the sixth group, at the tip of the pyramid, Fats, Oils, & Sweets, is included but is meant to be included only sparingly as part of a healthy eating plan. The Food Guide Pyramid shows a range of daily servings for each group. The number of servings that is right for a person depends on how many calories one needs. Energy needs depend on one's age, gender, size, and how active one is. In general, daily intake for children, teen girls, active women and most men is 2,200 calories per day. Most women and older adults should consume 2,800 calories. Those with lower energy/calorie needs should select the lower number of servings from each group of food. Please see the Appendix for a sample daily diet that follows the recommended caloric intake for each of the three levels.

The students will be able to create and present an oral presentation of at least three minutes detailing the food pyramid. Through this exercise, the students will present their knowledge of the benefits of good personal health habits and health promotion. The students will be able to demonstrate connections between healthy food choices and leading healthy lives. They will explain and demonstrate through class work and personal actions the advantages of healthful eating habits and conversely, the drawbacks that a poor diet may impart on their lives.

Not only will students be able to work as a team to create a healthy menu of food choices, they will also work as a group to make and share food with friends. Students will use communications standards throughout the unit, but none more so than here, when they will make judgments about different forms of communications, and they are presented in their worlds. By recognizing fact from opinion, and recognizing false advertising that is presented to them on television and on the radio, students will become aware that what is advertised as healthy may not be the best choice for good nutrition. Students will recognize that to live healthy may mean limiting the amount of processed, high fat, and high sugar foods they previously consumed. Using nutritional guidelines, they will evaluate how to make good choices in their daily lives.

A complete listing of standards is located in the Appendix.

Strategies

Dwight Eisenhower established the President's Council on Youth Fitness, which later became the President's Council on Physical Fitness and Sports (PCPFS) during the 1950's when fear developed that American children were not as athletically agile as European children. A set of seven tests was created, which was intended to measure fitness. However, the tests failed in their goals as they measured athletic or motor skills rather than health-related fitness. The initial test, designed by the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD) was developed in 1958 and included these events: pull-ups, a shuttle run, a softball throw, sit ups, a 50 yard dash, a 600 yard run or walk, and a standing long jump. To pass and receive the Presidential Award, the participants had to score in the 85th percentile. Disappointingly, less than one percent passed the test (Cooper 100).

Concern over the perceived failure of American children to perform at a high standard led to a new true fitness test, offered in 1986, which dropped some of the athletic skill evaluations in favor of a more health-related test. The requirements include a 1-mile run or walk, a shuttle run, pull-ups, sit ups, and a sit and reach. While this new test encouraged students, it was still extremely difficult to qualify for the Presidential Fitness Award. In 1988, the Council established the National Physical Fitness Award, which requires participants to score in the 50th percentile on all tests (Cooper 101). Having the students participate in a test much like this will give them some idea of their physical fitness level. The students will be able to feel their bodies working, and judge for themselves how fit and able they truly are.

Strategies for this unit begin with finding out how students feel about nutrition. A conversation over lunch will meet this objective quite simply.

Looking at what we eat and talking about our feelings about food in an open dialogue will create an atmosphere where the students can explain their true concerns and feelings about food and health. Many of my students are overweight and over-eat; many more are on medication and under-eat. This simple discussion will allow me as the educator to assess the knowledge my class has about nutrition, and also the background information from and peer/social situations. According to Kenneth Cooper in his book, *Kid Fitness*, poor nutrition -including an unhealthy balance of protein, carbohydrates, fats, vitamins, minerals, and water-may cause a child to tire easily, have a poor appetite, experience slower growth, or lag in muscle coordination. Also, poor nutrition can cause a child to become sick more easily because of an inability to ward off infections and viruses (170). I think we, as educators, need to ask our kids how they *feel*. We as adults think regularly about eating and food, and we talk about how food makes us feel. We know the times of day when we have low energy or mood swings, and we know the pick-me-up foods that help keep us going. Most of us only have this understanding through a trial and error type of strategy that we employed in our youth. If we can teach our kids at a young age to recognize the subtle and not-so-subtle signs their bodies are sending, they will be more prepared than most to deal with nutrition and food from a healthy mindset. They will learn to give their body what it craves, not what society has programmed us to believe it craves.

In order to elicit response from my students, I plan to use a visual aid to stimulate discussion on nutrition. I will produce a typical meal from a fast food restaurant, complete with cheeseburger, fries, and a pop. In order to ascertain the prior knowledge of nutrition, I will provide information on recommended daily allowances of sugar and fat for children of their ages. I will even show them the amount as weighed by a teaspoonful for reference. I will then proceed to ask what they believe the amount of sugar and fat in the cheeseburger and pop are. To make the visual complete, I will put 9 teaspoons of sugar into a glass to represent the amount of sugar in one 12ounce pop. I will then put 9 teaspoons of lard into another glass to represent the amount of fat found in a typical fast food hamburger. Students will then write about their feelings at seeing such a graphic representation of poor nutritional options.

