THE FOOD ADVENTURES WORKSHOP:
DEVELOPMENT OF A PILOT SUMMER NUTRITION EDUCATION/COOKING
CLASS PROGRAM FOR GRADE SCHOOL STUDENTS

A graduate project submitted in partial fulfillment of the requirements
For the degree of Master of Science in
Family and Consumer Sciences

by

Arlyn P. Sabado

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The thesis of Arlyn P. Sabado is approved:

______________________________  ____________________________
Annette Besnilian, MPH, RD, CLE  Date

______________________________  ____________________________
Lydia Chowa, Ph.D., RD, BSN  Date

______________________________  ____________________________
Claudia Fajardo-Lira, Ph.D., Chair  Date

California State University, Northridge
DEDICATION

This project is dedicated to:

To the elementary students enrolled in the first-ever CSUN summer cooking class in 2007, who were a delight to work with and allowed me to share with them my knowledge and interest in food and nutrition.

To all the academic departments, sponsors, advisors, assistants, and lecturers that were involved in making this nutrition education/cooking class happen.
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ABSTRACT

THE FOOD ADVENTURES WORKSHOP: DEVELOPMENT OF A PILOT SUMMER NUTRITION EDUCATION/COOKING CLASS PROGRAM FOR GRADE SCHOOL STUDENTS

by

Arlyn P. Sabado

Master of Science in
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The purpose of this project was to develop a summer nutrition education/cooking class program for elementary students, fourth through sixth grades, ages 9–11 years old. The program ran from July 2nd to August 3rd, 2007, at California State University Northridge (CSUN). Two succeeding classes followed the pilot program in the next two summers (2008 and 2009). The main objective of the project was to create a five-week curriculum with the intention of introducing nutritional and food science concepts through cooking. Twenty students were enrolled and participated in the class. In addition to the curriculum manual, a follow-up focus group study was conducted four years after the inception of the pilot class. The goal of this study was to follow up on a segment of the students who participated in the class(es) to determine the influence of the class(es) on their eating habits and attitudes in the longer term.

Pre- and post-assessment surveys distributed to the students during the course of the pilot program showed some positive changes in their attitude and knowledge about food and nutrition. Subjective feedback from the students and parents indicated that the
students enjoyed the activities and learned a lot about eating and cooking healthy foods. The follow-up interview with the focus group and additional feedback from their parents revealed a continued practice of healthy eating and cooking new foods at home. The pre/post-assessment surveys and the follow-up focus group study findings showed the positive impact such a program has in children and in battling the childhood obesity problem.
CHAPTER I

INTRODUCTION

Nutrition is a vital component of human existence, and good nutrition is necessary for the proper growth and development of the body. One major concern in recent years is the overnutrition of the population in general, particularly in the developed nations. Overnutrition is the imbalanced intake of nutrients, resulting in excess and contributing to overweight and obesity—which in turn promotes medical problems such as diabetes, cardiovascular diseases, and joint problems (Mahan & Escott-Stump, 2004). The rate of overweight and obesity has risen dramatically in the last three decades. More than one-third of adults in the United States are considered obese, according to the Centers for Disease Control and Prevention (CDC, 2011). One major concern is the prevalence of childhood obesity, which has increased by threefold in the last three decades, claiming approximately 17% of children and adolescents in the nation (CDC, 2011). Childhood obesity affects the future of society. If the rate of childhood obesity continues to grow, it is predicted that the children born in this generation will have shorter life spans than their parents’ (Olshanky et al., 2005).

Obesity in children stems primarily from their unhealthy food choices and low levels of physical activity. These behaviors are influenced by socioeconomic, cultural, and environmental factors coming from the home, school, media, and community. Childhood obesity is a popular health issue, and many programs are dedicated to reducing the prevalence through nutrition education and physical activity. Nutrition education at an early age can establish healthy eating practice into adulthood.
A five-week cooking class program for grade-school students was initiated in the summer of 2007 at CSUN. It was offered through the Summer Academic Program for Elementary Students (SAPESS) under the Department of Elementary Education Michael D. Eisner College of Education in collaboration with The Marilyn Magaram Center for Food Science, Nutrition and Dietetics, an auxiliary organization of the Department of Family and Consumer Sciences. The program’s intention was to introduce nutrition education, food science, and culinary concepts. The unofficial title of the class was the “Food Adventures Workshop.” The goal of the program was to orient the students to the different aspects that food has to offer while providing an adventure to learn about and experience the nutritional benefits and consequences of food, the chemical and physical interactions involved, the gastronomic results created from cooking, and the history and culture of food in society. This was meant to not only educate but also enable the students to appreciate and be more conscious of what they eat.

The nutrition education/cooking class curriculum involved two segments. The first part of the class was the nutrition lecture and exercises, which included teaching about the United States Department of Agriculture’s (USDA’s) MyPyramid (now replaced by ChooseMyPlate as of June 2011), the nutrient components of foods, and portion sizes. Some of the activities incorporated into the lessons included trivia, workbook activities, and games. The second part of the class involved the actual cooking exercise, which was meant to apply the nutritional/food science concepts learned from the lecture portion. The lecture and cooking lessons were meant to provide a fun and interactive learning experience and expose the students to a wide range of foods. A pre- and post-assessment test was administered to evaluate the students’ learning. The
feedback received from the students and parents indicated that they enjoyed the class, specifically the cooking exercises and tasting new foods and ingredients. In addition, a follow-up focus group study on five of the students who participated in the first class and the next classes was conducted in January 2012 to determine whether the class(es) exerted any positive impact on the choice of food they eat now. Initially, there were plans to develop a cookbook based on the children’s own creation of recipes, but because of time constraints, the program did not allow them to independently develop their own recipes. Instead, a cookbook memoir was developed to showcase the experiences of the students and staff involved in the pilot program. The book included some of the favorite recipes of the children and their current feedback about the program.

**Statement of the Problem**

Childhood obesity continues to be a growing health concern because it puts children at risk of early onset of chronic diseases and a shorter lifespan. The dietary pattern of today’s youth consists of high-caloric foods with low nutritional values. Combined with minimal or a lack of physical activity, this contributes to the increasing rate of childhood obesity in the United States. Children learn these bad eating habits from infancy. It is important that children learn proper nutrition at an early age in order to develop a healthier lifestyle towards adulthood. One solution that can help reduce the rate of childhood obesity is to provide nutrition education at a young age. A good way to learn about nutrition is to incorporate it into cooking activities. Such programs not only help children create nutritious foods but also provide them with a fun and enjoyable learning experience that can be practiced at home and as they grow older.

**Objectives**
The objectives of the project were as follows:

1. To develop a curriculum manual consisting of daily weekday lesson plans for five weeks that provides basic nutrition education and cooking activities.

2. To put into practice the curriculum and facilitate student learning through cooking activities, pre/post-test surveys, in-class and home assignments, and quizzes.

3. To create a cookbook memoir.

**Assumptions**

- Students in this exercise had either little or no knowledge about nutrition.
- Students were able to read English and knew basic math and science concepts since they are enrolled in elementary schools.
- Students participated in lecture and cooking activities without pressure from instructors and with consideration of food allergies and intolerances and cultural and religious practices.

**Limitations**

- The curriculum manual was intended for grade-school level only and teaches introduction to nutrition and cooking skills as well as basic food science concepts.
- The curriculum for the cooking class was written and presented exclusively in English.
- The curriculum was intended for a five-week session only.
- The program itself was over a short period of time and did not allow the students to be able to independently create their own recipes.
CHAPTER II

REVIEW OF LITERATURE

Overview of Childhood Obesity

Prevalence. Childhood obesity has been a much-discussed topic in the healthcare field over the years due to its increased prevalence and concern about the health and well-being of children in their present and future lives. It is a serious health concern affecting not just the local community but also at the national and global levels, deemed an epidemic by healthcare experts. From the Centers for Disease Control and Prevention (CDC, 2011), data from the National Health and Nutrition Examination Survey (NHANES) indicated that an estimated 16.9% of children and adolescents ages 2–19 years are obese. Results from 1976–1980 and 2007–2008 surveys showed that prevalence rose from 5% to 10.4% for children ages 2–5 years, 6.5% to 19.6% for those ages 6–11 years, and 5% to 18.1% for ages 12–19 years. These results indicate that the number of obese children has more than doubled for children age five and under and more than tripled for ages 6–19 in the last three decades. At the state level, a study reported by The California Center for Public Health Advocacy in 2005 indicated that 28.1 out of every 100 children enrolled in grades five, seven, and nine in California were considered at 90th percentile or above of body mass index (BMI) for age, indicating that the students are overweight and/or obese. The highest percentage was among Pacific Islanders at 35.9%, followed by Latinos at 35.4%, American Indian/Alaskan Natives at 31.7%, and African Americans at 28.7% (McCusker, 2005). In Los Angeles County overall, more than one in five (23.3%) students in fifth, seventh, and ninth grades were considered obese in 2005, with the San Fernando Valley area claiming 32.9% of its
children as obese. The San Fernando Valley area was ranked 123\textsuperscript{rd} of 128 cities/communities of obesity. This was reported in A Cities and Communities Health Report October 2007 submitted by the County of Los Angeles Public Health.

\begin{figure}
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\caption{Figure 1. Trends in obesity among children and adolescents: United States, 1963–2008}
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According to the World Health Organization (2011), there were 42 million overweight children in the world under the age of five in 2010, with about 35 million of them in developing countries. The International Association for the Study of Obesity indicated that 10\% of the world’s children have excess body fat, and about ¼ of them are considered obese. The rate of obesity is increasing in highly developed nations as Canada, U.S., and the United Kingdom and is becoming more common in countries undergoing rapid socioeconomic transitions such as Brazil and China. Obesity now
coexists with undernutrition (inadequate intake to meet metabolic needs; see Mahan & Escott-Stump, 2004) in many developing countries. Overweight children can be found in poor areas of wealthy nations and in affluent regions of poorer countries. (Crossman, Sullivan, & Benin, 2006).

For most of the aforementioned studies, criteria used to determine obesity in children and adolescents, ages 2–19, were based on the 2000 CDC BMI-for-age growth charts in the United States and in compliance with labels used by organizations such as the Institute of Medicine and the American Academy of Pediatrics. Body Mass Index (BMI) is a measurement that takes into consideration weight and height. A BMI at 85th and below the 95th percentile for children of the same age and sex in a growth chart is defined as overweight. Obesity is defined as a BMI at or above the 95th percentile (CDC, 2007).

**Importance of issue.** About one-third (33.8%) of U.S. adults are obese (CDC, 2011). Studies show that obese children and adolescents are likely to remain so as adults. Freedman et al. (2005) reported that 70–80% of adolescents who are overweight at age 10–15 years will likely become obese as young adults (around 25 years old). Another study indicated that 25% of obese adults were overweight as children (Cassazza & Cicazzo, 2006; McCusker, 2005). The issue of childhood obesity is very important because it poses a threat to the present health of the children and may likely cause detrimental consequences in their future lives. Obesity and overweight are associated with increased risk of chronic diseases such as cardiovascular disease, diabetes mellitus Type 2, joint problems, asthma, high blood pressure, high cholesterol, some cancers, behavioral problems, and depression (CDC, 2007; McCusker, 2005). These conditions
may lead to premature death as well. One study showed that 70% of obese children demonstrated at least one risk factor of cardiovascular disease (Freedman et al., 2005). Studies show more children contracting these diseases at an early age. In the 1990s, Type 2 diabetes (DM) was uncommon among young people, but now it accounts for nearly 50% of new cases of diabetes for children and adolescents in some communities (Wechsler, McKenna, Lee, & Dietz, 2004). There is increased prevalence of Type 2 DM among children and adolescents (Rosenbloom, Joe, Young, & Winter, 1999). A report by Venkat Narayan, Boyle, Thompson, Sorensen, and Williamson (2003) indicated that one in three American children born in 2000 will develop diabetes in their lifetime.

Pediatricians lately have observed an increased frequency of hypertension, diabetes, and cardiovascular diseases (Harper, 2006).

Childhood overweight is also associated with social and psychological problems such as discrimination and poor self-esteem (Wechsler et al., 2004). This may lead to further disordered eating patterns. Psychological factors can, in turn, affect academic and social functioning and likely persist through adulthood. Wechsler et al. (2004) indicated the connection between successful academic performance and good nutrition. The author implies that the success of the school and the students relies heavily on the children and staff being healthy and fit physically, mentally, and socially.

Weight-related diseases have increased health care costs and affected the national economy. Medical costs associated with obesity were estimated at $147 billion in 2008 (CDC, 2011). In 2006, an estimated $41 billion was spent on medical care, workers’ compensation, and lost productivity related to overweight, obesity, and physical inactivity among adults in California, nearly double the amount from the year 2000.
(California Center for Public Health Advocacy [CCPHA], 2011). With the prediction that more than one in three children born in 2000 will eventually suffer from diabetes, costs will be higher in the future. Cassazza and Cicasso (2006) reported a 197% increase in obesity-associated hospitalizations among adolescents in the past 20 years. Obesity “can lead to expensive and preventable adult illnesses and may reduce the life expectancy of” today’s children (McCusker, 2005, p.1).

**Contributing factors.** Many different factors contribute to the rise of obesity in children in the United States. Weight gain can result from overconsumption of calories, a measure of energy expenditure used for normal body functions and daily activities (Mahan & Escott-Stump, 2004). For children and adolescents, calories are used to support growth and development, metabolism, and physical activity. Poor dietary practices and inadequate physical activity are related to the cause of obesity and are influenced by several aspects of life, including genetic, environmental, behavioral, social, emotional, and cultural factors (CDC, 2007; McCusker, 2005).

**Poor dietary patterns.** Children’s dietary patterns have changed over the years due to influences from the family and school environments, media, and community settings. Multiple studies reveal that today’s youth tend to eat foods with low nutritional value. In 2009, only 22.3% of high school students reported eating fruits and vegetables five or more times daily, not including fried potatoes and potato chips, during the past seven days (CDC, 2011). Children are consuming fewer than two cups of dairy per day, less than the three cups recommended by the USDA’s MyPyramid (Condon, Crepinsek, & Fox, 2009). Sixty percent of young people eat too much fat, and 80% drink sugar beverages on a given day. Sugar-sweetened beverages are the largest source of added
sugar in the diet and provide less satiety than solid foods. High consumption of sugar-infused drinks may lead to higher caloric intake and obesity. According to Cassazza and Ciccazzo (2006), an estimated 50% of overall calories consumed come from relatively low-nutrient-dense foods or “junk food” such as french fries, deep-fried snacks, candies, cookies, and soda. Only 39% of children ages 2–17 meet the USDA’s dietary recommendation for fiber (found primarily in beans, peas, fruits and vegetables, and whole grains). In addition, according to the Division of Adolescent and School Health under the CDC (2011), fewer than 40% of children and adolescents meet the Dietary Guidelines for Americans for saturated fat. A study showed that a high-energy-dense diet is associated with a higher risk of body fat during childhood. Children are snacking more frequently and choose “junk food” as their preference instead of healthier fare. High-fat and sugary products lead to increased caloric intake and weight gain. Portion sizes have also grown, and if given a bigger plate, children will eat the food without thought (CDC, 2007). Portion sizes have increased over time in restaurants, grocery stores, and even vending machines as well.

The poor dietary patterns of children are linked to several factors. The most influential one can be traced to the home and family environment. According to Crossman, Sullivan, and Benin (2006), parental modeling theory indicates that parents’ own behaviors are reflected onto their children’s actions. Parents have an influence on children’s weight through the beliefs and practices they teach their children. This includes the food they provide, activities they can afford, and reinforcing good and discouraging bad behaviors. Parents set the foundation for eating behaviors early on and are the role models for children. According to Crossman et al. (2006), parental obesity
puts children at greater risk for being overweight or obese as young adults. When the parents have poor dietary practices, the child likely will follow in their footsteps.

Poor food choices, eating out often, and not eating together at the table as a family can contribute to poor dietary habits and weight increase. Crossman et al. (2006) reported that children whose parents have a greater knowledge about nutrition and a more-accurate assessment of their own weight status are less likely to be overweight. Studies show that eating together as a family at the table influences the eating habits of children. Studies in the United States, Ireland, Taiwan, and Finland found that children who ate dinners with their family members ate more fruits, vegetables, and dairy foods than did children who did not dine with the family (Colker, 2005).

Making poor food choices due to money and time constraints can also be a contributing factor. Research shows that single mothers, low-income families, and those with lower levels of cognitive stimulation in the home are more prone to obesity (Covington & Cybulski, 2001). Families with little money are able to afford only foods within their means. These cheaper foods typically contain few health benefits and are convenient. Foods such as chips, canned goods, soup packages, frozen meals, and sodas become staples in the household. Parents work around the clock and have little time left to prepare a home-cooked meal, thus resorting to packaged, processed foods that are typically high in fat, sugar, and salt and offer few nutrients. These same families choose fast foods for convenience and affordability. Fast food restaurants are known to serve foods that are high in calories and fat and may well contribute to overweight and obesity (Pereira et al., 2005). It is important that the family promote and model healthy behavior
within the home environment. A supportive family framework and home dietary practices exert an influence on healthy weight that will last into adulthood.

Schools are also a setting where children have been known to eat unhealthily mainly due to the selling of foods through vending machines. Ninety percent of public schools sell competitive (commercial) foods that are not required to meet USDA nutrition standards (Harper, 2006). Where these foods are highly available, students have been shown to consume fewer fruits and vegetables. According to the CDC (2011), more than half of U.S. middle and high schools still offer sugar drinks and less-healthy foods for purchase. Also, nearly 20% of schools give students fewer than 20 minutes to eat lunch, which promotes vending machine use and increased snacking. In addition, lunch programs use commodity foods that are typically processed and include starchy vegetables such as french fries, the most frequently offered vegetables in the meals (Condon, Crepinsek, & Fox, 2009). Schools provide a perfect setting to shape children’s eating behavior and promote physical activity through education and sports. However, within the last three decades, schools have been part of the contributing factors in the increase of childhood obesity. Students have frequent access to sugar drinks and less-healthy foods at school throughout the day from vending machines and the school cafeteria and at fundraising events, school parties, and sporting events (CDC, 2011).

