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A TASTEFUL EDUCATION:
HEALTHY AND DELICIOUS LESSONS ABOUT FOOD

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ABSTRACT

According to the Center for Disease Control and Prevention, 65 percent of Americans are overweight or obese. Children are at even greater risk than their overweight caregivers, as the rate of early childhood and childhood/adolescent obesity has doubled and tripled, respectively, in the past 20 years.¹ The present paper explores the role of schools in combating the nation-wide threat of obesity, specifically in reference to the school's food environment. The following analysis of the Montgomery and Fairfax County School districts illustrates the contrast between a mediocre and an advanced school food environment. Topics addressed include food policy, competitive foods, vending machines, marketing in schools, food and beverage contracts, food education efforts in the classroom, and hands-on learning food experiences. Emergent themes of success include leadership initiatives, local government, state, and community support, customer focus, student involvement, and dedication to nutrition integrity.

In addition, the school comparison analysis reveals a gap in current nutrition initiatives in reference to educating students about food through eating and learning experiences with fresh, farm-grown or homemade products. As such, a discussion on the importance of providing students with hands-on learning experiences that engage students in using their senses of taste, sight, touch, and sound is included. The present paper argues that children must be educated in matters of nutrition and in the art of enjoying the foods eaten. Furthermore, food education efforts that focus on the joys of eating and taste will extend lessons on the nutrition value of food, to encompass food as it relates to the environment, culture, and the body.

¹ Brownwill, Kelly and Katherine Horgen, *Food Fight: The Inside Story of the Food Industry, America's Obesity Crisis, and What We Can do About it*, (Chicago, Contemporary Books, 2004), 3-4.

DECLARATION

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

I certify that this thesis contains 18,147 words.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying.

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SUPERVISOR CERTIFICATION

I Eva Gullberg certify that I have read the final draft of the thesis of Noelle Reeder and am satisfied that, on the basis of technical presentation, the thesis is worthy of examination.

Signed _____

Date 2005 - 08 - 11

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1 INTRODUCTION

Levi-Strauss believed that the cookery of a culture is like a language in which food serves as the source of communication. Take a moment to ponder what the food of twenty-first century America is communicating. The positive: American cuisine represents innovation, convenience, and a multicultural modernity. For example, author Eric Schlosser describes how fast food industries such as McDonalds have become American icons, “proof of the nation’s great economic vitality, a beloved American institution that appeals overseas to millions who admire our way of life.” The negative: American foods often embody quantity and convenience as opposed to quality and freshness. The result of these negative messages is the perception that American foods are largely processed products that have little cultural significance.¹ Whether taking on the positive or negative perspective on American food, there remains one irrefutable message: The American diet is feeding a nation of people, who are plagued with obesity and weight-related illnesses.

The food environment in the United States thrives on conflicting messages. Consider the external messages about food and health that Americans encounter on a daily basis: consume fewer calories, smaller portion sizes, less carbohydrates, and less chemical substances. The list is as long as it is ever changing. Competing with these messages of health are the thousands of food advertisements that urge consumers to buy their product, whether it be a *Magically Delicious*TM children’s cereal or a *Do the Dew*TM soft drink. So although Americans are constantly reminded to lead healthy lifestyles, they are also inundated with verbal and visual reminders to do the opposite, to forgo calorie counting for a *Sinful Surprise*.TM

The result of such a drastic array of foods, and the conflicting health warnings and advertisements that accompany them, is the foundation for what Michael Pollan refers to as “our national eating disorder . . . the golden age of American food faddism . . . and ‘scientific eating.’”² Living in a culture that values weight loss but revels in guilty pleasures has born an era of fad dieting techniques that promise a Delicious, Doctor-Designed, Foolproof Plan for Fast and Healthy Weight Loss.”³ What is striking is the

power that such fads possess. For example, the current weight loss fad, “carbophobia,” has challenged the place of pasta, bread, and potatoes in the American food industry and has destroyed many a bakery and doughnut shop in its path of destruction.⁴

The increase of fast food products that are high in fat and sugar is also in part to blame for the weight gain trend. After all, nearly one quarter of the adult population visits a fast food restaurant on a given day, often bringing their children along for the irresistible happy meals and playgrounds that are advertised on TV, the sides of buses, and on school walls.⁵ These clever adverts are meticulously created to attract the “child market,” and they teach children that fast food is cool, fun, and desirable, the direct opposite of the dreaded plate of spinach that caregivers across the nation are battling their children to eat.⁶

Visiting a fast food restaurant confirms any promises of fun with every happy meal toy and chocolate milkshake. These visits also ensure that children learn the concept of ‘Supersizing,’ something that provides more of the desired menu items for only a small increase in price. Based on the popularity of “buying more for less,” it comes as little surprise that a 2001 study conducted by nutritional researchers at Pennsylvania State confirmed that the presence of larger sizes induced people to buy and eat more. It is even less surprising that restaurants and food producers alike began offering the option of larger portions, whether in the form of bigger meals, sodas, snacks, or candy, to capitalize on the public’s willingness to overlook satiety in the name of overindulgence.⁷

It is important to note that convenience foods extend outside of fast food restaurants and into the shelves of the supermarket in the form of microwave meals, snacks, and many other fatty/sugary items. Many studies reveal that the makers of these foods use chemical additives and preservatives that have detrimental effects on the body. For example, Carol Simontacchi describes how food has shifted from a substance that satisfied hunger and provided bodily strength into “. . . packages, boxes, artificial flavors, coloring agents, and pseudofoods that strip the body and leave the brain poverty-stricken.” This directly affects weight gain because instead of eating to satisfy physical hunger, food is now

consumed to appease artificial cravings “created by a brain that isn’t working right . . . we eat, but we’re never satisfied. We’re full, but we are never contented.”⁸

Combine the increased consumption of the unhealthy snacks and convenience foods with the decrease in childhood physical activity and there you have it: a nation of overweight children, who potentially face a lifetime of major health (e.g., heart disease, diabetes) and emotional problems. Just as easy as it is to point to the advertising moguls and fast food products for creating a nation of overweight youths, so too is it easy to blame the TV, computer, and video game industries for depleting the will of children to play outside and exercise. In the case of TV, for example, it is estimated that the typical American child spends over 21 hours a week watching television. Outside of school, this is the most time spent on any activity aside from sleeping.⁹

Based on the above information, the foods and eating habits of the twenty-first century reveal a food atmosphere where corporations, who are only interested in fattening their wallets, manipulate children into eating junk foods for toy giveaways and promises of fun.¹⁰ The heavily consumed processed foods not only communicate that bigger is better, but they also contain additives that convey to the brain and body that items with sugar and fat are desirable. Keith Connors asserts that evidence of this communication exists in the two most common extremes of child behavior, lethargy and hyperactivity.¹¹ Certainly the lack of childhood physical activity and overall trend in weight gain also provide compelling evidence as to the existence of a negative relationship between children and the foods they eat.

What processed convenience foods are not communicating is also cause for concern. Stephanie Alexander aptly asserts, “for many children there is no way they can relate the food they see in bottles, packets and jars with soil, sunshine, ripeness and satisfying activity.”¹² The heavily consumed processed foods are often so unnatural, that concepts of freshness and food in nature have become nothing more than marketing strategies or vague notions at best. Compounding the already removed relationship between food and the environment is the reality that as more people work full time, “urban dwellings

continue to be the norm.” This, combined with the replacement of local purveyors with global food empires results in little to no child interaction with the source of naturally grown food products.¹³

The culmination of these factors results in a world of cuisine devoid of connections between the growing and preparation of most foods.¹⁴ As a result, many children grow up in an atmosphere that provides virtually no social cues to suggest that the majority of the convenient store-bought foods are unhealthy to their bodies. Furthermore, the popularity of junk foods ensures that their existence in the food market is permanent. This becomes a concern because the processed foods continue to replace the foods and food practices more closely connected to nature, the very foods that nourish the body and brain, convey a set of values, and help children to foster “a sense of responsibility for themselves, their larger communities, and their environment.”¹⁵

Researchers Brownell and Horgen point to the importance of changing the “toxic” food environment as a means to combat obesity:

With obesity the nation’s most common major chronic health problem, vast number of people could benefit [from preventative measures]. Children are the logical focus when a disease begins early in life. Food preferences, eating habits, and possibly, brand loyalties take shape in childhood, so the best opportunity for creating healthy habits [exists] in the early years.¹⁶

The best preventative measure available is education. Children should be educated about food and nutrition, as well as exposed to delicious non-processed foods. Environments that foster healthy food choices should be the norm. If there is to be significant change, parents, teachers, schools, community leaders, and government officials must aid in this education and provide children with an atmosphere conducive to healthy food choices.

In considering the need for a food education renovation, the logical place to begin is where the children spend their first eighteen years of learning: the schools. Schools present the potential to mold young minds and, in so doing, young bodies, which grow

into healthy adults. In addition, schools are an arena in which students, parents, teachers, community members, and government officials come in contact with one another. The crucial players for battling obesity intersect in schools in way that is unparalleled in other institutions and facets of life. Students are also eating one and sometimes two meals a day during school hours, allowing the cafeteria to be a laboratory for applying knowledge and skills taught in the classroom. In short, schools can potentially create an environment that not only fosters healthy food choices in the classroom and lunchroom, but also produces a generation of healthy children who understand and value the foods they eat. The aim of this study is to investigate and discuss the components used in the creation of a healthy school environment.

The present paper explores the role of schools in combating the nation-wide threat of obesity, specifically in reference to the school's food environment. The American public education system, as well as the role of food and eating and the importance of food within that system, is described. Current actions that support health-promoting schools, such as the *Commitment to Change* and the *Physicians Committee for Responsible Medicine's (PCRM) School Lunch Report Cards*, are reviewed. Specifically, one school district from two neighboring states, the Montgomery County school district in Maryland and the Fairfax County school district in Virginia, will be analyzed in terms of the measures the districts take to meet their chosen state goals as outlined in the *Commitment to Change*.

Issues such as food policy, competitive foods, vending machines, marketing in schools, and food and beverage contracts will be discussed. In addition, food education efforts in the classroom will be explored, as well as the availability of hands-on learning food experiences. The accessibility of information pertaining to students, parents, teachers, and other community members will also be assessed. A discussion of the relevancy of these issues, as well as the enabling factors of success, to the creation of a healthy food environment will follow.

Finally, the efforts taken within the two school districts will serve as a platform for a discussion on the role of educating students about food and nutrition, as well as food as it relates to culture, taste, and the environment. The present paper argues that in order for health messages to be heeded, they must be delivered in an innovative manner that not only provides messages on health but also engages students in seeing, feeling, touching, hearing, and tasting what they eat. Such gastronomic experiences provide the best opportunity for educational sustainability, both in terms of an understanding of healthy food choices, as well as a drastic food behavior change.

2 BACKGROUND

According to the Center for Disease Control and Prevention, 65 percent of Americans are overweight or obese.¹⁷ This number includes the 10 percent of 2-5 year-old children and 15 percent of 6-19 year-old children and adolescents, who are also struggling with weight. Children are at even greater risk than their overweight caregivers, as the rate of early childhood and childhood/adolescent obesity has doubled and tripled, respectively, in the past 20 years. Furthermore, overweight youths have an 80 percent chance of becoming obese adults,¹⁸ who face a lifetime of emotional and physical ailments, which can include certain types of cancer, type-2 diabetes, hypertension, heart disorders, infertility, depression, and over twenty-five additional medical conditions associated with obesity.¹⁹ Such drastic trends in youth weight gain, weight-related illness, and dietary choice are the reflection of sedentary lifestyles and an apparent “lack of awareness about food and what it means to choose and eat healthy foods.”²⁰

The following chapter provides a background of the American public school system, as well as the many ways in which students come in contact with food and messages about food throughout the school day. A review on both the typical and atypical student exposure to food within the public school system is provided as a foundation for the subsequent comparison of the Montgomery and Fairfax County school lunch and nutrition education efforts.

2.1 The American Public Education System

There are a variety of types of American schools that fall under the categories of either public or private. Most American children attend public schools, which are schools that are funded by government taxes. In general, a public school must admit any child living in its school district. The location of a home determines what school district the child will attend. For this reason, parents often locate the schools or school districts that they are interested in and then look for homes within those catchment areas (i.e., the zones served

by particular schools). In special instances, children are permitted to attend schools outside of their catchment area in order to attend a program for their special needs. Some children also have the option of attending a public school outside of their own district for a fee, as long as the school has the space and is willing to make an exception. Such rules vary at both the state and district levels.²¹

Most of the educational decisions in the US are made at the state or district level. States differ in how they share educational decisions with school districts in terms of deciding what subjects to teach, what teaching methods and educational resources to approve, how many days and hours of school are required, and so on. Each state has a Department of Education that shares the decision-making responsibilities with public school districts, which are generally led by a group of 3-41 elected, non-paid citizens. This group makes rules about budgets, teacher hiring, transportation, curriculum, and school buildings.²²

While the US Federal Government's influence on education is indirect, the federal government can influence education through its funding priorities. For example, the government may give more money to schools that offer specific programs believed to be in the national interest. Special programs in science, math and foreign language, reading, and job training are often rewarded with more funding. Schools that offer school lunches for children from low-income families are also given more money for the year. The 2002 *No Child Left Behind Act* increased the role of the federal government by requiring states to set standards for reading and mathematics. In addition, the bill specified that children receiving inadequate schooling may attend a more qualified school at the cost of the school district. The bill further specified that states and school districts have more flexibility in how they use federal funds and it encouraged the use of "scientifically-based instruction programs."²³

Because there is no national curriculum in the US, it is difficult to predict the exact course of study for students. Generally, students progress from the kindergarten years of learning letters and sounds into the elementary years of reading, writing, arithmetic, and basic social studies and sciences. Middle school approaches the major subjects in more

depth and children begin algebra, earth and physical sciences, and literature. High school further evolves student understanding of academic subjects of Science, Math, English, Social Studies and a Foreign Language. Elective courses are also available in which a student may choose from a variety of academic, arts, or physical education courses (e.g., cooking classes, woodworking, chorus, advanced calculus, weights training). Throughout all of the school levels, children may be required to take art, music, health, and physical fitness courses. There may also be specific requirements set by the state of a school district for the study of topics such as state history, government and civics, and even driver education.²⁴

In addition to a variation in school curriculum, public schools across the US, and even within a state, vary in terms of the quality of the teachers, class sizes, facilities, and student achievement. Though the variation in school quality exists for a number of reasons, school funding is one of the largest predictors of a quality education. Public school funding is generally split between the state and local government. In terms of approved tax rates and budget choices, state and local districts differ. This means that some school districts have larger amounts of money for the school year than others, though generally public schools within the same district tend to be similar in quality.²⁵

Whether a school is located in an urban or suburban area can also have an effect on the quality of the education received. Suburban school districts tend to be better funded, something that can result in better quality educational resources. Urban schools are challenged with lower funding and with educating large numbers of children from a wide variety of cultural, financial, and linguistic backgrounds. This challenge is often heightened by the reality that many financially stable parents in urban dwellings choose to send their children to private schools. Studies show that losing the support of educated and financially secure parents is detrimental to urban public schools because it is these parents who are the most involved, and therefore influential, in the maintenance and improvement of the schools' standards.²⁶

Despite these challenges, urban school settings have some advantages. For example, the large international student body often results in comprehensive bilingual language programs. In addition, the large urban student population is in some cases large enough to support magnet schools that center on a particular teaching method (e.g., “open education”) or subject (e.g., the high school of Creative and Performing Arts). In such instances, students apply for acceptance and may attend if they live within city limits.²⁷

2.2 Food Within the American Public School System

Once fairly simple, the school food environment is now highly complex. Traditionally, children bought lunches prepared at home or ate the lunches served in the school cafeteria. School cafeterias generally offered only the U.S. Department of Agriculture (USDA) federally subsidized school meals, which are required to meet defined nutritional standards. Recently however, children have been offered an array of “a la carte” menu items, which are foods that are offered individually and outside of the school meal program and therefore do not have to meet the set nutritional guidelines. Children can now find a la carte items in school vending machines, school stores, and at school fundraisers.²⁸

2.2.1 Federal School Meals

Lunch services in the form of cafeteria style dining entered public school systems as early as 1900. By 1937, over fifteen states had passed legislation specifically authorizing local school boards to operate lunchroom dining. However, although both the state and local legislation gave their authorization to provide meals for children in school, most of the local governments and school districts could not provide the necessary funds to accommodate the increasing student population. In addition, the economic hardships of the depression left many families unable to both pay for school lunches and provide meals at home. As such, the danger of malnutrition became a national concern, and federal assistance within the school lunchroom became essential.²⁹ In response to this need, the National School Lunch Act was passed in 1946. Under this legislation, the

National School Lunch Program (NSLP) was created with the sole purpose of 'safeguarding the health and well-being of the Nation's children and encouraging domestic consumption of nutritious agricultural and commodities of other food.'³⁰

The NSLP is a federally assisted meal program that currently operates in more than 99,000 public and non-profit private schools. The premise of the program is to provide low-cost or free, well-balanced meals to school-aged children. Schools that participate in the NSLP receive cash subsidies and donated commodities from the USDA for each meal served. As of 1998, school authorities are also reimbursed for any nutritious snacks served in after-school education and enrichment programs. In return, the schools must abide by federal requirements and serve free or reduced price lunches to all eligible children.³¹

The lunches served in school cafeterias must meet the recommendations of the *Dietary Guidelines for Americans*, which specify that no more than 30 percent of an individual's calories come from fat, and less than 10 percent may come from saturated fats. In addition, school lunches must provide one-third of the *Recommended Dietary Allowances* of protein, Vitamin A, Vitamin C, iron, calcium, and calories.³² The final specification for school lunches under the NSLP is that "foods of minimal nutritional value" (FMNV) may not be sold in food service areas during the school meals period. The four categories of restricted foods defined as FMNV by federal regulations are soda water, water ices, chewing gum, and certain candies.³³ As long as these federal requirements are met, decisions about what foods are served and how they are prepared are left to the discretion of the local school food authorities in conjunction with state education agencies.³⁴

