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Fast Food, Fast Track... To No Where

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Overview

Why is nutrition information important? The answer to this question is summarized by Eric Schlosser in *Fast Food Nation*, which epitomizes the importance of educating children about healthful nutrition.

Hundreds of millions of people buy fast food every day without giving it much thought, unaware of the subtle and not so subtle ramifications of their purchases. They rarely consider where this food came from, how it was made, what it is doing to the community around them. They just grab their tray off the counter, find a table, take a seat, unwrap the paper, and dig in. The whole experience is transitory and soon forgotten.¹

What fats and sugars are included in the fast foods that you eat? What happens to the digested food? Do you think we can solve the obesity epidemic? These are a few essential questions that students will analyze throughout this curriculum unit. It will educate them about the different types of fats and sugars imbedded in fast foods. Students will learn there are healthy fats and sugars that provide numerous nutritional benefits. The main goal of this unit is to help students discover proper nutrition.

Students will read informational text to gain insightful background knowledge and participate in nutritional activities that promote healthy food choice. These objectives will be achieved through student exploration of the causes that underlie obesity, the potential risks of this medical condition, and preventive methods to offset it. They will scrutinize fast food restaurant menus and advertisements geared towards encouraging children to participate in deficient eating habits. Through reading comprehension assignments students' will become aware of alternative methods and resources to incorporate a healthy diet.

A culminating project will require students to synthesize information from multiple sources and organize a school-wide health fair that cultivates collaboration with students, parents, teachers, and the community. In addition, students' will incorporate a research project to investigate and critically assess evidence to determine if in fact the United States is the fattest county in the world. Potential enrichment projects may include inviting a local chef to model good nutrition and discuss cooking tips.

Student background knowledge about the initial source of the food they eat is limited. For example, it is not uncommon for a student to think that milk comes from the supermarket instead of a cow. Therefore, I believe

students will benefit from field trips to local farmers' markets and/or farms. This experience will allow students to gain a personal connection with regards to the farming process.

The unit is intended for seventh and eighth grade students. The length of time it should take to complete the unit is approximately six-eight weeks. The curriculum unit is aligned to the Pennsylvania State Standards for literacy, math, and science.

Rationale

Often we eat without any conscious thought about the innumerable complex structures that work as a cohesive group to bring food on our plate. A tremendous concern for me is that my students do not understand what they are eating. I think it is vital that students become knowledgeable about the food they ingest; I want them to understand how the food impacts their digestive system and overall health. Students need information to counteract the escalating obesity epidemic, because a major portion of their diet consists of processed foods obtained from fast food restaurants. Also, included in the equation are the long-term negative health consequences experienced by low-income people, because of their reliance on low-quality food. A diet is deficient when it consistently lacks the essential minerals and nutrients to fuel the body. Regrettably, deficient nutrition generally results in significant life-threatening illnesses and a restricted quality of life when they reach old age.

Simultaneously, students need to examine how excessive consumption of low quality food leads to poor nutrition and obesity. Based on my dialogue with inner city families, they have not made the connection that regular consumption of certain types of food considerably impacts their health. Some will make comments such as "We are going to die from something 'or' I will only live once." To further complicate the problem, when I visit urban neighborhood supermarkets and observe customers' shopping carts, frequently I see an abundance of frozen foods, meats, sugary cereals, fatty snacks, and sodas. Unfortunately, it is rare to see a cart with a balance of fruits and vegetables. For many reasons, these communities continue to consume significant amounts of processed food. One fundamental cause is the lack of nutrition education.

Access to a sizable number of supermarkets is a considerable dilemma. For example, during the 1970s my inner city neighborhood had a local supermarket within a short walking distance from my home. The local corner store sold generic foods and was only patronized for emergency purchases. The main function of the corner store was to buy penny candies and snacks. Food shopping was conducted on a bi-weekly or monthly basis depending on the family's need. Today, many of the large supermarkets have closed in urban neighborhoods leaving low quality markets such as Murray's[©] and Save-A-Lot's[©]. These markets specialize in processed, frozen, and/or canned foods. Many families feel compelled to purchase low quality foods, since these stores are stocked with limited options. My sentiments are supported by Morgan Spurlock's argument in *Don't Eat This Book*: he states that there are fewer supermarkets in low-income urban neighborhoods compared to their suburban counterparts.² Coupled with the quality and conditions of the supermarkets there are vast differences: for instance, shoppers will find that the foods high in bad fats and sugars cost substantially less than healthier choices such as fresh fruits and vegetables. Consequently, there is little incentive to purchase fruits and vegetables. I shop in a variety of markets throughout the city and surrounding suburbs, I have personally experienced this problem.

The United States Department of Agriculture (USDA) reports that the cost of vegetables and fruit rose 120% between the years 1985 and 2000, while the price of junk food like sodas and sweets went up less than 50% on average.³ This data brings to mind a conspiracy theory: is the food industry purposely sabotaging our health? Michael Pollan's, *In Defense of Food*, also poses a question that validates my conspiracy theory hypothesis. Who benefits from a Western Diet? ⁴ The food industry generates income from a new line of processed foods. The medical community use new drugs to treat escalating illnesses and chronic diseases. The health care industry profits from the development of these new drugs. Above all, the people continue to suffer the consequences of deficient health.

Students know about healthy nutrition on a superficial level. Disappointingly, when I poll them, they typically do not practice healthy eating. As students learn about proper nutrition, they can influence their parents to purchase healthy foods and adopt healthy eating practices. The United States is often referred to as the fattest country in the world, subsequently if we can generate student application of a healthy lifestyle, this positive way of living may offset some of the diseases and illnesses that occur later in life. A research project to assess the validity of this assumption will help students make the connection that the obesity crisis is not fictional, but factual. I think students will be astounded by the following estimates from the National Restaurant Association noted in Eric Schlosser's *Fast Food Nation* that documents the astronomical money spent on fast food.