Food advertisements also influence children’s poor dietary practices. There is a considerable amount of marketing geared toward young audiences. Marketing designed specifically for children increased from $6.9 billion in 1992 to $15 billion in 2002 and included commercials for food (Harper, 2006). Commercials for fast foods, sugared cereals, and high-fat/calorie snacks are all designed to entice young children. Fast food
restaurants offer toys with their meals. Even in school, use of vending machines to market products promotes obesity.

**Declined physical activity.** Low activity levels of children and adolescents combined with poor eating practices contribute to the prevalence of childhood obesity. Physical activity plays an important role not only in body weight but also for blood pressure and bone strength in children. Physically active children will likely remain so throughout adolescence and possibly adulthood (CDC, 2007). Reports show that children spend less time engaged in physical activity in and out of school. Daily participation in school physical education among adolescents dropped from 42% in 1991 to 28% in 2003. In addition, fewer than one-third (28%) of high school students meet currently recommended levels of physical activity. In 2009, only 33% attended daily physical education (PE) classes. Fewer than 10% of elementary students participate in PE (Harper, 2006). According to the CDC (2011) there is a lack of daily, quality physical activity in all schools. Most adolescents fall short of the 2008 Physical Activity Guidelines for Americans recommendation of at least 60 minutes of aerobic physical activity each day. There are lowered physical education requirements, and schools cite competing academic demands and budget constraints as reasons for the decrease in PE programs (Harper, 2006). Schools suffer from financial cuts frequently, and PE programs often are the first to be eliminated or reduced.

Outside of school, children are becoming more consumed with sedentary behavior stemming from the use of multimedia diversions. According to the CDC (2011), children 8–18 years of age spend an average of 7.5 hours each day using entertainment media including television (TV), computers, video games, cell phones, and movies, with about
4.5 hours dedicated to viewing TV. Several studies have shown the positive correlation between time spent viewing television and increased prevalence of overweight in children. The long period spent on media use displaces time that can be used for physical activities more beneficial to the physical health and well-being of children and adolescents. This sedentary behavior likely reduces their metabolic rate/capacity and induces bad eating behavior and excessive energy consumption with frequent snacking and eating meals in front of the TV. In addition, it influences children to make unhealthy food choices by being exposed to food advertisements (CDC, 2007).

Socioeconomic factors also play a role in the health and well-being of the children within the community. There is a strong correlation between neighborhoods and the incidence of obesity. The County of Los Angeles Public Health (LAPH) (2007) reported a higher prevalence of obesity in cities or communities where the economic burden (higher poverty, lower educational attainment, more dependents, etc.) was more prominent. In these neighborhoods, access to physical activity and affordable and healthy foods is limited. Lack of proper care for parks, sidewalks, and bike paths prevents children from walking, biking, and enjoying sports and other activities. Half of the children in the United States do not have a park, community center, or sidewalk in their neighborhood. Some people have less access to stores and supermarkets that sell healthy foods and fresh produce, particularly in rural, minority, and lower-income neighborhoods. Supermarket access is associated with a reduced risk for obesity, according to the CDC (2011). Additionally, in the urban setting, residents are surrounded by convenient establishments including fast food restaurants and liquor stores that seldom offer fresh fruits and vegetables. Moreover, the higher crime rates make it unsafe for
children to be outdoors. According to the LAPH studies (2007), in L.A. County, there are more than four times as many fast food restaurants and convenience stores as supermarkets and produce vendors.

**2007–2009 County Obesity Prevalence Among Low-Income Children Aged 2 to 4 Years**

*Figure 2. Childhood obesity prevalence indicated by county in the United States. Adapted from the CDC, 2011.*

**Solutions.** In recent years, numerous and aggressive attempts have been made to address the issue of childhood obesity. Results of the Healthy People 2010 initiative indicated that the objectives for the weight status of adults and youth were not met and actually moved away from the target goals. The CDC (2011) reported that during the survey periods from 1988–94 to 1999–2002, the proportion of adults aged 20 years and
older at a healthy weight decreased from 42% to 33%, while the proportion of adults who were obese increased from 23% to 30%. The targets were to increase the percentage of healthy-weight American adults to 60% and decrease obese adults to 15%. The prevalence of overweight and obesity among children and adolescents aged 6 to 19 years increased from 11% to 16%, with the target goal to reduce the rate to 5%. Objectives for increased consumption of fruits and vegetables and whole grains had no apparent or minimal declining changes.

Reversing the epidemic will take a collaborative effort by all sectors of society. A continued push for changes in the home environment in regards to eating and engaging in physical activities is needed, as well as changes in programs and policies within the local, state, and federal governments. Covington and Cybulski (2001) noted that prevention of obesity must begin with parents and with healthy practices implemented in infancy. Success is dependent on educating the family in “the basics of nutrition, exercise, behavior modification, and the critical timing of prevention” (p. 73). Parents who facilitate and model healthy behaviors and demonstrate strong support will likely steer their children toward the same direction. Berg, Buechner, and Parham (2003) suggest that families should set goals for healthy eating, emphasizing portion size and recommended servings as detailed in the Dietary Guidelines and by the USDA. Parents should pay attention to both what and how children eat, include a variety of foods, create a positive environment for meals, and eat together as a family when possible. Parents should also learn and encourage responding to body signals of hunger and fullness, taking time to relax, enjoy the food, and feel satiety. In addition, as suggested by the CDC (2011), parents can limit media time for kids to no more than one to two hours of quality
programming per day, whether at home, school, or child care; engage children in preparing healthier foods; provide water instead of sugar drinks; and encourage physical activity and playtime with children.

For the state and city levels, the California Center for Public Health Advocacy and Los Angeles Public Health call on policymakers to establish comprehensive policies that support parents and communities in providing children opportunities to make healthy choices about eating and physical activity. Some of their calls include setting up healthy food and beverage standards in schools, ensuring quality physical activity standards with emphasis on duration and frequency, establishing grocery stores with fresh produce and healthy items in underserved neighborhoods, eliminating advertisement of unhealthy foods and beverages, providing health plan benefits with age-appropriate counseling and education along with physical activity programs, and making school recreational facilities available for after-hours use, particularly in areas that lack adequate, safe, and accessible parks and recreational facilities. In addition, advocates call for an improvement in community infrastructure and local scale design that should include implementing “complete streets” to provide safe and convenient roadway access for people to walk, bike, or use wheelchairs; providing financial incentives for establishing recreational facilities, grocery stores, and farmers’ markets, particularly in low-income communities; and incorporating health into local planning design with consideration to proximity of jobs, schools, recreation areas, and sidewalks (LAPH, 2007; McCusker, 2005).

Several enactments have shown promise in redirecting the prevalence of childhood obesity in the United States. In 2005, California Governor Arnold Schwarzeneggar signed laws restricting the sale of soft drinks in high schools, setting
nutritional standards for foods sold in schools, and allocating additional funds for school meal programs to serve fruits and vegetables. Beginning in 2007 for a two-year phase, the Los Angeles Unified School District (LAUSD) banned unhealthy snacks in all 720 schools in the district. Other notable efforts include how South Carolina mandated physical education from 75 minutes per week to a recommended 150 minutes per week (CDC, 2011; Harper 2006). Wechsler et al. (2004) suggested addressing physical activity and nutrition through a Coordinated School Health Program (CSHP) approach with eight components: (1) health education, (2) physical education, (3) health services, (4) nutrition services, (5) counseling, psychological and social services, (6) healthy school environment, (7) health promotion for staff, and (8) family and community involvement. These CSHPs have been embraced by education agencies in most states, including 23 state education agencies currently funded by the CDC. They emphasize health promotion for school staff as role models and the importance of implementing strategies to increase healthy eating and physical activity. Wechsler et al. (2004) also noted health education is more effective in changing behaviors when practical skills are taught and when there is more focus on helping students overcome barriers to adopting behaviors.

Possibly the most recognized and exposed attempt at addressing childhood obesity nationally is First Lady Michelle Obama’s Let’s Move! Program, an initiative “dedicated to solving the problem of obesity within a generation, so that children born today will grow up healthier and able to pursue their dreams” (Let’s Move, 2011). This is part of the first-ever Task Force on Childhood Obesity, established by President Barack Obama in 2010. The task force’s goal is to reduce the childhood obesity rate to just five
percent by year 2030. The 70 recommendations by the Task Force focus on the five pillars of the First Lady’s Let’s Move! Initiative:

1. creating a healthy start for children
2. empowering parents and caregivers
3. providing healthy food in schools
4. improving access to healthy, affordable foods
5. increasing physical activity

An updated report submitted one year after the task force’s inception indicated “significant signs of progress in communities across the nation” (Let’s Move, 2011).

Other efforts focusing on childhood obesity include HealthierUS and the Steps to a HealthierUS initiative, a cooperative program between the federal government and states, cities, and tribal societies to implement prevention efforts to reduce the burden of disease attributable to obesity, diabetes, heart disease, stroke, and asthma. Another cooperative program between the USDA and U.S. Health and Human Services collaborates with agencies and the public and private sectors to encourage youth to adopt healthy eating habits and physical activity by promoting increased consumption of fruits, vegetables, and whole grains. One framework is the 5 A Day for Better Health Program, a partnership between the fruit and vegetable industry and the federal government to implement strategies to increase fruit and vegetable consumption. A publication published by USDA, “Making It Happen: School Nutrition Success Stories,” shows how 32 schools and school districts across the country improved the nutritional quality of foods and beverages offered on campus (CDC, 2011). The National Farm to School Network works with agencies in each state and provides opportunities for nutrition
education while supporting local and regional farmers bringing local produce into the cafeteria (Farm to School, 2011). The Network for a Healthy California-LAUSD is one of thousands of programs involved within the national network to provide effective learning experiences integrating nutrition and physical activity in the classroom curricula (Healthy LAUSD, 2011).

**Importance of Cooking as Part of Nutrition Education**

Education is an integral part in behavior modification. One of the main suggestions indicated as a solution to addressing childhood obesity is implementation of nutrition education programs within schools. It is important to teach children nutrition in order for students to learn to eat healthier; this may help reduce the prevalence of obesity and related diseases in children and help prevent the risk of chronic diseases. Providing an opportunity to learn information will help children adopt skills needed to enact the learned behavior. Nutrition education at an early age can set the tone for a healthier lifestyle towards adulthood. Fifty-six percent of schools studied in the United States implemented nutrition education in classrooms, according to Anh and Kim (2007). Cassazza and Cicazzo (2006) revealed that although children have limited knowledge about healthy eating and their consumption of fruits and vegetables is low, their attitudes toward learning about healthier eating practices are favorable. Interventions that include nutrition and overall health education have the potential to improve lifestyle habits and influence the future health of adolescents.

In a review of 43 general nutrition intervention programs from 1990 to 1994, the authors concluded that a behavioral focus as well as incorporation of appropriate instruction is necessary for intervention effectiveness. An increase in knowledge does
not necessarily result in a behavior change, as determined by a study of 292 high-school adolescents: Nutrition knowledge did not differ between obese and non-obese individuals, and intakes reportedly were similar, but reinforcement and interaction can make an impact in promoting changes in children. Programs should have a behavioral focus and be relevant to the students so that they are able to integrate the information into their own lifestyle and build new skills. Emphasis on lifestyle modification and interactive practice, not just increased knowledge, are likely to offer substantial health benefits throughout the years (Cassazza & Cicazzo, 2006).

Two particular programs with an emphasis on nutrition education resulted in positive changes. Harper (2006) reported that an intervention project in North Carolina was implemented to improve heart health among third- and fourth-grade students. The eight-week program included classroom education, physical activity, and healthy food selections. At the conclusion, health knowledge and physical activity were increased. The kids in the intervention group experienced a greater loss of body fat and greater gains in aerobic strength than did the control group. The authors concluded that this type of classroom approach is “easily implemented, uses positive peer pressure, and avoids stigmatization” (p. 291). Another study intervention in the United Kingdom for ages 7–11 years in 2001–2002 discouraged soft drink consumption and promoted a balanced diet. At 12 months, the intervention group experienced a decline in carbonated drink consumption. School-based educational programs may be effective in reducing soda consumption and preventing obesity in children (Harper, 2006).

A study conducted in Korea promoted computer-based learning/nutrition education that is understandable, fun, relevant, and entertaining to the population.
Subjects indicated that dietary assessment and cooking or selecting snacks are the favorite topics (Anh & Kim, 2007). The authors indicated that programs should include sections regarding specific nutrition information reflecting their needs, sections for self-assessment of weight and eating behaviors, as well as sections providing general nutrition information. Most interesting nutrition information for fourth-through-sixth-grade students were growth in stature, diets for academic performance, adequate weight control, and cooking. Subjects liked to have activities including cooking, games, and exercise. Cooking practice, songs, role playing, activity-based learning, and nutrition education would be more effective in changing food behaviors as well as increasing nutrition knowledge (Anh & Kim, 2007). This study indicated that young children prefer cooking exercises as a way to learn about nutrition. Cooking provides an interactive method for teaching nutrition, as the participants are able to apply what they learn in their activities. In certain studies, children’s learning capacity is at the greatest level at 2–3 years. At 5–10 years old, they start to analyze what they learn and put it into practical use. Children learn more with interaction, activities, and demonstration, and this is the best method to teach behavioral modification and increase knowledge. Children develop food habits at a very young age. According to Colker (2005), having them learn about the nutritional value of foods they eat will provide them with a sense of empowerment and personal responsibility in making the right choices for their own well-being. Children who cook will be able to take pride in what they make and are more likely to try new foods. The author notes a cooking program with emphasis on safety and health will encourage children to cook safely, become more food literate, and to form healthy food patterns that will serve them well throughout life.
A cooking program entitled “Cookshop” by the Community Food Resource Center in New York City was successful and concluded that although fifth graders did not change their dietary habits, they showed a difference in food exposure and willingness to try new foods (Quinn, Horacek, & Castle, 2003). These modifications are critical first steps to changing dietary habits. Behaviorally focused intervention as opposed to knowledge-focused intervention is more effective in changing eating habits. An evaluation indicated that when cooking and eating experiences were coupled with cognitive learning, there was a decrease in plate waste of targeted foods (fruits, vegetables, and grain products). Those who were not exposed to the foods through the cooking class were unwilling to try the targeted foods. The purpose was to improve attitudes toward and increase the consumption of fruits and vegetables through the program. The lessons highlighted a different fruit or vegetable to learn about and cook. Although there were no immediate changes in intake, the children did indicate more nutrient-dense fruit and vegetable choices, could identify more nutritious foods, said that they would be willing to try new foods, and reported that they knew how to cook nutritious foods. The attitude toward fruits and vegetables improved, and initial exposure was a key to changing eating habits. According to the authors, four general factors best predict an increase in fruit and vegetable consumption: increasing availability of fruits and vegetables in the home, enhancing the preference for fruits and vegetables through exposure, increasing self-efficacy and skill for preparing fruits and vegetables, and providing concrete experiences with food (Quinn et al., 2003).

This study exposed children to new foods and indicated that the children are more likely to try them in the future. Food habit changes do not always occur immediately.
Changing dietary habits is a slow process and influenced by many factors. Although sustained dietary change did not occur during the length of this study, the first steps of change were observed. The author concluded that when introduced to nutrient-dense foods or new foods, children may require up to 10 encounters to learn to enjoy them and eat them on a regular basis. Continued nutrition education and practice are ideal so that change can be achieved through using consecutive, hands-on experience (Quinn et al., 2003).

Cooking is fun and engages hands-on practical activities that utilize the five senses. Children learn best when working with concrete materials in an interactive environment and are able to shape their perceptual skills, start asking questions, create solutions, and collect and interpret data (Friedl, 2001). Cooking provides ample opportunities to manipulate foods and create a desired outcome while piquing their interest in connecting the nutritional values of foods and curiosity in new experiences. In addition to nutrition learning, cooking provides practical skills that utilize different academic facets including math, science, history and culture, agriculture, and art and promotes motor functioning, organizational skills, and creativity in a fun and interactive way (Colker, 2005). Knowing about proper nutrition coupled with cooking applications at an early age can make a significant impact in the children’s future lifestyle by developing a healthier mentality and behavior toward eating and making food choices.
CHAPTER III

METHODOLOGY

Through the guidance of Annette Besnilian, the program director of Marilyn Magaram Center at the time, a pilot program geared towards grade-school children involving cooking and nutrition education was developed and implemented in the summer of 2007. The goal was to teach young children about basic nutrition and food science concepts and apply this knowledge to healthy eating habits that may lead to positive eating behaviors and attitudes as they grow into adolescence and adulthood. The program emphasized creating a fun and interactive environment, exposing the students to new foods, teaching them culinary skills, and allowing the students to gain an appreciation of food. The program was a new class added under the Summer Academic Program for Elementary Students (SAPESS), which offers learning experiences for grade-school students during summer and began on July 2\textsuperscript{nd} and ended on August 3\textsuperscript{rd}, 2007. There were 20 students between the ages of 7 and 11 years old enrolled in this pilot program.

Planning and Class Structure

The initial development of the program began before the summer inauguration, and the lesson plans for each day were designed and reformulated as the classes progressed. The Family and Consumer Sciences kitchen lab was used for the lectures and the cooking activities. Funding was made possible through the SAPESS department via registration/lab fees, Marilyn Magaram Center resources, and grant money provided by the Center for Innovative & Engaged Learning Opportunities (CIELO) organization—as well as sponsorship from Whole Foods Market. Funds were used to purchase school
supplies (i.e., pens, notebooks, folders, etc.), lecture materials (posters, printed literature), and junior chef uniforms for the students and chef uniforms for the staff. The majority of the food supply was graciously provided by Whole Foods Market. This author and another graduate student at the time, Rania Dabboussi, were the primary coordinators for the program and developed the lesson plans. Chef Cecilia DeCastro taught the cooking sessions and was responsible for developing most of the recipes. The staff also enlisted the help of four other CSUN students and one of Chef DeCastro’s students to assist with mainly the cooking sessions. Rania and this author taught the lecture portion, which transitioned to the cooking exercises based on the lecture topics. The 20 students were divided into groups of four for each station in the kitchen lab. The assistants were responsible for working with five students randomly picked for each station.