Some schools also participate in the School Breakfast Program (SBP). Research indicates that the benefits of breakfast include better academic achievement, improved behavior, and better physical health. As such, the number of schools participating in the SBP has nearly doubled over the past ten years. Similar to the school lunches, the foods provided for the SBP must meet the USDA dietary guidelines for total fat and saturated fat. In addition, the foods served must have age-appropriate calorie levels, and one-quarter of

the Recommended Dietary Allowances for protein, calcium, iron, vitamin A, and vitamin C. Not all schools offer the program, generally because of funding, lack of food service resources and personnel, and a lack of time.³⁵

To ensure that school cafeteria lunches are meeting the federal requirements, the USDA periodically assesses the nutritional quality of the meals served in schools. A 2001 USDA School Nutrition Dietary review reported that many of the schools surveyed did not meet the basic nutritional requirements. The school districts in question were then “encouraged by the USDA to adjust the menu selections they offer.”³⁶ However, once assessed, schools are not audited again for another five years, making it possible for schools to avoid penalization for serving meals that are high in fat and low in nutrient value.³⁷

2.2.2 Competitive Foods

The term “competitive foods” is used to describe all foods and beverages that are sold outside of federal school meal programs. Competitive foods include a la carte foods and beverages found in vending machines, the foods and beverages sold in school as part of a fundraiser, items served in the classroom as a reward or snack, and food items made available during after-school activities. More often than not, competitive foods have a lower nutritional value than those foods served as part of the school meal.³⁸ Specifically, a la carte food items tend to be high in energy density (i.e., high in fat and sugar) and low in nutrient density.^{39 40 41}

For example, a survey conducted by the Center for Disease Control and Prevention revealed that 76.3 percent of the elementary, middle, and high schools surveyed provided soft drinks or sports drinks and 63.5 percent offered salty, high fat snacks. These numbers paled in comparison to the 17.6 percent of schools that offered fruit and vegetables and 14.9 percent that offered low-fat or non-fat yogurt.⁴² In addition to the snacks served outside of the school lunchroom, it is estimated that 20.2 percent of schools sell high-fat fast food such as Pizza Hut and McDonald’s.⁴³

Current federal nutrition guidelines for the sale of competitive foods in schools are limited. As mentioned above, the sale of foods with minimal nutritional value is prohibited during school lunch periods. However, the foods that qualify as FMNV are narrowly defined (e.g., soft drinks and certain types of candy), which allows for the sale of other items with low nutrient density and/or high energy density foods such as cookies, candy bars, and potato chips. No other national standard currently exists to mandate the screening of the nutritional quality of competitive foods. Furthermore, federal guidelines do not prohibit the sale of FMNV or other salty, sugar-laden, high-fat snack foods from vending machines outside of the cafeteria.⁴⁴

States and school districts do have the option to implement their own policies regarding the sale of competitive foods. Many states have passed legislation that limit the types of foods sold, as well as the hours in which they are sold, during the school day. For instance, a recent report by the General Accounting Office found that 21 states had policies on competitive foods that surpassed the limitations set by the USDA.⁴⁵

2.2.3 Health Education

In addition to encountering food in the lunchroom, students can learn about food and nutrition in the classroom. Health education classes in particular often provide lessons on nutrition and dietary behavior. The majority of American elementary, middle, and high schools require that students take health class for at least one full year at each school level. Some schools require only one semester while others require students to take health every year. Numerous topics including safety, first aid, alcohol and tobacco use prevention, growth and development, and personal hygiene are covered in health education classes and vary by the ages of the students.⁴⁶ According to a survey conducted in 2000, 75 percent of health courses included instruction on nutritional and dietary behavior.⁴⁷

National data show that over two-thirds of the states require health education curricula to include instruction on nutrition and dietary choice. In addition, over two-thirds of school

districts follow national, state, or district-level guidelines. The majority of these schools follow the National Health Education Standards, which “emphasize the importance of teaching students behavioral skills – such as effective decision making and goal-setting – thereby making healthful behaviors more likely.”⁴⁸ Despite the high number of schools utilizing behavioral nutritional curricula, few health classes are required to test their students on their understanding of the topics covered. Furthermore, the time spent in the classroom learning about food and nutrition issues is low. Students are estimated to spend five hours of class time per year on diet-related lessons.⁴⁹

2.2.4 Food Woven Throughout the Curriculum

Outside of health education, there is no guarantee that lessons about food or nutrition will be a part of the school-day curriculum. While some schools make learning about food a conscious priority, most students encounter indirect messages about food and eating within the school environment. For instance, children can come in contact with food advertisements or “commercialized food-related” educational materials, a topic further reviewed in the following section. The foods served in the cafeteria and vending machines can also convey messages to students. A middle school student in California expressed what the foods in her cafeteria conveyed to her:

When I was in 6th grade I was overweight in my school. We had Papa Johns [a pizza chain], Chick fil a, and Slurpies. But then in the summer I started hitting the gym. It was hard but I started liking it. I really like fruits and vegetables. But when I was in 7th grade everything changed. We had double cheeseburgers and greasy pizzas just like last year . . . Sometimes I think the school doesn’t care about the kids’ health. What I really think they care about is the money [the school makes from selling unhealthy foods].⁵⁰

2.2.5 Advertising in Schools

Growing concern exists over the use of food advertisements on school grounds, particularly in reference to the extent of commercial food advertising and its influence on

children's food and beverage choice.⁵¹ A comprehensive literature review of the effects of food promotion on children concluded that food advertisements trigger children to request the purchase of previously seen products to their parents. Viewing advertisements were also found to have an effect on children's product and brand preferences as well as on their consumptive behavior.⁵² In addition, children view advertisements with less skepticism than adults and "therefore are particularly vulnerable to advertising."⁵³ Research with fifth and sixth grade students supports this theory, as over half of the students surveyed believed that everything said in commercials to be truthful in nature. Additional research findings assert that "children have difficulty distinguishing between advertising and programming and, before the age of eight, they do not understand that the intent of commercials is to sell a product."⁵⁴

Researchers from the Institute of Medicine of the National Academies concluded that advertisements infiltrate public schools in the following ways:

- **Product Sales:** short-term fundraising activities, such as the sale of candy or magazines, that benefit a specific student activity; cash or credit rebate programs; and commerce in products that benefit a district, school, or student activity, such as vending machine contracts and "pouring-rights" contracts;
- **Direct Advertising:** billboards, signs, and product displays; signs on school buses, corporate logos or brand names on school supplies or equipment; ads in school publications, such as the school newspaper or newsletter; media-based advertising, such as Channel One News; and free samples and coupons;
- **Indirect Advertising:** corporate-sponsored educational materials; teacher training; contests; incentive programs; and lesson plans or curricula sponsored by companies;
- **Market Research:** questionnaires, taste tests, and Internet surveys conducted through or on school grounds.^{55 56}

Some of the advertisement techniques are more common or prevalent in schools. For example, Channel One, which is under the *Direct Advertising* category, is a television broadcast that reaches over 12,000 schools in the nation. Channel One shows ten minutes

of ads in its daily broadcasts and, in return, schools receive \$25,000 worth of free video equipment. These ads reach 400,000 educators and eight million teenage viewers per year. Ads are estimated to cost \$175,000 for a thirty-second spot, a price well worth it to any company that wishes to have access to 40 percent of the American teenage consumer population.⁵⁷

Research on Channel One revealed that 69 percent of commercials broadcasted over a four-week period were for food products, including fast food items, candy, and soft drinks. The study concluded that viewing Channel One had an impact on what children thought about the products that were advertised; specifically, viewing the advertisements led to an increased positive feeling about the products advertised. In addition, Channel One enhanced students' consumer orientations and increased their intent to purchase the products viewed.⁵⁸

Other advertising methods are less obvious, such as the example of the infiltration of education materials as listed in the *Indirect Advertising* category. The Consumers Union evaluated corporate-sponsored education materials and found that 80 percent of the textbooks, reading books, math books, and science experiments surveyed "favored the company's agenda and/or included biased or incomplete information."⁵⁹ Companies such as Cambell Soup, Kellogg's, and the American Egg Board were cited as producing commercialized food-related materials. Learn-by-counting books were particularly prevalent with titles such as *Skittles Math Riddles*, *Reese's Pieces: Count by Fives*, and the *Hershey Milk Chocolate Bar Fractions Book*.⁶⁰

Because public schools are institutions that survive on taxpayer dollars, there are issues regarding the appropriateness of commercial advertising within the school setting. Aside from the aforementioned research findings that cite the negative influence of advertisements on children's food and beverage choice, there is also concern that advertisements in school circumvent parental control over the types of products and advertisements to which children are exposed. Further, evidence suggests that children

may interpret the in-school advertisements as evidence that the teachers and school staff endorse the items marketed at school.⁶¹

Despite these concerns, schools face a number of barriers in removing food-related advertisements. Foremost is the issue of funding. Corporate sponsors contribute greatly to school funding and the sale of their items brings in substantial revenue.⁶² Schools receive only \$2.14 for each free meal served as part of the NSLP, a compensation that is often not enough to break even. Conversely, the profit margin for a la carte foods and corporate items sold in vending machines can be anywhere from 50-100 percent.⁶³ In addition, advertisement space can often bring in hundreds of thousands and even millions of dollars in free equipment, curriculum material, incentives, sports equipment, food-service equipment, computers, and televisions.⁶⁴ A New York City school district, for example, hopes to raise \$53 million annually by allowing advertisements on the district's school buses.⁶⁵

2.2.6 Pushing Soft Drinks

Research findings suggest that what students are drinking in school is just as important as the foods they eat. Soft drinks in particular “raise nutritional issues that place them at the forefront of present-day dietary concerns.”⁶⁶ The Center for Disease Control and Prevention concluded that the majority of K-12 schools, with 93 percent of high schools, 83 percent of middle schools, and 58 percent of elementary schools, allow the sale of soft drinks and other “high-added-sugar drinks” in vending machines, school stores, and cafeterias.⁶⁷

The detriment of the over consumption of soft drinks is represented in Tables 1 and 2, as created by researcher Marion Nestle. Table 1 illustrates the low nutrient composition of soda in comparison to juice and milk. The Center for Science in the Public Interest labels soda as “liquid candy,” due to its high sugar level in conjunction with its nonexistent nutrient level. As shown in Table 2, this “liquid candy” is now replacing milk in the diets of many American children. School purchases reflect this trend. For example, between

the years of 1985 and 1997, school districts decreased the amount of milk they bought by 30 percent and increased their soda purchases by 1,100 percent. The increased consumption of soft drinks also means that children are drinking hundreds of empty calories that are replacing calories from more nutritious foods and drinks. Furthermore, soft drink consumption is linked with obesity such that the risk of obesity increases by 1.6 times with each additional soft drink consumed.⁶⁸

Though once simply a matter of selling soft drinks in vending machines on school grounds, soft drink companies have increased their efforts to reach the student market. For example, schools can now participate in pouring-rights contracts, in which schools are given money donations in return for the exclusive sales of one company's product on school grounds. The stable base of sales also comes with the resulting advertisement opportunities. Marion Nestle describes the use of such advertisements:

. . . *all* students in the school, even those too young or too difficult to reach by conventional advertising methods, receive constant exposure to the logos and products. The use of a single brand is designed to create loyalty among young people who have a lifetime of soft drink purchases ahead of them.⁶⁹

Allowing the sale of soft drinks at school combines the issues of competitive foods and school-based advertisements. On the one hand, the sale and advertisement of soft drinks brings in a much-needed revenue for the schools and often comes with free incentives, whether through school equipment or money donations. On the other hand, the purpose of providing food and beverages in school is to provide children with a well-balanced lunchtime meal "that contributes to healthful eating habits."⁷⁰ The sale of competing items, particularly an item such as soda that has virtually no nutrient value, is in direct opposition to the notion of a healthy school environment.

TABLE 1. The Nutrient Composition of 12-ounce Soft Drinks, Juice, and Milk

	Coca-Cola	Pepsi	Orange Juice	1% Milk
Calories	154	160	168	153
Sugar	40	40	40	18
Vitamin A	0	0	291	750
Vitamin C	0	0	146	3
Folic Acid	0	0	164	18
Calcium	0	0	33	450
Potassium	0	0	711	352
Magnesium	0	0	36	51
Phosphate	54	55	60	353

Source: Nestle, Marion. *Food Politics: How the food Industry Influences Nutrition and Health*. Berkeley: University of California Press, 2003, 198.

TABLE 2. Beverages Available, Gallons Per Person Per Year, in the U.S. Food Supply

	Diet Soda	Regular Soda	Milk
1970	2.1	22.2	31.3
1975	3.2	25.0	29.5
1980	5.1	29.9	27.6
1985	7.1	28.7	26.7
1990	10.7	35.6	25.7
1995	11.8	39.8	24.3
1997	11.6	41.4	24.0

Note: As the consumption of soda increases, the consumption of milk decreases.

Source: Nestle, 198.

2.2.7 Intervention Programs

School-based intervention programs to improve dietary quality among students generally include one or more of the following components:

- Changing food service (changing the foods available, their prices, and preparation methods);
- Providing students with promotional activities;
- Including nutrition education in classroom curriculum;
- Involving parents and the community via newsletters or home activities.⁷¹

Such interventions generally target total fat, saturated fat, or fruit and vegetable intake. Evaluating the existing literature is difficult due to the variety in outcome measures and the “multi-component nature of their designs . . . Differences exist across studies in the number and type of food related behaviors and age groups targeted.”⁷² Some school-based interventions utilizing the above techniques have resulted in positive change in one of the following areas: producing healthful food choices among students, changing dietary behavior, changing the fat content of meals, lowering body weight, and increasing the intake of fruits and vegetables (refer Appendix 9.1 for an overview of various research variables and outcomes).⁷³

Research also supports the effectiveness of behavior-oriented curricula in promoting healthy food choices “based on self-monitoring, goal setting, feedback about behavior change efforts, incentives, and reinforcement methods.”⁷⁴ Activities that involve skill building, in which students practice desired and new behaviors, are effective learning techniques. Method of instruction and positive feedback are critical components in executing such teaching strategies.⁷⁵

2.3 Why Schools Provide an Important Food Environment

2.3.1 The Changing Family Dynamic

In past centuries, the role of child upbringing fell upon the mother. However, by 1975, nearly one-third of American mothers with young children worked outside the home. Today this number has doubled.⁷⁶ The increase of women in the workplace has amplified the demand for services once performed by the housewife, particularly in reference to cooking and childcare. Here we see where convenience foods perform their much-needed duties of relieving caregivers from spending what little free time they have in the kitchen. The need for convenience also extends outside of the kitchen in terms of the decline of the 'traditional' family meal.' For example, author Eric Schlosser reports that 10-15 years ago, three-quarters of the money used to buy food in the United States was spent on ingredients for home-prepared meals, whereas now half of the money used to buy food is spent in restaurants – “mainly fast food restaurants.”⁷⁷

The point in including information about the increase of women in the work force is not to place blame on working mothers. Rather, it is just one example of the present changes in the family dynamic. Other changes include longer working hours and an increase in the number of homes in which both caregivers work full time. The relevance of this to the development of food preferences in children is vast, as theorists believe that food choices are formed within the family environment as well as through genetic predispositions.⁷⁸

Jane Ogden's theoretical approach to understanding food choices emphasizes the importance of learning and experience within the environment. Generally, it is within a family context that children initially observe the foods that are safe, culturally acceptable, and morally correct. During this time, children also learn about what is pleasurable and the values associated with certain foods.⁷⁹ Although eating food remains a social activity for some, the changing family dynamic results in less time spent on eating with the family and having family meals. Thus, in terms of targeting an environment in which to convey healthier food messages, it seems appropriate to target the place in which children

are spending the majority of their food socializing time: the schools.⁸⁰

2.3.2 Time Spent at School

With less and less time spent eating at the family dinner table, children are becoming more independent with what, when, and how they eat. For example, a child can prepare a turkey, mashed potato, and stuffing meal by simply taking the plastic off of a microwave dinner. Thirty seconds later, the child is enjoying all of her Thanksgiving food favorites, without any of her family members, and in front of the television. This same child can go to school, order a slice of pizza off of the a la carte menu, and take the pizza to an isolated corner in the cafeteria. In fact, some school cafeterias even have the luxury of the television that she enjoys at home.

Despite many of the discouraging trends in the lunchroom, schools maintain a certain measure of control over what students eat and how and where they eat. With children spending two-thirds of their young lives within school grounds, schools have the opportunity to ensure that the foods served in the cafeteria are delicious and nutritious and that the importance of nutrition is reinforced within the classroom. In addition, schools can provide students with a lunchroom atmosphere conducive to the enjoyment of the meals served, including the appropriate time allotted for meals as well as a comfortable dining area. The members of the Healthy Schools Summit further elaborate on the potential power of the school setting to teach children about food:

Schools represent the best opportunity to promote children's current and future well-being and thus their opportunity to learn. . . By providing equality of access to information in settings where families differ in their level of knowledge and ability to discuss nutritional needs, schools help communities meet the needs of all children.⁸¹

Evidence suggests that food preferences become more difficult to change with age, something that supports findings indicating an adolescent resistance to change in dietary

habits.⁸² By changing the food environment within the schools, starting at the earliest years and progressing into the later years, healthy food preferences can be solidified.

2.3.3 Academic Performance and Healthy Eating

Numerous studies provide data that supports the relationship between healthy eating and improved academic performance.^{83 84 85 86 87} Eating healthy foods is linked to academic achievement, self-esteem, mental health, school attendance, livelier classroom participation, higher energy levels, and higher test scores, all of which lead to a stronger student performance. In short, when the health and nutrition needs of students are met, “they have the cognitive energy to learn and achieve.”⁸⁸

2.3.4 Nutrition and Active Learning about Food

Much of the focus of eating and learning about food in schools is centered on nutrition. For example, many schools make an effort in the lunchroom to meet the nutritional needs of the children and teach the importance of eating healthy foods in the classroom. While such efforts are important in the battle against childhood obesity, they often lack the ability to help children appreciate and understand the food they eat. Chapter 7 will expand on the notion of schools as an ideal setting, not only to convey messages of health, but to engage students in innovative food-learning experiences that encourage them to actively think about the foods they eat, how they taste, where they came from, how they were prepared, and their cultural significance.