In 1970, Americans spent about \$6 billion on fast food; In 2001, they spent more than \$110 billion. Americans now spend more money on fast food than on higher education, personal computer, computer software, or new cars. They spend more on fast food than on movies, books, magazines, newspapers, videos, and recorded music combined.⁵

To create a balance, it is critical that students are presented with preventive solutions. The unit will provide students with alternative options such as learning how and why it is essential to regularly eat fruits and vegetables. Students need to become cognizant that the fast food industry has intentionally designed the food to taste good through the use of additives. Likewise, through extensive marketing, major corporations have instituted deliberate strategies to persuade children to desire fast food. Research indicates that many families select fast foods because they are convenient and easy to prepare, as a result time is saved to engage in other activities.

Ultimately, my goal for teaching this unit is to help students discover several benefits of preparing home cooked meals as opposed to consistently eating processed foods. I think it is my responsibility to motivate my students to examine the benefits of preparing healthy meals that will generate numerous unexpected benefits such as a quality family time. When you teach children how to prepare food and eat together as a family, the seed is planted for the possibility of a life long tradition. In the past, one function of eating together was to give families an opportunity to strengthen their bond and sense of community. Another solution is to help students find local farmers' markets and/or co-op programs that allow the family to purchase fruits and vegetables at an affordable cost. To finish this point, I hope to encourage families to plant a garden to grow some basic vegetables and herbs that do not require wide planting space. If a home garden is not possible, then another option is for families to seek out inner city community gardens where people can request a garden plot.

In summary, I wholeheartedly concur with this statement expressed by Michael Pollan, because I can look at my family and see the manifestation of his comments. "Thirty years of nutritional advice have left us fatter, sicker, and more poorly nourished. Which is why we find ourselves in the predicament we do: in need of a new

way to think about eating."⁶

Background

White Castle, the first modern fast food chain began around 1917 with its introduction of the hamburger by J. Walter Anderson. The success of White Castle, which specialized in hamburgers, inspired regular men to start new businesses. These men believed in the "American Dream" and during the early part of the 20th century they emulated Anderson's model and created other fast food restaurants. For example, Dunkin' Donuts was opened in 1948 by William Rosenberg, a high school dropout. Keith G. Cramer and his father-in-law Matthew Burns established Burger King in 1953. Harland Sanders created Kentucky Fried Chicken in 1952. The concept formed by White Castle proved to be reliable because many of these fast food restaurants exist 50 years later.

At the end of the 1940's, Richard and Maurice McDonald started one of the first successful fast food restaurants. After several attempts to maintain a thriving restaurant, the McDonald's determined that an innovative approach was crucial to attain their goals. These brothers revolutionized the restaurant business with their "Speedee Service System" which resembled a car assembly line for food where a worker was assigned one task. In this case, one worker would grill hamburgers and another worker would prepare milkshakes. To increase their service the only sandwiches served were cheeseburgers and hamburgers. There were many advantages to this type of restaurant operation. They were able to eliminate the use of plates, bowls and silverware by using paper products. They reduced the need for skilled employees because the worker had to complete one function. They also reduced food costs because the sandwiches and condiments were standard with no substitutions allowed. The assembly line blueprint continues to exist in McDonalds and other popular fast food restaurants. More importantly, the McDonald brothers created an institution, which permitted "working class families who could finally afford to feed their children restaurant food."⁷

The transformation to the McDonald's Corporation came from the ingenious idea and tenacious work of Ray Kroc whose philosophy of QSC and V (which means Quality, Service, Cleanliness, and Value) still guides the present corporation. Kroc was a high school dropout and a salesman who mastered the art of customer service. His expertise immensely impacted his success with the expansion of the McDonald's corporation. He understood the importance of what you sell and how you sell were an inseparable combination. Around 1955, Kroc convinced the McDonald brothers to sell him the rights to franchise McDonald's nationwide. It appears that many of his philosophical and design decisions were inspired by Walt Disney's ability to grasp children's imaginations with the Magic Kingdom theme park. Walt Disney created a unique environment for children to become immersed in a fantasy that they children wanted to repeatedly participate and duplicate. As a result, Kroc launched deliberate marketing strategies to implant the McDonald's fanciful vision in the minds of children through a variety of mechanisms. First, he created a safe clean, all-American place for children. The restaurant design consisted of bright colors, a playground, a toy, a clown, a drink with a straw, and a little piece of food wrapped like a present. Second, every restaurant was required to fly the stars and stripes. Third, in 1963 the mascot was changed from "Speedee" to "Ronald McDonald," which was introduced to the United States via an extensive marketing campaign. Lastly, McDonaldland was created for toddlers to generate life-long brand loyalty.

Although, several fast food restaurants started during this time period, the focus of the unit is to examine the McDonalds Corporation and its impact on fast food, specifically how it relates to childhood obesity. I selected

McDonald's due to its dominance in the market and based on the monopoly of its system. There are many similarities emulated by other major fast food chains. The following statistics obtained from *Fast Food Nation* highlights how a single corporation can impact the world. The McDonald's corporation is responsible for 90% of the country's new jobs. In 1968 there were 1000 restaurants, as of 2001 there were approximately 30,000. According to the McDonald's Corporation website, as of January 2007, they continue to have more than 30,000 restaurants. This Corporation is the largest owner of retail property in the world. McDonald's is able to achieve this feat because they earn most of its profits from collecting rent not from selling foods. A new franchise owner leases the property from McDonald's at an approximate 40% mark-up with McDonald's holding the land title. They are the nation's largest purchaser of beef, pork, and potatoes, and the second largest purchaser of chicken. Consistent with the statistics noted above, McDonald's 2007 Annual Report highlights a 6.8% increase in global sales and \$23 billion in total revenues. I found these statistics staggering and I think my students will be amazed to learn the market share control held by the McDonald's Corporation.