The parents were given consent forms to sign for their children’s participation in the cooking exercises and study, and photographs were taken during the course of the session. The parents were also asked about any allergies that the kids might have and additional needs that their children might require. Please see Appendix A for consent forms.

The goal of the class was to educate about basic nutrition and introduce food science concepts together with a cooking practicum. The plan was to use the cooking segment as a way to reinforce what was learned in the lecture. Classes were held from Monday to Friday from 10:40 a.m. to 12:30 p.m. The first portion of the class consisted of a lecture about the background of nutrients. At the time of the pilot program, MyPyramid was the USDA model for dietary guidance for all Americans. Using MyPyramid, the daily lectures were divided based on food groups indicated in the guide,
with emphasis on the number of servings, portion sizes, and types of nutrients provided. Since then the USDA has replaced MyPyramid with ChooseMyPlate in June 2011, using a plate model to simplify the image and help consumers prioritize their choices. This helps promote the messages of the updated 2010 Dietary Guidelines for Americans released on January 2011 (USDA, 2012). While the servings and portion sizes remain consistent, the major changes are the removal of the physical activity images and renaming the food groups, milk to dairy, and meat and beans to protein. The lectures included fun activities and questions at the end to reinforce the daily lesson. The second half of the class consisted of cooking practices in which the chef demonstrated techniques and introduced ingredients used in various recipes. Please refer to Appendix B for the recipes and instructions.

The lectures were delivered predominantly using PowerPoint presentations. The students were each given notebooks to make notes, work on problems, and answer questions posted in the lectures. Apart from the actual cooking exercises, the lecture activities were made to be fun and interactive and included word and picture searches, coloring, diagrams, mazes, games, physical exercises, and demonstrations. All of the worksheets and the class recipes that the students worked on were compiled and filed in folders given to the students at the end of the program.

**Five-week Curriculum**

The following is a brief summary of the topics included in the classes in order of presentation. The NCES Food N’ Fitness The Kid Connection kit was used as reference to create the lesson plans. Please refer to Appendix B for complete instructions, lessons, and activities.
**Week 1.** Day 1: Introduction and orientation to the class and the room set-up as well as rules and regulations involving the lecture and the cooking exercises.

Day 2: The importance of nutrition and introduction to MyPyramid.

Day 3: Introduction to nutrients, serving sizes, recipe reading, and measuring.

Day 4: Discussion of number of daily servings for each food group under MyPyramid and creating a well-balanced meal.

**Week 2.** Day 5: Identifying types and benefits of vegetables and working with vegetables.

Day 6: Learning about the different fruits and the nutrients they provide as well as creating recipes with fruit.

Day 7: Introduction to major vitamins and minerals and basic food science concepts.

Day 8: Discussion of the benefits of oils/fats and avoiding high consumption of fats/sweets.

Day 9: Review of vegetables, fruits, vitamins and minerals, and fats/sweets presentations.

**Week 3.** Day 10: Learning about important nutrients in milk and cooking with dairy products.

Day 11: Learning about calories and how different methods of cooking affect the number of calories in a meal.

Day 12: Introduction to Dietary Guidelines for Americans with emphasis on exercise.

Days 13 and 14: Discussion of food as it relates to history and culture.
**Week 4.** Days 15 and 16: Learning about where grains are found and their benefits to the body as well as cooking with whole-wheat flour.

Days 17 and 18: Discussion involving meats and beans as protein sources and cooking with alternative choices of protein.

Day 19: Development of the graduation menu.

**Week 5.** Days 20 to 24: Food preparation and review of lessons. Last day was the graduation mini-banquet.

The last week of the program consisted of preparing for the graduation mini-banquet in which the intention was to showcase what the children had learned to their invited guests. The banquet featured recipes that the students voted on to prepare. Please refer to the Cookbook Memoir for complete details of the whole cooking class experience.

**Evaluation**

To evaluate the effectiveness of the program, co-coordinator and graduate student Rania Dabboussi distributed a pre-assessment questionnaire to the students at the beginning of the summer session, asking about their knowledge of nutrition and healthy eating and exercise behaviors and attitudes. The same questionnaire was given as a post-test measure at the end of the program to determine any differences in their responses. This was part of Dabboussi’s thesis report in completing her M.S. degree. A feedback survey was also given to the parents to obtain their opinion of the program and how it affected their child.

The above measurements and the graduation mini-banquet in itself were forms of evaluating the effectiveness of the program. The students were also subjectively asked
what they liked and disliked about the program. In addition, the author conducted a follow-up focus group study on five of the students enrolled in the pilot class and/or registered in the two succeeding summer cooking classes. The purpose of this focus study was to follow up on a segment of the students who were enrolled in the first and/or second and third summer sessions four years after the inception of the pilot program and determine whether they had made any changes in the way they eat since taking the classes. The pre-/post-test measurements were a short-term evaluation of their knowledge and changes in their behaviors/attitudes at the time. This focus group study took into account a longer-term aspect in the effectiveness of a nutrition education/cooking class in shaping the eating habits of children as they grow older.

Five of the students who took part in the exercises are now 13; they were nine years old when they took the class(es). Three of them took the three classes consecutively, one took the second and third class, and one took the third class. The students were interviewed as a group, allowing them to have an open discussion of their experiences of taking the classes and recall the activities they engaged in and preferred. Data were recorded via notation and video recording, consents for which were requested from the subjects and their parents. The following questions were asked:

1. What did you think of the cooking class?
2. What did you learn most from the cooking class?
3. What was your favorite part of the class?
4. How did the class change the way you eat?
5. How did the class change the way you see food?
6. What types of food do you eat now?
7. What are your favorite foods to eat?

8. How many times do you cook in a week?

9. How many times do you go grocery shopping?

10. Can you name some new foods you’ve tried?

11. Can you name some foods you’ve cooked or made?

The parents were again asked, this time via e-mail, of their feedback on any changes, if any, to their children’s eating habits since taking the class(es). The following questions were asked:

1. What changes did you notice about your child regarding his/her eating habits after taking the class?

2. How do you compare their food choices before and after taking the cooking class?

3. How involved is your child in preparing meals, shopping, and choosing foods?

4. How much nutrition knowledge does your child possess at this time?

Included in the initial planning of the program was the development of a cookbook with the idea that the students were able to create their own recipes based on what they learned from the lectures and the cooking exercises. Even though they have their preferences for certain ingredients in a recipe, the children were not able to formulate their own recipes within the short timeframe of the learning they received, and they still needed much guidance and coaxing. Instead, a cookbook memoir was developed to detail the complete experience of the pilot program, The Food Adventures Workshop, and it included the focus group study update.
CHAPTER IV
RESULTS

Dabboussi (2007) reports that, overall, the participants (students) made positive changes in their nutritional knowledge, practices of healthy eating behaviors (with the exception of vegetable consumption), and attitudes toward healthy exercise behaviors. Based on the statistical significance of the pre-/post-test measurements, participants ate more fruits after participating in the program. Dabboussi (2007) also highlighted how—despite a lack of significant findings partly due to the small number of subjects and the short duration of the program—there were still some changes as a marker of the program’s effectiveness.

Focus-group interviews are a method of gathering qualitative data in researching human behaviors, attitudes, and feelings. They are useful vehicles in the health care field and may be used as part of evaluations of health promotion and nutrition intervention programs (Rabiee, 2004). The five students involved in the interview are a purposive sampling of all the students that participated in the summer cooking classes with the focus of determining changes in their dietary habits since taking the classes. The aim of the interview was to provide a comfortable setting for the participants to openly discuss their opinions about the classes, what they learned and how it affected their lifestyle and practices.

The follow-up focus group study was conducted four years after the inception of the pilot class to see whether the class(es) produced positive effects on the selected students’ dietary habits since then. The following is a summary of their responses and reactions to the interview.
Key Findings

**Opinion of the cooking class(es).** It was important to ask the subjects what they thought of the classes to see if they were satisfied with their participation and looking back if it was a good learning experience for them and for anybody who might be interested in future classes. When asked what they thought about the cooking class, the subjects all indicated they enjoyed their participation. They liked that they learned new ways of eating and learned most from the new techniques of cooking. One indicated that it was “educational, informative, and fun” and she liked “cooking from scratch” instead of from a box. One participant mentioned that she learned to follow recipes and cook more healthfully. Collectively, their favorite part of the class was eating and cooking and “being with friends while making food.” Their least favorite part of the class was the lecture portion as they all agreed it was boring for the most part and they preferred more time cooking.

**Changes in eating and food pattern/dietary practice.** The purpose of these groups of questions was to determine what kind of changes that might have occurred after taking the classes. In response to how the class changed the way they eat, four out of five said that they eat more healthfully and know “the right amount of eating.” One indicated, vaguely, portion sizes and another, the “food pyramid.” Another mentioned that she is aware of “bad” versus “good” foods. When asked how the class changed the way they see food, one subject said that she used to be picky but now is open to trying new foods.

**Food choices.** The intent for this group of questions was to determine their food selections and see if they follow recommended and healthier food choices. The types of food they eat now include meat, fish, chicken, fruits, and vegetables. One indicated that
she picks healthier choices in restaurants. For example, she would choose a salad instead of something fried. One subject indicated that she eats “everything” and enjoys desserts. Another mentioned that she “learned what’s good for my body” and would choose salad over pasta with chicken. Another mentioned fish, meat, pasta, and sushi. In response to questions about their favorite foods, one indicated ribs, broccoli, corn, pasta once in a while, and cucumbers. Another indicated meat and pasta. One said “sweets, desserts, fruits” including strawberries, cherries, bananas, and melons. Another mentioned pasta, cucumber, cantaloupe, watermelon, and chicken. Another said that her favorite are Italian and Japanese foods.

**Involvement in food selection/preparation.** The purpose of these questions was to ask if the class had impact on their involvement in making food selections and cooking practices at home. When asked how many times they cook in a week, all five students predominantly said once a week on Saturdays because of school. One subject indicated that she cooks every morning: eggs, pancakes, waffles, and smoothies. All five participants generally indicated that they go to the grocery store twice a week and help pick out foods. One mentioned that she goes to Whole Foods daily with her mother as they do not keep anything frozen.

**Trying new foods.** As part of the intention of the class(es) was to introduce new foods and flavors to the students, these set of questions were meant to determine if they’ve maintained their interest and willingness to include new and different foods in their diet and cooking practices. Collectively, some of the new foods they tried included portobello mushroom pizza, seaweed, fried rice, guava, sweet potato, jicama, kiwi, lychee, passionfruit, tofu, and tilapia. One subject said that she used to “refuse” to eat
sushi, but now she likes it, and she tried passionfruit after seeing it at a major grocery chain store. One mentioned that she likes kiwi after tasting it in class. Another indicated that her family used to eat only salmon but now likes tilapia as well. When asked to name some foods they have cooked or made, one cited “cupcakes, sushi, chicken stir-fry.” Another indicated omelets, pancakes, chicken, and tofu. One indicated that she made a dish similar to shrimp scampi with pasta, rosemary, and olive oil that has become a regular dish at the table on New Year’s. Another said that she makes bell peppers stuffed with salad. Another said that she makes brownies and once made carrot cupcakes with the recipe used in the cooking class and brought them to school. Another said that she makes salad and bowtie pasta.

**Parental Feedback**

It was important to obtain feedback from parents in order to affirm the students’ learning and their attitudes toward food and diet practices at home. Dabboussi (2007) indicated that most parents agreed that the class was a great opportunity for their children to learn about nutrition concepts and healthy cooking, and that their children enjoyed the class. The parents in general mentioned that their children were requesting to buy new fruits, vegetables, and other foods from the market and trying healthier recipes at home. Some parents really loved the idea of the class as a combination of nutrition education and cooking activities; they asked whether they could take the class with their children when it is offered next time around.

As with the parental feedback given at the conclusion of the pilot program, the follow-up feedback also revealed positive comments from the parents. This time, feedback was to determine the children’s eating habits and practices with elapsed time to
see whether the class(es) proved influential. Some of the comments included the following: the children wanted to try new and a variety of foods all the time, they would ask about the ingredients in a dish, and would be more aware and excited about eating healthier foods. The children would encourage the parents to make the recipes from class, make nutritious snacks, and try new foods and dishes at home. The children paid more attention to measuring the right amount of food, serving sizes, nutritional content, and cared about what they would eat, getting more excited about eating vegetables. For one parent, the child’s interest faded over time from the recipes, but eats fairly healthy. The children are very involved in cooking, grocery shopping, and enjoy making food selections and preparing meals. They know the food groups and the difference between healthy food and junk food, and are able to make wiser decisions. One parent stated her child asks for cookbooks for Christmas. Overall, the parents indicated their children have a better understanding of the nutritional contents of food.
CHAPTER V
DISCUSSION

Based on Dabboussi’s (2007) study, parental feedback responses at the conclusion of the pilot class and from the follow-up, as well as the subjects’ own responses from the focus group study, the Food Adventures Workshop pilot program and subsequent classes were a positive influence on the food attitudes and eating habits of the children. In the short-term pre/post-test study, the children did increase their consumption of fruits and preferences for fruits and vegetables as well as their attitudes and behaviors towards healthy eating and exercise. At the time, the students indicated they enjoyed their participation in the class and most of the parents were willing to enroll their children again if there were future classes. In the longer-term focus group study, the five students interviewed were very enthusiastic when recalling the activities they experienced in the cooking class(es). Although they needed to be prompted with the questions at times and tended to repeat each other’s responses, they were very receptive to the interview and liked sharing their opinions. All indicated that they had fun, learned new ways of eating, and generally eat healthier since taking the class(es). Some specified nutritional concepts including the “food guide pyramid” and portion sizes. What was most exciting for them was trying out new foods in the class and continuing to do so afterwards, particularly fruits such as lychee, kiwi, and the root vegetable jicama.

Some indicated that they did not like certain foods such as tofu and sushi prior to taking the class(es) but now love them. They are all involved in cooking and shopping and enjoy picking out foods and making the recipes from the class(es) such as the tofu macaroni and cheese, tofu stir-fry, sushi, and portobello mushroom pizza. When asked
about some recipes they have made since the classes and foods they like to eat, all indicated use of fruits and vegetables in their dishes and choices. All agreed it was an entertaining and educational class. They did not prefer the actual lectures but did enjoy the worksheets included in the lecture portions of the class(es).

The feedback responses from the parents of the focus group study subjects confirmed their children’s enthusiasm and developed affinity for cooking, trying out new foods, and eating healthfully. The parents indicated that their children are more aware of healthy versus unhealthy foods and tend to make wiser choices. Their children enjoy participating in cooking and shopping and are more particular about the right number of servings and the nutritional contents of food. The parents indicated that their children are more open to trying new and different foods and a wider variety of flavors. This feedback not only shows the children’s positive changes at home but also highlights the support of parents in their food practices.
CHAPTER VI

SUMMARY AND CONCLUSION

The intent of this project was to develop a curriculum for a pilot program with emphasis on nutrition education and cooking classes. The objective was to create a cooking class that included a nutrition focus in order to promote healthy eating practices among children at a young age with the hope that what they learn will encourage a healthier lifestyle in adulthood. The program was evaluated through various methods including a short-term pre-/post-test study as well as subjective feedback from parents and students and a longer-term follow-up focus group study. A cookbook memoir was also written to showcase the experiences of all that participated in the pilot program.

The issue of childhood obesity persists, as evidenced by the increasing rate of prevalence and the inability to fulfill the goals indicated in the Healthy People 2010 benchmarks. Many organizations and programs are geared towards promoting healthy eating and physical activity for young children and adolescents. Nutrition education programs are one solution with the potential to make a difference in children’s eating habits and behaviors, and what better way to learn about nutrition than from cooking. Cooking provides a fun and interactive way of learning. Since the problem of obesity stems from unhealthy and/or overeating, cooking provides a practical reinforcement in creating healthier meals to consume.

The pilot program was well received by the community and enjoyed by the students who participated. Overall, the students made positive changes in the short and long term. This implies how influential an educational and practical program such as this
is in shaping young children’s attitudes and behaviors towards healthier choices in food and a healthier lifestyle in the future.
REFERENCES


APPENDIX A

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE
THE FOOD ADVENTURES WORKSHOP PROJECT
PARENTAL INFORMED CONSENT FORM

The Food Adventures Workshop Project is funded by the Department of Education Summer Academic Program for Elementary School Students and Marilyn Magaram Center in the Family and Consumer Sciences Department. It is conducted by Arlyn Sabado and Rania Dabboussi as part of the requirements for the M.S. degree in Food Science and Nutrition and designed to teach elementary school students about nutrition and food science through lessons and cooking.

The goal of the project is to increase nutrition awareness and promote healthy eating habits within the community. The research will aim to study the effect of this nutrition education and cooking session on the students’ behavior and mentality in their food consumption and choices. This program not only tackles health issues related to children today, but offers a fun and practical method of learning the material. We are hopeful that with the success of this program, future continuation and development of more similar programs will occur to further extend to the greater community.

The program requires the students to engage in educational games which may include outdoor activities, and to engage in cooking applications. Please know that they will be exposed to potential risks as sharp, pointed objects (knives), fire/heat, food allergies, and a chance of choking. We will implement all possible precautions. The children will have adult supervision for all educational activities and cooking practices, with a coverage of 1 adult per 3 children. If any safety issues occur, such as food allergic reactions or choking, help measures will be taken immediately by trained personnel, who will always be present during the whole class period. Any cooking practice that poses a potential threat to the students will only be handled by an adult, and the food allergies you indicate for your child will be addressed.