2.4 Recent Attention to Food in Schools

In 2001, U.S. Surgeon General David Satcher issued *A Call to Action to Prevent and Decrease Overweight and Obesity*, a report that addressed the need for a nationwide understanding of and commitment to “the prevention and treatment of overweight and obesity and their associated health problems.”⁸⁹ The report was particularly concerned with the weight-related health issues of American children, and it named the public

school system as a key environment in which to address the epidemic of overweight and obesity. Schools were identified as a key setting to initiate change because “most children spend a large portion of time in school . . . [and] schools provide many opportunities to engage children in healthy eating and physical activity and to reinforce healthy diet and physical activity messages.”⁹⁰

The *Call to Action* report further indicated that health approaches in schools should extend beyond existing health and physical education courses to include school policy, the physical and social environment within the school setting, and a partnership of the school, community, and family unit. Options were given as to how to improve upon matters of “Communication” (e.g., build nutrition awareness among school staff, educate school staff on the importance of physical activity), “Action” (e.g., ensure that school meals meet standard nutrition guidelines, prohibit student access to junk foods), and “Research and Evaluation” (e.g., evaluation of school-based learning initiatives about health and eating, conducting research on the relationship between student eating patterns to student health, learning, attendance).⁹¹

In response to the issues addressed in the *Call to Action* report, a group of 500 leaders from the education, physical activity, health, and nutrition fields collaborated to form a national Healthy Schools Summit in October of 2002. Over 35 national education, health organizations, and government agencies formed the Healthy Schools Summit Planning Committee, a core group that created the *Commitment to Change* (refer Appendix 9.2). Identifying twelve steps towards achieving sound nutrition and physical activity in schools, the *Commitment to Change* outlines actions needed to create health-promoting schools that provide a sustainable education for students.⁹²

Though a handful of public schools were already making efforts to provide healthier school meals or to increase nutrition education, the Healthy School Summit served as a catalyst for individual state support in the creation of health-promoting schools. Never before has the issue of obesity as it relates to public education been accompanied with a level of awareness and support, both on the state and national level. The Healthy Summit

Report indicates that state teams (present in all fifty states and the District of Columbia) “are working to initiate and sustain action at the state, school district and school building level . . . [by] creating action plans, identifying and pursuing specific goals that are priorities for the particular state and translating concern into actions that yield positive results in children’s health and improved academic performance.”⁹³

3 METHOD

A few months ago a friend of mine, a teacher at a less fortunate inner city school in Philadelphia, spoke of the importance of quality school meals and nutrition intervention programs for the students in her district. The school's financial state, lack of funding, student demographic breakdown, lack of parental involvement, drop-out rate, and the urgent need for qualified teachers and school staff are all factors that she felt contributed to an overweight student body. She sighted these same factors as obstacles in combating the issue of obesity within her school. Frustrated, she made the following statement:

The issues that inner city schools face are far greater than the issues in suburban schools. Our kids are overweight. The lunchroom has fast food and there are vending machines all over the school. You would never see that sort of thing in the top school districts. Health is a priority at the wealthier school districts. In my school, getting the kids to stay for a whole day is our top priority.

Obesity rates are indeed rising rapidly, particularly among the African American and Hispanic population, the two largest demographic groups at my friend's school. Obesity rates are also higher for individuals of lower socioeconomic backgrounds, an issue that the students at the Philadelphia school face. I agree with my friend that nutrition intervention programs and better quality food are needed for these students. What I was not sure of was whether low quality food and lack of nutrition education was an issue isolated to poor inner city schools. Does a high quality education guarantee high quality school meals and provide adequate knowledge about food?

3.1 Preliminary Research

My preliminary research on the status of the school lunches and food nutrition efforts in wealthier suburban school districts revealed that the quality of a school was not necessarily a predictor of the quality of the foods served or education provided on food and nutrition. The following section reviews the findings of the 2004 School Lunch Report Card, a study that assessed the Baltimore and Montgomery County school

districts (among others) in terms of the quality of foods served and education provided on food. These two Maryland counties were of interest because Montgomery County is a wealthier suburban county with a high success rate amongst students, where as Baltimore County, an inner city school district, has a lower educational budget and success rate amongst their students

The objective of the 2004 School Lunch Report Card is to assess “three different essential categories for children’s nutrition in schools: Obesity and Chronic Disease Prevention, Health Promotion and Nutrition Adequacy, and Nutrition Initiatives.”⁹⁴ Table 3 provides a brief explanation of the three categories as described by the PCRM. Schools were assessed using the criteria and were awarded points in accordance with the items in question. For example, when considering the Nutrition Initiatives category, schools were awarded two points for every innovative nutrition program, with the possibility of earning up to ten points. Points are then tallied and each school receives a grade.

To earn an “A,” the top mark of a total score between 95-100 percent, on the PCRM Report Card, schools must have vegan entrée options, low-fat vegetable side dishes, fresh, dried, or canned fruit, and non-dairy, calcium-rich beverages available daily. School menus must also contain less than 30 percent of their calories from fat, less than 10 percent from saturated fat, small amounts of cholesterol, and at least 8-10 grams of fiber and 15 milligrams of vitamin C per meal. An “A” school must have healthy foods and beverages in their vending machines such as low-fat snacks, juice, and water. Finally, an “A” school must be “initiating nutrition education efforts and teaching healthy eating habits to students. . .”⁹⁵

TABLE 3. Description of the Criteria for the 2004 School Lunch Report Card

Categories for the Evaluation of School Lunches and Nutrition
<p>Obesity and Chronic Disease Prevention: 40 points</p> <p>This Category includes the nutrient composition and frequency of healthy entrée selections that are especially important for the prevention of obesity and obesity-related diseases such as heart disease, diabetes, and cancer . . . it is especially important that schools provide meals that are low in fat, saturated fat, and cholesterol, and provide plant-based entrees.</p>
<p>Health Promotion and Nutrition Adequacy: 40 points</p> <p>Separate from nutrition’s relationship to disease prevention is the issue of whether meal patterns are meeting nutrient needs and providing dietary options that promote the health of the children. The Health Promotion and Nutrition Adequacy category specifically measures whether the foods offered in elementary school lunches provide the essential nutrients of fiber and vitamin C, daily low-fat vegetable side dishes, fruit, and calcium-rich, non-dairy beverages for children who do not choose to drink milk for health or other reasons.</p>
<p>Nutrition Initiatives: 20 points</p> <p>To truly promote health and ward off obesity, schools must teach about nutrition. It is also critical for districts to include only healthy vending foods when vending machines are present. This review evaluates districts on what steps they are taking to help children appreciate and choose healthy food and understand why diets built from fruits, vegetable, whole grains, and legumes help prevent obesity and chronic diseases.</p>

Source: Physicians Committee for Responsible Medicine, “2004 School Lunch Report Cards: The Background,” *Healthy School Lunches*, 2004, <http://www.healthyschoollunches.org/reports/report2004_intro.html> (13 September 2004), 1-5.

Montgomery County received the following points in the three categories of the PCRМ: 31.0 points in Obesity and Chronic Disease Prevention; 25.4 points in Health Promotion and Nutrition Adequacy; and 14.0 points in Nutrition Initiatives. The total score was 70.4, giving the county a below average grade of C-. A brief description following the allocation of points commended Montgomery County for having a low percentage of calories from fat in the lunches served to students, as well as for the absence of vending machines on school grounds. On the other hand, the reviewers felt that the menu lacked in nutrient content and plant-based menu options. A lack of nutrition education outside of the health classroom was also cited as an area for improvement.⁹⁶

The Baltimore County School district received the following points from the PCRМ: 26.0 points in Obesity and Chronic Disease Prevention; 27.6 points in Health Promotion and Nutrition Adequacy; and 12.0 points in Nutrition Initiatives. The total score was 65.6, giving the county a below average grade of D. Similar to Montgomery County, Baltimore County had a relatively low percentage of fat calories. In addition, the county was applauded for offering a daily selection of vegetable side dishes and fruit. However, the foods served to students were low in fiber (5.6 grams) and high in cholesterol (62 milligrams per average). The addition of plant-based items was recommended to remedy the lack of fiber and surplus of cholesterol in the menu. Efforts to educate children about food were not present in the Baltimore schools, causing their score to suffer by ten points.⁹⁷

The comparable scores and descriptions about Montgomery County and Baltimore County food and nutrition education indicate that the quality of the school or location of the school (inner city versus suburban) are not always predictive of the quality of students' experiences with food. The results of the eleven total districts surveyed by PCRМ revealed scores ranging from 59.8 to 84.7 points, each assigned to schools of varying income levels, demographic backgrounds, and educational quality. As such, I began to wonder what factors, outside of demographic and income variables, enabled successful food environments. To uncover this dilemma, I reviewed the top scoring school district in the PCRМ, Fairfax County, Virginia, a suburban school in close

proximity to Montgomery County. The inclusion of Vegan entrees and classroom time spent learning about food and nutrition awarded this district the highest grade.⁹⁸

The PCRМ focuses primarily on the nutrient, fat, and vitamin composition of food options. Little is mentioned about the measures taken to teach children about food, despite the inclusion of the Nutrition Initiatives category. The present study provides an in-depth examination of two specific school districts, Montgomery County and Fairfax County, as a means to identify factors that contribute to the success (or lack of success) of school district involvement in providing adequate school meals and nutrition education. Based on the background information presented in Chapter 2 pertaining to the issues that schools face in creating a healthy food environment, the present study expands on the items analyzed by the PCRМ to include specific analysis of the following:

- Whether the schools have a nutrition mission;
- Whether the schools meet the 6 approaches to promoting healthy food choice, which includes:
 - Establishing nutrition standards for competitive foods;
 - Providing healthy foods and beverages at greater volumes;
 - Adopting marketing techniques to promote healthful choices;
 - Limiting student access to competitive foods;
 - Supporting healthy eating throughout school events, fundraising activities, and students rewards;
 - Influencing food and beverage contracts;⁹⁹
- Whether the schools reinforce healthy eating in the classroom;
- Whether the kids have hands-on learning experiences with food;
- Whether the school receives support from the local community, parents, and the government;
- Whether information is accessible to parents, students, and community; members in reference to the foods available, nutrient analysis, and school-based nutrition efforts.

Through this exploration, themes such as the approaches used to promote healthy food choices, as well as the keys to success will be discussed.

Chapter 7 will further explore a large element that was not present in either the Montgomery or Fairfax districts: gastronomy. While the schools focus primarily on providing children with nutritious school meals and an education on nutrition, gastronomy provides a philosophical basis for healthy eating, which includes, the sensual awareness of eating delicious and well-prepared foods, enjoyment of eating, and an understanding of the foods eaten. Author Michael Pollen, aptly asserts, “. . . *how* we eat, and even how we feel about eating, may in the end be just as important as *what* we eat.”¹⁰⁰ Chapter 7 will address the role of gastronomy within the school food environment. The term gastronomy will be generally defined and defined within the context of the school environment. Topics covered will include a comparison of nutrition and gastronomy, the relevance of including gastronomic lessons to combat obesity, and a review of current examples of successful gastronomic experiences within the schools.

3.2 Why Montgomery and Fairfax County Public Schools?

The Fairfax County and Montgomery County school districts present an interesting case for comparison because of their similar demographic backgrounds and the dissimilar reviews of the food environment as outlined by the PCRM. Based on the aforementioned expanded research analysis method, the factors that contribute to the difference in school food environments and education efforts will be reviewed. The two counties are also interesting case studies because they represent a microcosm of the American educational approach to studying food and nutrition as a whole. For this reason the comparison of these counties illustrates the factors present for success, as well as existing gaps within the approaches that the American education system utilizes in teaching children about food.

In trying to research and determine the differences in what foods are being eaten in the lunchroom and what students are learning about food and nutrition in the classroom, it

was important to choose counties that are similar to each other among other unrelated factors. The findings of the PCRMR indicated that districts differing in quality of education were not necessarily indicative of the food atmosphere. Nevertheless, choosing similar counties further reduces the likelihood that the differences found among what the schoolchildren are eating and learning about food are accounted for by variables such as school size, student diversity, budget, and student enrollment.

Both the Montgomery and Fairfax County school systems are considered suburban school districts. Besides the differences reported by the PCRMR in their Lunch Report Cards, the two school districts were chosen for this study because of their proximity of location and their similarities across several statistical categories, which are highlighted in Table 4. The two counties are approximately 30 miles apart and are both considered part of the Washington D.C. metropolitan area. The Montgomery County public school district has the largest number of students enrolled in the state of Maryland, while Fairfax County also boasts the top spot in school enrollment throughout Virginia.^{101 102}

Table 4 also illustrates that the Montgomery and Fairfax county public school districts have comparable performance and dropout rates, both of which indicate an academically sound student body receiving an above average quality of education. The operating budget for Montgomery County stands at \$1.6 billion whereas Fairfax County's budget reaches \$1.8 billion per year, with county funding being the primary source of funding for both school districts. In terms of food, both counties serve between 8-9 billion meals per year. The statistics for free and reduced priced meals in each county are also akin to one another, as Montgomery County reduces 22.3 percent of meals and Fairfax County reduces 19.9 percent of all meals served.^{103 104}

The existing statistical similarities between the Montgomery County and Fairfax County school districts provide natural controls for otherwise unpredictable confounding variables. As such, the two public school districts provide an opportunity for the comparison of school lunches and nutrition education efforts.

TABLE 4. Comparison of the Montgomery and Fairfax County Demographics

	Montgomery County	Fairfax County
Size	497 miles	395 miles
Population	942,000 – 1 in 7 residents attends public school	1,000,000 – 1 in 6 residents attends public school
Total Number of Schools	192	205
Employees	19,951	21,520
Meals Served	8.3 million	140,000 per day
Enrollment	140,492 – largest in MD	166, 275 – largest in VA
Performance	92 percent graduation rate	92 percent graduation rate
SAT Score	1102	1105
Drop-out rate	2.0 percent	2.4 percent
Demographics	White: 44.6 percent African-American: 22.1 percent Hispanic: 18.7 percent Asian: 14.3 percent	White: 51.4 percent African-American: 10.7 percent Hispanics: 15.5 percent Asian: 17.2 percent
Free and Reduced Meals	22.3 percent	19.9 percent
Operating Budget	1.6 billion \$10,537 per pupil	1.8 billion \$11,022 per pupil

Source: “About Us,” *Montgomery County Public Schools*, 2004-2005, <<http://www.mcps.k12.md.us/about/>> (22 May 2005), 1.

Source: “Fairfax County Public Schools: Statistics,” *Fairfax County Public Schools*, 2004-2005, <<http://www.fcps.edu/statis.htm>> (22 May 2005), 1.

4 MARYLAND PUBLIC SCHOOLS ANALYSIS

4.1 Background Information

4.1.1 Maryland State Team Action Plan Goals

In response to the 2001 report, *A Call to Action to Prevent and Decrease Overweight and Obesity* and the subsequent Healthy Schools Summit report, *Commitment to Change*, Maryland formed a state team to improve student nutrition. The Maryland State Team is working to achieve three of the goals from the *Commitment to Change*. Two of the goals deal directly with food and eating and one pertains to fitness, a topic that is not discussed in the present paper. The two relevant goals are:

Goal 2: Provide students in pre-kindergarten through grade 12 with behavior-focused nutrition education integrated into the curriculum that is interactive and teaches the skills they need to adopt healthy eating habits.¹⁰⁵

Goal 8: Provide an adequate amount of time for students to eat school meals, and schedule lunch periods at reasonable hours around midday.¹⁰⁶

The State Team is particularly interested in Goal 8 and is planning a mealtime pilot project to ensure that all Maryland students have an adequate amount of time to eat lunch. To help accomplish this goal, the State Team is conducting a study of ten local school systems to “demonstrate that child nutrition can be improved to achieve the best mealtime schedules.”¹⁰⁷ A statewide assessment to identify the barriers of providing adequate meal times, as well as the complications involved in scheduling longer mealtimes, is currently underway. The results will serve as a means to identify areas of improvement and “best practices” to the State Board of Education, with the intent to impact the future development of mealtime standards.¹⁰⁸

4.1.2 Maryland State Legislation on Nutrition

As of February 22, 2005, the Maryland State Board of Education approved new nutrition standards designed to reduce the amount of junk food eaten in public schools. The standards prevent school cafeterias from selling snacks with more than 9 grams of total fat, 2 grams of saturated fat, and 15 grams of sugar. These regulations prohibit the sale of many previously served a la carte items such as ice cream, cookies, cakes, and chips. In addition, vending machines that sell FMNV must be turned off until after school hours as opposed to only being turned off until the end of the lunch period. However, the standards for the fat and sugar content and vending machines are optional and apply only to elementary and middle schools.

State officials report that Maryland's 24 school district leaders support the nutrition guidelines, many opting to adopt guidelines that are even more stringent. For example, Joan Stern, a Montgomery County Democrat, introduced a bill in the General Assembly that calls for the elimination of fried foods in schools cafeterias and requires healthful foods to be served during school activities by 2006. By 2010, the bill would impose portion size regulations as well as limits on sodium, fat, and sugar content. Some school districts plan to implement the standards in high school campuses as well. Under federal law, Maryland school districts are also developing "wellness plans" for the 2006-2007 school year. These plans will provide guidelines for nutrition education and physical activity. By January of 2006, Maryland school districts will also submit a nutrition policy to the state board of education.¹⁰⁹

4.2 Montgomery County Public Schools (MCPS)

4.2.1 A Review of the MCPS Background Information

Montgomery County's public school system is the largest school system in Maryland and the seventeenth largest school system in the United States. The county spans close to 497 square miles, and approximately one out of every seven of 942,000 county residents is a

public school attendee. In the 2004-05 school year, it was estimated that 139,203 students occupied the 192 Montgomery County schools. During this school year, 8.3 million meals were served, and between 22-35 percent of the students received free or reduced-price meals.¹¹⁰

Like most public schools in the United States, the Montgomery County school system focuses on student achievement, something that is generally measured through “performance.” In this area, the county boasts a 92 percent high school graduation rate. In addition, 67 percent of the students participate in honors or advanced placement courses and the average standardized testing results for students who took the Scholastic Aptitude Test (SAT) was 1102, a score that is 100 points above the national average. Of the students who took their SATs, 51 qualified as National Merit Scholars, a distinction that identifies a student as scoring in the top 1 percent of all SAT participants.¹¹¹ What these test scores indicate is that the student body is performing “above average,” which when considered in conjunction with the relatively high education budget and graduation rate, points to a student body who is receiving a “high quality” public school education.