The goal of this activity is for children to acknowledge the obvious impact that eating sugar and fat will have on a person. Instead of my telling and lecturing them on the harm of excessive fats/sugars in the diet, the students will (hopefully) make the visceral connection between diet and obesity. In 1995, a national nutrition survey published by the National Center of Health Statistics concluded that as many as 5 million American children aged 6 through 17 are severely overweight (Marti, 127). I hope this simple visual demonstration will go farther than the classroom and carry over into the daily lives of my students. Maybe one

of them will think twice about this demonstration before purchasing a fast food burger or grabbing another coke.

In the United States, food labels are regulated by two agencies, the Food and Drug Administration (FDA) and the Food Safety and Inspection Services (FSIS), which is a branch of the USDA. Regulations were issued in 1906, and have evolved over time into the food labels we as consumers see today. The Nutrition Labeling & Education Act of 1990 mandated that all food regulated by the FDA must be labeled with nutrition information. Nutrients listed, health claims, and serving sizes must all be defined within the parameters of the law (Tamborlane 265).

Classroom Activities

Week One:

The unit will begin during lunch period. The students and I will eat lunch together and discuss the items that are in the school lunch. We will also look at any items bought at the school store or brought from homes. We will have an informal discussion of the food groups and the nutritional value of our food. During this week, we will also begin to discuss serving sizes and create our own rendition of the food pyramid. Students will describe what items made it on to their personal food pyramid. I assume many of the students will place their favorite high fat and sugar items on these food pyramids. Over the course of the next weeks, they will see where those foods belong, and how to replace them with nutritionally sound and taste bud friendly choices instead.

Students will conduct research using the computer lab to discover ways the media influences our choices and food consumption. Each student will be responsible for creating an oral presentation on a food group. The students will be required to include information on healthy choices within their food group. Students will create a poster or visual aid to explain their project. The posters will be displayed around the school to promote healthful eating habits to the school community.

The students will write a research paper about one of the food groups found in the appendix. They will follow the approved process for writing a research paper:

1. Choose a topic
2. Take notes from at least three sources. These may be library or computer sources
3. Make an outline.
4. Write a rough draft.
5. Revise
6. Publish

The students will then present their paper and a poster or visual aid in an oral presentation to the class. The students will speak for at least three minutes, and will include the main points of their research paper. A rubric is included in the appendix.

Week Two:

During week two, students will begin to judge food on their own. They will be given several area restaurant menus and asked to choose their favorite food items. The students will find the nutritional value of their “meal” by using the food pyramids, and then by using the Internet to judge fat, sugar, and caloric intake. Students will be able to see that having a pizza *or* chicken wings, or a pizza *or* cheese fries and a salad is better than having a pizza *and* chicken wings, or a pizza *and* cheese fries. I expect these lessons to take roughly three or four 45-minute periods. Access to computers is also important.

Week Three:

During this third week, we will begin to research recipes using Internet sources in the computer lab. Such sites as Foodnetwork.com, www.greatrecipesonline.com, and www.geocities.com/sylvanqueen/recipe.html are good sources to direct kids to. The students will be able to start printing out interesting recipes that they would like to try and make as a class. We will also begin planning the menu for our culminating luncheon event. The lessons during this week will take two 45-minute periods and access to the computer lab is preferable. If the computer labs are not available, I would bring in cookbooks from home, or print out various recipes students may want to try. I will also encourage students to bring in recipes from their families that may have cultural or familial significance.

Week Four-Week Six:

During these weeks, students will begin to pull their knowledge together in a series of culminating events. The students will create invitations to invite school staff and family to the luncheon. Students will finalize menu plans and create nutritional information cards to be displayed next to each dish. Students will use grocery store advertisements to make shopping lists, and total up the money needed to purchase goods.

As the day draws near, students can take a field trip to the store to purchase foods for the luncheon. Students should assist with prep work needed the day before the event. Each student will have a job in the kitchen and be

responsible for cooking, presenting, and serving a dish. Finally, the students will help with cleaning up and sanitizing areas used during the event. These last three weeks will take extra planning on the part of the teacher and dedication on the part of the students. The success of a well-planned luncheon will be worth the hard work put forth by all!