The research study portion will entail a pre- and post-assessment of the children’s knowledge of nutrition with a questionnaire. The students will also be assigned to reflect on their daily experiences in a journal during the course of the program. This journal will be used to create a published cookbook, in which the students will create their own recipes based on what they’ve learned and include testaments of their experiences. The participants, activities, and product results will be photographed for the cookbook. Photos will only be included with consent from all parties involved. This cookbook will serve as the ultimate assessment of their learned experiences and the effectiveness of the program in providing nutrition/food science education with cooking applications.
Any information collected in this study that can be identified specifically with your child will be disclosed only with your written permission or if required by law. The cumulative results of this study will be published as thesis reports and the names or identity of the subjects will not be made known. However, the cookbook, as part of a project development that will be discussed in the report, is intended to illustrate the personalized experiences of the students which may include identification and photo of your child engaged in activities. This will only be done with your consent. All data/documentation collected by the researchers as part of this project will also be confidential.

Your child will not receive monetary compensation for participation in this study. However, there may be specific benefits inherent in the program which your child can expect as a result of participation in this study, including gaining new knowledge and learning new skills to implement in current and future life. Each child will also be provided with a copy of the published cookbook.

If you wish to voice a concern about the research, you may direct your question(s) to Research and Sponsored Projects, 18111 Nordhoff St., CSU, Northridge, CA 91330-8232, or phone 818-677-2901. If you have specific questions about the study you may contact Dr. Lydia Chowa, faculty advisor, at same address 91330-8308, or phone 818-677-4086.

You should understand that approval for your child to participate in this study is completely voluntary, and you may decline to participate or withdraw from the study at any time without jeopardy. If you so choose not to have your child partake in the study, he/she will still participate in all activities and evaluation but will not be included in any published report. Likewise, the researcher may cancel this study at any time.

Please list all known foods that your child is allergic to:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
I have read the above and understand the conditions outlined for participation in the described program and study. **Please check one.**

[ ] I give informed consent for my child to participate in the program activities and in this study.

[ ] I give informed consent for my child to participate in the program activities but not in the study.

[ ] I do not want my child to participate in the program activities and the study. (Please note that the enrolled student will only observe at this point).

Child’s PRINTED Name______________________________________________

Child’s Birth Date__________________________________________________

Parent or Legal Guardian’s PRINTED Name__________________________________________

Signed: ___________________________ Date: __________________________

(Signature of parent or legal guardian)

CSUN Researcher’s Signature: ___________________________ Date: ______________

If you have signed this form, please return in an envelope by mail to:

Dr. Lydia Chowa  
Department of Family and Consumer Sciences  
California State University, Northridge  
18111 Nordhoff Street  
Northridge, CA 91330-8308

Or give this form to your child to submit in class to Arlyn Sabado or Rania Dabboussi, CSUN graduate student educators/researchers.
As mentioned previously the cookbook, as part of a project development, will intend to illustrate the personalized experiences of the students which may include identification and photo of your child engaged in the classes’ activities. Please check one.

[ ] I give informed consent for my child to be part of the cookbook.

[ ] I do not want my child to be part of the cookbook.

Child’s PRINTED Name ________________________________

Child’s Birth Date____________

Parent or Legal Guardian’s PRINTED Name __________________________

Signed: ___________________________ Date: ______________

(Signature of parent or legal guardian)

CSUN Researcher’s Signature:________________________ Date: __________

If you have signed this form, please return in an envelope by mail to:

Dr. Lydia Chowa
Department of Family and Consumer Sciences
California State University, Northridge
18111 Nordhoff Street
Northridge, CA  91330-8308

Or give this form to your child to submit in class to Arlyn Sabado or Rania Dabboussi, CSUN graduate student educators/researchers.
You are being asked to consent for your child to participate in a research study. Participation in this study is completely voluntary. Please read the information below and ask questions about anything that you do not understand before deciding if you want to allow your child to participate. A researcher listed below will be available to answer your questions.

**RESEARCH TEAM**

**Researcher:**
Name: Arlyn P. Sabado  
Department: Food and Consumer Sciences  
Telephone Number: (818) 919-9338

**Faculty Advisor:**
Name and Title: Lydia Chowa, Dr.P.H., R.D., R.N.  
Department: Family and Consumer Sciences  
18111 Nordhoff St.  
Northridge, CA 91330-8308

**PURPOSE OF STUDY**
The purpose of this focus group study is to follow-up on the students who participated in the summer nutrition and cooking classes starting with the pilot program in 2007. The intent is to determine if the classes had any positive impact on the students’ eating habits since taking the class or classes.

**SUBJECTS**

**Inclusion Requirements**
Your child is eligible to participate in this study if he/she was registered under the SAPESS program and enrolled in the 2007 class and/or the two following summer classes thereafter.

**Time Commitment**
This study will involve approximately 1 hour of your child’s time.

**PROCEDURES**
The following procedures will occur:
The children will be grouped in a table setting and the researcher will conduct an interview session. The researcher will introduce herself and the purpose of the gathering. The researcher will ask questions to the children as a group and will allow them to respond in an open forum discussion. A video recording of their responses will take place and individual pictures will be taken after the discussion.
RISKS AND DISCOMFORTS
This study involves no more than minimal risk. There are no known harms or discomforts associated with this study beyond those encountered in normal daily life.

BENEFITS
Subject Benefits
The possible benefits your child may experience from the procedures described in this study include reinforcement of nutrition knowledge and practice to be continued at home, and maintaining positive eating habits in his/her later years.

Benefits to Others or Society
This follow-up study might prove the success of the summer cooking class as a tool in influencing children’s eating behavior and may lead to more similar programs that tackle the problem issue of childhood obesity within the local community. If the children did adopt better eating behaviors, this could prevent childhood obesity and could contribute to lowering of its prevalence. Subsequently money spent on health care costs associated with childhood obesity will be saved and can be used for more education opportunities.

COMPENSATION, COSTS AND REIMBURSEMENT
Compensation for Participation
Your child will receive a copy of the planned cookbook memoir with your child’s responses and/or picture included in the book.

CONFIDENTIALITY
Subject Identifiable Data:
All identifiable information that will be collected about your child will be removed after the cookbook memoir is created.

Data Storage
All research data will be stored on a laptop computer that is password protected. The video recordings will also be stored in a file cabinet which has a lock at the home office of the researcher; then transcribed and erased at the end of the study.

Data Access
The researcher named on the first page of this form will have access to your child’s study records. Any information derived from this research project that personally identifies your child will not be voluntarily released or disclosed without your separate consent, except as specifically required by law.

Data Retention
The researcher intends to keep the research data until the research is published and/or presented and then it will be destroyed.

IF YOU HAVE QUESTIONS
If you have any comments, concerns, or questions regarding the conduct of this research please contact the research team listed on the first page of this form.
If you are unable to reach a member of the research team listed on the first page of the form and have general questions, or you have concerns or complaints about the research study, research team, or questions about your child’s rights as a research subject, please contact Research and Sponsored Projects, 18111 Nordhoff Street, California State University, Northridge, Northridge, CA 91330-8232, or phone 818-677-2901.

VOLUNTARY PARTICIPATION STATEMENT

You should not sign this form unless you have read it and been given a copy of it to keep. Participation in this study is voluntary. Your child may refuse to answer any question or discontinue his/her involvement at any time without penalty or loss of benefits to which you and your child might otherwise be entitled. Your decision will not affect your future relationship with California State University, Northridge. Your signature below indicates that you have read the information in this consent form and have had a chance to ask any questions that you have about the study.

If your child is 9 years of age or older he/she will be provided with an assent form that explains the study in language understandable to a child. A member of the research team will also read the form to your child and answer any questions your child may have. Your child will be asked to sign the form only if he/she agrees to be in the study. If your child does not wish to be in the study he/she will not be asked to sign the form. In addition, if after signing the assent form your child changes his/her mind your child is free to discontinue his/her participation at any time.

If your child is younger than 9 years then an assent form will not be provided, but a member of the research team will explain the study to your child and ask your child whether or not he/she wishes to participate. If your child declines to participate then your child will not be included in the study. Additionally, if your child says yes and declines later your child will be withdrawn from the study at his/her request.

( ) I agree to allow my child to participate in the study.
( ) I agree to allow my child to be videotaped as part of data collection for the study.
( ) I agree to allow my child’s name ( ), photo image ( ), and age ( ) to be included in the cookbook memoir.

Subject Signature __________________________ Date __________________________
Printed Name of Subject __________________________

Researcher Signature __________________________ Date __________________________
Printed Name of Researcher __________________________
California State University, Northridge

ADOLESCENT ASSENT TO BE IN A HUMAN RESEARCH PROJECT

The Food Adventures Workshop Summer Cooking Class
Follow-Up Focus Group Study

We would like to invite you to participate in a research project. Participating in this project is your choice. Please read about the project below. Feel free to ask questions about anything that you do not understand before deciding if you want to participate. A person connected to the research will be around to answer your questions.

Informal Title of the study: Kids Eating Healthy
Formal Title: The Food Adventures Workshop Follow-Up Focus Group Study

RESEARCH TEAM
Name and Title of Researcher: Arlyn P. Sabado
Department: Food and Consumer Sciences
Telephone Number: (818) 919-9338

Name and Title of Faculty Advisor: Lydia Chow, Dr.P.H., R.D., R.N.
Department: Family and Consumer Sciences
Telephone Number: (818) 677-4086

Study Location(s): AGBU school in Canoga Park, CA

WHAT IS THIS PROJECT ABOUT?
This project is about trying to see if students who were in the summer cooking class or classes at CSUN have made any changes in the way they eat since taking the classes.

WHAT WILL HAPPEN IN THE PROJECT?
These things will happen if you want to be in the study:
You will be sitting in a table with other students that took the class also. It will be a group get-together and interview session.
You will be asked some questions about what you remember from the class and what kinds of foods you’re eating right now.
You will be recorded in a video with the whole group and your picture will be taken. If you don’t feel comfortable with this, please let me know.

BENEFITS OF THE PROJECT TO YOU AND OTHERS
This study will help to see if you made any healthy changes in the way you eat since taking the classes. If you feel you made good progress, then it will help you live a healthier life when you get older. By knowing about making the right food choices, you can teach other kids to eat healthier and try out new foods. This will help improve the health of the community as a whole.
DO YOU HAVE ANY QUESTIONS ABOUT THE PROJECT?
You can ask questions any time. You can talk to the researchers, your family or someone else in charge, before you decide if you want to participate. If you do agree to participate, you can change your mind and withdraw from the study at any time without any penalty.

If you are unable to reach a member of the research team listed on the first page of the form and have general questions, or you have concerns or complaints about the research study, research team, or questions about your rights as a research subject, please contact Research and Sponsored Projects, 18111 Nordhoff Street, California State University, Northridge, Northridge, CA 91330-8232, or phone 818-677-2901.

If you want to be in the study sign your name below.

__________________________________________________________________  ______________  __________
Signature of Child Age Date

__________________________________________________________________
Signature of Researcher Date

__________________________________________________________________  __________
Signature of Individual Obtaining Assent Date
If different from researcher
The Food Adventures Workshop: Five-Week Curriculum

by

Arlyn P. Sabado

and

Rania Dabboussi
# CSUN Summer Cooking Class

**Lesson Plan:**
Day 1 – Introduction/Orientation

**Objectives:**
1. Students will learn each other’s names and goals for the class.
2. Students will know the lesson and kitchen set-up, time schedule, rules and regulation.
3. Students will identify with at least 3 food safety and sanitation practices.
4. Students will identify with at least 2 cutting techniques.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome students and all attendants.</td>
<td><em>Pick two things from the board to tell us about yourself.</em> Introduction topics may include nicknames or pet names, cultural/ethnic background, birthplace, why they are in the class, what they want to be when they grow up, talent, hobbies, pet peeves, travel adventures, what do you like most about school, what do you like to eat, etc.</td>
<td>Write on board Board Dry-erase markers Eraser</td>
</tr>
<tr>
<td><strong>Activity (25 min):</strong> Ice-breaker Have all the educators, volunteers, and students take turns to stand up and introduce themselves. Make a list of topics on the board that everyone can talk about. Have individuals pick at least two of the topics aside from their name and their expectations of the class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lesson (25 min):</strong> Explain classroom set-up, schedule, and agenda.</td>
<td><em>The teacher assistants (TA) will be picking up the students and bringing them to class everyday.</em></td>
<td></td>
</tr>
</tbody>
</table>
| Draw names of students from a ballot randomly to assign groups. | • There will be a 15-25 min. nutrition lesson; 5-10 min. break before cooking to go to bathroom and wash hands; 1 hr. 30 min. cooking activity.  
• Lesson will take place in desk area in front.  
• Students will be divided into groups of 5 for each of the four stations with the same TA or alternating TA's for the cooking activities.  
• After cooking, all students and educators will be encouraged to eat together. We will taste and experience the food we've created as time permits.  
• Some of the foods we'll be cooking include pizza, pasta, cake, vegetables, fruits, and introduction of foods not familiar to most. | Write on board  
Papers  
Box |
|---|---|---|
| Cooking Lab (1 hr): Discuss rules and regulations. | • Remind students that if they have questions, ask their TA.  
• Direct students to where chef will teach/demonstrate before actual cooking activity.  
• Discuss washing hands for at least 20 seconds. Inform students to always wash after working with any animal products (including meats, poultry, eggs, fish), and to also wash every time they sneeze, scratch a body part, touch their hair, or hold something dirty with their hands.  
• Discuss use of colored cutting boards and plastic knives and scissors in this kitchen.  
• Inform students that if they get a cut to inform their TA.  
• Using chef's knife and cutting gadgets to show different forms.  
• Students will practice cutting using plastic knives and scissors.  
• Veggie chips (yams, beets, parsnips, rutabaga, potato, carrots, radish) | Use poster board and/or powerpoint presentation.  
Poster board  
Markers  
Computer  
Projector |
| Demonstration by chef: Basic cutting techniques | Menu: | Kitchen knives – variety  
Mandolin  
Lettuce knives  
Cutting boards  
Scissors  
Baking Sheets |
**Our Safety Rules**

**Personal Hygiene Rules**
- Wear only close-toed and non-slip shoes
- Keep your nails short and clean
- Keep your hair pulled back or use a cap
- Jewelry are not allowed in the kitchen

**Kitchen Rules**
- Do not touch anything in the kitchen until your instructor asks you to
- No running or horseplay in the kitchen
- Always wash hands first before cooking
- Always wash hands after working with animal products and after touching any of your body parts or something dirty

**Knives Rules**
- Do not pick up knives until you are asked to do so
- Use knives only on cutting boards
- Knives will stay on tables before and after you use them
- Always clean or change knives after cutting meat, poultry, or fish

**Kitchen Rules cont...**
- Always place a towel under the cutting board
- Always use the right cutting board for the food you’re cutting (meat, poultry, fruits and vegetables, fish)
- Always place scraps in a separate container
- Always clean tables with soapy water and clean towel

**If you’re not sure about something, always ask your TA!**

Anyone who does not follow the rules will have a time out.
Veggie Chips

Ingredients:
Yams
Beets
Rutabaga
Turnip
Parsnips
Potatoes
Carrots
Canola oil spray
Salt (optional)

Directions:
1. Preheat oven to 300°F.
2. Slice vegetables as thinly as possible. (A mandolin with safety guard may be used for best results). Potatoes may be cut into waffle decorations with the mandolin.
4. Place in oven for 20 minutes. Check to see if “chips” are crispy. If slices are thicker, may need additional cooking time of 10-20 minutes and/or may need to lower temperature to 270°F.
5. Sprinkle salt if desired.
# CSUN Summer Cooking Class

**Lesson Plan:**
Day 2 – Importance of Nutrition and MyPyramid Basics

**Objectives:**
1. Students will learn the concept of nutrition, food science, and culinary arts.
2. Students will learn the importance of nutrition.
3. Students will identify the six food groups indicated in MyPyramid.
4. Students will identify at least one food item in each food group.

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<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
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</tr>
</thead>
</table>
| Ask 5 random students what they learned from yesterday. Distribute pre-test (15 min) | Topics:  
- What is nutrition?  
- What is food science?  
- What is culinary arts?  
- Why learn nutrition?  
- Briefly describe effects of poor nutrition showing pictures. *This is what can happen if we don’t eat healthy.*  
*We’ll be using this pyramid as our guide to learn more about nutrition.* Discuss the food groups in the pyramid and samples of food that may be included in each group. Ask students to give examples. | Powerpoint presentation  
Computer  
Projector  
MyPyramid poster  
MyPyramid handouts |

**Lesson (30 min):**
Discuss nutrition focus within our cooking. Introduce definition of nutrition, food science, and culinary arts.

Display a poster of MyPyramid and pass the handout to each student.
| **Cooking Lab (1 hr 10 min):** Game: “Fascinating Factor” | 5 students at a time are seated in the front table. Every student in each group will take turns to be blindfolded and “experience” a food item. The students will be encouraged to describe the food through sensory evaluation (using all four senses). They will guess what that food item is and where it belongs in MyPyramid. TA’s will write their description on a table format on the board based on feel, sight, smell, and taste, and what their guess of the item is and what pyramid group it belongs in. The students in the audience will describe what it looks like out loud, including the color. Each student is given about 3 minutes to guess the item and where it belongs in the pyramid and the audience are asked to see if it’s correct. |
| **Menu:** The foods are prepared ahead of time by TA’s and placed in small plates. The students are assisted with feeding as needed. | **Blindfold masks** **Small paper plates** **Paper cups** **Paper bowls** **Plastic spoons and forks** **Cutting boards** **Saucer pans** |
| **Homework:** “Pyramid Picking Activity” | From the diagram, pick which items belong in the appropriate group. | “Pyramid Picking Activity” handouts |
• Nutrition is all about the study of food and how our bodies use food as fuel for growth and daily activities.

Nutrition Matters

• Food science looks at the nature and what's inside the food and how they work together and with outside forces to create a result or different product.