4.2.2 Division of Food and Nutrition Services

What does the Division of Food and Nutrition Services convey about the foods served and schools policy on issues relating to food and nutrition?

The following is the Montgomery County Public School’s Division of Food and Nutrition Services mission:

The mission of the Division of Food and Nutrition Service is to provide appealing, quality, nutritious meals in a cost effective and efficient operation. Dedicated employees empowered to promote success for every student serve meals in an innovative learning environment, respectful of each student’s needs and differences.¹¹²

From their website, parents, teachers and students can access information on the free and reduced price meal income guidelines. In addition, parents and students can learn about their summer food program, which provides nutritious meals to students of low-income backgrounds.

4.2.3 School Lunch Menus for May 2005

Current menus are available from the Division of Food and Nutrition Services web page. Appendix 9.3 includes the elementary, middle, and high school lunch menus from May 2005. All of the menus are easy to read and include graphics to make them aesthetically pleasing. Menus are available in English and Spanish. Included on all menus are the lunch prices for students along with a key that identifies symbols for items that contain pork and poultry and items that are meatless. Advertisements for the Montgomery County Department of Recreation as well for the Montgomery county Health and Human Services are included on the Elementary menu calendar. Middle and High School students are reminded to make smart food choices. There is no nutritional information for any of the breakfast or lunch items included on the menu calendars.¹¹³

The Elementary school breakfast menu includes items such as a breakfast wrap, pancakes, cinnamon bun, cheese sandwich, and french toast sticks. Fruit and milk are provided as well. Children may opt to choose a daily alternative of either cereal or a bagel if they do not like what is on the menu. The Elementary school lunch menu features items such as burgers, chicken nuggets, pizza, Teriyaki beef bites, and hot dogs. There are always two entrée options, as well fruit and milk. Some days include a vegetarian option such as a cheese pizza or grilled cheese sandwich. The daily vegetable ranges from Tater Tots (the equivalent to a hash brown french fry), to carrots, to an occasional salad.¹¹⁴

Lunch entrees for middle and high school students are the same. With the exception of the ham and cheese croissant, the daily breakfast specials are identical to those offered to the elementary students. Alternate breakfast items are available, though they are not

listed. Also similar to the elementary menu, the middle and high school lunch menu features items such as pizza, chicken nuggets, cheese steak subs, hamburgers, and tacos. Students have three menu items from which to choose, an extra sandwich option being the difference from the elementary school menu. A vegetarian meal is provided most days. Each of the daily or super specials comes with three choices of fruits and/or vegetables, though there is no mention of available options. Students are provided with milk at each meal.¹¹⁵

4.2.4 Nutrition Education

Nutrition education is taught in the health classroom. Students learn about the food pyramid and the importance of making healthy food choices. There are no additional food-related lessons outside of the health program. Students do not receive hands-on experience with food during the school day.

4.2.5 Vending Machines and A La Carte Food Items

Vending machines are not an issue in the Montgomery County school district as it is their policy to restrict student access to vending machines during school hours. The a la carte menu items available in the cafeteria meet the nutrition standards set by Maryland legislation (i.e., no snacks with more than 9 grams of total fat, 2 grams of saturated fat, and 15 grams of sugar).

5 VIRGINIA PUBLIC SCHOOLS ANALYSIS

5.1 Background Information

5.1.1 Virginia Action for Healthy Kids State Team Goals

In response to the 2001 report, *A Call to Action to Prevent and Decrease Overweight and Obesity* and the subsequent Healthy Schools Summit report, *Commitment to Change*, Virginia formed a state team to improve student nutrition. The Virginia State Team is working to achieve three of the goals from the *Commitment to Change*. Two of the goals deal directly with food and eating and one pertains to fitness, a topic that is not discussed in the present paper. The two relevant goals are:

Goal 1: Provide age-appropriate and culturally sensitive instruction in health education and physical education that helps students develop the knowledge, attitudes, skills and behaviors to adopt, maintain, and enjoy healthy eating habits and a physically active lifestyle.¹¹⁶

Goal 6: Ensure that healthy snacks and foods are provided in vending machines, school stores and other venues within school grounds.¹¹⁷

Over the course of their first year in action, the Virginia State Team has achieved the following:

- Developed Nutrition Integrity Guidelines and Recommendations for Virginia Schools;
- Developed a template for school nutrition policies;
- Created a 10th grade nutrition curriculum for health educators;
- Created a curriculum resource guide that integrates nutrition resources to Virginia Standards of Learning for grades K-12;
- Presented healthy school environment strategies at several statewide meetings;

- Served as an advisory group to the Virginia Commission on Youth, providing recommendations on the most cost efficient and effective means to prevent obesity among Virginia youth;
- Selected “best practice” schools for recognition by First Lady Lisa Collis.

As shown above, the Virginia State Team has made vast progress over the course of the year. The development of the Nutrition Integrity Guidelines and Recommendations for Virginia Schools, template for the nutrition policy, 10th grade nutrition curriculum, and the curriculum resource guide are particularly important.

The general nutrition recommendations as stated in the Virginia Action for Healthy Kids Recommendations for School Nutrition Standards:

- Requires all foods and beverages offered anywhere on the school campus; to incorporate the recommendations of the Virginia Action for Healthy Kids;
- Prohibits competitive foods of minimal nutritional value on campus during the school day;
- Encourages fund-raising organizations to limit the sale of high fat or high calorie foods of minimal nutritional value;
- Encourages schools to establish a Nutrition Advisory Council consisting of administrators, teachers, school nutrition personnel, students, parents, and community partners.¹¹⁸

In conjunction with these recommendations, a Nutrition Policy template was created. The template includes a discussion on the importance of healthy eating within the school setting. In addition, the template displays the ideal policy for Virginia schools to adopt, which includes recommendations to implement a School Breakfast program, incorporate nutrition into the curriculum, create a Nutrition Advisory Council, follow the nutritional criteria as stated in the Virginia Action for Healthy Kids Recommendations for School Nutrition Standards.¹¹⁹

In response to the growing epidemic of obesity and the poor eating habits of children and adolescents, the Virginia State Team also developed a 10th grade nutrition curriculum for health educators. Lessons are in keeping with the Virginia Standards of Learning and cover topics such as the guidelines for healthy weight management, the importance of making healthy food choices, information on fad diets, body image, and eating disorders. The curriculum also covers “hunger issues” and food security within the local community and provides information on the federal assistance programs that address these issues.¹²⁰

The Curriculum Resource Guide expands upon the 10th grade curriculum by integrating nutrition resources to Virginia Standards of Learning for grades K-12. Age appropriate lesson plans and ideas are included along with additional resources and information for after school programs, cultural influences, and creating gardens at school. Student websites are also included in an effort to engage students in a variety of fun lessons.¹²¹

5.1.2 Virginia State Legislation on Nutrition

The Virginia Competitive Foods Policy states that any food or beverage sold (including a la carte menu items) in Virginia schools from 6:00 a.m. until the end of breakfast period, and during the lunch period, must meet the specific nutrition standard. “The foods and beverages sold must either be a recognized component of the food based meal pattern or must contain 5 percent of the Daily Value, per serving or per 100 calories, of at least one of these eight essential nutrients: iron, calcium, protein, vitamin A, vitamin C, niacin, thiamine, or riboflavin.” Iced or hot coffee or tea may not be sold to students; non-carbonated water may be sold. In addition, the money from the sale of food or drink during the protected time periods must go to the school nutrition program account.¹²²

5.2 Fairfax County Public Schools

5.2.1 Review of FCPS Background Information

Fairfax County’s public school system is the largest school system in Virginia and the twelfth largest school system in the United States. The county spans 395 square miles,

and approximately one out of every six of the 1,000,000 county residents is a public school attendee. In the 2004-05 school year, it was estimated that 166,275 students occupied the 205 Fairfax County schools. The lunchroom served meals to 140,000 students per day, and between 20 percent of the students received free or reduced-price meals.¹²³

In the area of student performance, the county boasts a 92 percent high school graduation rate. In addition, 47.6 percent of the students participate in honors or advanced placement (AP) courses and the average standardized testing results for students who took the Scholastic Aptitude Test (SAT) was 1105, a score above the national average. Of the students who took their SATs, 213 qualified as National Merit Scholars, a distinction that identifies a student as scoring in the top 1 percent of all SAT participants.¹²⁴ The high quality education of the Fairfax County students is evident from their graduation rate and test scores, the result of an ample education budget and qualified employee staff.

5.2.2 Division of Food and Nutrition Services

What do the Fairfax County Food and Nutrition Services convey about the foods served and school policy on issues relating to food and nutrition?

The following is the Fairfax County Public School's Division of Food and Nutrition Services mission:

We will provide nutritious meals that reflect current research and meet the recommended dietary allowances for school-age children. We will provide nutrition education in the classroom with the school cafeteria serving as the nutrition laboratory. We will serve as a nutrition education resource to the community.¹²⁵

In addition to their mission statement, the Fairfax Office of Food and Nutrition Services has also created a vision for the future:

The Office of Food and Nutrition Services, Fairfax County Public Schools, will assist in developing excellence in each and every student. In an atmosphere that

values diversity and human resources, we will be the best Food and Nutrition Services program in the nation by providing students food and nutrition knowledge, skills, and values they will need for a healthy body in an ever-changing global society.¹²⁶

To assist in maintaining their mission statement and obtaining their vision, the food service team also created a Nutrition Integrity list (refer Appendix 9.4). Ensuring that “every student will have the opportunity to choose nutritious foods that will prepare students to learn,” the Nutrition Integrity statement covers topics ranging from assurances on food quality, to student input on menu planning, to the collaboration of lunchroom and classroom in achieving a healthy food environment.¹²⁷

A host of additional links are available on the Food and Nutrition website. From these links viewers can learn about the excellence awards that FCPS have received, which include the 5 A Day National Excellence Award for Employee and Community Education Efforts, as well as the Doll Food Company award of School Food service Professional of the year (awarded to Penny McConnell, the director of the food and nutrition service). People visiting this site can also learn about food safety practices, food and nutrition facts, and about the option of bringing food from home. Kids can locate recipes provided by other students, and they can access food activities. Parents and teachers may be interested in the publications section in which the menu items and policies relating to them are explained, or in the policies and bylaws section that reviews the contents of student lunches, the daily salad bar options, and the availability of student breakfast.¹²⁸

Parents and teachers also have links specifically created for their use. The *Facts for Teachers* page provides information on the standard student lunch menu made in accordance with the USDA dietary guidelines. Teachers are reminded that free meals are available to students in need and are asked to review their school’s procedure. In addition, teachers are reminded of the option of school breakfasts in 141 schools within the district. Food sanitation, safety, and recycling information are also provided. Finally,

an explanation about the nutrition education promotion, *Give Me 5! Colors That Jive*, is provided along with the added benefit of registered dietician assistance.¹²⁹ The Fact sheet for parents contains similar information with the addition of information on a la carte menu items available for their children, school meal prices, food allergies, and student meal accounts.¹³⁰

5.2.3 School Lunch Menus for May 2005

Current menus are available from the Food and Nutrition Services web page. Appendix 9.5 includes the elementary, middle, and high school lunch menus from May 2005. All of the menus are easy to read and include colorful graphics. Lunch prices are also included for elementary students as is menu nutrient analysis that details the percent of calories from fat per menu item. Advertisements for the EZ-Bear birthday catering team are included on the Elementary menu calendar.¹³¹

The Elementary school breakfast menu includes items such as a low-fat breakfast roll, pancakes, french toast sticks, Bagel with cream cheese, and Turkey sausage with biscuit. Children may also choose from alternatives of cereals, bagels, yogurt, muffins, and nutrition bars. Fruit and milk, with the option to request soymilk, are provided daily. Breakfast is offered in 154 of the 238 schools, so parents must contact their local school to determine if it is served. The Elementary school lunch menu features a wide range of items such as veggie burgers, chicken tenders, pizza bagel, fish fillet, and cheese lasagna. There are always 4 entrée options to choose from containing a meat or meat alternative, two different vegetables and fruits, enriched bread or a bread alternative, and skim or 1 percent unflavored and chocolate milk. In addition, all days have the option of a pretzel and yogurt and a salad from the Energy Zone Salad Patch.¹³²

Student breakfast and lunch entrees for middle and high school students are similar to those served in elementary schools, though the menu has a larger range of options from which students can choose. For lunch, students choose from up to eight entrée choices with the choice of two side dishes. Included in lunch entrée options are items such as

nacho tortilla with chili, pancakes, peanut butter and jelly sandwiches, various sandwich and subs, and southwestern rice. Children are given the option of a choice of two from a list of five options of fruits and vegetables. French fries are always among those options. In addition, students may frequent the pizza line, which offers stuffed crust pizza, regular pizza with a topping, and pizza bagels. Students may also opt to choose an item from the salad bar to replace another available meal. Milk is always included.¹³³

A unique quality of the school menus is the student involvement in their planning. To ensure that meals reflect student preferences, the Food and Nutrition Department developed “taste parties” in which students evaluate and determine the placement of new menu items. The students complete report cards on the new items so that menu planners are provided with adequate feedback. The goal of the taste parties is to “plan menus that are affordable and more importantly to provide students with several nutritious choices that they want to select and eat.”¹³⁴

Another distinctive quality of the student meals is that the nutrient analysis and ingredient information for most of the popular food items are posted in the cafeteria. All of the food nutrient analyses and ingredient listings are available upon request. Currently, FCPS is working with their food suppliers to address the trans fatty acid content in the foods served.¹³⁵

5.2.4 Nutrition Education

The health classroom includes nutrition within the curriculum. Topics covered range from food choice, to the importance of eating healthfully, to eating disorders and obesity. These topics are presented in accordance with the age group of the students. Outside of health class, core curriculum teachers provide in-class time to educate K-6 students “on the importance of healthy food choice . . . By getting involved in hands-on food preparation, doing tasting activity puzzles, and taking home nutrition activities for the family, students learn the value of nutrition right from the start.”¹³⁶

The FCPS director, Penny McConnell also developed a program called Color Me Five! Colors That Jive!. This program, for student in K-6 grades, promotes the importance of eating five fruits and vegetables every day. Students are introduced to new fruits and vegetables in the lunchroom. In addition students complete classroom activities that correspond with the fruits and vegetables of the week such as Give Me 5! Bingo, Kids Cooking, and the Fruit and Vegetable Trivia Challenge. In the classroom, kids learn how to make banana splits, cinnamon apple wraps, and dried fruit snacks along with many other age-appropriate healthy snacks.¹³⁷

5.2.5 Vending Machines and A La Carte Food Items

All vending in FCPS is done through the Food and Nutrition Service in conjunction with the school administration. The nutrition department determined it was necessary to manage its own vending in order to maintain the level of standard of the Nutrition integrity outlines in their mission, vision, and Nutrition Integrity statements. Vending machines are available in close to half of the Fairfax County Public Schools, bringing in three million dollars in annual sales. Items such as low fat granola bars, milk, and 100 percent juices are available in vending machines. All of the items meet the USDA nutritional standards.¹³⁸

The a la carte menu items also meet USDA standards. Unlike other school districts, the FCPS district has a competitive food regulation, stating that nothing can be sold in competition with the school food service program for the duration of school day hours. However, soft drinks and candy are available during after school hours for high school students. During the school day, parents have the option of limiting their children's a la carte purchases by restricting the money in the students' food account to breakfast and lunch only.¹³⁹

To ensure that healthy foods are served in vending machines and at the a la carte section of the lunchroom, the food service team developed its own brand, Energy Zone, complete with a mascot wearing school colors and a label for all of its packaged products (e.g., EZ

sandwich wraps and EZ bottled water). The success of the brand is reflected in product sales. For example, over 44,000 bottles of EZ water were sold in 2002.¹⁴⁰

6 DISCUSSION

The contrast between the analysis of the Montgomery County and Fairfax County school systems illuminates a number of factors that contribute to a more successful food environment. Although both schools provide healthy foods for their students, the efforts of Fairfax County point to the importance of creating an overall healthy food environment as opposed to one that is limited to the lunchroom.

6.1 Montgomery County Public Schools

The MCPS system provides a moderately varied menu for students, though the nutrient content of the menu is not accessible. The district's vending machine policy ensures that students cannot buy FMNV during school hours, and Maryland State legislation provides limits on the a la carte items sold. The district also has some powerful government officials vying for a more healthful food environment such as a Montgomery County politician, who introduced a bill to eliminate fried foods in school cafeterias and require healthful foods to be served during school activities by 2006.

In terms of the approaches used to create a healthy food environment, they succeed in establishing nutrition standards and limiting student access to competitive foods. The choice to not have vending machines within school grounds does affect food and beverage contracts, in that the MCPS are saying no to vending contracts prevents the sale of FMNV. As of yet, fundraising activities for the school do not always promote healthy food choices, as students may choose to sell candy bars and pizza to raise money for various school activities. In addition, there are no food-related advertisements on school grounds. Finally, although the MCPS gives their students some choice in menu selection, the next chapter illustrates a school district that exceeds the MCPS menu selection.

The complete absence of nutrition education efforts is disconcerting. What minimal direction students receive in health class about food is far from adequate. The Maryland Action for Healthy Kids State Team recognizes the importance of such instruction and has listed it as a priority. The contrast between the State Team goal and the action taken

by the MCPS system points to the need for a health advocate within the schools themselves. Perhaps the MCPS 2006 nutrition policy (as mandated by Maryland legislation) will address the lack of hands-on and behavior-oriented food efforts within the district. Perhaps too, the MCPS mission statement will encompass more than providing healthy foods for students, which is an area in which the county succeeds.