Annotated Bibliography/Resources

Articles

Wootan, Margo. *Dispensing Junk: How School Vending Undermines Efforts to Feed Children Well*. CSPI, 2004. Article includes survey of schools across the country and vending machine usage. Also includes alternatives to typical vending machine snacks offered to children. Suggests school districts can make as much money by selling healthier snacks to children, instead of current practices.

Neighmond, Patricia. *A State's Battle Against Obesity*. National Public Radio, 2004. Article and audio of Arkansas towns that are weighing and measuring the youth against BMI to determine obesity. Interesting story.

Books

Below you will find resources that are appropriate for parents and educators alike. Teachers will find a wealth of information that can be adapted into curriculum and lesson plans. Parents will use these books as a jumping off point for open discussion about weight and health issues relating to children.

Cooper, Kenneth H. *Kid Fitness: A Complete Shape up Program from Birth through High School*. New York, 1991. Informative chapters on health related fitness tests and athletic evaluations. Includes a test to guide in determining the health of individual children. Also includes ideas for strength development and aerobic programs. Healthy recipes are included, with nutritional content.

Kowalski, Robert E. *Cholesterol and Children: A Parent's Guide to Giving Children a Future Free of Heart Disease*. New York, 1988. An informative text for families that encourages the implementation of healthy food choices into daily living.

Lopez, Ralph I. *The Teen Health Book*, New York, 2002. Comprehensive information on adolescent issues including eating disorders, drug, and alcohol use. Includes helpful websites for parents and teens.

Marti, James E. *The Ultimate Consumers Guide to Diets and Nutrition*. Boston, 1997. Offers specific chapters on dietary needs of children. Includes required and recommended foods necessary for achieving and maintaining ideal health and body weight. Extremely in-depth references and resource section.

Pitman, Teresa and Miriam Kaufman, M.D. *The Overweight Child: Promoting Fitness and Self-Esteem*. New York, 2000. Advice and guidance to help parents

raise confident, happy children, regardless of body size. Ways to improve fitness designed for the whole family.

Tamborlane, William V., *The Yale Guide to Children's Nutrition*, Virginia, 1997. Parental Guide to nutrition and eating habits from infants through to adulthood.

Websites

www.caloriecontrol.org/bmi/htm. Calculates BMI and provides a chart for normal BMI based on height.

www.cnpp.usda.gov/Pubs?Brochures/index.htm A publication titled *How Much are You Eating?* is available for downloading. It relates to portion and serving size.

www.cspinet.org Nutritional content of fast foods. Link to studies on vending machine usage in middle and high schools.

www.dairycouncilofca.org/edu/edu_prog_mhfc2.htm. This site contains downloadable Food Guide Pyramids that can be printed and reproduced for classroom use.

<http://www.foodnetwork.com/> Kid and adult friendly recipes. Easily adapted for classroom use.

<http://www.greatrecipesonline.com/dir/Kids/>. Variety of recipes and snacks that children can make without adult supervision. Healthy ideas!

<http://www.geocities.com/sylvaqueen/recipe.html> More ideas on healthy recipes and adaptations for a healthier lifestyle. Good for classroom ideas and use.

www.Kidshealth.com Interactive website for kids, parents, and teens relating to health/fitness issues. Would be a great resource for classroom teachers!

www.lib.vt.edu/subjects/nutr/NutritionCentral/pyramid.htm Numerous links to Food Pyramid resources and teaching ideas.

www.lifeclinic.com/calculators/nutritionassessor.asp Calculates caloric and nutritional value of various foods.

www.nal.usda.gov National Agricultural Library. Filled with information about nutrition and foods. USDA recommended interactive site; contains information on Food Pyramid, and other various food pyramid models.

<http://Schoolmeals.nal.usda.gov> Several sample lesson plans for teacher use. Includes recipes and kid easy ideas for home and classroom use.

<http://teachfree.com/student/pyramidpower.htm> A Food Pyramid word search in a pyramid shape is available for free duplication.

Materials

Materials needed for the lessons will vary with the chosen menu options. However, some items will be needed regardless of luncheon choice. These include:

1. Cookware for final event
2. Construction paper, markers, stickers, crayons, etc. to decorate posters and invitations.
3. Computers with internet access
4. Various cookbooks, magazines, and newspapers
5. Paper, Pencils, pens
6. Food items for the final meal

Appendix-Content Standards

Recipes

Here is a sample of recipes that could be used in a classroom, with readily available tools and supplies. I plan to offer these as choice for my students to make for our luncheon. Many of the recipes, and the others found on kid-friendly websites mentioned in the bibliography, can be made at home with little or no adult supervision. If sending these recipes home, be sure to include a parent letter noting any recipes that use knives, the oven or broiler, or involve other kitchen appliances that could be dangerous. Please use professional judgment about the skill level of your students, and their abilities in the kitchen. All of these recipes and more are found in *Kid Fitness: A Complete Shape Up Program from Birth through High School* by Kenneth H. Cooper.