For example, cooking turns red meat to brown.

• Culinary Arts — study of cooking

Why Learn Nutrition?

• Proper nutrition creates healthier body, growth, and aging.

• Healthful food promotes achievement — kids who eat well perform better in their physical and mental activities

• Prevent diseases and poor nutrition
**Tips for Families**

**Eat Right**

1. **Make half your grains whole.** Choose whole-grain foods, such as whole-wheat bread, oatmeal, brown rice, and lowfat popcorn, more often.

2. **Vary your veggies.** Go dark green and orange with your vegetables—eat spinach, broccoli, carrots, and sweet potatoes.

3. **Focus on fruits.** Eat them at meals, and at snack time, too. Choose fresh, frozen, canned, or dried, and go easy on the fruit juice.

4. **Get your calcium-rich foods.** To build strong bones, serve lowfat and fat-free milk and other milk products several times a day.

5. **Go lean with protein.** Eat lean or lowfat meat, chicken, turkey, and fish. Also, change your tune with more dry beans and peas. Add chick peas, nuts, or seeds to a salad; pinto beans to a burrito; or kidney beans to soup.

6. **Change your oil.** We all need oil. Get yours from fish, nuts, and liquid oils such as corn, soybean, canola, and olive oil.

7. **Don’t sugarcoat it.** Choose foods and beverages that do not have sugar and caloric sweeteners as one of the first ingredients. Added sugars contribute calories with few, if any, nutrients.

**Exercise**

1. **Set a good example.** Be physically active and get your family to join you. Have fun together. Play with the kids or pets. Go for a walk, tumble in the leaves, or play catch.

2. **Take the President’s Challenge as a family.** Track your individual physical activities together and earn awards for active lifestyles at www.presidentchallenge.org.

3. **Establish a routine.** Set aside time each day as activity time—walk, jog, skate, cycle, or swim. Adults need at least 30 minutes of physical activity most days of the week; children 60 minutes every day or most days.

4. **Have an activity party.** Make the next birthday party centered on physical activity. Try backyard Olympics, or relay races. Have a bowling or skating party.

5. **Set up a home gym.** Use household items, such as canned foods, as weights. Stairs can substitute for stair machines.

6. **Move it!** Instead of sitting through TV commercials, get up and move. When you talk on the phone, lift weights or walk around. Remember to limit TV watching and computer time.

7. **Give activity gifts.** Give gifts that encourage physical activity—active games or sporting equipment.

**Have fun!**
Game: "Fascinating Factor"

Describe each food item to be experienced. How does it feel? How does it smell? What
does it taste like? Ask the audience how the item looks like. What do you think it is?
Where does it belong in MyPyramid?

<table>
<thead>
<tr>
<th>Name of student</th>
<th>Touch</th>
<th>Smell</th>
<th>Taste</th>
<th>See</th>
<th>What is it?</th>
<th>Where in the pyramid?</th>
</tr>
</thead>
</table>

Menu:

*Familiar foods*  *Exotic foods*

- non-fat plain yogurt  - pepper jack cheese
- green tea frozen yogurt  - tuna (canned)
- turkey deli  - edamame
- mango  - gaya melon
- pan de sal  - tamarind
- grape tomato  - cactus pear
- purple yam  - arugula
- broccoli  - sweet rice pop cracker
- radicchio  - oatmeal - cooked
  - artichoke
  - avocado
Pyramid Picking Activity

Instructions:
Circle the foods that belong in each food group.

Grains
For energy and healthy digestion

Vegetables
For healthy skin and eyes

Fruits
For healing wounds and a healthy immune system

Oils
A little goes a long way

Milk
For strong bones and teeth

Meat & Beans
For building healthy muscles

Name

Date
# CSUN Summer Cooking Class

**Lesson Plan:** Day 3 – MyPyramid Basics continued/Recipe and Measurement  
**Objectives:**  
1. Students will identify common food serving sizes from all food groups of MyPyramid.  
2. Students will measure portion sizes from all food groups.  
3. Students will learn to read a recipe and measure ingredients.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| Collect “Pyramid Picking Activity” homework from previous lesson.       | **Topics:**  
  - What are nutrients?  
  - 6 basic nutrients  

  *It’s important to know how much we’re eating so we can avoid eating too much and not eating enough. A good way is to measure what we eat.*  
  Discuss what the common food serving sizes look like.  
  - 1 cup, ½ cup, 1 oz., 3 oz. meat  
  Have students follow the drawings on the handout using hand gestures. *If you don’t have something to measure with, you can look at your hands or imagine…*  
  - CD case = 1 oz. slice of bread  
  - tennis ball = 1 serving of whole fruit  
  - box of crayons – 3 oz. serving of chicken  
  - die – 1 oz. cube of hard cheese | Powerpoint presentation  
  Computer  
  Projector  
  Notebook, pencils  

  Portion size handout  
  Food models, measuring cups  
  CD case, tennis ball, box of crayons, die  
  Write on board.  
  Board  
  Dry-erase markers  
  Eraser |
| Method of evaluation: Review questions | 1. What does a “fist” equal to?  
2. What is a serving of a cheese?  
3. What is a serving of a meat? | Notebooks, folders  
Pencils |
|----------------------------------------|--------------------------------------------------|-----------------|
| **Cooking Lab (1hr 20 min):**  
Reading a recipe and measuring techniques.  
Have TA’s handle slicing of chicken breasts. | The students create a chicken sandwich and start using a recipe. Each group makes two sandwiches. Have each student pick out a topping of choice. They must follow the given measurements before “shuffling” or assembling the ingredients to make a sandwich. After making the sandwich, the students will measure their own juice to drink. Ask students how many servings from each food group they have made. | Aprons  
Cutting boards  
Knives  
Lettuce knives  
Serving plates  
Paper plates  
Baking sheets  
Parchment paper  
Saucepans  
Grill/griddle  
Biscuit cutter |
| Demonstration by chef: | • 4 ways of cooking chicken  
  ○ en papillote, poached, grilled (healthier version)  
  ○ deep-fried (non-healthy version) to compare  
• Portioning by trimming the top and bottom of the bun to weigh 1 oz. each | |
| Menu: | “Deck of Cards” Sandwich  
1 Hamburger bun (2 oz. total top and bottom)  
3 oz. Grilled chicken breast  
Choice of toppings:  
1 cup veggies  
1 oz. cheese  
½ cup fruit  
½ - 1 tsp. condiment  
100% apple juice | |
What are nutrients?

- Substances found in foods or supplement pills
- give energy – to do activities
- makes us grow
- give structure – such as our bones
- provide maintenance – keeps our body system going
- helps us to repair – from a cut or injury (broken arm)

6 basic nutrients

- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Water

6 Basic Nutrients

- **C**arbohydrates
- **F**ats
- **P**roteins
- **V**itamins
- **M**inerals
- **W**ater
Portion Sizes and School-Age Children

Serving Sizes Are in Your Hand

A fist or cupped hand = 1 cup

1 serving = ½ cup cereal, cooked pasta or rice
or 1 cup of raw, leafy green vegetables
or ½ cup of cooked or raw, chopped vegetables or fruit

Palm = 3 oz. of meat
Two servings, or 6 oz., of lean meat (poultry, fish, shellfish, beef) should be a part of a daily diet. Measure the right amount with your palm. One palm size portion equals 3 oz., or one serving.

A thumb = 1 oz. of cheese
Consuming low-fat cheese is a good way to help you meet the required servings from the milk, yogurt and cheese group. 1 ½ - 2 oz. of low-fat cheese counts as 1 of the 2-3 daily recommended servings.

Thumb tip = 1 teaspoon
Keep high-fat foods, such as peanut butter and mayonnaise, at a minimum by measuring the serving with your thumb. One teaspoon is equal to the end of your thumb, from the knuckle up. Three teaspoons equals 1 tablespoon.

Handful = 1-2 oz. of snack food
Snacking can add up. Remember, 1 handful equals 1 oz. of nuts and small candies. For chips and pretzels, 2 handfuls equals 1 oz.

1 tennis ball = 1 serving of fruit
Healthy diets include 2-4 servings of fruit a day.

Because hand sizes vary, compare your fist size to an actual measuring cup.
"Deck of Cards" Chicken Sandwich
Cooked in three methods

Ingredients:
3-4 oz. chicken breast
Choice of herbs and seasonings:
Fresh rosemary
Basil
Cilantro
Parsley
Salt
Thyme
Dried Oregano
Lemon
Pepper
Chives

1 (2 oz. total) whole wheat hamburger bun

Choice of toppings:
1 cup veggies, 1 oz. or 1 slice cheese, ½ cup fruit, ½ - 1 tsp. condiment
Romaine lettuce
Tomatoes
Grilled eggplant slices
Grilled red bell pepper slices
Grilled onion slices
Low-fat Swiss cheese
Pineapple slices
Avocado
Teriyaki sauce
Barbecue sauce
Lite mayo
Salsa
Hummus
Mustard
Ketchup

Directions:
Cut chicken breast to about the size of a deck of cards (3-4 oz). Place chicken in a “Ziploc” bag. Pound the breast using a mallet or heavy pan and make sure the breast has same thickness all around to ensure even cooking. Season with salt and pepper.

Method 1: Grilled
Chop fresh herbs finely. Sprinkle either dried or fresh herbs and/or squeeze of lemon. Using grilling pan or outside grill, spray with canola oil and cook chicken for 2 minutes. Turn same side counterclockwise to 10 o’clock placement to get grilled marks and cook for another 2 minutes. Flip chicken and cook for another 2 minutes. Using grilling machine, cook 3 minutes first, then turn to 10 o’clock position, and cook for another 3 minutes. (See back)
Method 2: En Papilllon—steamed in parchment paper
Preheat oven to 350° F. Cut a large piece of parchment paper into a circle the size of large serving plate. Fold in half and place onto a baking sheet. Place chicken breast on ⅛ of the parchment paper. Place a lemon slice and a whole herb of choice. Fold the other half of the parchment paper over and seal tightly by folding creases. Bake for 10 minutes or until paper pops up. Open paper using scissors or knife and be careful to let the steam out. Do not put face directly on top.

Method 3: Poached
Heat ready-made chicken stock or broth in a quart size pot, or dissolve 1 bouillon cube into 2 cups of water. Place whole or chopped herbs and let simmer in low heat. Add chicken breast and cook for 6 minutes.

To grill vegetables and fruit
Slice large eggplant onion across the width. Slice red bell pepper into quarters. Use one can of pineapple slices drained. Spray grilling pan or machine lightly with canola oil and grill for 3 minutes.

Southwest flavor:
Romaine lettuce
Tomatoes
Low fat Swiss cheese
Avocado
Salsa

Mediterranean flavor:
Romaine lettuce
Tomatoes
Low fat Swiss cheese
Grilled pepper and eggplant
Hummus

Hawaiian/Asian flavor:
Romaine lettuce
Tomatoes
Low-fat Swiss cheese
Pineapple slice
Teriyaki sauce

Western flavor:
Romaine lettuce
Tomatoes
Grilled onions
Cheddar cheese
Barbecue sauce
# CSUN Summer Cooking Class

**Lesson Plan:** Day 4 – Portion size and Meal Pattern/Complete well-balanced meals

**Objectives:**
1. Students will create a well-balanced meal with emphasis on variety, balance, and moderation from the food groups in MyPyramid.
2. Students will identify when and how much to eat utilizing a schedule and a scale.

<table>
<thead>
<tr>
<th>METHODS</th>
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</thead>
<tbody>
<tr>
<td><strong>Lesson (30 min):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended servings/day.</td>
<td>• Discuss how much of each food group is recommended for the day.</td>
<td>MyPyramid poster</td>
</tr>
<tr>
<td>Have students follow with</td>
<td>o Breads/cereals – 6 oz</td>
<td>MyPyramid handouts</td>
</tr>
<tr>
<td>the pyramid handout and</td>
<td>o Vegetables – 2 ½ cups</td>
<td>Board</td>
</tr>
<tr>
<td>guide with the poster.</td>
<td>o Fruits – 1 ½ cups</td>
<td>Dry-erase markers, eraser</td>
</tr>
<tr>
<td>Write amounts on the board</td>
<td>o Dairy – 3 cups/3 servings</td>
<td>Use of food and non-food</td>
</tr>
<tr>
<td>and have students write</td>
<td>o Meat and Beans – 5 oz</td>
<td>models</td>
</tr>
<tr>
<td>them down on their handout.</td>
<td>o Oils/sugars – very little</td>
<td></td>
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<tr>
<td>Remind students of the</td>
<td></td>
<td></td>
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<tr>
<td>serving sizes from yesterday.</td>
<td></td>
<td></td>
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<tr>
<td>Math problem</td>
<td>• Have students do addition/subtraction practice using above measurements.</td>
<td></td>
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<tr>
<td></td>
<td>o For example: How many ½ cups make up 2 ½ cups?</td>
<td></td>
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<tr>
<td></td>
<td>If you eat 3 oz. meat and you need 5 oz. for the day, how much more meat do</td>
<td></td>
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<tr>
<td></td>
<td>you need?</td>
<td></td>
</tr>
<tr>
<td>Have students follow with</td>
<td>• Discuss meal pattern with emphasis on variety, balance (throughout the day),</td>
<td>Use place mat drawings</td>
</tr>
<tr>
<td>place mat.</td>
<td>and moderation following MyPyramid.</td>
<td></td>
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<tr>
<td></td>
<td>• How much you eat is up to your body. This is the recommended amount you</td>
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<tr>
<td></td>
<td>should be eating but sometimes you may need to eat a little bit more because</td>
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<tr>
<td></td>
<td>you are active for fuel and energy.</td>
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<tr>
<td></td>
<td>• The best way to know how much to eat is to listen to your body. Eat only</td>
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<tr>
<td></td>
<td>when you are hungry, not because you're bored or sad or upset and eat only</td>
<td></td>
</tr>
<tr>
<td></td>
<td>until</td>
<td></td>
</tr>
</tbody>
</table>
**your body feels comfortably full. Not overstuffed.** Show students level of hunger/fullness using a scale and explain where on the scale they should start and stop eating.

<table>
<thead>
<tr>
<th>Starving!</th>
<th>My stomach feels empty.</th>
<th>I feel just right – not too hungry or too full.</th>
<th>I'm feeling too full.</th>
<th>I ate way too much! I don't feel so well.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

- Discuss recommended meal scheduling.
  - 6-8 small meals a day to replenish energy and blood sugar or
  - breakfast, snack, lunch, snack, dinner
  - last eating should not be less than 3 hours before going to sleep

**Cooking Lab (1 hr 15 min):**
Each student will make one complete breakfast meal using a variety of choices from MyPyramid food groups to create a well-balanced meal. Each will make an egg omelet with their choice of fillings. At the end of the cooking session, the class will observe prepared complete lunch, dinner, and two snacks set-up to showcase variety, moderate portions, and the balance of foods throughout the day.

**Demonstration by chef:**
- 3 omelet methods: regular, Spanish, French
- Preparation of a complete lunch, dinner, and snack.

**Menu:**
- Junior's omelet
- Choice of fillings:
  - Spinach, onions, tomato, mushroom, bell peppers, lowfat shredded cheese, cilantro, basil, parsley, salsa, avocado
- Blueberry waffle with maple syrup and fresh apple slices and blueberries
- Milk

<table>
<thead>
<tr>
<th>Aprons</th>
<th>Small paper plates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paper cups</td>
<td>Plastic forks and knives</td>
</tr>
<tr>
<td>Cutting boards</td>
<td>Lettuce knives</td>
</tr>
<tr>
<td>Small fry pans</td>
<td>Mixing bowls</td>
</tr>
<tr>
<td>Forks</td>
<td>Waffle maker</td>
</tr>
<tr>
<td>Serving plates</td>
<td></td>
</tr>
</tbody>
</table>
Junior’s Omelet

Ingredients:
1 egg
1 egg white
Dash of salt and pepper

Choice of fillings:
Herbs: cilantro, parsley, rosemary, oregano, thyme
Bell peppers - assorted colors, diced
1 oz. nonfat cheddar cheese, grated
Green onion, diced
Mushroom, sliced
Spinach leaves
Tomato, diced
Onion, diced

Regular omelet version: beat egg and egg white using a fork until slightly bubbly. Add salt and pepper. Add choice of fillings. Spray canola oil onto small fry pan. Pour omelet mixture and let cook for 2 minutes. Fold one half over the other and serve.

Spanish omelet version: separate egg whites from the yolk. Whisk egg whites until foamy. Add the yolk and pour on fry pan. Add fillings. Cook for 2 minutes. Fold one half over the other and serve.

French omelet version: mix all ingredients and pour onto fry pan. Fold over one-third and the other one-third to create a roll and serve.