6.2 Fairfax County Schools

As evidenced from the aforementioned information, the Fairfax County Public School system succeeds in providing a healthier food environment in a number of ways. Their menus provide a wide range of options from which students can choose. In addition, students have access to fruits and vegetables as well as a salad bar, soy products and vegetarian meal options. The nutritional content of the menu is both accessible in the lunchroom as well as available upon request, giving students the option to choose or refuse a meal based on its ingredients or nutrient qualities. Furthermore, healthful vending and a la carte items ensure that the FCPS competitive foods policy is upheld. Finally, the creation of the Energy Zone brand and products introduces children to positive marketing techniques that promote healthful food choices.

The above food success techniques reveal that the FCPS system utilizes five out of the six primary approaches used to promote healthy eating. Their approaches include making more healthful foods and beverages available, establishing nutrition standards for competitive foods, limiting student access to competitive foods, influencing food and beverage contracts (i.e., creating their own brand of products and managing their own vending as opposed to signing a contract with an unhealthy vendor), and marketing healthy foods to children.¹⁴¹ As of yet, fundraising activities for the school do not always promote healthy food choices, as students may choose to sell candy bars and pizza to raise money for various school activities.

Inside the classroom, students learn about the importance of making healthy food choices. In addition students are provided some hands-on experiences with cooking, though the time in which students receive instruction on food preparation is limited. Parents are included in the in-class education and lunchroom activities through

newsletters. The Food and Nutrition website also provides ample information about the current nutrition efforts within the FCPS district.

6.3 Emergent Themes

The analysis on the Fairfax County Public School reveals that this school district is indeed performing above average in providing children with a variety of nutritious meals, educating children in the classroom about the importance of nutrition and food, and involving students, teacher, and the community in the process of creating a healthy food environment. This district also exemplifies that the impetus for changing the school food environment often begins with the vision of a leader, such as Penny McConnell. Sharing her vision with others and using her power to initiate the multiple-step process of improving school nutrition is the difference between a mediocre food environment and a thriving one.

The keys to the FCPS success lay in their innovative attitude, customer focus, positive partnerships, and the devotion to their Nutrition Integrity guidelines. The school district's innovative attitude to be flexible to meet the challenges of a diverse student body is made evident by the number of ways in which they reach the students, teachers, parents, and community members to change the food environment. Customer focus is also a key element, as student eat with their eyes as well as their mouths. The creation of the school brand not only visually introduces students to positive marketing, but also encourages them to make healthy choices. Developing positive partnerships with food service individuals (or in the case of FCPS, creating your own vending and food brand) further creates a rapport with the students, parents, and community. Finally, the importance of creating food policies and missions, which are upheld to a specific set of standards such as those outlined in the FCPS Nutrition Integrity statement, are also crucial in creating a healthy school environment.¹⁴²

6.4 An Absence of a Gastronomic Education

In analyzing the Montgomery and Fairfax County school systems, the factors reviewed dealt primarily with nutrition, both within the lunchroom and classroom. Certainly it is important to educate children about nutrition and to provide them with healthy lunches. However there seems to be a gap between children understanding how to make proper food choices and children making choices based on an educated sense of taste, touch, sound, and sight. How, for example, would children who have never visited a farm with fresh grown tomatoes or a Parisian market selling freshly baked, preservative free bread, know the pleasures of taking that first delicious bite of an ordinary food that seems suddenly so extraordinary? Even in some of the best nutrition environments, such as Fairfax County, a gastronomic education of the senses is largely absent.

The following chapter defines gastronomy and describes its relevance to educating students about food and eating. Examples of three existing gastronomic programs are reviewed. In addition, research to support the presence of such programs is included, as are suggestions for future research in the area.

7 THE PLACE OF GASTRONOMY IN SCHOOLS

7.1 Defining Gastronomy

Brillat-Savarin described gastronomy as “the reasoned comprehension of everything that concerns us insofar as we sustain ourselves.”¹⁴³ This definition is often cited in text because its broad implications encompass the role of consumption, sociability, and communication within the realm of gastronomy. However, the contemporary interpretation of the meaning of gastronomy now addresses the production and preparation of food, as well as how, when, where, and why it is consumed. The importance of this contemporary definition is that it introduces the role of cultural ideologies and their influences on gastronomic practices.¹⁴⁴

The word gastronomy does not simply encompass all that has to do with food – it also brings with it a connotation of eating for enjoyment or, as La Rochefoucauld wrote, eating intelligently as an art form. A volume of the Encyclopedia Britannica from the 1930s help illustrate the art of gastronomy:

[Gastronomy] is an art because it demands the cooperation of all the senses. The crispness of fried dishes and pastry is agreeable to the ear. The softness of well-thickened sauces and melting *foies gras*, the succulent freshness of fruit, are pleasant to the touch. Is there anything more delightful to the eye than a dish *au gratin*, with its captive flavors imprisoned under its golden dome? Do not odors like those of seasonings of herbs, or of truffles, afford the highest possible gratification to the sense of smell? Of the palate there is no need to speak.¹⁴⁵

The benefit of encouraging students to enjoy the sensual aspects of fresh foods is that children can learn that eating is not simply about making healthful choices based on calories and numbers; rather, healthy food choices can also encompass delicious, fresh, fragrant cuisine that provokes thoughts outside of nutrition. Perhaps it is the foods themselves, their quality and freshness, or the atmosphere (or both) that evoke such an

eating experience. Whatever the reason, a gastronomic experience is one in which a certain sense of awareness about the foods being eaten exists, whether, for example, in terms of their taste, cultural significance, environment, or even in relation to a past memory.

Gastronomic experiences can permeate the school environment both in the lunchroom and classroom. The following section presents four examples of gastronomy entering the lunchroom and classroom through improving school meals and the cafeteria environment, connecting school and students with local farmers and fresh produce, and incorporating school gardens and kitchen classrooms as part of the curriculum.

7.2 Gastronomy in Schools

7.2.1 Gastronomy in the Lunchroom

As evidenced from the analysis of Montgomery and Fairfax County schools, school lunch meals are becoming more healthful. School food service officials are purchasing meals with lower fat, saturated fat, and calories, and with higher amounts of nutrients and vitamins. This is certainly a crucial development in ensuring the health of students. However, cafeteria food is still a product purchased in bulk that has been frozen and laden with preservatives to prevent spoiling. Freshness of ingredients is often not a part of the equation. The foods served in the lunchroom are generally the equivalent of store-bought frozen foods that bear little to no resemblance to the items in their natural state. For example, the frozen pizza served in school cafeterias comes out in single serving squares, with a white starch crust, a layer of canned tomatoes paste, and shredded pre-packaged mozzarella cheese.

The kitchen of Long Island City High School has addressed the issue of freshness in school food by switching “from typical fare to cafeteria haute cuisine.”¹⁴⁶ To accomplish this, the district hired a renowned chef to take charge of cafeteria foods. Chef Jorge Leon Callazo has improved the cafeteria atmosphere drastically by treating students like the

customers he once served in restaurants and corporate dining rooms. Certainly there are too many mouths to feed to prepare everything from scratch within the school cafeteria. However, School Chef Jorge is combining the reheating of certain foods with the added bonus of homemade sauces and fresh side dishes. In addition, he uses his buying power to force change among food manufacturers. In particular, he will not accept the breaded pieces of meat that the school once received, and instead demands “a plain chicken breast or a plain piece of fish that we could put a good, low-fat *cacciatore* or *guisado* sauce on.”¹⁴⁷

In addition to improving the nutritional quality of foods served, he has also enhanced the taste, presentation, and popularity of the foods served in the largest school district in the nation. School food service individuals under Jorge’s command participate in intensive culinary training programs, so that they can provide students with foods that have been prepared and presented in innovative ways and with quality ingredients. Various ethnic dishes are incorporated daily in the menu to attract a diverse student population, and students are asked to comment on their likes and dislikes.¹⁴⁸

What is unique about Jorge’s methods of creating a healthier food environment is not necessarily the inclusion of healthier foods, but rather it is the notion that cafeterias are venues in which to present children with delicious and fresh foods. Eating can be fun as well as healthful. Schools have the opportunity to use their buying power to demand fresher and healthier ingredients, and they can provide staff with adequate training to present innovative dishes that resemble home cooking as opposed to store-bought frozen foods. The success of Jorge’s cafeteria renovation is illustrated by the increase in student purchase of school meals.

In addition to improving the quality of the foods served, it is possible to improve the quality of the dining atmosphere. Alice Waters, owner of Chef Panisse Restaurant and founder of the Edible Schoolyard, describes the importance of the dining atmosphere:

The dining room exists to serve the students. . . and it speaks for the school district. The message should be, ‘We value you.’ Everything that you’re looking

at, everything you taste and smell and hear, how we greet you, how you feel here is telling you that we value you, and that we're really taking good care of you.' The environment of the common dining room tells students explicitly, and it tells them unconsciously, how the school district feels about them . . . The message is embedded in the surroundings of the dining room, in the ways people relate to one another, and in the food itself. It speaks to nourishment of the whole person, in an environment of hospitality health, and respect.¹⁴⁹

The Center for Ecoliteracy has researched the important factors in creating a pleasing dining experience. Included are issues such as the lighting, the sound level, the time allowed for eating, the wall decoration, the way food is prepared and served, and the quality of social interactions that take place during meals. Drawing from a number of various schools that succeed in one or more of these areas, the Center for Ecoliteracy reviews the ways in which dining experience encompasses more than food. For example, by creating a family-style table, students can learn and practice manners, respect, and patience. To achieve this family style environment, the foods are served to the students seated at the table (as opposed to students standing in a line). The foods are also left on the table so that students are sharing and passing food around.¹⁵⁰

Waters created this style of dining by including tablecloths, non-disposable silverware, and candles. In addition, students are seated at round tables so as to encourage communication and sharing. Research confirms that the pleasing sights, soothing sounds combined with the smell and taste of fresh foods encourages students to participate in school meals. In addition, research points to the effectiveness of student involvement in determining the necessary dining room changes. Finally, evidence supports the recommendation for longer lunches such that adequate meal time influences meals satisfaction and encourages student involvement in the school lunch program.¹⁵¹ Future research on the totality of the dining room factors in the influence on student food choice and eating habits would further illustrate the long-term positive impacts of the dining experience in schools.

7.2.2 Extending Gastronomy from the Lunchroom to the Classroom

An innovative program that helps students enjoy delicious foods and learn about them in the classroom is the Farm to School initiative. Farm to School connects schools with local farmers with “the objectives of serving healthy meals in school cafeterias, improving student nutrition, providing health and nutrition education opportunities that will last a lifetime, and supporting small farmers.” To achieve these goals, schools buy and feature farm fresh foods, such as vegetables, fruits, eggs, honey, meat, and beans. The participating schools are then expected to incorporate nutrition-based lessons into the classroom, as well as to provide students with experiential learning opportunities through farm visits, gardening projects, and recycling programs.¹⁵²

Children benefit from the partnerships of farms with schools because they receive an education that makes a connection between the foods they eat to the source of their growth. Furthermore, the multifaceted approach of incorporating farm food into learning experiences allows children to better relate to how these foods affect their health, the local farmer, and the community.

Experiential-based learning initiatives with food are also an important development in connecting the lessons learned in the classroom with the foods served in schools. Projects such as the Edible Schoolyard integrate organic gardening and cooking into students’ daily life. The students of Martin Luther King Junior Middle School in Berkeley, California participate weekly in the process of planting and nurturing crops. Garden classes reinforce the hands-on work in the garden by teaching the principles of ecology, origins of food, and the importance of respect for all living systems. In the kitchen classroom, students “complete the cycle of food production” by preparing and eating seasonal dishes from the produce grown in the garden. This “Seed to Table” experience simultaneously exposes children to concepts of nutrition, food production, and ecology, and “fosters an appreciation of meaningful work, and of fresh and natural food.”¹⁵³

For the Martin Luther King Junior Middle School, the success of the Edible Schoolyard led to a number of other important developments, such as the adoption of a food policy (as of 1999)¹⁵⁴ and the involvement of legislation in removing the sale of junk food in schools (as of 1/1/04).¹⁵⁵ The importance of this development is in the shared recognition that in order to create a school atmosphere conducive to the development of change in food choices, all parties (students, parents, teachers, school administrators, and government officials) must be considered and involved in the process. The policy process is also important because it necessarily involves integrating programs, such as Farm to School and kitchen gardens, with classroom curriculum and school lunches.¹⁵⁶

While little long-term research has been conducted, what evidence does exist points to the positive impact of combining hands-on experience with the growth and preparation of food and food-based lessons in the curriculum. For example, an assessment on the impact of the Edible Schoolyard revealed several trends:

- Increased academic achievement in math and science;
- Greater understanding of the garden cycle;
- Improvement in psychosocial adjustment;
- Increased knowledge of ecosystems, sustainable agriculture, and ‘sense of place;’
- Improvements in numbers of fruit and vegetable servings
- Increased enthusiasm of teachers as a result of improved student learning.¹⁵⁷

Kay Richardson conducted qualitative research on a similar kitchen garden program in Australia. She found that experience with the garden and in the kitchen helped the children in:

. . . becoming confident and trusting their own abilities and those of others [which] allows the students to build on prior knowledge and change pre-conceived ideas about how food is grown, harvested, prepared, cooked and eaten. The students are therefore more accepting of new foods and willing to try foods that they had previously not liked . . .¹⁵⁸

Finally, a study on the Cookshop Program, a similar health-related initiative in American schools, which focuses on a holistic approach to promoting sustainable food choices, revealed that involving the whole community in incorporating healthy eating messages in school lunches and the classroom was “effective in changing food behaviors and positively impacted on behavioral intentions in younger children and self-efficacy of older children.”¹⁵⁹

Future research in this area should include longitudinal studies, which would provide the concrete evidence necessary to conclude the relevance of teaching the connections between food, health, and the environment. Furthermore, virtually none of the present initiatives directly incorporate a component of physical fitness. Accordingly, the potential for these food programs to increase physical activity or to affect an understanding of the importance of physical activity is nonexistent.

Also, there is little information on the psychological and psychosocial impacts of the program. Perhaps research on how the childhood experience in the kitchen garden affects issues of self-esteem and self-efficacy in adolescent years could reveal the relevance of hands-on experience with food in easing adolescent disordered eating behavior. Certainly a change in the relationship between children and food has implications within the realm of childhood obesity and other disordered eating behaviors, such as anorexia, that more commonly surface in adolescence.

Despite the lack of research in the area of how improving the nutritional content and appeal of school lunches affect children, it is clear that what evidence does exist is positive. These positive implications, combined with the research existing on the importance of hands-on and project-based learning, indicate the potential for programs such as Farm to School and the Edible Schoolyard to provide a foundation in the formation of food-related values as they relate to a sense of responsibility for the health of individuals, communities, and the environment.¹⁶⁰

8 CONCLUSION

Because obesity continues to plague American school children, it is important to employ preventative measures in which children learn about and critically discuss food from an early age. By approaching food in a holistic manner in the schools, through the inclusion of parents, teachers, government officials, and community members, it is possible for children to develop their food choices within a more health conscious realm. Indeed, the adoption of food policies by boards of education, as well as the passing of state legislation laws that limit the sales of high fat, high-sugar, highly processed foods at schools, are positive signs of change.

The review of the two school districts in Montgomery County and Fairfax County act as a microcosm of the range of school-based efforts to provide an education on food and nutrition. The success of Fairfax County in creating a positive and healthy food atmosphere in the lunchroom and the classroom, as well as in engaging their students in this process of change, is important because their example sets the bar for an environment in which the health of American students is paramount. In addition, the contrast between the two school districts is particularly interesting because they do not differ in available resources, yet they differ greatly in the progress of their nutrition efforts. The importance of the factors that contributed to this difference such as school policy, student involvement, marketing efforts, selection of foods, in-class education about food and nutrition, are illustrated.

What also becomes evident from the comparison of the two counties is that it is not a matter of budget, location, or size that determines the potential success of creating a healthier food environment for children; rather, it is a commitment to change and having a person or group of people with vision to follow through with enforcing that change. As was evident through the contrast between the Maryland Action for Healthy Kids goals and the existing Montgomery County school efforts – which didn't provide behavior-based learning experiences or longer lunch periods – school districts themselves need their own goals and leaders in order to succeed. This point is exemplified in the case of

Fairfax County as it is the director of Food Services, Penny McConnell, who is the driving force in making positive change. Through her efforts she has created a self-sustaining environment in which nutrition is a priority.

Addressing nutrition in an advanced district such as Fairfax County illuminates an area that is absent from most school-based food initiatives: an education of the senses in which children learn to taste, touch, hear, and see the foods they eat, the environments from which they grow, and their methods of preparation. The success of chef Jorge's cafeteria and the research provided on renovating the lunchroom environment illustrate the impact of providing innovative and fresh foods to students in a pleasant atmosphere (i.e., higher participation in and enjoyment of the school meal program). Similarly, innovative projects such as the National Farm to School program and the Edible Schoolyard are important steps in both helping children to appreciate and understand the foods they eat and in building a foundation for healthy adolescent and adult eating patterns. Barlow accurately describes the importance of incorporating enriched food-learning experiences into the school curriculum:

. . .experiences of growing food in school gardens, preparing meals in the kitchen classroom, enjoying delicious lunches in the cafeteria, and visiting local, sustainable operated family farms, contribute to an educational setting in which the connections between diet, human health, the environment and our collective future [are] demonstrated.¹⁶¹

Rather than students battling obesity through unsuccessful diets, pills, and disordered eating habits, gastronomy helps students appreciate the sensual enjoyment of eating fresh, nutritious, well-prepared cuisine. Well-educated eaters, who are aware of how the foods they eat affect their bodies, as well as their environment, and who can enjoy the act of eating for all its many sensual and social pleasures will “discover that the relationship of pleasure and health in eating is not, as we've been hearing for a hundred years, necessarily one of strife, but that the two might again be married at the table.”¹⁶²

9 APPENDICES

9.1 An Overview of Intervention Program Outcomes

School-Based Dietary Intervention Studies

School-based interventions to improve food choices and dietary quality among students have been designed primarily as multifaceted interventions that include one or more of the following components:

- Changes in food service and the food environment (e.g., food availability, preparation methods, price)
- Promotional activities (cafeteria-based or schoolwide)
- Classroom curricula on nutrition education and behavioral skills
- Parental involvement (e.g., informational newsletters or parent-child home activities).