Obesity

Students need the following background information to fully understand the process of how an individual transitions from being overweight to an obese body. To generate student interest, especially for my visual learners, I plan to provide students with a general overview using a PowerPoint presentation. According to experts such as the National Institute of Health, obesity means having too much body fat whereas overweight means weighing too much.⁸ Due to the fact that the terms are often used interchangeably, it is important to explain the differences for student clarification. Obesity is a condition that occurs over time due to excessive eating. Initially, fat cells increase in size and when they can no longer expand, the cells increase in number. If we eat too much, the extra food turns to fat and is stored in our bodies. Basically, an obese person has a high amount of extra body fat because they have eaten more calories than energy exerted. On the other hand, an overweight person has extra body weight from muscle, bone, fat, and/or water.

The body mass index (BMI), which is based on height and weight, is one of the most common tools used to assess obesity and overweight for adults, teens, and children. According to The American Obesity Association, doctors consider a teen obese when his or her BMI number is higher than the BMI numbers of 95% of other teens from the same age and gender group. A teen is considered overweight if the BMI is between 85% and 95% of other teens.⁹

A 2005 Emedicine health article reports that "obesity is an epidemic in the United States and in other developed countries. More than half of Americans are overweight, including at least 1 in 5 children. Obesity is on the rise in our society because food is abundant and physical activity is optional."¹⁰ An earlier survey completed by the Center for Disease Control (CDC) in 1999 confirms the above results regarding the obesity problem. The prevalence of obese adolescents' ages 12-19 were documented at the 95th % of the BMI for the following years: 1976 to 1980 equals 5%; 1988 to 1994 equals 11%; and 1999 to 2000 equals 15.5%. These results confirm the %age of obese adolescents has tripled over the past 25 years.¹¹

Even though obesity affects all people, the percentage among ethnic groups is significantly higher. As Spurlock points out as of 2004 *The Journal of the American Medical Association* reported that 77 % of African-American women and 61 % of African-American men are overweight or obese. The Women's Health Information Center says that Mexican American women are 1.5 times likely to be obese than the general female population.¹² The 2003 Centers for Disease Control and Prevention reported that obesity can lead to diabetes. Also, one out of every three children born in America in 2000 will develop type 2 diabetes. Among African-American and Hispanic children, it's almost one out of two. These statistics support the need for

nutrition education. Moreover, the majority of my students are African-American and any knowledge obtained from the unit can result in a positive and life altering healthy change.

Causes

In order for students to be proactive in supporting their own health, they need to know the factors that cause obesity. The National Institute of Health reports the following causes for obesity: energy balance, physical inactivity, environment, genes and family history, health conditions, medicines, emotional factors, and lack of sleep.¹³

One of the main causes that I will scrutinize throughout the unit is: What are we eating? Here's how Pollan explains the reasons for the obesity epidemic; "Since 1985 our calorie consumption has increased by approximately 300 calories."

Nearly a quarter of these additional calories come from added sugars (and most of that in the form of high-fructose corn syrup); roughly another quarter from added fat (most of is in the form of soybean oil); 46 % of them from grains (mostly refined; and the few calories left (8 %) from fruits and vegetables. Therefore, the bulk of the increase calories 93 % were in the form of sugars, fats, and most refined grains that supply lots of energy but very little nutrients. Students will analyze some of the causes and evaluate how it impacts their life.¹⁴

How do the causes translate into our everyday life? According to Pollan "We are snacking more and eating fewer meals together."¹⁵ Pollan's statement is supported by Harvard economists' calculations, the bulk of the calories we have added to our diet over the past twenty years have come in the form of snacks that do not include fruits and vegetables.¹⁶ How does this information correlate to what I observe in my classroom? It is seldom that students bring in fruits or vegetables. A typical lunch for my students includes the following foods: chips, sodas, "hug" (a cheap sugary drink), processed lunchmeat, candy, cookies, and pastries. Of course, students cannot be held accountable for a poor diet. If they are not conscious of the changes they can implement into their diet, how can we expect improvement? For that reason, I believe it is the educator's responsibility to guide them with practical advice.

Risk

Why is children's health at risk? They frequently consume large amounts of food items that are loaded with a high sugar, fat, and salt content. These poor nutritional practices impact children in a detrimental way. Children are bombarded with advertisements that solicit them through subliminal seduction, which illicit a desire to eat junk foods. Also, they drink excessive quantities of beverages that are loaded with sugar. Parents purchase the groceries and often children are not aware of or have not been exposed to alternative foods that are just as savory to the palate as the junk food. More importantly, their nutrient deficient diet can affect future medical problems as they age. Common medical problems that manifest due to obesity are heart disease, high blood pressure, high cholesterol, fatty liver, stroke, type 2 diabetes, cancer, and sleep apnea.

The types of foods that we eat which have attributed to inflating our risk factors in terms of obesity are referred to as "The Western Diet." Pollan defines this diet as one that includes "lots of processed foods and meat, lots of added fat and sugar, lots of everything except for vegetables, fruits, and whole grains."¹⁷ Processed foods have been deleted of nutrients and vitamins that are essential for good health. According to Pollan, people who eat the Western diet experience adverse side effects to their health such as substantially

higher rates of cancer, cardiovascular diseases, diabetes and obesity. Pollan also points out that the risk is greater for Hispanic or African-Americans. He goes on to reference Harvey Levenstein's contention that "the sheer abundance of food in America has fostered a culture of careless, perfunctory eating."¹⁸ The crisis can be further evidenced with data reported in *Don't Eat This Book*, in 2003 Americans spent a staggering \$227 billion on medications.¹⁹