For a well-balanced breakfast, complete with choice of 1 oz. or ½ cup serving of grain, ½ cup serving of fruit, 1 cup dairy (optional). Example: Serve omelet with ½ blueberry waffle with blueberry compote, ½ cup orange juice, 1 cup milk.
# CSUN Summer Cooking Class

**Lesson Plan:** Day 5 – Vegetables  
**Objectives:**  
1. Students will be able to identify the different parts of the plant.  
2. Students will be able to state 2 examples of vegetables that come from different parts of the plant.  
3. Students will be able to identify 2 benefits of vegetables.  
4. Students will learn to work with a variety of vegetables in the kitchen.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| Lesson (15 min): Have students take notes. | • Using the “Vibrant Vegetables” presentation the following will be discussed  
  o Plant parts  
  o Different types of vegetables from the different parts of the plant  
  o Health benefits of vegetables  
  o How much vegetables we need every day  
  - Demonstrate measurement of different vegetables  
  • Ask each student to pick their favorite color from the following and come up with a vegetable for that color:  
  o **Red**: Tomatoes, red peppers, beets, radish, red onions, red potatoes, rhubarb  
  o **Orange/Yellow**: acorn squash, butternut squash, sweet potatoes, pumpkin, orange and yellow tomatoes, corn, yellow summer squash, yellow winter squash, carrots, orange and yellow pepper  
  o **White**: onions, cauliflower, mushrooms, garlic, jicama, white potatoes, parsnips, turnips  
  o **Green**: broccoli, spinach, green leafy lettuce, romaine lettuce, turnip green, mustard green, boy choy, green peppers, green peas, green beans, celery, snow peas, asparagus, okra, zucchini, green cabbage, green onions  
  o **Blue/Purple**: eggplant, turnips, purple cauliflower, purple cabbage | Powerpoint presentation  
Computer  
Projector  
Food models  

| Activity (5 min): Have students write down in their notebooks and allow them to share out loud. | | Board  
Dry-erase markers  
Eraser  
Notebooks, pencils |
<table>
<thead>
<tr>
<th>Method of Evaluation:</th>
<th>• Review questions from Powerpoint presentation. Prompt questions during lecture.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cooking Lab (1 hr 25 min):</strong></td>
<td>Have each station group create a vegetable platter and whichever is the most creative will win a prize.</td>
</tr>
</tbody>
</table>
| **Demonstration by chef:** | • Cutting of vegetables  
• Mixing of dips  
• Garnishing |
| **Menu:** | Crudite – choice of vegetables  
Four different dips  
• Yogurt and mint  
• Hummus  
• Roasted pepper mayo  
• Baba ghanoush |
|                       | Aprons  
Small paper plates  
Paper cups  
Plastic forks and knives  
Cutting boards  
Lettuce knives  
Mixing bowls  
Mixing spoons  
Blender  
Serving platters |
Edible Vegetable

- Vegetables grow in the USA
- They can be eaten raw or cooked
- They are part of plants you can eat:
  - Flower
  - Leaves
  - Roots
  - Seeds
  - Stems
  - Tubers
  - And Bulbs

**STRUCTURE OF A PLANT**

- Flower
- True
- Seed
- Leaf
- Stem

**FLOWER**

**VEGETABLES - INFLORESCENT**

- Artichoke
- Broccoli
- Cauliflower

**VEGETABLES - LEAF**

- Spinach
- Broccoli
- Cabbage

**VEGETABLES - ROOT**

- Radish
- Turnip
- Carrot
- Horseradish
- We should eat veggies every day
- They come in different colors

**Benefits of Vegetables (1)**
- Keep our body healthy
- They have lots of nutrients:
  - Vitamins (A, C, and E)
  - Minerals (Potassium and Calcium)
  - Phytochemicals (substances in foods that help protect us against diseases)
Benefits of Vegetables (2)

- They give our body fiber, which is important for healthy digestion

How much do we need?

2 1/2 cups per day

Vary Your Veggies

- Red
- Orange/yellow
- White
- Green
- Blue/purple

Review

- What are the 3 benefits of vegetables?
- How much vegetables should we eat per day?
Hummus dip

Ingredients:
2 cups dry chickpeas (to be rinsed and drained before use) soaked in water
and ½ tsp. bicarbonate of soda overnight
3 cloves of garlic crushed
½ cup tahini (sesame seeds paste)
¼ cup lemon juice
Salt & pepper

Directions:
Drain the chick peas and rinse well, then put in a saucepan with plenty of
water and cook over high heat till it starts boiling, then lower the heat and
simmer covered for about one and a half hours, or until the chick peas are
soft to the touch, alternatively, use tinned chick peas (2 tins of 445g each).
Drain the cooked chickpeas and put in a food processor with all other
ingredients till they become a soft paste. Empty in a flat dish and decorate
with some parsley leaves and drizzle with good quality olive oil. Serve with
warm pitta bread.
Minted Cucumber and Yogurt Dip

Ingredients:
1/2 pound yogurt
2 cucumbers
2 tsp. dried mint leaves (crushed)
salt to taste
2 cloves garlic, crushed (optional)

Directions:
Pour yogurt, dried mint, salt & garlic into a big bowl and mix. Skin the cucumber and cut into small (1/8 inch) squares. Mix cucumber into the yogurt.

Variations: mix walnuts and/or golden raisins in with the cucumbers.
Baba Ghanough (Eggplant dip)

Ingredients:
2 big aubergines (eggplants)
2 tbsp tahini (sesame paste)
2 tbsp lemon juice
2 tbsp yogurt
1 garlic crushed (optional)
Salt & pepper

Directions:
Make a slit in the skin of the aubergine and place under a hot grill for a few minutes on each side or until the skin blackens on all sides. Leave it to cool down, then peel the off skin, wash with cold water and put in a colander for a few minutes to get rid of all excess liquid. Put the aubergines and the other ingredients in a food processor to make into a dip, or crush the aubergines with a potato masher and mix with the other ingredients to get a rough mix. Serve cold topped with some olive oil and chopped parsley or fresh basil.
## CSUN Summer Cooking Class

### Lesson Plan:
Day 6 – Fruits

### Objectives:
1. Students will identify 2 benefits of fruits.
2. Students will learn to read the nutrition label and determine the percent juice contained in a fruit juice.
3. Students will learn the meaning of 100% juice.
4. Students will be able to graph the % juice contained on 3 or more types of fruit juice.
5. Students will learn to work with a variety of fruits in the kitchen.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lesson (10 min):</strong></td>
<td>• Using the “Fantastic Fruits” presentation the following will be discussed</td>
<td>Powerpoint presentation</td>
</tr>
<tr>
<td>Have students take notes and</td>
<td>o Fruit rainbow (red, orange/yellow, green, blue/purple, white)</td>
<td>Computer</td>
</tr>
<tr>
<td>allow them to share out loud.</td>
<td>o Benefits of fruits</td>
<td>Projector</td>
</tr>
<tr>
<td></td>
<td>o How much do we need per day?</td>
<td>Food models</td>
</tr>
<tr>
<td></td>
<td>- Demonstrate measurement of different fruits</td>
<td>Notebooks, pencils</td>
</tr>
<tr>
<td><strong>Activity (10 min):</strong></td>
<td>• Show students where to look for “% juice” in a container. Have students</td>
<td>Juice containers - variety</td>
</tr>
<tr>
<td>Give a fruit juice container</td>
<td>look at how much fruit juice is in each container. Explain that 100% is like</td>
<td>Transparencies</td>
</tr>
<tr>
<td>to each student in the class</td>
<td>the whole fruit and if something is not 100%, then it is not the whole fruit.</td>
<td>Projector</td>
</tr>
<tr>
<td>to look at. Provide Juice</td>
<td>• Have students identify different % of juices using the work sheet and</td>
<td>Marker</td>
</tr>
<tr>
<td>Activity worksheet. Have them</td>
<td>graphing them. Ask them to write down name of juice and use the crayons to</td>
<td>Boxes of crayons</td>
</tr>
<tr>
<td>switch containers until</td>
<td>color in how much juice is in each container.</td>
<td></td>
</tr>
<tr>
<td>worksheet is filled.</td>
<td>• Review questions from Powerpoint presentation. Prompt questions during</td>
<td></td>
</tr>
<tr>
<td><strong>Method of Evaluation:</strong></td>
<td>lecture.</td>
<td></td>
</tr>
</tbody>
</table>
| Cooking Lab (1 hr 25 min): | Aprons  
Small paper plates  
Paper bowls  
Plastic forks  
Cutting boards  
Lettuce knives  
Skewers  
Mixing spoons  
Blender  
Serving plate |
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>Demonstration by chef:</td>
<td>The students will work with a variety of fruits and will learn different ways to cut for decorations.</td>
</tr>
</tbody>
</table>
|                           | • Fruit-cutting techniques  
• Garnishing  
• Raite – Spiced yogurt dip |
| Menu:                     | Fruit kebabs with Raite  
Fruit smoothies |
|                           |
Edible fruit

- They can be eaten fresh, frozen, or canned
- They taste great because they are naturally sweet
- Best to eat the whole fruit with the skin on to get most of the fiber

- We should eat fruits everyday
- They come in different colors

Focus on fruits

- Red
- Orange/yellow
- White
- Green
- Blue/purple

Benefits of fruits (1)

- Fruits provide the body with nutrients like:
  - Carbohydrates
  - Vitamins (A, C, and B)
  - Minerals (potassium)
  - And lots of fiber, which is important for healthy digestion
Benefits of fruits (2)

• Keep us from getting sick in the first place or at least we get well faster.

• Reduce the risk of health diseases and other diseases later in life

How much do we need?

2 cups per day

Juice Activity

• Worksheet
• Make groups of 3
• Hand out juice container with different juice %

Review

• What is are the benefits of fruits?
• How much fruits should we eat per day?
• What is the best way to eat the fruit?
Is It Fruit?

Juice name

_____ % fruit

Is it fruit? _____yes _____no

Juice name

_____ % fruit

Is it fruit? _____yes _____no

Juice name

_____ % fruit

Is it fruit? _____yes _____no
Fruit Kabobs

Ingredients:
- Raspberries
- Strawberries
- Blueberries
- Blackberries
- Bananas
- Mango
- Pineapple
- Watermelon
- Cantaloupe
- Honeydew
- Grapes
- Pears
- Cherries
- Apples

Directions:
Cut up all the fruits into chunks; place on skewers, and serve with low-fat vanilla yogurt.
Fruit Smoothies

Ingredients:
- ½ cup fat free vanilla ice cream or frozen yogurt
- ¼ cup 1% milk
- ½ cup ice

Choices of fillings:
- Raspberries
- Strawberries
- Blueberries
- Blackberries
- Bananas
- Mango
- Pineapple

Directions:
Cut up all the fruits into chunks; place all ingredients in a blender, pour and serve.
# CSUN Summer Cooking Class

**Lesson Plan:** Day 7 - Vitamins and Minerals/Basic Food Science  
**Objectives:**  
1. Students will name at least 2 vitamins and/or minerals.  
2. Students will identify at least 2 benefits of vitamins and minerals.  
3. Students will identify at least 2 fruits and/or vegetables that are rich in vitamins (specifically: A, C, and K).  
4. Students will identify at least 2 fruits and/or vegetables that are rich in minerals (specifically: calcium, potassium, and iron).  
5. Students will learn 3 basic food science concepts.  
6. Students will make at least 3 different types of salads.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| **Lesson (10 min):**  
Have students take notes.  
Activity (15 min):  
Food Science experiments.  
Have students assist with preparation.  
Let experiments sit and have students observe results at the end of class. | - Using the “Vitamins and Minerals” presentation, the following will be discussed:  
  ○ Different types of vitamins and their benefits  
  ○ Different types of minerals and their benefits  
  ○ Different fruits and vegetables that are high in a specific vitamin and/or mineral  
- Using “Food Science 101” presentation, demonstrate the following food science concepts:  
  ○ Acid/base (pH of food) using red cabbage. Colors and textures (or feel) of fruits and vegetables are affected by acid and base.  
    - one container mix with baking soda and another mix with vinegar. Both are heated and let cool to see effects.  
  ○ Enzymatic browning using apples. Oxygen from air affects fruits and vegetables.  
    - rub one side of half-slice apple with lemon and let sit. Soak 3 apple wedges under water and let another 3 apple wedges sit out in a bowl. | Powerpoint presentation  
Computer  
Projector  
Notebooks, pencils  
Beakers  
Watch glasses  
Paper bowls  
Red cabbage, apples, strawberries, sugar |
| Discussion of results: | ○ Osmosis using sugar and strawberries. *Osmosis means the water tends to go to where there is less amount of water.*  
  - place 4 strawberries and cover with sugar and let sit.  
  Ask students what they think will happen to the end products.  
  - *With acid from vinegar, the red color of the cabbage becomes brighter and the cabbage is firm. With base from baking soda, the cabbage color is dull and it’s soft.*  
  - *Lemon and the water keep the apple from turning brown. This is what they do in cooking.*  
  - *The water in the strawberries traveled from the fruit to the sugar because the sugar has no water in it.*  

| Method of evaluation: | • Review questions from Powerpoint presentation. Prompt questions during lecture. |

| Cooking Lab (1 hr 20 min): | The students will make different salads. |
| Demonstration by chef: | • Cutting up vegetables  
  • Preparing different salad dressings from scratch |
| Menu: | • Corn and arugula salad  
  • Broccoli salad  
  • Strawberry balsamic vinaigrette dressing |

| | Aprons  
  Small paper plates  
  Paper bowls  
  Plastic forks  
  Cutting boards  
  Lettuce knives  
  Salad bowls  
  Mixing spoons  
  Whisks  
  Serving plates |
What are nutrients?
- Substances found in foods or supplement pills
  - Energy
  - Growth
  - Structure
  - Maintain or repair

6 basic nutrients
- Carbohydrates
- Fats
- Proteins
- Vitamins
- Minerals
- Water

6 Basic Nutrients
- Could Carbohydrates
- Fanny Fats
- Play Proteins
- Violin Vitamins
- Much Minerals
- Worse Water

Why are Vitamins & Minerals important?
To keep our body healthy

Fantastic Fruits & Vibrant Vegetables

<table>
<thead>
<tr>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
</tr>
<tr>
<td>Orange/yellow</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Green</td>
</tr>
<tr>
<td>Blue/purple</td>
</tr>
</tbody>
</table>

93
• How many servings of **fruits** we need per day?
  » 2 cups

• How many servings of **vegetables** we need per day?
  » 2 ¼ cups

---

**Vitamins**

Does Everyone Know Batman And Catwoman

• **VITAMINS:**
  - A, B, C, D, E, K

---

**Vitamins**

• A: helps keep your eye healthy and helps you see in the dark (carrots, mango, spinach, sweet potatoes, milk, cantaloupe)

• C: can help heal cuts and bruises and fight infection (orange, strawberries, broccoli)

• D: helps maintain teeth and bones (milk, egg yolks, fish)

• K: helps in blood clotting (cabbage, dark leafy vegetables, spinach)

---

**Minerals**

• Calcium: helps build strong bones (dairy products, green leafy vegetables, calcium fortified food—OJ)

• Potassium: helps your muscles and nervous system working properly (bananas, broccoli, tomatoes, potatoes with skins)

• Iron: helps because it’s important for carrying oxygen throughout the body (meat, especially red meat, such as beef, tuna, and salmon, eggs, beans)

---

**Benefits of Vitamins & Minerals**

• The combination of these nutrients gives the body
  - Energy
  - Encourages healthy eyes and skin
  - Aids in healing cuts and bruises

---

**Food Science 101**

• Acid and base
  - properties and characteristics of food

• Acid
  - sour; citrus fruits

• Neutral - even

• Base (alkaline)
  - bitter; mostly chemicals

• pH scale
  - measures acidity and alkalinity
**Review**

- Why are vitamins and minerals important?
- Name all the vitamins, and give me an example of a food that has this vitamin.
- Name 1 mineral, and give me an example of a food that has this mineral.
**Corn & Arugula Salad**

**Ingredients:**
- 2 white corn
- 2 cups baby arugula
- 2 red onions
- 1 bundle of Thyme
- $\frac{1}{2}$ cup of Olive Oil
- $\frac{1}{2}$ cup of White Wine Vinegar
- $\frac{1}{2}$ tsp salt
- $\frac{1}{2}$ tsp pepper
- $\frac{1}{2}$ cup of canola Oil

**Directions:**
Boil corn for 15-20 minutes. Let cool. Shuck corn kernels from the cob. Tear off arugula into smaller pieces. Finely chop red onions. Pull out thyme leaves from stem. Combine all ingredients in a bowl. Mix it well and serve.
**Broccoli Salad**

**Ingredients:**
- 2 large heads of broccoli
- ¼ cup golden raisins
- ¼ cup cranberries
- ½ cup red onions
- 2 tbsp lite mayo

**Directions:**
Steam broccoli and pull the flowers apart. Combine the rest of the ingredients with the flowers of the broccoli, mix well, and serve.
Strawberry Balsamic Vinaigrette

Ingredients:
2 tbsp Strawberry preserve
1 tbsp Balsamic vinegar
2 tbsp Olive oil
Salt
Pepper

Directions:
Whisk all ingredients and season with salt and pepper. Serve with any choice of salad greens.
# CSUN Summer Cooking Class

**Lesson Plan:**
Day 8 – Fats and Sweets/Cake Baking

**Objectives:**
1. Students will be able to identify the two states of oils (liquid and solid) and give an example of each.
2. Students will be able to state at least 2 benefits of oils.
3. Students will be able to identify the disadvantages of consuming too much oil.
4. Students will learn basic pastry baking techniques

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| **Lesson (10 min):**  
Have students take notes. | • Using the “Fats and Sweets” presentation the following will be discussed:  
  o The 2 types of oils  
  o Give examples of each type/state  
  o The benefits and detrimentsof oils  
  o How many servings per day do we need | Powerpoint presentation  
Computer  
Projector  
Notebooks, pencils |
| **Activity (5 min):** | • “Stay away tooth decay” sheet. *Eating too much sugar can cause unhealthy weight gain and tooth decay and can lead to health problems.* | Use worksheet |
| **Method of evaluation:** | • Review questions from Powerpoint presentation. Prompt questions during lecture. | |
| **Cooking Lab (1 hr 30 min):** | The students will use ingredients of fats and sugars to make cupcake versions. Each group will make one cake recipe and share with the rest of the groups. | Aprons  
Small paper plates  
Plastic forks  
Mixing bowls  
Mixing spoons  
Electric beaters |
| **Demonstration by chef:** | • Measuring techniques in baking  
  • Mixing of batter | |
<table>
<thead>
<tr>
<th>Menu:</th>
<th>NOTE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whisks</td>
<td></td>
</tr>
<tr>
<td>Muffin tins</td>
<td></td>
</tr>
<tr>
<td>Individual foil containers</td>
<td></td>
</tr>
<tr>
<td>Red beet chocolate cake</td>
<td></td>
</tr>
<tr>
<td>Carrot cake</td>
<td></td>
</tr>
<tr>
<td>Coconut cake</td>
<td></td>
</tr>
<tr>
<td>Maple syrup cake</td>
<td></td>
</tr>
</tbody>
</table>

Let cupcakes cool and decorate the next day.
Fats & Sweets

OILS

- Oils are very important for good health
- We only need a little bit every day

Types of Oils

<table>
<thead>
<tr>
<th>Liquid, which are found in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
</tr>
<tr>
<td>Fish oils</td>
</tr>
<tr>
<td>Nuts</td>
</tr>
<tr>
<td>And vegetable oils</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solid, which are found in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margarine, butter</td>
</tr>
<tr>
<td>Shortening, lard</td>
</tr>
<tr>
<td>And foods that contain these</td>
</tr>
</tbody>
</table>

Benefits of Oil

- Stores energy for when you need it
- Help you grow up
- Protects your bones from injury
- Helps your brain think

Too much fat

- Bad for your body - especially your heart
- Can make you overweight

Make wise choices

- Choose naturally lower fat foods
  - Fruits
  - Vegetables
  - Beans and lean meats
  - Grains
  - Low fat/fat free milk

OVER

- Fatty snacks and treats
Review

- What are the two types of fat?
- Give me an example of each.
- Give me one benefit of oils
NAME: ________________________________

DIRECTIONS: Please circle the foods that are healthy and good for your teeth.
RED BEET CHOCOLATE CAKE
Makes 1 cake or 2 dozens cupcakes

Ingredients:
2 cups pureed cooked beets
2 1/2 cups sifted unbleached all-purpose flour
1 tsp double-acting baking powder
2 tsp baking soda
1/2 tsp salt
1 tsp cinnamon powder
5 oz. unsweetened chocolate
5 eggs
2 cups granulated sugar
1 1/2 cups corn or canola oil
1 tsp vanilla extract

Directions:
1. Butter three 9-inch round layer cake pans. Line them with parchment paper, butter the paper and lightly dust with flour. Tap off any excess flour. If making cupcakes, line standard-sized cupcake pans with cupcake liners.