Most often these interventions have targeted total fat, saturated fat, or fruit and vegetable intake. In addition, they may have addressed other weight-related behaviors such as physical activity or television viewing (reviewed later in this chapter). This section focuses on the large-scale controlled intervention studies that have examined weight status or body mass index (BMI) changes as an outcome measure. A much larger literature exists on school-based interventions to change the dietary behaviors of students, including the 5-A-Day and Know Your Body studies (Walter et al., 1985; Hearn et al., 1998).

Evaluation of the literature on such interventions is complicated because of their variety and the multicomponent nature of their designs, making comparisons of results difficult. In addition, differences exist across studies in the number and types of food-related behaviors and age groups targeted. Studies based in elementary, middle, and high schools differ not only in the developmental stage of the students, but in the corresponding physical and social environments, which contrast dramatically, for example, in the availability of à la carte foods, fast foods, snack bars, and vending machines. High school students are also more likely than elementary or middle school students to leave campus during the lunch period. These variables may moderate the effects of interventions designed to influence food choices in the school setting.

The Child and Adolescent Trial for Cardiovascular Health (CATCH), the largest and most comprehensive school-based intervention yet undertaken, targeted diet and physical activity behaviors as secondary outcome variables (Box 7-2). This randomized trial involving 96 elementary schools did not result in significant changes in body weight; however, significant changes did occur in the school food environment and in reported dietary intakes by students (Luepker et al., 1996). Compared to control schools, the fat content of meals at the intervention school meals was substantially lowered, and intervention students' reported dietary fat intake was significantly reduced relative to that of control students. Also, as noted below in the discussion on physical activity, the percentage of physical education classroom time with moderate to vigorous physical activity increased in the intervention schools. The researchers speculated that the reasons for the lack of changes in physiologic risk factors may be related to the growth and development stage of the students or to the relatively low magnitude of the changes in food intake and physical activity levels (Luepker et al., 1996).

Pathways, a large, multicomponent school-based intervention designed as an obesity prevention study, was conducted among third- to fifth-grade American-Indian children in reservation schools over a 3-year period (Caballero et al., 1998). Pathways did not significantly affect body-weight change, but significant intervention-related changes were observed for some dietary and physical activity behaviors, including lower fat intake and higher self-reported physical activity levels in the students in the intervention schools (Caballero et al., 2003). The goal of the food service intervention—to reduce the fat content of the school meals—was achieved. Both the CATCH and Pathways interventions show the feasibility of making positive changes in the school food environment, but also the challenges still to be faced in designing primary obesity prevention interventions in schools. As pointed out by the researchers in the Pathways study, restriction of energy intake is not an option in schools because there are students who are below the fifth BMI percentile, additionally, the school meals programs have to meet minimum mandatory levels for calorie content (Caballero et al., 2003).

Several other school-based intervention studies have shown significant effects on body-weight outcomes; these studies tested multicomponent interventions not limited only to targeting dietary change. Planet Health reported reductions in the prevalence of obesity among girls only (Gortmaker et al., 1999), and the Stanford Adolescent Heart Health Program observed reductions in BMI, triceps skinfold thickness, and subscapular skinfold thickness among boys and girls (Killen et al., 1988).

Overall, school-based interventions, both multicomponent and single component, have produced healthful food choices among students. Envi-

BOX 7-2
Selected School-Based Interventions

Child and Adolescent Trial for Cardiovascular Health (CATCH)—Designed as a health behavior intervention for the primary prevention of cardiovascular disease, CATCH was evaluated in a randomized field trial in 96 elementary schools in California, Louisiana, Minnesota, and Texas (Luepker et al., 1996). CATCH schools received school food service modifications and food service personnel training, physical education (PE) interventions and teacher training, and classroom curricula that addressed eating behaviors, physical activity, and smoking (Luepker et al., 1996). The primary individual outcome examined was change in serum cholesterol concentration; school-based outcomes were also examined.

Pathways—Designed to reduce obesity in American-Indian children in grades three through five, a randomized trial was conducted in 41 schools serving American-Indian communities in Arizona, New Mexico, and South Dakota (Caballero et al., 1998; Davis et al., 1999). This multicomponent program involved incorporation of high-energy activities in PE classes and recess, food service training and nutritional educational materials, classroom curricula enhancements, and family efforts including family fun nights, take-home action and snack packs, and family advisory councils. The primary outcome measure was the mean difference between intervention and control schools in percentage of body fat at the end of the fifth grade.

Planet Health—A curriculum-based health intervention, Planet Health lessons were integrated into the math, language arts, social studies, science, and PE curricula of grades six through eight. The lessons focus on teaching better dietary

ronmental interventions, which target reduced consumption of high-fat foods and greater intake of fruits and vegetables through variations in availability, pricing, and promotion in the school environment (Whitaker et al., 1993, 1994; Luepker et al., 1996; Caballero et al., 1998; Perry et al., 1998, 2004; Reynolds et al., 2000; French et al., 2001, 2004; French and Stables, 2003) may have a particularly significant independent effect on food choices (French et al., 2001; French and Stables, 2003). But their impacts are perhaps smaller in magnitude than when deployed as part of a multicomponent intervention program (Perry et al., 1998, 2004; French et al., 2001; French and Stables, 2003).

Because classroom education/behavioral skills curricula, for example, have typically been embedded in a multicomponent program, the effectiveness of this intervention component is difficult to evaluate as an isolated strategy. Furthermore, caution is needed in interpreting studies of self-reports of dietary intakes, which may be subject to reporting errors and bias.

habits, promoting physical activity, and reducing television viewing (Gortmaker et al., 1999). Evaluation of the intervention involved comparing obesity prevalence and behavioral changes among students in five intervention and five control schools in the Boston area.

Sports, Play and Active Recreation for Kids (SPARK)—A school-based intervention designed to improve the quantity and quality of physical education, the evaluation involved seven elementary schools in southern California in a 3-year study (McKenzie et al., 1997). The SPARK program involves enhancements to the PE curriculum, implementation of a self-management curriculum, and teacher in-service training programs. Outcomes assessed included changes in student BMI and physical activity levels.

Stanford Adolescent Heart Health Program—Designed to reduce cardiovascular disease risk factors in high school students, the intervention consisted of 20-minute classroom sessions on physical activity, nutrition, smoking, and drugs (Killen et al., 1988). The evaluation of the intervention compared the results of 10th-grade students in four high schools in northern California for behavioral changes and physiological variables including BMI.

Stanford S.M.A.R.T. (Student Media Awareness to Reduce Television)—Designed to motivate children to reduce their television watching and video game usage, the intervention was evaluated in two elementary schools in California (Robinson, 1999). Students in the intervention first and fourth grades participated in an 18-lesson, six-month curriculum and families received an electronic television time manager. The primary outcome measure was television viewing time. Physiological variables and behavioral changes were also assessed.

Recent and Ongoing Pilot Program

Several pilot programs have been developed at the school, district, state, and federal levels to explore strategies to increase fruit and vegetable consumption among students in school. The committee is not aware of any published outcome evaluation of these studies but the programs are described here to illustrate current approaches that may warrant continued funding and more systematic analysis. The most recent and perhaps largest effort to increase the availability and consumption of fresh fruits and vegetables was implemented by USDA during the 2002-2003 school year (Buzby et al., 2003). One hundred schools in four states (Indiana, Iowa, Michigan, and Ohio) and seven schools in New Mexico's Zuni Indian Tribal Organization participated in the pilot program, which distributed fruit and vegetables free to participating schools. Schools could choose when and how to distribute the produce to students. The program requested, however, that the fruits and vegetables be made available to students outside the regular school meal periods. Due to limited funding, no

quantitative data were collected on the effects of the program on students' fruit and vegetable consumption or on any other dietary outcomes. However, schools and school food-service staff reported that the program was positively received (Buzby et al., 2003), and there are plans to expand the program. A similar program was developed and pilot-tested on a national basis in the United Kingdom beginning in 2000. As far as the committee is aware, no quantitative evaluation data are available (United Kingdom Department of Health, 2002).

The Department of Defense's Fresh Produce Program has been working with schools in several states to provide fresh produce for the school meal programs. Schools have also begun to incorporate produce from school gardens (Morris and Zidenberg-Cherr, 2002; Stone, 2002), school salad bars (USDA, 2002), and farmers' markets (Misako and Fisher, 2002) into the school meal program in an effort to increase student participation and specifically to increase their fruit and vegetable consumption (Box 7-3). Evaluation of these and other similar programs is important in determining the effects of these changes on student dietary behaviors.

Next Steps

As discussed above, several large-scale school-based intervention studies demonstrate that changes in the school food environment can impact students' dietary choices and improve the nutrient quality of their diets while at school.

Schools, school districts, and state educational agencies need to ensure that all meals served or sold in schools are in compliance with the Dietary Guidelines for Americans. Additionally, schools should focus on improving

BOX 7-3 Edible Schoolyard

The Edible Schoolyard is a nonprofit program conducted at the Martin Luther King Junior Middle School in Berkeley, California, a public school for sixth- through eighth-graders. Students participate in all phases of the Seed to Table approach—planting vegetables, grains, and fruits; tending and harvesting the crops; preparing meals with the produce they have grown; and recycling the vegetable scraps back to the garden. This cooking and gardening program involves classroom lessons and hands-on experience in the garden and in the kitchen. The program's goals include an enhanced understanding of the cycle of food production; the focus of evaluation efforts to date has been on ecoliteracy.

SOURCE: Edible Schoolyard, 2004.

food quality in the school meal programs. Increasing the availability of whole-grain foods, low-fat milk, and fresh local produce will not only be more healthful for participating students, but has the potential to attract greater participation.

Current nutritional standards are extremely limited for regulating competitive foods sold in schools, and many schools are selling high-calorie, energy-dense food and beverage items, often in competition with school meal programs. To ensure that foods and beverages sold or served to students in school are healthful, **USDA, with independent scientific advice, should establish nutritional standards for all food and beverage items served or sold in schools.** Such standards need to be applied to *all* meals and *all* foods and beverages served or sold within the school environment.² Among the many nutritional issues, consideration should be given to setting standards for the fat and sugar content of school foods, because they are often high in calories and in energy density. **State education agencies and local school boards should adopt and implement these standards or develop stricter standards for their local schools.** Without such schoolwide standards, different sources compete for student sales under unequal conditions. Such competitive practices often give unfair advantage to those selling less healthful food and beverage items to students. Providing and enforcing uniform standards for meals, foods, and beverages on a schoolwide basis also establishes a social norm for healthful eating behaviors. The standards ensure that the school environment is one in which healthful eating is promoted and modeled, consistent with nutrition education messages taught in the classroom.

It is important that evaluations be conducted to assess the impact of changes on competitive foods' nutritional value and availability, on student dietary quality, and on revenues generated by food and beverage sales. Evaluations of the school food environment may benefit from point-of-service purchase information available from automated systems in school cafeterias. Additionally, evaluations of the efficacy and effectiveness of school-based multicomponent interventions are needed to determine whether these programs should be continued, replicated, expanded, or replaced.

In efforts to make changes in school foods, the school food industry should be an important partner in developing innovative approaches to preparing and serving healthful foods and beverages. Training of school

²Such changes in federal regulations may require changes in USDA's authority, as USDA's current authority extends only to foods sold in the cafeteria and other school food-service areas during school meal periods (GAO, 2004).

nutrition and food-service personnel should include a focus on obesity prevention efforts. Furthermore, as schools are built or renovated, school districts should take into consideration plans for school kitchens that have adequate preparation and serving space as well as plans for school cafeterias that are of adequate size and layout so that students will not be rushed, uncomfortable, or scheduled to eat lunch too early or too late in the school day.

Behavioral Nutrition and Physical Activity Curricula

As described below, research findings support the effectiveness of behavior-oriented curricula—based on self-monitoring, goal-setting, feedback about behavior change efforts, incentives, and reinforcement methods—in promoting healthful food choices and physical activity. Skill-building activities, in which students engage in the desired behaviors and have a chance to practice new behaviors and receive feedback, are effective learning strategies.

However, there is still much to learn about the elements of nutrition and physical activity education programs that are key to changing behaviors and, subsequently, body weight. The most commonly used theoretical framework for developing behavior-based school interventions is social cognitive theory (SCT) (Bandura, 1986). “Self-efficacy,” in particular, or the confidence in one’s ability to perform a specific behavior, is a central concept in SCT. Self-efficacy is enhanced through skills building, practicing and mastering the behavior with feedback and reinforcement, and observing modeled behavior.

A recent review of 16 school-based cardiovascular risk factor prevention intervention studies found that interventions were most effective in changing cognitive variables, such as self-efficacy and outcome expectations, and were least effective in changing physiological variables such as body fatness (Resnicow and Robinson, 1997). However, these studies are difficult to compare because of the diversity of their intervention components and the primary outcomes targeted. Some interventions were only based on classroom curricula, while others include changes in the school food environment or PE classes.

Two of the most ambitious health behavior change interventions have been CATCH and Pathways, described above (Box 7-2). But despite tremendous commitments of resources and expertise, intervention effects were significant for some of the reported behavioral changes but not for the

objectively measured physiological changes, including BMI or body fatness (Luepker et al., 1996; Caballero et al., 1998; Davis et al., 1999). The specific effects of the classroom curricula could not be evaluated because the studies were implemented as multicomponent interventions, including individual-level intervention targets (e.g., student knowledge and behavior) and environmental intervention targets (e.g., school meals, PE classes).

An interesting contrast is provided by the results of the Planet Health intervention (Gortmaker et al., 1999), which aimed to reduce the prevalence of obesity among students in grades six through eight. Ten schools were randomized to intervention or control for a 2-year period, and the interventions were classroom-based only; they did not include school food service, physical activity, or other environmental-change components. Classroom intervention sessions, which featured behavioral skills development and strategies (e.g., self-assessment and goal-setting) were incorporated into different curriculum content areas; behaviors targeted for change included increases in fruit and vegetable intake, increases in physical activity, and decreases in television viewing time. At the end of the study, obesity prevalence among girls in the five intervention schools was significantly lower than among girls in the five control schools. Differences in obesity prevalence were not significant among boys. Analysis of changes in behavioral variables showed that decreases in television viewing were significantly associated with decreases in obesity prevalence among the girls. The reason for the lack of an intervention effect in boys is not clear. There are few controlled studies in this area and further research is needed.

Curriculum-only interventions have also resulted in significant reductions in BMI or skinfolds among both boys and girls. The Stanford Adolescent Heart Health Program targeted tenth-graders in a four-school randomized controlled trial (Killen et al., 1988). In addition to changes in body composition, the 20-session classroom curriculum also produced significant improvements in fitness.

Source:

Institute of Medicine of the National Academies. "Schools." *Preventing Childhood Obesity: Health in the Balance*. Edited by Jeffrey P. Koplan, Catharyn T. Liverman, and Vivica I. Kraak. Washington D.C.: The National Academic Press, 2005, 237-284.

9.2 The Commitment to Change

Healthy schools, those that support good nutrition and physical activity as part of a total learning environment, produce healthy students. Healthy students are better able to develop and learn. Healthy students, who achieve their educational potential, form healthy communities. Healthy communities build a healthy America. The underlying premise of the Healthy Schools Summit is that all schools in America should provide a healthy environment where children learn and participate in positive dietary and lifestyle behaviors and practices. By facilitating learning through the support and promotion of good nutrition and physical activity, schools contribute to the basic health status of children, thereby optimizing their performance potential, and ensuring that no child is left behind. For many schools, to provide a healthy environment requires significant change. Therefore, it is essential to form public-private partnerships among the various parties who influence the school environment and curriculum, and those who can influence the adoption of policies and practices that support healthier lifestyles as outlined in a number of recent reports, including:

1. U.S. Department of Health and Human Services. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Office of the Surgeon General, December 2001;

<http://www.surgeongeneral.gov/topics/obesity/calltoaction/CalltoAction.pdf>;

2. U.S. Department of Agriculture. Foods Sold in Competition with School Meal Programs: A Report to Congress. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, August 2001;

<http://www.fns.usda.gov/cnd/Lunch/CompetitiveFoods/competitive.foods.report.to.congress.htm>;

3. U.S. Department of Agriculture. Changing the Scene: Improving the School Nutrition Environment. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, August 2000;

4. Centers for Disease Control and Prevention. Guidelines for School Health Programs to Promote Lifelong Healthy Eating. MMWR 1996;45 (No. RR-9): 1-41;<ftp://ftp.cdc.gov/pub/Publications/mmwr/rr/rr4509.pdf>;

5. Centers for Disease Control and Prevention. Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People. MMWR 1997;46 (No. RR-6): 1-36;
<ftp://ftp.cdc.gov/pub/Publications/mmwr/rr/rr4606.pdf>;

6. American Academy of Family Physicians, American Academy of Pediatrics, American Dietetic Association, National Hispanic Medical Association, National Medical Association and the U.S. Department of Agriculture. Healthy School Nutrition Environments: Promoting Healthy Eating Behaviors. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service, August 2001;
<http://www.fns.usda.gov/cnd/HealthyEating/HealthyEatingBehavior/healthyeatingchallenge.htm>;

7. National Association of State Boards of Education. Fit, Healthy and Ready to Learn: A School Health Policy Guide (Part 1. Physical Activity, Healthy Eating, and Tobacco-Use Prevention). Alexandria, VA: National Association of State Boards of Education, March 2000;

8. U.S. Department of Health and Human Services and U.S. Department of Education. Promoting Better Health for Young People Through Physical Activity and Sports: Report to the President. Washington, D.C.: U.S. Government Printing Office, December 2000;
<http://www.cdc.gov/nccdphp/dash/presphysactrpt/download.htm>; and,

9. U.S. Department of Health and Human Services. Healthy People 2010: Understanding and Improving Health. 2nd ed. Washington, DC: U.S. Government Printing Office, November 2000.
<http://www.health.gov/healthypeople/document/tableofcontents.htm>.