Prevention

The solution includes a concerted effort that involves the government, parents, and children. The government has the responsibility to regulate the food industry through proper and accurate product labeling specifically with regards to content requirements. Also, there is a need to regulate the type of advertisement geared toward children especially in economic depressed communities. The parent has the responsibility to implement a healthy diet in the home through education and awareness. The children have the responsibility to apply the information taught in school through such programs as "5 A Day" and incorporate these practices for future generations. The program encourages students to eat at least five fruits or vegetables per day. Students can launch the change by collecting data for the creation and implementation of a healthy food policy. Students can survey parents, teachers and classmates to solicit feedback on the vital healthy policy components. We all can generate change by adhering to Michael Pollan's common sense advice *In Defense of Food* "Eat food, Not too much. Mostly plants."²⁰

Fast Food and Obesity

One of my goals when I teach this unit is to generate student excitement about discovering answers to the following question: How does fast food affect obesity? My initial research indicates that there are contrasting viewpoints. Some people argue that the "super size" phenomenon directly correlates to the obesity epidemic. As a result, advocates for this argument believe that fast food restaurants should be held liable for potential health problems. In contrast, others believe that we make a choice to eat fattening foods, consequently we are responsible. The research I will use supports the premise that fast food does impact obesity in children. A study completed by Yale researcher Kelly Brownell, PhD. was mentioned in a CBS news report entitled *Fast Food Linked to Child Obesity* with the following comment: "New study results bolster evidence that fast food contributes to increased calorie intake and obesity risk in children."²¹ In addition, researcher Shanthy A. Bowman, PhD supports Brownell's assertion in an article from WebMD entitled *Fast Food Creates Fat Children*; fats and sugars in fast food draw children like a magnet, largely they appeal to a child's "primordial" tastes. Children who ate fast food consumed more sugar-sweetened beverages, less milk and fewer fruits and nonstarchy vegetables.²²

According to Eric Schlosser, the typical American consumes approximately three hamburgers and four orders of fries every week.²³ What is frightening is that most fast food is delivered to the restaurant already frozen, canned, dehydrated, or freeze dried except for salad greens and tomatoes. In addition, McDonalds spend more money on advertising and marketing than any other brand. Fast food is heavily marketed to children. This growth occurred during the 1980s when major corporations' ultimate goal was to create current and future consumption by the way of brand loyalty. It has been documented that brand loyalty starts as early as 2 years old. The ability to persuade is validated with results from a survey of American school children that found 96% of them could identify Ronald McDonald. Various media marketing techniques used in television, radio, Internet, clothing, toys, and children clubs are used to entice consumers to buy more things. Pollen summarizes the impact of marketing influence on the American public; currently, \$32 billion is spent on food

marketing.²⁴ Of course, food manufacturers gained significant income increases from public purchases. Pollan asserts that healthcare has benefited from the fast food industry because he estimates that the cost to society was \$250 billion a year in diet related health costs.²⁵

Objectives

The overall objective of this unit is for students to discover proper nutrition that results in life-long healthy food choices. I want students to become critical about what they eat and motivated to read about nutrition. Above all, they will acquire knowledge with regards to the nutritional value or lack of nutrients in food. They will become aware of food ingredients and how to read food labels. It is essential that students understand they have options and that an assortment of tasty foods exists. Students will realize it is beneficial to eat a healthy diet over the long term to help avoid common illnesses as they age. Students will discover they require less food when they eat nutrient dense food as opposed to foods that generate empty calories, which tend to be high in fats and sugars. Through research students will improve in their ability to make shrewd judgments about McDonald's business ethics. As a result, this curriculum unit will serve as an integrated unit that includes activities connected to the content areas of literacy, math, science, and health. I will collaborate with the science teacher for implementation of applicable activities. Students will have numerous practice opportunities to expand critical thinking skills, improve reading comprehension, and written expression.

Strategies

Cook-Wissahickon Elementary School is an urban public school that features a small learning environment with science prep classes. I teach several resource level classes for grades 3rd through 8th with a focus on literacy. These classes are organized into five 50 minutes periods per day. Due to the numerous amounts of students who are required to receive special education services, grades 3 & 4 and grades 5 & 6 are combined. This literacy block will enable me to incorporate the nutrition unit over the course of 6 to 8 weeks, which is equivalent to one grading period. Therefore, the unit will be taught primarily during my literacy block. It will extend across the content areas to complete the goals and objectives. Furthermore, I will collaborate with our science teacher to obtain scholarly input on complex science concepts and implementation of the lesson plans.

I want to teach lessons that have students utilize meta-cognitive skills. I will incorporate hands-on interactive lessons to reach the various categories of learners that Howard Gardner describes in his book *Frames of Mind: The Theory of Multiple Intelligences* such as visual, auditory, and kinesthetic.²⁶ The unit incorporates a range of learning styles and abilities, which is an educational approach that was developed by Howard Gardner. Students arrive in the classroom with numerous strengths and deficits, educators are encouraged to incorporate differentiated instruction as part of the routine learning environment.

Reading Comprehension

Mastery of the numerous reading comprehension skills is an extremely difficult task for my struggling learners to achieve. Usually, these students are at least one to three years below grade level. My responsibility is to provide students with strategies that will help them close the achievement gap. To facilitate student success in this unit, I will focus on the following reading comprehension strategies, which are defined in the following paragraphs: anticipation guide, monitoring comprehension/meta-cognition, and responding to text (TAG it a 3).

The purpose of the anticipation guide is to activate student prior knowledge and help them focus on the most important concepts. It is a pre-reading strategy that provides a non-threatening learning environment for students as there is no right or wrong answers. Students will be given a list of statements about fast food restaurants in which they have the choice to agree or disagree (See: Appendix B). I will have an opportunity to engage students in an open-ended discussion that generates a multitude of information about a specific topic. Due to the fact that the majority of my students frequent McDonald's and other fast food restaurants regularly, I believe this preliminary activity will help me to measure students' prior knowledge and interest.