Corny Cornbread

Servings

Yields: 16

1 ¼ cups yellow or white cornmeal
¾ cup flour
1 tablespoon sugar
2½ teaspoons baking powder
½ teaspoon salt
2 egg whites, beaten (or ¼ cup egg substitute)
2 tablespoons melted margarine
1 cup skim milk

Calories: 83
Cholesterol: 0mg
Fat: 2g

Preheat oven to 425°. Mix dry ingredients; set aside. Mix egg whites (or substitute) and liquid ingredients. Pour dry mixture into the dry wet mixture. Blend with a few rapid strokes. Grease a heavy 8X8-inch baking pan with margarine or oil. Place the pan by itself in the oven until sizzling hot. Pour batter into the hot pan. Bake 20-25 minutes until golden brown.

Turkey Salad

Servings

Yields: 4

12 ounces cooked, skinless turkey
3 stalks celery
1 large apple
¼ cup raisins
1 tablespoon light sour cream
1 tablespoon low-calorie mayonnaise
2 teaspoons sesame seeds

Calories: 200
Cholesterol: 73mg
Fat: 4g

Dice the turkey, celery, and apple. Combine all ingredients and refrigerate. Try this turkey pleaser in a garden ripe tomato or stuffed pita pocket.

Frothy Fruit Frostie

Servings

Yields: 1

½ cup ice cubes
1 cup un-sweetened pineapple juice
½ cup low-fat yogurt or 1% milk
½ cup fruit (pineapple, melon, or your choice)

Calories: 250
Cholesterol: 7mg
Fat: 2g

Put all ingredients in a blender container, cover, and blend until smooth. Pour into glass and serve. Alternate cubes of fruit on a wooden skewer and place in drink.

Fruit Cube Fizz

Servings	Yields: 16
3 empty ice cube trays	
2 cups apple juice	Calories: 48
2 cups apple-strawberry juice	Cholesterol: 0mg
2 cups apple-boysenberry juice	Fat: 0g
1 quart carbonated water	

Fill each ice cube tray with a different flavor juice. Freeze overnight. Place one cube of each flavor in a glass. Fill with carbonated water. Flavor surprises abound as each cube melts.

Peanut Butter Banana Crunch

Servings	Yields: 4
2 tablespoons natural peanut butter	
½ cup evaporated skim milk	Calories: 160
2 bananas cut in half	Cholesterol: 1mg
¼ cup chopped peanuts (or 1 cup crushed cereal)	Fat: 7g

Mix peanut butter with evaporated skim milk until creamy. Roll bananas in peanut butter and milk mixture. Then roll in nuts (or cereal). Place in freezer until frozen.

Oven French Fries

Serving	Yields: 1
1 medium potato with skin	
nonstick cooking spray	Calories: 220
	Cholesterol: 0mg
	Fat: 0g

Preheat oven to 425°. Cut the potato into strips. Arrange on a cookie sheet that has been sprayed with nonstick cooking spray. Bake 15-20 minutes or until brown. Turn the potatoes over with a spatula and bake another 15 minutes or until tender.

Fiesta Tortilla Chips

Servings	Yields: 2
4 medium corn or whole-wheat tortillas	
	Calories: 135
	Cholesterol: 2mg

Preheat oven broiler. Cut each tortilla into 4 wedges. Place on baking sheet. Place under broiler for 5 to 7 minutes until slightly brown. Serve with healthy dips.

Note: If chips stick to the baking sheet, spray with nonstick cooking spray before placing chips on the sheet.

Here is an example of USDA recommended sample diet for three-calorie levels.

	Lower 1,600 calories	Moderate 2,200 calories	Higher 2,800 calories
Grain Group Servings	6	9	11
Vegetable Group	3	4	5
Fruit Group	2	3	4
Milk Group	2-3*	2-3*	2-3*
Meat Group (ounces)	5	6	7
Total Fat (grams)	53 grams	73 grams	93 grams
Total Added Sugar (tsp)	6 tsp	12 tsp	18 tsp

* Women who are pregnant or breastfeed, teenagers and young adults to age 24 need 3 servings.

Additional Learning Activities

All of the following activities can be found online.

Middle School Level

~Using poster or pamphlets, introduce or review the Food Guide Pyramid with students. Discuss how to use the Food Guide Pyramid to make healthy food choices.