These reports are clear: obesity is at an epidemic level in America. Childhood obesity and overweight are on the rise, while diet quality is poor and physical activity levels are insufficient. These factors compromise children's ability to achieve their full educational potential. To underscore further the effect of obesity on Americans and America, the Surgeon General has reported that unhealthy dietary habits and sedentary behavior together account for over 300,000 DEATHS and \$100 BILLION in costs annually. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity declares a need for widespread support to develop solutions to one of the nation's most dire and burdensome public health issues. Solutions need to be collaborative, vigorous and sustainable.

The Healthy Schools Summit represents such collaboration with support and participation from diverse sectors of government, education, health and nutrition, business and industry, and community. The Summit collaborators recognize the critical need to improve children's overall health and to manage obesity and overweight. To achieve this, we must reach children when and where they are most educable. In a healthy school environment, dietary behavior and patterns can be shaped, physical activity can be encouraged and positive habits can be formed. To that end, the Healthy Schools Summit collaborators also recognize the following:

- A. Schools provide a total learning environment for developing and practicing lifelong behaviors. The entire school environment, not just the classroom, should be aligned with healthy school goals to positively influence a child's understanding, beliefs and habits as they relate to good nutrition and regular physical activity. A healthy school environment should not be dependent on revenue from high-fat, low-nutrient foods to support school programs.

- B. Poor dietary habits diminish nutrient quality and thereby contribute to sub-optimal health status and performance. All foods available before, during or after school should meet the USDA nutrition standards in a manner that appeals to children and promotes an increase in school meal participation, including breakfast, lunch, after-school snacks and meals, and summer feeding. Emphasis should be placed on foods that naturally contain nutrients that are typically missing from children's diets. Foods should be served with consideration toward safety, handling, packaging, taste and appeal to ensure high quality meals that optimize nutrient density per calorie in a cost-efficient manner.

- C. The amount of time children are engaged in physical activity continues to decrease. Physical activity should be included in a school's daily education program from grades pre-K through 12. Physical activity should include regular instructional physical education, co-curricular activities and recess. It is not appropriate to substitute any one of these components for the others and the physical education program is an essential basis for all students to learn about and participate in physical activity.

- D. There is a national imperative to improve academic performance and close gaps among ethnic and socioeconomic groups. Educators, administrators, regulators, health practitioners and communities must all acknowledge the critical role children's health plays in academic stamina and performance and adapt the school environment to ensure students' basic nourishment and activity needs are met. Research highlighting the positive relationship between good nutrition, physical activity and the capacity of children to develop and learn should be highlighted to ensure widespread understanding of the benefits to healthy school environments. The diversity of the student population should be considered at all times to ensure that all children's needs — including those at highest risk for obesity related health problems — are attended.

The Healthy Schools Summit collaborators, individually and together, recognize their role in supporting the development of children into academically sound, productive, physically fit and well-nourished members of society. Integral to meeting this responsibility is a healthy school environment. This “Commitment to Change” document, adapted from the Surgeon General’s Call to Action, outlines the specific actions (below) needed to create a healthy school environment, and provides guidance for Summit collaborators and others to begin to take action. While no one collaborator can independently achieve all of the Actions outlined in this document, we can achieve much of it by working together.

Communication

- Build awareness among education and health leaders, administrators, teachers, food-service staff, coaches, nurses and other school staff as well as community and business leaders and the media about the contribution of proper nutrition and physical activity to the maintenance of lifelong healthy weight.
- Educate education leaders, administrators, teachers, staff, and parents about the importance of school physical education and nutrition programs and policies.
- Motivate education leaders, administrators, teachers and other school staff to take action toward a healthy school environment based on research linking good nutrition and physical activity with academic performance.
- Educate parents, teachers, coaches, staff and other adults in the community about the importance they hold as role models for children, and teach them how to be models for healthy eating and regular physical activity.
- Educate students, teachers, staff and parents about the importance of body size acceptance and the dangers of unhealthy weight control practices.
- Develop sensitivity of staff to the problems encountered by the overweight child.

Action

1. Provide age-appropriate and culturally sensitive instruction in health education and physical education that help students develop the knowledge, attitudes, skills and behaviors to adopt, maintain and enjoy healthy eating habits and a physically active lifestyle.
2. Provide students in pre-kindergarten through grade 12 with behavior-focused nutrition education integrated into the curriculum that is interactive and teaches the skills they need to adopt healthy eating habits.*
3. Ensure that meals offered through all school feeding programs meet federal nutrition standards.
4. Adopt policies ensuring that all foods and beverages available on school campuses and at school events contribute toward eating patterns that are consistent with the Dietary Guidelines for Americans.
5. Provide food options that are low in fat, calories and added sugars, such as fruits, vegetables, whole grains, and low-fat or nonfat dairy foods.
6. Ensure that healthy snacks and foods are provided in vending machines, school stores and other venues within the school's control.
7. Prohibit student access to vending machines, school stores, and other venues that contain foods of minimal nutritional value and compete with healthy school meals in elementary schools and restrict access in middle, junior and high schools.
8. Provide an adequate amount of time for students to eat school meals, and schedule lunch periods at reasonable hours around midday.
9. Provide all children, from pre-kindergarten through grade 12, with quality daily physical education that helps develop the knowledge, attitudes, skills, behaviors and confidence needed to be physically active for life.
10. Provide daily recess periods for elementary school students, featuring time for unstructured but supervised active play.
11. Provide adequate co-curricular physical activity programs, including fully inclusive intra-mural programs and physical activity clubs.

12. Encourage the use of school facilities for physical activity programs offered by the school and/or community-based organizations outside of school hours.

Based on U.S. Department of Health and Human Services, *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*. Rockville, Md.: U.S.

Department of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001.

* Excerpted from U.S. Department of Agriculture. *Changing the Scene: Improving the School Nutrition Environment*. Alexandria, Va.: U.S. Department of Agriculture, Food and Nutrition Service, August 2000.

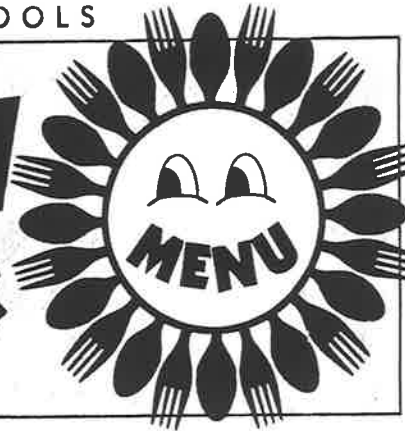
This Commitment to Change is the guiding document for the 2002 Healthy Schools Summit: Taking Action for Children's Nutrition & Fitness. For more information on the Summit and the leading children's health and education organizations that are collaborating on this initiative, please visit www.ActionForHealthyKids.org.

Source:

Taking Action for Healthy Kids: A Report on the Healthy Schools Summit and the Action for Healthy Kids Initiative. *Healthy Schools Summit*. 2002. <http://www.actionforhealthykids.org> (20 March 2005).

May 2005

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9.3 School Lunch Menus for May 2005, MCPS



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Monday 2

Café Burger
Tater Tots
OR
Penne Pasta & Tomato Sauce^
French Bread

Fruit Cup
Pears
Milk

Monday 9

Hot Dog+
Baked Beans
OR
Baked Turkey Tenders+
Corn
Dinner Roll

Chocolate Pudding
Fruit Cup
Milk

Tuesday 3

Baked Shrimp Poppers
Mixed Vegetables
Dinner Roll
OR
Baked Chicken Patty+
w/Bun
Mashed Potatoes

Orange Juice
Fruited Gelatin
Milk

Tuesday 10

Baked Chicken Patty+
w/Bun
Potato Wedges
OR
Grilled Cheese
Sandwich^
Tater Tots

Raisins
Pears
Milk

Wednesday 4

Taco Pocket
OR
Pancakes w/Syrup
Sausage*

Fruit Juice Bar
Raisins
Milk

Wednesday 11

French Bread Pizza
Cheese^ or Pepperoni*
OR
Café Burger
Tater Tots

Peaches
Pineapple
Milk

Thursday 5

Baked Chicken
Nuggets+
Tater Tots
Dinner Roll
OR
Crunchy Baked Fish
w/Bun & Corn

Applesauce
Peaches
Milk

Thursday 12

Chips Olé
OR
Baked Breaded Veggie
Patty^ w/Bun
Green Beans

Orange Juice
Fruit Juice Bar
Milk

Friday 6

Pizza
Cheese^ or Pepperoni*
OR
Chili w/Chips

Baby Carrots w/Dip
Fresh Fruit
Cookie
Milk

Friday 13

Pizza
Cheese^ or Pepperoni*
OR
Pancakes w/Syrup
Sausage*

Baby Carrots w/Dip
Fresh Fruit
Cookie
Milk

Character Counts



What you do matters, and one person can make a big difference.

Monday 16

Hot Dog+
Potato Wedges
OR
Baked Shrimp Poppers
Corn
Dinner Roll

Orange Juice
Pineapple
Milk

Tuesday 17

Baked Chicken
Nuggets+
Corn
Dinner Roll
OR
Sloppy Joe Sandwich
Green Beans

Fruit Juice Bar
Peaches
Milk

Wednesday 18

Café Burger
Tater Tots
OR
Roast Turkey & Gravy+
Mashed Potatoes
Dinner Roll

Fruit Cup
Raisins
Milk

Thursday 19

Grilled Chicken
Breast w/ Bun+
Rice Pilaf
OR
French Toast Sticks^
w/Syrup

Apple Juice
Fruited Gelatin
Milk

Friday 20

Pizza
Cheese^ or Pepperoni*
OR
Crunchy Baked Fish
Cornbread

Baby Carrots w/Dip
Fresh Fruit
Cookie
Milk

BREAKFAST

Monday
Breakfast Wrap
Pears
Milk

Tuesday
Pancakes with Syrup
Apricots
Milk

Wednesday
Cinnamon Roll
Mixed Fruit
Milk

Thursday
Sausage &/or
Cheese Sandwich
Orange Juice
Milk

Friday
French Toast Sticks
with Syrup
Pineapple
Milk

Daily Alternate
Cereal or Bagel
or String Cheese
Fruit of the Day
Milk

Monday 23

Teriyaki Beef Bites
Mixed Vegetables
Dinner Roll
OR

Hot Dog+
Tater Tots

Chocolate Pudding
Pineapple
Milk

Tuesday 24

Café Burger
Tater Tots
OR
Penne Pasta &
Tomato Sauce^
French Bread

Orange Juice
Peaches
Milk

Wednesday 25

French Bread Pizza
Cheese ^ or Pepperoni*
OR
Baked Turkey Tenders+
Mixed Vegetables
Dinner Roll

Fruit Cup
Raisins
Milk

Thursday 26

Chips Olé
OR
Pancakes w/Syrup^
Spiced Peaches

Fruit Juice Bar
Pears
Milk

Friday 27

Pizza
Cheese^ or Pepperoni*
OR
Chili w/ Cornbread

Baby Carrots w/Dip
Fresh Fruit
Cookie
Milk

Monday 30

MEMORIAL DAY HOLIDAY



Tuesday 31

Teriyaki Beef Bites
Corn
Dinner Roll
OR
Baked Breaded Veggie
Patty^ w/Bun
Tater Tots

Orange Juice
Fruited Gelatin
Milk



Physical activity and
good eating habits are
keys to health and
wellness.

Montgomery County Health and Human Services
Informationline? 240-777-1245

*A phone call away for easy access to information about
Health and Human services and programs ...*

- Child Care Assistance
 - Health Care Services
 - Immunizations
 - Financial Assistance
 - Disability and Senior Services
 - Mental Health and Substance Abuse
 - Other Health and Human Services programs and services
- Informationline open Monday through Friday 8:30 a.m. to 5 p.m.
Bi-lingual staff available.



* Pork Products + Poultry Products ^ Meatless

May 2005

Montgomery
County
Public
Schools

Lunch Entrees for High School & Middle School Cafes

May 2 - 6

Monday
Baked Breaded Veggie Patty on Bun^
Hot Turkey Sandwich+
Bacon, Lettuce & Tomato Sandwich*

Tuesday
Personal Pizza^☆
Teriyaki Beef Bites w/Roll
Sliced Turkey Sandwich+

Wednesday
Baked Shrimp Popper Salad w/Breadstick☆
Grilled Cheese Sandwich^
Cold Cut Sub+

Thursday
Steak & Cheese Sub☆
Baked Turkey Tenders w/Roll+
Sliced Ham Sandwich*

Friday
Pizza^
Hamburger
Tuna Salad Sub

May 9 - 13

Monday
Baked Chicken Nuggets w/Roll+
French Bread Pizza^
Sliced Turkey Sandwich+

Tuesday
Chicken Club Sandwich+*☆
Taco Pocket
Tuna Salad Pita Pocket

Wednesday
Chicken Caesar Salad w/Breadstick☆+
Beef Barbecue Sandwich
Swiss Veggie Sandwich^

Thursday
Steak & Cheese Sub☆
Grilled Chicken Breast Sub+
Cold Cut Sub+

Friday
Pizza^
Baked Shrimp Po'Boy Sandwich
Sliced Ham Sub*

BE TRUE 2 YOU
Smart Food Choices =
A Healthier You



**May is
National Physical
Fitness & Sports Month**



**Get moving...
be physically active
each day.**

May 16 - 20

Monday
Teriyaki Beef Bites w/Roll
Baked Turkey Tenders w/Roll+
Bacon, Lettuce & Tomato Sandwich*

Tuesday
Personal Pizza^☆
Baked Chicken Patty on Bun+
Sliced Ham Sandwich*

Wednesday
Chicken Fajita Salad+☆
Macaroni & Cheese w/French Bread^
Cold Cut Sub+

Thursday
Steak and Cheese Sub☆
Baked Breaded Veggie Patty on Bun^
Sliced Turkey Sandwich+

Friday
Pizza^
Crunchy Baked Fish on Bun
Turkey Salad Sub+

May 23 - 27

Monday
Grilled Chicken Breast Sub+
French Bread Pizza^
Tuna Salad Sandwich

Tuesday
Double Cheeseburger☆
Taco Pocket
Sliced Turkey Ham Sandwich+

Wednesday
Chef Salad w/Breadstick+☆
Nachos
Turkey Salad Sandwich+

Thursday
Steak and Cheese Sub☆
Hot Dog+ or Chili Dog+
Sliced Turkey Sub+

Friday
Pizza^
Baked Shrimp Poppers w/ Roll
Cold Cut Sub+

May 30 - 31

Monday
Memorial Day Holiday
No School

Tuesday
Personal Pizza^☆
Teriyaki Beef Bites w/Roll
Sliced Turkey Sandwich+

**Daily Special
\$1.95**

**Super Special ☆
\$2.55**

- ▶ Each daily or super special comes with 3 choices of fruits and/or vegetables and milk.
- ▶ Second lunches may be purchased at a la carte prices.
- ▶ Menus are subject to change.

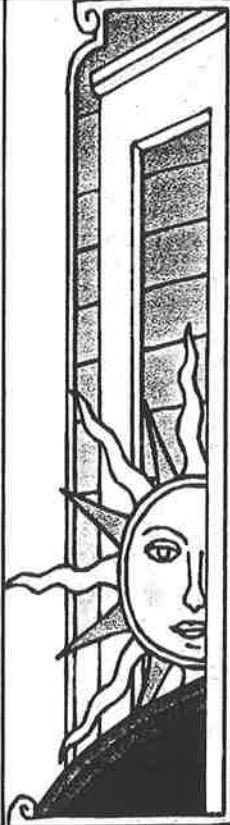
*pork +poultry ^meatless



2004-2005

M C P S
Cafe

Daily Breakfast Specials



Monday	Breakfast Sandwich Wrap Fruit Milk
Tuesday	Pancakes with Syrup Fruit Milk
Wednesday	Ham & Cheese Croissant Fruit Milk
Thursday	French Toast Sticks w/ Syrup Fruit Milk
Friday	Sausage & Cheese Sandwich Fruit Juice Milk

Alternate breakfast items are available

A great way to start the day!
\$1.00

Breakfast Powers Your Brain!
Eating a healthy breakfast helps you...
Concentrate better on learning
Stay focused
Score better on tests
Make fewer errors
Feel better



9.4 Fairfax County Public Schools Nutrition Integrity List

Every student will have the opportunity to choose nutritious foods that will prepare students to learn.

- Our nutrition standard will be based on Dietary Guidelines for Americans and the Food Guide Pyramid.
- Nutrition values of meals will be evaluated over a period of days rather than judged on a single meal or food item.
- Student preferences and input from monthly customer report cards and student tastes parties will be considered in menu planning. Since foods must be eaten to provide nutrients, menu changes will be gradual to assure acceptance.
- Student meals will contain adequate calories and a variety of foods to support growth, development, and healthy weight.
- Purchasing practices will ensure the use of high quality ingredients and prepared products to maximize acceptance. Food and Nutrition Services professionals will continue to work with industry to develop these foods.
- Foods will be prepared in ways that ensure a balance between optimal nutrition quality and student acceptance.
- Foods offered to students in addition to meals will be of optimal nutrition quality as stated in the code of Virginia.
- Nutrition Education will be an integral part of the curriculum from preschool through twelfth grade. The school cafeteria will serve as a laboratory for applying knowledge and skills taught in the classroom by food service personnel.
- In-service and professional development opportunities will be provided for school food and nutrition managers and staff and other school-based instructional personnel. These experiences will be sponsored by professional organizations and Nutrition Education and Training activities.

















Source: Fairfax County Public Schools. "About Us." *The Office of Food and Nutrition Services*. October 2004. < http://www.fcps.edu/fs/food/about_us/> (22 May 2005).