At the same time, monitoring comprehension is essential given that students need to be aware of what they understand and identify what they do not understand. This strategy correlates to meta-cognition since students need to think about why they do what they do. This is not an easy skill for students to accomplish because often they are unsure of the requirements. In order for students to reach a level of proficiency there is a method that I must implement for student success. First, there is direct instruction to explain and clarify the task. Second, modeling is an integral component of my special education class where I demonstrate how to apply the strategy. Third, guided practice means it is necessary for me to direct and assist students as they become reacquainted with the skill. Lastly, I continue to assist students until they can independently apply the skill. Generally, monitoring comprehension is a repetitive skill in the unit since students will read and respond to an array of informational text.

Responding to text utilizing the TAG3 strategy has resulted in one of the most powerful impacts on overall improve content knowledge. The acronym is defined in the following manner: Students are instructed to turn (T) the question into statement, which forces the student to make sure they understand the question requirements. Students then must answer (A) the question with accurate information. Students are reminded to appropriately answer the question. Next, they are required to give (G) at least three details or examples to support their answer. Students are expected to extend and explain their answers using evidence from the text. Students are advised to first obtain evidence from the text and fully develop their written response. After they have fulfilled this obligation they can extend their answer to make personal connections depending on the type of question.

PowerPoint/Video

Students will complete a K-W-L before the PowerPoint presentation. What do students know (K) about the topic as it relates to their prior knowledge? What do you want (W) to know are the questions the students will create. At the end of the unit, students will answers questions to assess what they have learned (L). This strategy will allow students to review prior knowledge, create questions, and discover answers throughout the unit. Do they know the difference between obesity and overweight? What does healthy nutrition mean to them? Also, they will answer the essential questions posed at the beginning of the unit. Students will continue to review and update the K-W-L. Next, I will introduce the history of fast food restaurants with a focus on the McDonald's Corporation utilizing PowerPoint slides to generate student interest in the topic. The focus on technology will be an important part of my unit for several reasons. The majority of my students are normally

interested in technology and they are a generation that is accustomed to interactive visuals and graphics. Students will watch a video and/or excerpts of early fast food businesses to reinforce the PowerPoint presentation. The video and PowerPoint will be ideal for auditory and visual learners.

In addition, students will access the Internet to view the digestive system diagrams and process. This will give students the opportunity to view an animated explanation of this complex process, which will bring alive the intricacies of the human body. For example, Michael Pollan points out the complexity of the digestive system "the human digestive tract has roughly as many neurons as the spinal column. We don't yet know exactly what they're up to, but their existence suggests that much more is going on in digestion than simply the breakdown of foods into chemicals."²⁷

Cooperative Groups

Establishing cooperative groups as part of this unit will offer positive outcomes for my students. Cooperative Groups will provide a learning environment where students can help, assist, encourage, and support each other's efforts to learn. Student will engage in cooperative groups during a jigsaw activity and a walking tour. In the case of the jigsaw activity each group will be assigned text to read based on their ability. This is one of the many opportunities when I will incorporate differentiated instruction. After completion of the reading, each group will assign a classmate to summarize the information. Next, the walking tour allows students to work in small groups. I will use this strategy as a review. Questions related to the topics discussed are written on chart paper around the classroom. Each group is given a few minutes to write their responses. When the signal is given, the groups move to the next chart. At the end of the activity, the group assigns a classmate to present their responses.

Journal

Students will maintain a three-part reflection journal to document thoughts and ideas as we complete the curriculum unit. In part one, students will respond to teacher generated journal prompts that relate to current health topics. Over a specific time period, students will maintain a food journal to track food consumption. Also, students will respond to journal prompts to reflect on their progress towards making healthy choices. Part two is when student will interview grandparents, parents, and relatives to complete a simplistic family history chart regarding nutrition. Students will improve questioning and communication skills and they will make a personal connection to family elders. The information obtained from the interviews will help them to grasp the obesity crisis. Students will discover that family members may be prone to certain illnesses and diseases. Part three is designated for students to maintain a glossary of health terms and facts covered in the course of reading and analyzing fats and sugars in fast foods. Students will complete activities to demonstrate their comprehension of terms. Students will write the formal definition and then include a written definition or illustration to help them take ownership for the term. The purpose of this strategy is to improve students' vocabulary development.

Graphic Organizers

A picture is worth a thousand words. Graphic organizers illustrate the concepts and it helps students to read and understand difficult text. Consistently I use graphic organizers to enhance my lessons. My students use graphic organizers to help them focus on specific comprehension skills as opposed to becoming overwhelmed with a multitude of expectations. Graphic organizers provide two benefits. First, it allows them to work in shorter chunks. Second, it allows time to digest new or difficult ideas. The graphic organizers I think are

applicable to this unit are cause and effect, compare and contrast, timeline, fact or opinion, and summarization.

Assessments

Students overall assessments will be based on a portfolio of a collection of the above assignments and completion of the lesson plans that follow. The assessment criteria will include rubrics with a score of five indicating outstanding work, and a score of one indicating the assignment needs improvement. Typically, my students have extreme difficulty following directions based on countless reasons. Therefore, to help them remain focused they will consistently need to refer to the checklist to ensure adherence. A score of five indicates the student followed directions, stayed on task and helped other students while a score of one informs the student that they did not listen to the directions, so they did not know what to do. Student scores for independent work are essential because seventh and eighth grades students will soon transition to high school. Sometimes this transition is difficult because my school is based as a small learning community; as a result it is paramount that my students gain confidence and independence with the use of resources. A score of five means that the student was able to complete the work independently, on the other hand a score of 1 means that the student was unable to find the assigned information and failed to accept or ask for any assistance. It should be noted that there is a range with five being the highest and one is the lowest score a student can earn.