2. In a blender or food processor, puree the cooked beets. Measure and set aside.

3. Sift together the flour, baking powder, baking soda, and salt. Set aside.

4. In a small plastic or glass bowl, place the chocolate and melt on defrost or low temperature in a microwave, until just beginning to melt. Stir until completely melted.

5. In a large bowl of a mixer, beat the eggs just to mix. Beat in the sugar, oil, vanilla extract, melted chocolate, beets and lastly, the dry ingredients. Beat until incorporated. (See back)
6. Pour mixture into prepared pans or cupcake pans. Bake for 50 minutes or when top springs back when gently pressed with your fingertip. For cupcakes, check in 25 to 30 minutes. Allow to cool before frosting and decorate as desired.
CARROT CAKE
Makes 1-3 layer cake or 2 dozens cupcakes

Ingredients:
1 cup dark raisins
2 tbsp warm water
1 lb carrots (about 4 cups shredded)
2 cups unbleached all-purpose flour
2 tsp double-acting baking powder
1 tsp baking soda
1 tsp salt
1 tsp cinnamon powder
1 tbsp unsweetened cocoa powder
4 eggs
2 tsp vanilla extract
1 cup granulated sugar
1 cup dark brown sugar, firmly packed
1 1/4 cup corn or canola oil
1 1/2 cups chopped walnut, optional

Directions:
1. Preheat oven to 350 degrees.

2. Butter three x 9-inch round layer cake pans. Line them with parchment paper, butter the paper and lightly dust with flour. Tap off any excess flour. If making cupcakes, line standard-sized cupcake pans with cupcake liners.

3. In a small bowl, combine the raisins and water. Set aside.

4. Wash, peel and cut off the ends of carrots. Grate the carrots. Measure and set aside.

5. Sift together the flour, baking powder, baking soda, salt, cinnamon and cocoa powder. Set aside. (See back)
6. In a large bowl of a mixer, beat the eggs. Add the vanilla extract, both sugars and the oil.

7. Lower the speed and slowly add the dry ingredients. Mix until well incorporated.

8. Stir in the carrots, raisins and the nuts (optional).

9. Divide the batter into prepared pans, making sure you fill pans 2/3 full.

10. Bake for 40 minutes or until the tops just spring back when gently pressed with your fingertip. For cupcakes, bake for 25 to 30 minutes.

11. Allow to cool completely. Layer with frosting from non-dairy ready to whip topping. Decorate as desired.
## CSUN Summer Cooking Class

**Lesson Plan:** Day 9 – Nutrition Review/Food Artistry (Cake Decoration)

**Objectives:**
1. Students will review all lessons for the week.
2. Students will learn to make pastry decorations and presentations.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson (15 min):</td>
<td>• Review previous lectures, which include:</td>
<td>Powerpoint presentation</td>
</tr>
<tr>
<td></td>
<td>o Vibrant Vegetables presentation</td>
<td>Computer</td>
</tr>
<tr>
<td></td>
<td>o Fantastic Fruits presentation</td>
<td>Projector</td>
</tr>
<tr>
<td></td>
<td>o Vitamins and Minerals presentation</td>
<td>Notebooks, pencils</td>
</tr>
<tr>
<td></td>
<td>o Fats and Sweets presentation</td>
<td>Placemat drawings</td>
</tr>
<tr>
<td></td>
<td>Activity (15 min):</td>
<td>&quot;My Healthy Score Card&quot; worksheets</td>
</tr>
<tr>
<td></td>
<td>• Color placemat from last week</td>
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<td></td>
<td>• Give the students &quot;My Healthy Score Card&quot; as a homework (to track how much</td>
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<tr>
<td></td>
<td>they ate fruits and vegetables for 1 week). This will turned in same day</td>
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<td></td>
<td>the following week.</td>
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</tr>
<tr>
<td>Cooking Lab (1 hr 15 min):</td>
<td>The students will decorate their cupcakes from the previous day.</td>
<td>Aprons</td>
</tr>
<tr>
<td>Demonstration by chef:</td>
<td>• Large round cake created by chef</td>
<td>Small paper plates</td>
</tr>
<tr>
<td></td>
<td>• Whipping of cake frosting</td>
<td>Plastic forks</td>
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<tr>
<td></td>
<td>• Coloring of frosting</td>
<td>Mixing bowls</td>
</tr>
<tr>
<td></td>
<td>• Cake decorating using different decorating tools</td>
<td></td>
</tr>
<tr>
<td>Menu:</td>
<td>Mixing spoons</td>
<td></td>
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<tr>
<td>-----------------------------</td>
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<td></td>
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<tr>
<td>• Cake frosting made with</td>
<td>Whisks</td>
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<tr>
<td>lowfat whipping dairy</td>
<td>Electric beaters</td>
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<tr>
<td>product</td>
<td>Cake spatulas</td>
<td></td>
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<tr>
<td></td>
<td>Pastry bags</td>
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</tr>
<tr>
<td></td>
<td>Cake decorating tool kit</td>
<td></td>
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<tr>
<td></td>
<td>Serving plates</td>
<td></td>
</tr>
</tbody>
</table>
Place an X or write out the food eaten or activity done in the column as you work toward meeting your daily goals. Use both columns to track more than one group at a time.

<table>
<thead>
<tr>
<th>Day</th>
<th>Group 1</th>
<th>Group 2</th>
<th>Get Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
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<tr>
<td>Monday</td>
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<td>Friday</td>
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<tr>
<td>Saturday</td>
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</tbody>
</table>

Circle the group you are tracking and list your daily goal.

- **Milk**
  - Goal_______
- **Grains**
  - Goal_______
- **Meat & Beans**
  - Goal_______
- **Physical Activity**
  - Goal_______
- **Fruits**
  - Goal_______
- **Vegetables**
  - Goal_______

Get Active:
- Watched less than 1 hour of TV or played video games each day
- Ate breakfast every morning this week
- Tried a new food
- Help cooked dinner
- Drank at least 5 cups of water each day this week.

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# CSUN Summer Cooking Class

**Lesson Plan:** Day 10 – Dairy

**Objectives:**
1. Students will be able to identify the important nutrients in milk and its products.
2. Students will be able to list two benefits of milk and its products.
3. Students will be able to identify how many servings of the milk group they need per day.
4. Students will learn to work with various dairy products.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| **Lesson (15 min):** Have students take notes. | • Using the “Marvelous Milk” presentation the following will be discussed:  
  o The important nutrients in milk and its products  
  o Benefits of the milk group  
  o How many servings of the milk group is needed per day  
  o Smart choices from the milk group (fat free/low milk) | Powerpoint presentation  
Computer  
Projector  
Food models  
Notebooks, pencils |
| Method of evaluation: | • Review questions from Powerpoint presentation. Prompt questions during lecture. | |
| **Cooking Lab (1 hr 30 min):** | The students will be working with cheese and milk. Allow time for ice cream makers following instructions according to manufacturer, and to freeze ice cream during class. During freezing, the students can cut vegetables and prepare other items for the fondue. | Aprons  
Small paper plates  
Plastic forks  
Cutting boards  
Lettuce knives  
Serving platters  
Mixing spoons  
Ice cream makers  
Fondue set |
| **Demonstration by chef:** | • Fondue mixture and melting of cheese  
• Use of ice cream maker | |
| **Menu:** | • Cheese fondue  
• Vanilla ice cream | |
Marvelous Milk

Nutrients in Milk and its Products
- Vitamin A
- Vitamin D
- Calcium
- Potassium
- And other minerals...

Benefits of Milk and its Products
- Building and maintaining healthy bones and teeth (Vitamin A and D)
- Helps the heart to beat and muscles to work properly

Feeding Our Bones
- We are all born with a certain amount of calcium in our bones and teeth.
- We need to get enough Calcium to feed those 206 bones 😎

Make Smart Choices
- Fat-free/ (1% or 2%) low-fat milk
- Lactose free milk
- Calcium fortified juices
- Cheese
- Yogurt
- Pudding
- Ice cream too! 😊

How much of the milk group do Cool kids your age need?
- 3 cups per day
Review

- Which choice is the better:
  - A: 100% fruit juice with added calcium
  - B: Fruit juice with added calcium
- How many servings of milk and its products should we have per day?
- How much in oz. is one cup of milk or yogurt?
EASY VANILLA ICE CREAM

Ingredients:
- 1 1/2 cups 1% milk
- 1 1/2 cups heavy cream
- 1 cup sugar
- 1/8 teaspoon salt
- 1 teaspoon vanilla extract or 1/2 vanilla bean

Directions:
1. In a bowl, combine all ingredients until sugar has dissolved in the mixture. (For a creamier consistency, chill the mixture in the refrigerator for at least 1 hour).
2. Transfer mixture to ice cream maker. Follow manufacturer’s direction.
3. Churn until soft peaks. Transfer to a freezer and freeze for 30 minutes. Scoop into a cone or bowl.

Variations:
a) Raspberry, strawberry, blueberry or peach - add 1/2 cup pureed fresh or frozen fruit. Best to add after 10 minutes of churning.
b) Cookies - reduce sugar to 1/2 cup. Chop 6 cream-filled chocolate sandwich cookies into small pieces. Add into soft churned mixture and churn another 3 minutes.

Cecilia De Castro
ceciliado@msn.com
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**Lesson Plan:**
Day 11 – Calories/Preparation Method Comparison

- Students will learn definition and sources of calories.
- Students will learn which of the 3 sources have the highest calorie count.
- Students will learn to add total amount of calories from food product package.
- Students will learn effect of calorie intake to the body.
- Students will cook two versions of an ingredient to show which has the projected higher calorie content.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
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</thead>
</table>
| **Lesson (30 min):**
  Write down on board.
  Have students take notes.
  Prompt questions during lecture.
| The energy that we get from food is measured by calories. Calories come from
  - Carbohydrates from the breads, cereals, and sugars
  - Protein from meats and beans
  - Fats from oils and meats
  - Discuss how many calories from sources.
    - Carbohydrate = 4 kcal/g;
    - Protein = 4 kcal/g;
    - Fat = 9 kcal/g → highest
  - Have the students look at the total amount of carbohydrates, protein, and fat from the labels and multiply by the amount of calories per gram.
  - Have students add the calories from each source and ask them to take off the cover from the “Calories” section. Have students compare.
  - Ask the students to look where the highest amount of calories are coming from each product. | Powerpoint presentation
Computer
Projector
Notebooks, pencils |
| **Activity:**
  Math Problem
  Provide students with food products to look at Nutrition Facts labels. Cover the “Calories” section prior to. | Various food product labels |
- Explain to students that some products have most of their calories from fats and sugars and to limit intake of these types of products.
- Discuss how too much and not enough energy affects the body (overnutrition/obesity and malnourishment)
- Discuss the concept of “burning off” calories through physical activities.

<table>
<thead>
<tr>
<th>Cooking Lab (1 hr 15 min):</th>
<th></th>
</tr>
</thead>
</table>
| Show how different methods of preparation affect the total calories in a food. Students will make baked apple and caramel candy apple as a comparison between the two. | Aprons  
Small paper plates  
Bowls  
Plastic forks  
Cutting boards  
Apple corer/wedger  
Baking pans  
Mixing spoons  
Lollipop sticks  
Serving plates |
| Demonstration by chef: |  |
| - Cutting and peeling of apples |  |
| Menu: |  |
| - Baked apple  
- Caramel candy apple |  |
Choose foods lower in fats and sugars

- Prevent diseases and poor nutrition

Calories: 520
Total fat: 26 g
49% of recommended
Daily Value of total fat

Calories: 620
Total fat: 51 g
78% of recommended
Daily Value of total fat

Calories: 412
Total fat: 25 g
36% of recommended
Daily Value of total fat

Burger King

BK Broiler Chicken Sandwich
267 calories

Tenderloin Sandwich
780 calories

Buena Cafeteria

Pain Cheeseburger
**CSUN Summer Cooking Class**

**Lesson Plan:** Day 12 – Dietary Guidelines for Americans/Exercise/Appetizers

**Objectives:**
1. Students will learn the importance and purpose of the Dietary Guidelines for Americans.
2. Students will be able to identify the benefits of exercise to our health.
3. Students will learn the recommended length of time for physical activity for children.
4. Students will learn to make 3 different appetizer/snack ideas using leftovers and ingredients already at home.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| **Lesson (5-8 min):**  
Use the 2005 Dietary Guidelines for Americans (DGA) poster to explain its importance. | • Introduce Dietary Guidelines for Americans  
○ Discuss importance and purpose. *It's a guide created by the government for us to follow to maintain good health.*  
○ Describe key recommendations  
- fruits and vegetables  
- whole grains  
- low-fat milk products  
- limit bad oils (fats) and sugars  
○ Emphasis on exercise (60 min per day most days of the week) for children. *Exercise helps to keep us healthy, fit, and strong.*  
Ask students what type of physical activities they like such as sports. | DGA poster |
| **Activity (20 min):**  | Stretching exercise with special guests from Kinesiology department |   |
| Cooking Lab (1 hr 20 min): | Aprons  
| --- | ---  
| Demonstration by chef: | Small paper plates  
| Menu: | Plastic forks  
| | Cutting boards  
| | Lettuce knives  
| | Mixing spoons  
| | Mixing bowls  
| | Serving plates  
| | Baking sheets  
| The students will be making different appetizers that can also be eaten as snacks. Show that leftovers and common food ingredients at home such as canned goods and cheese can be used to make different snack or appetizer ideas. | • Preparation of the recipes below  
| | • Preparation of mushrooms  
| | • Portobello mushroom pizza  
| | • Stuffed mushroom appetizer  
| | • Chicken salad with cranberry  

Key Recommendations for the General Population

ADEQUATE NUTRIENTS WITHIN CALORIE NEEDS

- Consume a variety of nutrient-dense foods and beverages within and among the basic food groups while choosing foods that limit the intake of saturated and trans fats, cholesterol, added sugars, salt, and alcohol.
- Meet recommended intakes within energy needs by adopting a balanced eating pattern, such as the U.S. Department of Agriculture (USDA) Food Guide or the Dietary Approaches to Stop Hypertension (DASH) Eating Plan.

WEIGHT MANAGEMENT

- To maintain body weight in a healthy range, balance calories from foods and beverages with calories expended.
- To prevent gradual weight gain over time, make small decreases in food and beverage calories and increase physical activity.

PHYSICAL ACTIVITY

- Engage in regular physical activity and reduce sedentary activities to promote health, psychological well-being, and a healthy body weight.
  - To reduce the risk of chronic disease in adulthood: Engage in at least 30 minutes of moderate-intensity physical activity, above usual activity, at work or home on most days of the week.
  - For most people, greater health benefits can be obtained by engaging in physical activity of more vigorous intensity or longer duration.
  - To help manage body weight and prevent gradual, unhealthy body weight gain in adulthood: Engage in approximately 60 minutes of moderate- to vigorous-intensity activity on most days of the week while not exceeding caloric intake requirements.
  - To sustain weight loss in adulthood: Participate in at least 60 to 90 minutes of daily moderate-intensity physical activity while not exceeding caloric intake requirements. Some people may need to consult with a healthcare provider before participating in this level of activity.
- Achieve physical fitness by including cardiovascular conditioning, stretching exercises for flexibility, and resistance exercises or calisthenics for muscle strength and endurance.

FOOD GROUPS TO ENCOURAGE

- Consume a sufficient amount of fruits and vegetables while staying within energy needs. Two cups of fruit and 2½ cups of vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on the calorie level.

• Choose a variety of fruits and vegetables each day. In particular, select from all five vegetable subgroups (dark green, orange, legumes, starchy vegetables, and other vegetables) several times a week.
• Consume 3 or more ounce-equivalents of whole-grain products per day, with the rest of the recommended grains coming from enriched or whole-grain products. In general, at least half the grains should come from whole grains.
• Consume 3 cups per day of fat-free or low-fat milk or equivalent milk products.