~Ask students to create a Pyramid Collage by locating and clipping pictures of food ideas from magazines or newspapers or use food models to make either an individual collage or a large classroom collage. (Adapted from Connecticut's Team Nutrition Program)

~Hold a Pyramid Relay by dividing students into teams. Students pull out food items or pictures from a bag. They must run across a designated distance to a Food Guide Pyramid on the floor or wall and tape the picture or leave the item on the Food Guide Pyramid correctly. Review the correct placement of all items

with students when the relay is finished. (Adapted from Connecticut's Team Nutrition Program)

~Play "Healthy Hopscotch." Set up a hopscotch board/outline and write a name of one food group in each square. A player throws a beanbag or other small marker into the square. Before the player hops, he/she must name a food from that food group. The player continues from square to square, naming foods for the indicated group until the course is completed. If an incorrect answer is given, the player gets a second chance.

~Ask students to create a "Favorite Fruit or Veggie" collage. Create a collage/poster with pictures in the many forms that it is available in. For example, if the student's favorite is a tomato, pictures could include tomato soup, tomato juice, spaghetti sauce, ketchup, pizza, tacos, fresh tomato, etc.

~Ask students to write down all that they had eaten yesterday and approximate serving sizes. Use a blank Food Guide Pyramid; student put each food and amount in the appropriate space on the Food Guide Pyramid.

High School Level

~Complete the "Rate Your Plate" quiz found at the American Dietetic Association website www.eatright.org/pr/pressnm98f.html.
Note to Teachers: You will need to make copies of the quiz for your students, as the quiz cannot be taken online. Use discretion in regards to the question about alcoholic beverages.

~Students conduct an analysis of their food choices related to the Food Guide Pyramid by completing the How Does Your Diet Rate? activity.

~Students explore Food Guides from other cultures, comparing foods typically eaten and servings recommended.

Extended Learning Activities

~Students create skits to teach younger students about the Food Guide Pyramid or the Five a Day program.

Writing Rubric

Grade 5 (This is a sample rubric. (If the unit is modified for a different grade level, the rubric should be altered as needed to suit the purpose.)

4. Advanced

3. Proficient

2. Basic

1. Below Level

- 4: Shows good sentence order
Understands the topic completely
Uses an interesting variety of words
Makes few or no mistakes in grammar, punctuation, or spelling
Has more than enough details to support the topic
- 3: Shows good sentence order
Shows some understanding of the topic
Uses some variety in words
Makes some errors in grammar, punctuation, or spelling
Has sufficient amount of details
- 2: Sentences may be confusing or inconsistent
Assignment may be incomplete
Shows limited choice of words
Makes too many errors in grammar, punctuation, or spelling
Does not have enough detail
- 1: The assignment is too confusing or incomplete to grade

Suggested Research Topics

- ~Various food groups
- ~Food pyramids from different cultures
- ~Impact of vitamin deficiency
- ~Eating disorders
- ~Obesity in schools
- ~History of School Lunch Program
- ~History of Food Pyramid
- ~History of nutritional guidelines

Student Learning Standards

The teachers in Pittsburgh Public Schools expect all students to achieve a high level of standards of academic performance and behavior. The academic standards describe the knowledge and the skills students should meet before graduating from school. As a special education teacher, I am expected to modify the curriculum to meet the needs of my individual students, and meet the

standards as well. In this unit, I address several areas of curriculum. The standards that I attempt to incorporate are as follows:

Communications:

1. All students will use effective research and information management skills, including locating primary and secondary sources of information with traditional and emerging library technologies.
5. All students analyze and make critical judgments about all forms of communication, separating fact from opinion, recognizing propaganda, stereotypes and statements of bias, recognizing inconsistencies and judging the validity of evidence.

Mathematics:

2. All students compute, measure, and estimate to solve theoretical and practical problems, using appropriate tools, including modern technology such as calculators and computers.
6. All students evaluate, infer and draw appropriate conclusions from charts, tables, and graphs, showing the relationship between data and real-world situations.

Arts and Humanities:

1. All students examine and evaluate problems facing citizens in their communities, state, nation, and world by incorporating concepts and methods of inquiry of the various social sciences.
10. All students demonstrate an understanding of the various roles they can play as citizens through participation in a community service project.

Science and Technology:

4. All students explain the relationships among science, technology and society.
7. All students evaluate advantages, disadvantages, and ethical implications associated with the impact of science and technology on current and future life.

8. All students evaluate the impact on current and future life of the varied energy forms, natural and synthetic materials, and production and processing of food and other agricultural products.

Environment and Ecology

5. All students evaluate the implications of finite natural resources and the need for conservation, sustainable agricultural development and stewardship of the environment.