Classroom Activities/Lesson Plans

Presented here are 3 sample lesson plans to be used in this unit. Teachers can use the ideas for a single lesson or plan the entire integrated unit based upon the objectives and strategies aforementioned.

Lesson 1: Overweight versus Obesity

Objectives: Students will understand the different definitions for the terms overweight and obesity. Students will analyze informational text via a summarization graphic organizer. Students will realize the relationship of body mass index (BMI) and healthy weight.

Materials: Index cards for students to record the letter choice and reason why they selected a specific definition. Print the article from kidshealth.org *When Being Overweight Is a Health Problem*. Students document thoughts on the summarization graphic organizer. Teacher prepares a list of fictitious teens for students to calculate BMI.

Procedures:

Critical Thinking Question: What are realistic strategies you can implement to prevent obesity?

Teacher starts the lesson with a whole class KWL format. Teacher encourages student participation by asking general questions to determine their prior knowledge regarding obesity, overweight, BMI, and healthy nutrition. Teacher uses chart paper to record student responses. The chart paper is posted in the classroom for ongoing review and update. At this point, the focus is on the know (K) and what do you want (W) to know portion of the KWL strategy.

Teacher writes the definition on chart paper for each term (obesity and overweight) with a designated letter. For example, letter A will have the correct definition for obesity and letter B will have the correct definition for overweight. Students silently read the definitions and use their index card to record their letter choice and term. Also, students will record the reason why they made a particular selection. Students will share aloud their choice.

Teacher reveals the correct definition. Teacher and students discuss the results. Teacher continues to update the KWL chart.

Teacher presents PowerPoint slides to review and reinforce factual information regarding obesity, overweight, and BMI. Refer to the rationale section "obesity" to obtain information to create slides.

Students read the article *When Being Overweight Is a Health Problem*, which can be found at http://kidshealth.org/teen/diseases_conditions/obesity/obesity.html >. Students will complete a summarization graphic organizer to help them understand and critique important elements.

Teacher types the fictitious name, gender, birth date, date of measurements, height, and weight on a strip of paper. Students randomly select two fictitious names to calculate the BMI. A student friendly BMI calculator can be found at <http://kidshealth.org/teen/nutrition/weight/bmi.html> >. Teacher models how to input information on the BMI calculator and the criteria students will need to analyze the results.

Teacher completes an informal assessment when students participate in the *Walking Tour* strategy. Refer to the strategies section "cooperative groups" for a detail explanation. Suggested review questions: How is obesity different than overweight? What is the purpose of BMI? I'm 14 year old 5 feet female, who weighs 140 with a BMI of 27.3, should I be concern?

Students answer the critical thinking question in their journal.

Extension Activity: Encourage students to submit personal BMI results. To achieve this goal, the teacher will collaborate with the school nurse to obtain student height and weight information. Students complete a research project to document common health problems that affect overweight and/or obese teens. The results could be presented in various forms such as a PowerPoint, narrative, or visual arts report.

Adaptations: Students work in pairs to read the assigned article. Teacher pair students based on reading comprehension levels into heterogeneous pairs. Teacher selects summarization graphic organizer complexity based on student reading comprehension and written expression ability. Students are given an option to summarize sections of the article instead of the entire article.

Lesson 2: Fruits and Vegetables In Our Community

Objectives: Students will discover the level of access they have to fruits and vegetables by listing stores and fast food restaurants in the community. Students will determine the types of fruits and vegetables that are available in their community. Students will compare the cost of fruits and vegetables in their community to a local farmers' market.

Materials: Worksheet that allows students to record the name and type of store. Students need Internet access to calculate the supermarket distance from their home.

Procedures:

Critical Thinking Question: How do you feel about the availability of quality fruits and vegetables in your community?

Part 1

Teacher provides students with a worksheet to record the names, types of stores, and fast food restaurants located in their immediate community. Students use a ten-block boundary from their home as a guide.

Students utilize the Internet to calculate the store distance from their home. They will use this information to analyze access to purchase fruits and vegetables. Students will document their results on a worksheet. They will participate in a discussion to compare results.

Students will watch the July 15, 2008, CNN's Chris Lawrence's video *Fast food ban?* report on a proposal to stop allowing more fast food restaurants. Students will use the compare and contrast graphic organizer to evaluate the video report to the above personal data that documents the number of stores and fast food restaurants in their community.

Part 2

Students will visit a neighborhood supermarket to document fresh fruits and vegetables available for purchase. Students will orally present their results to classmates.

Students will draw a diagram of the supermarket layout. It is important that they are aware of the placement of fruits, vegetables, and processed foods. This initial activity will be one of many that examines advertising and marketing of fast foods.

Students will select a total of six fresh fruits and vegetables. They will write the price of the selected foods on a tracking worksheet. Students will compare the cost of neighborhood market fruits and vegetables to a local farmers' market. Teacher will provide students with a price list of fresh fruits and vegetables from local farmers' markets.

Students answer the critical thinking question in their journal.

Extension Activity: Students can write persuasive letters to local stores requesting them to include quality fruits and vegetables in their stock.

Adaptation: Teacher prepares a checklist to reduce the amount of writing for struggling learners. For example, students will complete a check off box for the type of store. The different types of stores listed would be supermarket, mini-market, grocery store, or fast food restaurant.

Lesson 3: Fats and Sugars in Fast Foods

Objectives: Student will learn how to read and critique nutrition labels. Students will analyze fast foods to calculate the amount of fats and sugars.

Materials: Students need Internet access to obtain nutrition information.

Procedures:

Critical Thinking Questions: What fats and sugars are included in the fast foods that you eat? How does the

consumption of fast foods impact obesity?