9.5 School Lunch Menus for May 2005, FCPS



Food and Nutrition Services Fairfax County Public Schools Elementary Lunch Menu MAY 2005







Monday	Tuesday	Wednesday	Thursday	Friday
<p>2</p> <p>Chicken Nuggets w/Steamed Rice</p> <p>Pork Egg Roll w/Steamed Rice </p> <p>Peanut Butter & Jelly Sandwich Yogurt w/Pretzel</p> <p>CHOICE OF TWO Glazed Sweet Potatoes FRESH APPLE Chilled Peaches Fruit Cocktail</p> <p>—ENERGYZONE SALAD PATCH— Southwestern Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>3</p> <p>Nachos or Baked Potato w/Chili & Cheese Sauce w/Wheat Roll</p> <p>Salmon Salad on Bun w/ Baked Chips</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Broccoli Florets Cucumber/Carrot Coins w/Dip Orange Juice Dried Cherries</p> <p>—ENERGYZONE SALAD PATCH— Taco Salad w/Chili & Chips or Pretzel Fruit Salad w/Pretzel</p>	<p>4</p> <p>Chef Boyardee Beef Ravioli w/Breadstick</p> <p>Macaroni & Cheese w/Wheat Roll</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Mixed Vegetables Salad w/Tomato Applesauce Banana</p> <p>—ENERGYZONE SALAD PATCH— Caesar Salad w/Chicken w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>5 CINCO de MAYO GIVE ME 5! COLORS THAT LIVE! Turkey Hot Dog on Bun</p> <p>CHEESE QUESADILLA</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel </p> <p>CHOICE OF TWO Vegetarian Baked Beans Chilled Pears STRAWBERRIES Fruit Crisp </p> <p>—ENERGYZONE SALAD PATCH— Oriental Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>6</p> <p>Stuffed Crust Cheese Pizza</p> <p>Stuffed Crust Pepperoni Pizza </p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Green Beans Salad w/Tomato Frozen Sour Watermelon Juice Bar Chilled Pineapple</p> <p>—ENERGYZONE SALAD PATCH— Chef's Salad w/Salmon w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>
<p>9 GIVE ME 5! COLORS THAT LIVE! Chicken Tenders w/Muffin Cheese Sticks w/Marinara Sauce Peanut Butter & Jelly Sandwich Yogurt w/Pretzel</p> <p>CHOICE OF TWO Whipped Potatoes w/Gravy Orange Quarters FLAVORED APPLESAUCE Chilled Pineapple </p> <p>—ENERGYZONE SALAD PATCH— Southwestern Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>10</p> <p>Hamburger on Bun</p> <p>Cheeseburger on Bun</p> <p>Veggie Pattie on Bun w/Cheese or w/o Cheese</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Smiley Potatoes  Lettuce/Tomato/Pickle Chilled Peaches Fruit Juice</p> <p>—ENERGYZONE SALAD PATCH— Taco Salad w/Chili & Chips or Pretzel Fruit Salad w/Pretzel</p>	<p>11 GIVE ME 5! COLORS THAT LIVE! Spaghetti w/Meat Sauce or Marinara Sauce w/Breadstick Ham & Cheese on Croissant  Peanut Butter & Jelly Sandwich Yogurt w/Pretzel</p> <p>CHOICE OF TWO Green Peas Salad w/Tomato  Dried Cherries Chilled Apricots FRESH APPLE</p> <p>—ENERGYZONE SALAD PATCH— Caesar Salad w/Chicken w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>12</p> <p>Oven Fried Chicken w/Stuffing</p> <p>Cheese Lasagna w/Wheat Roll</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Glazed Sweet Potatoes Italian Green Beans Fruit Crisp Orange Quarters Fruit Cocktail</p> <p>—ENERGYZONE SALAD PATCH— Oriental Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>13</p> <p>Cheese Pizza</p> <p>Pepperoni Pizza </p> <p>Fish Fillet on Bun</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Broccoli/Baby Carrots w/Dip Frozen Sour Cherry Juice Bar Chilled Pears Dried Cherries</p> <p>—ENERGYZONE SALAD PATCH— Chef's Salad w/Salmon w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>
<p>16 GIVE ME 5! COLORS THAT LIVE! Chicken Nuggets w/Oriental Fried Rice Beef Teriyaki Nuggets w/Oriental Fried Rice Peanut Butter & Jelly Sandwich Yogurt w/Pretzel</p> <p>CHOICE OF TWO Field Peas with Snaps FRESH APPLE Dried Cherries Chilled Peaches </p> <p>—ENERGYZONE SALAD PATCH— Southwestern Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>17</p> <p>Nachos w/Chili & Cheese Sauce</p> <p>Fish Fillet on Bun</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Golden Corn Jicama/Baby Carrots w/Dip Fruit Cocktail Tossed Salad</p> <p>—ENERGYZONE SALAD PATCH— Taco Salad w/Chili & Chips or Pretzel Fruit Salad w/Pretzel</p>	<p>18 "Breakfast for Lunch" GIVE ME 5! COLORS THAT LIVE! Mini Pancakes w/Turkey Sausage</p> <p>Cheese Sticks w/Marinara Sauce</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Hash Brown Patties  FLAVORED APPLESAUCE Orange Juice Banana</p> <p>—ENERGYZONE SALAD PATCH— Caesar Salad w/Chicken w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>19</p> <p>Turkey Hot Dog on Bun</p> <p>Macaroni & Cheese w/Fish Bites and Wheat Roll</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Vegetarian Baked Beans Broccoli & Cauliflower w/Dip Fruit Crisp Chilled Pineapple</p> <p>—ENERGYZONE SALAD PATCH— Oriental Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>20</p> <p>Cheese Bagel Pizza </p> <p>Pepperoni Bagel Pizza</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Green Beans Frozen Orange Push Up Salad w/Tomato Chilled Pears</p> <p>—ENERGYZONE SALAD PATCH— Chef's Salad w/Salmon w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>
<p>23 GIVE ME 5! COLORS THAT LIVE! Corn Dog Bites</p> <p>Beef and Bean Burrito</p> <p>Grilled Cheese Sandwich</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Golden Corn Orange Quarters FLAVORED APPLESAUCE Chilled Pears Dried Cherries </p> <p>—ENERGYZONE SALAD PATCH— Southwestern Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>24</p> <p>Hamburger on Bun</p> <p>Hamburger w/Cheese on Bun</p> <p>Veggie Pattie on Bun</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Mini Potato Pancakes Lettuce/Tomato/Pickle Chilled Peaches Fruit Crisp</p> <p>—ENERGYZONE SALAD PATCH— Taco Salad w/Chili & Chips or Pretzel Fruit Salad w/Pretzel</p>	<p>25 GIVE ME 5! COLORS THAT LIVE! Pasta w/Meat Sauce or Marinara Sauce w/Breadstick</p> <p>Chicken Fillet on Bun</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Mixed Vegetables  Tossed Salad FRESH APPLE Chilled Pineapple</p> <p>—ENERGYZONE SALAD PATCH— Caesar Salad w/Chicken w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>26 GIVE ME 5! COLORS THAT LIVE! Soft Beef Taco w/Mexican Rice Tuna Wrap w/ Baked Chips Veggie Taco Hot Pocket</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Refried Beans w/Cheese Topping Lettuce & Tomato  STRAWBERRIES Fruit Cocktail</p> <p>—ENERGYZONE SALAD PATCH— Oriental Chicken Salad w/Pretzel Chef's Salad w/Cheese and Pretzel</p>	<p>27</p> <p>Cheese Pizza</p> <p>Pepperoni Pizza </p> <p>Fish Fillet on Bun</p> <p>Peanut Butter & Jelly Sandwich</p> <p>Yogurt w/Pretzel</p> <p>CHOICE OF TWO Broccoli/Baby Carrots w/Dip Cherry Juice Bar Chilled Pears Dried Cherries</p> <p>—ENERGYZONE SALAD PATCH— Chef's Salad w/Salmon w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>


See Reverse for Continued Lunch Menus and Breakfast Menus



Food and Nutrition Services
Fairfax County Public Schools
Elementary Lunch Menu
MAY 2005



Monday	Tuesday	MAY HIGHLIGHTS
30 MEMORIAL DAY HOLIDAY  NO SCHOOL	31 GIVE ME 5! COLORS THAT LIVE! Chicken Nuggets w/Steamed Rice  Pork Egg Roll w/Steamed Rice Peanut Butter & Jelly Sandwich Yogurt w/Pretzel  CHOICE OF TWO Green Peas FRESH APPLE Chilled Peaches Fruit Cocktail -ENERGY ZONE SALAD PATCH- NO SALADS AVAILABLE	National Book Month National Family Month  Child Nutrition Employee Appreciation Week, May 2 - 6 National Teacher Appreciation Week, May 1 - 7 Cinco de Mayo, May 5 Mother's Day, May 8 Armed Forces Day, May 21

YOGURT W/PRETZEL: 8 Ounce Yogurt, Pretzel, and Two Vegetable or Fruits, and Milk.
DAILY MILK CHOICES: 1% Chocolate, 1% Unflavored, or Skim, 50¢. Soy Milk available upon Request @ 75¢
ENTREES CONTAINING PORK: 

Let EZ-Bear's Team cater your child's birthday party. Freshly baked Otis Spunkmeyer Chocolate Chip Cookies or Ice Cream are available for 50¢ per student. Napkins and a surprise for the Birthday Child are included in the Birthday Tote Bag. Check to see if this program is available in your school. Contact the Food Service Manager at your child's school one week in advance of birthday celebration.




VEGETARIAN OPTION: Offer vs. Serve allows students to refuse meat entree and request additional vegetables, fruits, and bread items.

A COMPLETE LUNCH INCLUDES ONE ENTREE, CHOICE OF TWO VEGETABLES AND/OR FRUITS, BREAD, AND CHOICE OF MILK. Students can purchase only one breakfast (\$1.00) and one lunch (\$1.70) per day. Additional meals are available at adult prices (breakfast, \$1.30, and lunch \$2.50) or a la carte prices, whichever is less. Students who qualify for free or reduced price lunch (30¢) receive breakfast free or at a reduced price (20¢). For convenience, lunches may be purchased by the month. Make checks payable to (School Name) Food Services.

MENUS SUBJECT TO CHANGE DUE TO AVAILABILITY OF FOODS AND EMERGENCY SCHOOL CLOSINGS.

BREAKFAST MENU REPEATS WEEKLY

CHECK TO SEE IF BREAKFAST IS AVAILABLE AT YOUR SCHOOL.

Monday	Tuesday	Wednesday	Thursday	Friday
Fruit Juice	Fruit Juice	Fruit Juice	Fruit Juice	Fruit Juice
CHOICE OF ONE Low-Fat Breakfast Roll or Yogurt w/Graham Crackers or Cereal w/Graham Crackers	CHOICE OF ONE Pancake & Sausage on a Stick w/ Syrup  or Yogurt w/Nutrition Bar or Cereal w/Nutrition Bar (Contains Walnuts)	CHOICE OF ONE Bagel w/Cream Cheese or Jelly or Yogurt w/Fruit Muffin or Biscuit or Cereal w/Fruit Muffin w/Jelly	CHOICE OF ONE French Toast Sticks w/syrup or Yogurt w/Nutrition Bar (Contains Walnuts) or Cereal w/Nutrition Bar (Contains Walnuts)	CHOICE OF ONE Turkey Sausage w/Biscuit or Yogurt w/Biscuit or Cereal w/Biscuit & Jelly
Choice of Milk	Choice of Milk	Choice of Milk	Choice of Milk	Choice of Milk

NUTRIFAX: PICNIC SAFETY TIPS


- Food poisoning bacteria are a menace that can ruin a picnic. To minimize your fear, practice good food safety tips.
1. Keep your perishable food such as: hot dogs, hamburgers, starchy salads, and deviled eggs in an insulated cooler or pack with ice or blue ice freeze packs. Put the cooler in the passenger area rather than the hot trunk of your car.
 2. Wash your hands before working with food or use disposable wet handwipes.
 3. Handle cooked, grilled meat with clean utensils and serve onto clean plates. Don't reuse utensils, plates, or bowls.
 4. To kill any food poisoning bacteria cook all meat, poultry, and fish thoroughly and serve hot.
 5. Unpack your picnic items from the cooler just before you will be eating.

Menu Nutrient Analysis
 Percent of Calories From Fat

Nutrient Analysis:	Breakfast	Lunch
May 2 - 6	21.4%	27.3 %
May 9 - 13	21.4%	27.6%
May 16 - 20	21.4%	27.4%
May 23 - 31	21.8%	29.0%












"In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, or disability." To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

VISIT THE ENERGY ZONE WEB SITE AT: www.fcps.edu/fs/food/

 Recycled Paper

FOOD AND NUTRITION SERVICES
Fairfax County Public Schools
MIDDLE/HIGH MAY 2005

Double Deal: Any Second Entrée \$1.25

Monday	Tuesday	Wednesday	Thursday	Friday
<p>2 Chicken Nuggets w/ Steamed Rice Pork Egg Roll  Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Whipped Potatoes w/Gravy Green Peas Fresh Apple Chilled Peaches Fruit Cocktail</p>	<p>3 Nacho Tortillas w/Chili & Cheese Sauce Chicken Teriyaki on Bun Baked Potato w/Chili & Cheese Sauce w/ Wheat Roll Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Broccoli Florets Lettuce/Tomato/Pickle Dried Cherries Fruit Juice</p>	<p>4 Cheese Sticks w/Marinara Sauce Hamburger on Bun Cheeseburger on Bun Veggie Burger on Bun with or without Cheese Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Mixed Vegetables Lettuce/Tomato/Pickle Applesauce Banana</p>	<p>5 Double Turkey Hot Dog on Bun Chicken Fillet on Bun Fish Fillet on Bun Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Vegetarian Baked Beans Lettuce/Tomato/Pickle Chilled Peas Fruit Crisp</p>	<p>6 Steak Sub on Sub Roll Steak Sub w/Cheese on Sub Roll Cheese Quesadilla Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Campbell's Minestrone Soup or Green Beans Celery/Baby Carrots w/Dip Fruit Sherbet Chilled Pineapple</p>
<p>9 Chicken Tenders w/muffin Beef Teriyaki Nuggets w/muffin Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Orange Quarters Applesauce Dried Cherries</p>	<p>10 Nachos Tortillas w/Chili Cheese Sauce Deluxe Hot Ham & Cheese Sub  Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Golden Corn Celery/Carrots w/Dip Chilled Peaches Sandwich Fixings</p>	<p>11 Spaghetti Noodles w/Meat Sauce or Marinara Sauce w/Breadstick Hamburger on Bun Cheeseburger on Bun Veggie Cheeseburger on Bun Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Green Beans Lettuce/Tomato/Pickle Dried Cherries Chilled Pineapple</p>	<p>12 Soft Beef Taco Taco Meal Shredded Cheese Beef & Bean Burrito Peanut Butter & Jelly Sandwich Yogurt w/Pretzel Southwestern Rice -Choice of Two- French Fries Lettuce & Tomato Fresh Apple Fruit Cocktail</p>	<p>13 Oven Fried Chicken W/ Chicken Flavored Rice Fish Fillet on Bun BBQ Rib on Bun Peanut butter & Jelly Sandwich Yogurt w/ Pretzel -Choice of Two- French Fries Broccoli/baby Carrots W/Dip Frozen Shape Up Chilled Peas</p>
<p>16 Chicken Nuggets w/Oriental Rice Pork Egg Roll  Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Green Peas Fresh Apple Dried Cherries Chilled Peaches</p>	<p>17 Nacho Tortillas w/Chili & Cheese Sauce Cheese Sticks w/Marinara Sauce Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Golden Corn Jicama/Baby Carrots w/Dip Fruit Juice Applesauce</p>	<p>18 Double Pancake and Sausage on a stick  Chicken Fillet on Bun Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Hash Brown Patties Banana Chilled Pineapple Orange Juice</p>	<p>19 Double Turkey Hot Dog on Bun Cheese Lasagna w/Marinara Sauce & Breadstick Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Italian Green Beans Tossed Salad w/Tomato Fruit Cocktail Fruit Crisp</p>	<p>20 Steak Sub on Sub Roll Steak Sub w/Cheese on Sub Roll Cheese Quesadilla w/ Mexican Rice Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Green Beans Lettuce/Tomato/Pickle Frozen Cherry Juice Bar Chilled Peas</p>
<p>23 Chicken Tenders w/Steamed Rice Beef Teriyaki Nuggets w/Steamed Rice Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Golden Corn Orange Quarters Applesauce Tossed Salad</p>	<p>24 Nacho Tortillas w/Chili and Cheese Sauce Chicken Teriyaki Fillet on Bun or Rice Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Green Beans Lettuce/Tomato Chilled Peaches</p>	<p>25 Pasta (Penne) w/Breadstick w/Marinara Sauce or w/Meat Sauce Hamburger on Bun Cheeseburger on Bun Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Mixed Vegetables Lettuce/Tomato/Pickle Dried Cherries Chilled Pineapple</p>	<p>26 Soft Beef Taco w/Shredded Cheese Beef & Bean Burrito w/ Mexican Rice Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Refried Beans w/Cheese Topping Lettuce & Tomato Fresh Apple Fruit Cocktail</p>	<p>27 Chicken Fillet on Bun Macaroni & Cheese w/Biscuit Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Broccoli/Baby Carrots w/Dip Frozen Orange Push-up Chilled Peas</p>
<p>30 Memorial Day </p>	<p>31 Nacho Tortillas w/Chili & Cheese Sauce Chicken Teriyaki on Bun Baked Potato w/Chili & Cheese Sauce w/ Wheat Roll Peanut Butter & Jelly Sandwich Yogurt w/Pretzel -Choice of Two- French Fries Broccoli Florets Lettuce/Tomato/Pickle Dried Cherries Fruit Juice NO SALADS AVAILABLE</p>	<p align="center">May 5 - Cinco de Mayo May 30 - Memorial Day</p> <p align="center">MAY </p>		
<p>CHEF SALADS: Southwestern Chicken Salad w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>Taco Salad w/Chili Nacho Chips or Pretzel Fruit Salad w/Pretzel</p>	<p>Caesar Salad w/Chicken w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>Oriental Chicken Salad w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>	<p>Chef's Salad w/Salmon w/Pretzel Chef's Salad w/Cheese w/Pretzel</p>
<p>PIZZA LINE: Stuffed Crust Cheese Pizza  Stuffed Crust Pepperoni Pizza</p>	<p>Cheese Pizza  Pepperoni Pizza Bagel Pizza</p>	<p>Stuffed Crust Cheese Pizza  Stuffed Crust Pepperoni Pizza</p>	<p>Cheese Pizza  Pepperoni Pizza Pan Pizza</p>	<p>Stuffed Crust Cheese Pizza  Stuffed Crust Pepperoni Pizza</p>

"The USDA is an equal opportunity provider and employer."

10 NOTES

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