Teacher starts the lesson with a basic explanation about fats and sugars. To reinforce students understanding they will read two factual Internet articles that give information about fats and sugars in a straightforward kid-friendly format. Suggested articles are located in kidshealth.org website entitled *Figuring Out Fat and Calories* and BBC Health *Fats and Sugars* article written by Maxine Stinton.²⁸

Teacher reviews the U.S. Food and Drug Administration informational website *How to Understand and Use the Nutrition Facts Label*.²⁹ This step will provide students with the background knowledge to analyze fast food labels.

Teacher encourages a class discussion by asking students about their favorite fast food restaurants and foods they commonly purchase. Due to the fact that our focus is on the McDonald's Corporation, students will create a meal including a dessert they would purchase from McDonald's. Student will complete a document to compare the fat, sugar, and caloric content of their food choices. To help students think about healthful nutrition, they will transform this fast food meal into a healthy meal. They will have to create a healthy meal by using some of the traditional foods.

Students answer the critical thinking questions in their journal.

Extension Activity: Students create a meal for several fast food restaurants.

Adaptations: After students read the fats and sugars informational articles, teacher provides students with a two-sided fact sheet that summarizes fats and sugars. Students can use this guide as quick review check.

Resources

Annotated Bibliography - Teacher Resources

"American Obesity Association: Childhood Obesity." 05/02/2005. <http://www.obesity1.tempdomainname.com/subs/childhood> (accessed 04/18/2008). Written and statistical data regarding childhood obesity is discussed. I found this website extremely informative.

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"CBS News: Fast Food linked to Child Obesity." 01/05/2003. <http://www.cbsnews.com/stories/2004/01/05/health/main5913251.shtml> (accessed 06/22/2008). The amount of fast food consumed by children from a 1994 to 1996 and 1998 government survey is tracked over a specific time period.

"Center for Disease Control and Prevention." <http://www.cdc.gov/> (accessed 04/15/2008). An inclusive website that maintains a multitude of public health information and statistical data.

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documents the transformation of high fructose corn syrup, which is one of the major culprits that have attributed to obesity.

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"eMedicineHealth: Obesity." 12/30/2005. http://www.emedicinehealth.com/obesity/article_em.htm (accessed 03/05/2008). Articles give obesity statistics and definitions.

Epps, S. *Drugs Masquerading As Foods*. 1 st. ed. 1, Oak View: A-Kar Productions, 1999. It is a controversial book that provides detail information regarding the dangers of popular foods.

Gardner, Howard. *Frames of Mind: The Theory of Multiple Intelligences*. 2nd ed. Britain: Fontana Press, 1993. The author' research documents different ways that people learn.

Henderson, Vani R., Bridget Kelly, and "Food Advertising in the Age of Obesity: Content Analysis of Food Advertising on General Market and African American Television." *Journal of Nutrition Education and Behavior* 37, no. 4 (2005): 191-196. I found this article interesting due to the findings that more food advertisements appeared during African American programs than general market programs.

"How Food Ads Might Affect Children's Taste Preferences." *Child Health Alert* 25, no. Sep. (2007): 2-3. "This article reference a study by T.N. Robinson published in the August 2007 issue of "Archives of Pediatric and Adolescent Medicine," which states the powerful effects brand name has on children, specifically McDonalds' packaging.

Larimore, Walter and Sherri Flynt. *SuperSized Kids: How to Rescue Your Child from the Obesity Threat*. New York: Time Warner Book Group, 2005. Discuss the childhood obesity crisis and provides information to help parents solve the problem.

"MayoClinic.com: Nutrition for kids: Guidelines for a healthy diet." 07/20/2007. <http://www.mayoclinic.com/health/nutrition-for-kids/NU00606> (accessed 06/22/2008). The caloric guidelines for children ages three through eighteen is documented.

McCaffrey, Tracy A, Kirsten L. Rennie, and Julie M.W. Wallace. "Dietary Determinants of Childhood Obesity: the Role of the Family." *Current Medical Literature: Clinical Nutrition* 15, no. 3 (2006): 51-56. The causes of childhood obesity from parental influence through the lack of exercise. The end of the article highlights several preventive initiatives.

"MedlinePlus: Obesity." 02/21/2008. <http://www.nlm.nih.gov/medlineplus/obesity.html> (accessed 03/05/2008). A brief concise obesity definition and helpful nutrition links is presented.

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""

"Obesity Focused." 2003-2004. www.obesityfocused.com (accessed 06/22/2008). This site provided interesting articles on the obesity topic.

Pollan, Michael. *In Defense Of Food*. New York: Penguin Press, 2008. An extremely informative book that examines today's food industry and the evolution of how and what we eat. The data in this book confirmed I needed to implement an immediate change in how and what I eat. It was one of my favorite books in terms of content and style.

Pollan, Michael. *Omnivore's Dilemma*. New York: Penguin Press, 2006. The author explores factual data associated with food and the agriculture industry by providing readers with a first hand tour of the process.

Proctor, Dwayne C.. "The Power of Research: We Can Reverse the Childhood Obesity Epidemic." *American Journal of Preventive Medicine* 34, no. 4 (2008): 364-365. What are the factors that lead to obesity and what strategies can be implemented to reverse the trend?

Schlosser, Eric. *Fast Food Nation*. New York: Harper Perennial, 2005. It is a fascinating book that gives a comprehensive explanation about the fast food industry from a historical to the present day perspective. It was my favorite book and I found the information extremely insightful.

Spurlock, Morgan. *Don't Eat This Book: Fast Food and the Supersizing of America*. New York: Penguin Group, 2005. It reviews America's obesity epidemic. Also, there is an examination on the impact of fast foods locally and throughout the world. A good book to include on the student reading list.

Story, Mary, and Simone French. "Food Advertising and Marketing Directed at Children and Adolescents in the US," *The International Journal of Behavioral Nutrition and Physical Activity* (2004): <http://www.ijbnpa.org/content/1/1/3> (accessed June 17, 2008). An informative book about the fast food industry that includes comprehensive statistical data about advertising and marketing noted in schools, Internet, and television.

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"Center for Disease Control and Prevention." <http://www.cdc.gov/family/kidsites/> (accessed 04/15/2008). This website has a multitude of public health information and statistical data.

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"KidsHealth." 1995-2008. <http://kidshealth.org> (accessed 06/22/2008). According to the site, it is the largest and most-visited site on the Web providing health information for children and teens. I found this site to be kid-friendly and exceptionally useful.

Stinton, Maxine. "Fats and Sugars." 03/2001. http://www.bbc.co.uk/health/healthy_living/nutrition/basics_fatsugar.shtml. (accessed

08/01/2008). The article provides a concise simplistic fats and sugars definition.

Filmography

Big Mac: Inside the McDonald's Empire. Produced by CNBC Mitch Weitzner. 2007; Englewood Cliffs: CNBC. The documentary hosted by Carl Quintanilla gives a behind-the-scenes footage about the McDonald's Corporation. I think students will be intrigued by the information.

Good food/bad food. video recording: obesity in American children. Produced by Allie Light, Irving Saraf, and Nancy Evans. 2005; Boston: Light-Saraf Films. It appears to be an informative video that shows problems, causes and solutions.

Super Size Me. Produced by The Con Productions. 2004; United States: Roadside Attractions, Samuel Goldwyn Films, Showtime Independent Films. Due to the film's rating, it may be necessary to obtain parental permission prior to watching the movie. I think thoughtful discussions will be generated based on Spurlock's experiences.

Appendices

Appendix A: Implementing Pennsylvania District Standards

Standard 1.1: Learning to Read Independently

1.1F Understand the meaning of and apply key vocabulary across the various subject areas.

1.1G Demonstrate after reading understanding and interpretation of both fiction and nonfiction.

1.1H Demonstrate fluency and comprehension in reading.

Standard 1.2: Reading Critically in all Content Areas

1.2B Use and understand a variety of media and evaluate the quality of material produced.

1.2C Produce work in at least one literary genre that follows the conventions of the genre.

Standard 1.3: Reading, Analyzing and Interpreting Literature

1.3C Analyze the effect of various literary devices.

1.3F Read and respond to nonfiction and fiction including poetry and drama.

Standard 1.4:Types of Writing

1.4B Write multi-paragraph information pieces (e.g. letters, descriptions, reports, instructions, essays, articles, interviews).

1.4C Write persuasive pieces.

Standard 1.5:Quality of Writing

1.5A Write with a sharp, distinct focus.

Standard 1.6: Speaking and Listening

1.6B Listen to selections of literature (fiction and/or nonfiction).

1.6F Use media for learning processes.

Standard 2.2: Computation and Estimation

2.2F Identify the difference between exact value and approximation and determine which is appropriate for a given situation.

Standard 2.3: Measurement and Estimation

2.3D Estimate, use and describe measures of distance, rate, perimeter, area, volume, weight, mass, and angles.

Standard 2.4: Mathematical Reasoning and Connections

2.4F Use measurements and statistics to quantify issues (e.g. in family, consumer science situations).

Standard 4.3 and 4.4: Science

4.3.7.A Identify environmental health issues.

4.3.7.B. Describe how human actions affect the health of the environment.

4.4.A. Know the importance of agriculture to humans.

4.4.7.A. Explain society's standard of living in relation to agriculture.

4.4.7.C. Explain agricultural systems' use of natural and human resources.

4.8.7.C. Explain how human activities may affect local, regional, and national environments.

Appendix B: Anticipation Guide

The following questions were created to generate student discussion regarding McDonalds. Students are given the option to agree or disagree.

1. McDonald's sell the best french fries.
2. Children recognize the McDonald's logo more than any other symbol.
3. Most people would agree that McDonald's is the most well-known fast food restaurant.
4. Fast food restaurants employ more teenagers than adults.
5. The majority of the food sold by fast food restaurants is frozen.
6. McDonald's is the largest purchaser of potatoes and beef in the world.
7. Fast food restaurants are popular because of the free toys.
8. Fast food commercials entice people to visit the restaurant.

9. Supersize orders are the main cause of obesity.
10. Fast food restaurants pay a competitive hourly rate.

Notes

1. Eric Schlosser, *Fast Food Nation*, 10
2. Morgan Spurlock, *Don't Eat This Book*, 12
3. USDA from Spurlock, 12
4. Michael Pollan, *In Defense of Food*, 141
5. Schlosser, 3
6. Pollan, 81
7. Schlosser, 20
8. National Heart Lung and Blood Institute Diseases and Conditions Index
9. American Obesity Association
10. eMedicine Health
11. American Obesity Association - source: CDC National Center for Health Statistics, National Health and Nutrition Survey. Ogden et. al. JAMA. 2002;288:1728-1732.
12. Spurlock, 11
13. National Heart Lung and Blood Institute Diseases and Conditions Index
14. Pollan, 122
15. Pollan, 188
16. Pollan, 191
17. Pollan, 10
18. Pollan, 54
19. Spurlock, 6
20. Pollan, 1
21. CBS News "Fast Food Linked to Child Obesity"

22. J.L. Davis, "Fast Food Creates Fat Kids," 1.
23. Schlosser, 6
24. Pollan, 4
25. Pollan, 135-136
26. Howard Gardner, *Frames of Mind: The Theory of Multiple Intelligences*
27. Pollan, 63
28. kidshealth.org and bbc.co.uk/health/
29. US FDA website: www.cfsan.fda.gov/~cedms/foodlab.html

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