FATS

• Consume less than 10 percent of calories from saturated fatty acids and less than 300 mg/day of cholesterol, and keep trans fatty acid consumption as low as possible.
• Keep total fat intake between 20 to 35 percent of calories, with most fats coming from sources of polyunsaturated and monounsaturated fatty acids, such as fish, nuts, and vegetable oils.
• When selecting and preparing meat, poultry, dry beans, and milk or milk products, make choices that are lean, low-fat, or fat-free.
• Limit intake of fats and oils high in saturated and/or trans fatty acids, and choose products low in such fats and oils.

CARBOHYDRATES

• Choose fiber-rich fruits, vegetables, and whole grains often.
• Choose and prepare foods and beverages with little added sugars or caloric sweeteners, such as amounts suggested by the USDA Food Guide and the DASH Eating Plan.
• Reduce the incidence of dental caries by practicing good oral hygiene and consuming sugar- and starch-containing foods and beverages less frequently.

SODIUM AND POTASSIUM

• Consume less than 2,300 mg (approximately 1 teaspoon of salt) of sodium per day.
• Choose and prepare foods with little salt. At the same time, consume potassium-rich foods, such as fruits and vegetables.

ALCOHOLIC BEVERAGES

• Those who choose to drink alcoholic beverages should do so sensibly and in moderation—defined as the consumption of up to one drink per day for women and up to two drinks per day for men.
• Alcoholic beverages should not be consumed by some individuals, including those who cannot restrict their alcohol intake, women of childbearing age who may become pregnant, pregnant and lactating women, children and adolescents, individuals taking medications that can interact with alcohol, and those with specific medical conditions.
• Alcoholic beverages should be avoided by individuals engaging in activities that require attention, skill, or coordination, such as driving or operating machinery.

FOOD SAFETY

• To avoid microbial foodborne illness:
  o Clean hands, food contact surfaces, and fruits and vegetables. Meat and poultry
should not be washed or rinsed.
  o Separate raw, cooked, and ready-to-eat foods while shopping, preparing, or
    storing foods.
  o Cook foods to a safe temperature to kill microorganisms.
  o Chill (refrigerate) perishable food promptly and defrost foods properly.
  o Avoid raw (unpasteurized) milk or any products made from unpasteurized milk,
    raw or partially cooked eggs or foods containing raw eggs, raw or undercooked
    meat and poultry, unpasteurized juices, and raw sprouts.

Note: The Dietary Guidelines for Americans 2005 contains additional recommendations for
specific populations. The full document is available at
www.healthierus.gov/dietaryguidelines.

Updated Thursday, May 01, 2008 by ODPHP Web Support
Portobello Mushroom Pizza

Ingredients:
2 large Portobello mushrooms
2 tbsp of ready made pizza sauce

Choice of topping:
- Leftover low fat meats (sausage, etc...)
- Chopped bell peppers
- Sliced olives
- Chopped onions
- Broccoli flowers

2 ounces shredded low fat mozzarella cheese

Directions:
Preheat oven at 350 F. Take the stem off the mushrooms. Spread the pizza sauce over the Portobello mushroom and place toppings and cheese. Bake at 350 F for 15-20 minutes.
Chicken Salad

Ingredients:
2 pieces  Leftover cooked chicken breast
1/2 cup Fat free ranch salad dressing
Dash Worcestershire sauce
Dash Mustard
1/4 cup Celery
1/2 cup Dried cranberries or raisins
Salt and pepper to taste

Directions:
Chop or dice chicken breast. Combine all ingredients, mix well, and serve.
# CSUN Summer Cooking Class

**Lesson Plan:** Day 13 – Food History and Culture

**Objectives:**
1. Students will learn relation of food to culture and history.
2. Students will learn contribution of food to traditions and holidays.
3. Students will share their own personal culture, traditions, and/or holidays involving food.
4. Students will learn common foods from a specific ethnic region.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| Lesson (15 min): Prompt questions during discussion. | Discussion of the following topics:  
- Culture - what we value, beliefs, and attitudes.  
- Food is part of culture which is defined by our food practices and habits.  
- Evolution of food as use for survival, use as money, use as a symbol, and use for social interactions and celebrations.  
  - prehistoric hunting and gathering  
  - cocoa beans used as money during the Aztec period  
  - salt used as money  
  - bread of life in religion  
  - having foods during the holidays  
- Food as associated with religion  
  - Kashrut dietary laws  
  - almost all religion has some kind of fasting  
  - Passover – no leavened breads  
  - Muslim culture – no all pigs or four-footed animals that catch other animals with their mouths  
  - Hindu and Buddhism – vegetarianism  
- Holidays and traditions  
  - 4th of July barbecue |
<table>
<thead>
<tr>
<th>Activity (10 min):</th>
<th></th>
<th>Boxes of crayons</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Thanksgiving turkey and Christmas ham</td>
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<tr>
<td>• Family, personal, and social culture</td>
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<tr>
<td>• For example, choosing not to eat fish or other specific food, having different times of eating, offering foods to visitors</td>
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<tr>
<td>• America – melting pot, many different ethnic cuisines</td>
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<tr>
<td>Have children talk about their different ethnic backgrounds and share their personal culture and holiday traditions involving food.</td>
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<tr>
<td>Continue coloring of place mat drawings.</td>
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<tr>
<td>Homework: Have students write down at least one dish made or eaten often at home. Have them indicate at least 3 ingredients in a blank MyPyramid worksheet. Have them turn it in by next day to share with the class.</td>
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<tr>
<td></td>
<td>MyPyramid blank worksheets</td>
<td></td>
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<tr>
<td>Cooking Lab (1 hr 20 min):</td>
<td>Aprons</td>
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<td></td>
<td>Small paper plates</td>
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<td></td>
<td>Plastic forks</td>
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<td></td>
<td>Cutting boards</td>
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<td></td>
<td>Lettuce knives</td>
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<td></td>
<td>Mixing bowls</td>
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<td>Mixing spoons</td>
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<tr>
<td></td>
<td>Wooden bowl</td>
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<td>Bamboo mats</td>
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<td>Rice cooker</td>
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<td>Fan</td>
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<td></td>
<td>Frying pans</td>
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<td></td>
<td>Wok</td>
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<td></td>
<td>Serving plates</td>
<td></td>
</tr>
<tr>
<td>Demonstration by chef:</td>
<td>Menu:</td>
<td></td>
</tr>
<tr>
<td>• Knife skills for sushi preparation</td>
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<td></td>
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<tr>
<td>• Introduction to ingredients common to Asian cuisine</td>
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<tr>
<td>• Making of the recipes below</td>
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<td></td>
</tr>
<tr>
<td>Asian theme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Japan – sushi</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• China – potstickers</td>
<td></td>
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<tr>
<td>• Philippines – pancit</td>
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</table>
SUSHI RICE

Ingredients:
1 cup sushi rice (short grain rice)
1 cup water
2 tbsp sugar
1 tsp salt
1 tbsp rice vinegar

Directions:
1. Rinse the rice until water is almost clear (3 to 4 times). Drain.

2. Transfer rinsed rice to a rice cooker. Add water and cook until done (follow manufacturer’s direction).

3. In a small bowl, combine sugar, salt and rice vinegar. Stir until well dissolved. Set aside.

4. Transfer cooked rice to a bowl (wooden bowls are best). Spread rice and pour sugar mixture all over hot rice. Fan the mixture as you carefully fold the seasoned rice until cooled to room temperature. Use sushi rice as needed to form nigiri sushi and maki rolls.

Equipment needed:
Rice cooker
Strainer
Bamboo mats
Bowls
Rice paddle or rubber spatula
Plastic wrap
Clean towels
Knife
Cutting board
Chop sticks

Optional ingredients to make nigiri or maki rolls:
Nori sheets
Crab meat
Fresh fish fillets
Cucumber
Avocado
Pickled radish

(See back)
Wasabi
Mayonnaise
Chili paste
Togarashi
Toasted sesame seeds
Rice vinegar
Pickled ginger
Your favorite fish or vegetable ingredient
POT STICKERS
makes about 50 pot stickers

Filling:
1 cup Chinese or Napa cabbage
1 slice fresh ginger
2 green onions
1 lb ground meat or seafood (chicken, turkey, salmon, white fish or beef)
1 egg, lightly beaten
1 tsp salt
$\frac{1}{2}$ tsp ground black pepper
4 tbsp soy sauce
1 tsp cornstarch
$\frac{1}{2}$ tsp sesame oil
1 tbsp chicken stock
1 tbsp dry sherry or rice wine (optional)

To form into potstickers:
1 package 3-inch round pot sticker wrapper (about 50 pieces)
1 egg white, beaten

To cook:
4 tbsp light cooking oil
$\frac{1}{2}$ cup chicken stock
Dipping Sauce

Directions:
1. To make the filling: in a food processor, combine the cabbage, ginger and green onions. Process to a fine mince. Transfer to a medium mixing bowl.

2. Add the ground meat or seafood, egg, salt, pepper, soy sauce, cornstarch, sesame oil, chicken stock and dry sherry (optional ingredient). Mix until well blended.

3. To form the pot stickers, place the pot sticker wrapper on an open press. Place a rounded teaspoonful of filling on the wrapper. Brush edges of wrapper with beaten egg white. Close the press to seal the dumpling. (See back)
4. To cook, pour the cooking oil in a non-stick sauté pan. Heat the oil and place the pot stickers allowing spaces between each one. Brown on one side only. Add chicken stock and cover pan. Allow to steam for 10-12 minutes or until wrapper turns from creamy to glassy appearance. Remove cover and continue to cook until all liquid is absorbed. Serve browned side up with soy sauce or Chinese hot oil for dipping.
MyPyramid
Eat Right. Exercise. Have Fun.
MyPyramid.go
# CSUN Summer Cooking Class

**Lesson Plan:** Day 14 – Food History and Culture continued

**Objectives:**
1. Students will share foods normally eaten at their home.
2. Students will identify at least 3 ingredients from their listed dish with MyPyramid.
3. Students will learn interesting food facts.

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<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
</tr>
</thead>
</table>
| Lesson (25 min): | - Collect “My Healthy Score Card” worksheet indicating fruit and vegetable consumption from last week.  
- Collect ethnic dish assignment from previous day.  
- Have students share their personal culture involving food and ethnic foods they normally eat and how the ingredients fit in MyPyramid.  
- Discussion of interesting food facts:  
  o Chocolate – food of the Gods, used as money, used to be eaten with chilies  
  o Pasta – came from China  
  o Hot dogs/frankfurters – named by a cartoonist; after city in Germany  
  o Fortune cookies – San Francisco  
  o Corned beef – English word for a grain of salt  
  o Bologna – Italy  
  o Hamburger – Hamburg, Germany  
  o Pizza – from the Greeks  
  o Barbecue – come from barbacoa (frame of sticks)  
  o Pineapple – nemen (pine cone)  
  o Grapefruit – because it grows in bunches  
  o Apple – rose family  
  o Avocado – original name ahuacatl, meaning testicle | |
Activity: Continue coloring of plate.

Cooking Lab (1 hr 20 min):

The students will be preparing recipes from a specific ethnic background to learn about their foods.

- Introduction of ingredients common to Latin cuisine
- Preparation of recipes below
- Grilling methods

Demonstration by chef:

Menu:

Latin theme:
- Quesadilla
- Taco with Carne Asada with freshly pressed tortillas

Boxes of crayons

| Aprons | Small paper plates |
| Plastic forks | Cutting boards |
| Lettuce knives | Mixing bowls |
| Mixing spoons | Serving plates |
| Tortilla pressers | Fry pans |
| Grill/griddle |
**QUESADILLAS**

**Ingredients:**
- 12 ounces low-fat jack cheese, grated
- 4 ounces low-fat cheddar cheese, grated
- 4 pieces Anaheim or Poblano chile, roasted, peeled, seeded, julienne, optional
- 8 ounces grilled boneless, skinless chicken breast, julienne, optional
- 4 ounces red or green salsa, optional
- 8 pieces flour or corn tortillas

**Directions:**
1. In a small bowl, combine the cheeses and other optional ingredients of your choice.

2. Spread the cheese mixture on half of a tortilla. Fold in half and cook in a saute pan or panini grill, turning at least once to make sure the cheeses melt. Repeat process until you have made 8 quesadillas. Serve immediately.

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ceciliadc@msn.com
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TACO WITH CARNE ASADA

Ingredients:
1 lb beef tenderloin, fat trimmed, cut into 1/2" slices
1/2 tsp salt
1/4 tsp fresh ground black pepper
1/2 tsp dried oregano
1/4 cup orange juice
1 tbsp lime juice
2 ears white or yellow corn, husked
1 medium onion, peeled, sliced
1 piece red or green bell pepper, cored, seeded, julienne
12 pieces corn tortillas

Condiments:
Pico de Gallo Fruit salsa Chopped jalapeno
Red salsa Chopped cilantro
Tomatillo salsa Chopped onions

1. Season the meat with oregano, salt and pepper. Sprinkle with orange and lime juice.

2. On a griddle, over high heat, grill the ears of corn. Cook the onions and bell peppers until slightly charred. Set aside.

3. On the same griddle, over high heat, cook the beef strips until done. Add to cooked vegetables.

4. Warm the tortillas and fill with beef and vegetable mixture. Top with choice of condiment.

Cecilia De Castro
ceciliadeo@msn.com
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CORN TORTILLAS

Ingredients:
1 pound Masa preparada
1 Tortilla press
24 pieces Wax paper, cut into 6"x6" piece or plastic wrap

Directions:
1. Divide the dough into 12 balls.
2. Line a tortilla press with a piece of wax paper. Place 1 dough ball on the paper and cover with another piece of wax paper. Press down firmly until the tortilla dough flattens to about 6-inch piece in diameter. Repeat process until all the balls have been pressed.
3. To cook the tortillas, peel the wax paper and place onto a preheated, ungreased, medium-hot griddle or onto a heavy frying pan. As the tortilla warm and firms up, carefully turn to cook the other side. Use as needed.

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# CSUN Summer Cooking Class

## Lesson Plan:
Day 15 – Grains/Pasta

## Objectives:
1. Students will be able to state at least 3 different examples of grains.
2. Students will be able to identify at least 2 good choices of grains.
3. Students will learn methods to make homemade pasta noodles.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
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</thead>
<tbody>
<tr>
<td>Lesson (10 min):</td>
<td>Using “Great Grains” presentation, the following topics will be discussed:</td>
<td>Powerpoint presentation</td>
</tr>
<tr>
<td>Have students take notes.</td>
<td>• Where grains are found</td>
<td>Computer</td>
</tr>
<tr>
<td>Prompt questions during lecture.</td>
<td>• Good versus bad choices</td>
<td>Projector</td>
</tr>
<tr>
<td></td>
<td>Have students identify where the grains are in Mypyramid and have them provide samples.</td>
<td>Notebooks, pencils</td>
</tr>
<tr>
<td>Method of evaluation:</td>
<td>• Review questions from Powerpoint presentation.</td>
<td></td>
</tr>
<tr>
<td>Cooking Lab (1 hr 30 min):</td>
<td>The students will be making homemade whole wheat and multi-colored pasta.</td>
<td>Aprons</td>
</tr>
<tr>
<td>Demonstration by chef:</td>
<td>• Technique of making pasta dough</td>
<td>Small paper plates</td>
</tr>
<tr>
<td></td>
<td>• Making colored pasta</td>
<td>Plastic forks</td>
</tr>
<tr>
<td></td>
<td>• Use of pasta maker/cutter</td>
<td>Cutting boards</td>
</tr>
<tr>
<td>Menu:</td>
<td>• Homemade whole wheat pasta (regular and colored)</td>
<td>Lettuce knives</td>
</tr>
<tr>
<td></td>
<td>• Homemade tomato sauce</td>
<td>Pasta maker/cutter</td>
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<tr>
<td></td>
<td>• Turkey meatballs</td>
<td>Colanders</td>
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<tr>
<td></td>
<td>• Caesar salad</td>
<td>Large pots</td>
</tr>
<tr>
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<td></td>
<td>Mixing spoons</td>
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<td>Serving plates</td>
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</tbody>
</table>
Where could we find Grains?

- Grains are the seeds from the plants
- There are many grain groups to choose from:
  - Bread
  - Oatmeal
  - Pasta
  - Cereal
  - Rice
  - Popcorn
  - Tortilla

Grains Choices

<table>
<thead>
<tr>
<th>More</th>
<th>Less</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole grain breads</td>
<td>White pasta</td>
</tr>
<tr>
<td>Oatmeal</td>
<td>White breads</td>
</tr>
<tr>
<td>Whole grain pasta</td>
<td>White rice</td>
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<tr>
<td>Cereals</td>
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</tr>
</tbody>
</table>

To be continued...
BASIC WHOLE WHEAT PASTA DOUGH

Ingredients:
1 cup whole wheat flour
1 cup unbleached all-purpose flour
1/2 tsp salt
4 egg whites
1/2 cup extra flour for dusting work table

Directions:
1. In a food processor, with the metal blade, combine the flours and salt. While the motor is running, add the egg whites in a slow but steady stream. Process until it starts forming a ball. If dough is too wet, add a little bit more flour. If the dough is too dry, add a teaspoon of water at a time until dough forms a ball. Transfer dough to a floured table and knead a few seconds until it forms into a smooth, firm ball.

OR

1. To make dough by hand: mound 2 1/2 cups flour on work surface. Add salt and blend with a fork. Make a well in center. Add the egg whites and gradually draw flour from the inner edge of well into center, first using the fork, then with your fingers, until most flour is incorporated. Knead the dough until it forms a smooth, firm ball.

2. Roll dough and cut into desired shapes and length.

3. To cook pasta: bring a large pot of water with a generous addition of salt. Cook pasta until al dente. Serve with your favorite sauce.

Colored and Flavored Pasta:

For most colored pasta; substitute 2 egg whites with 1/4 cup of cooked vegetable puree:

Green pasta - spinach
Orange pasta - carrot
Pink pasta - beet

(see back)
Yellow pasta - roasted yellow pepper
*Black pasta - squid ink (substitute 1 egg white with 1 tablespoon ink)
For most flavored pasta, substitute 1 egg white with 1/8 cup of flavor:
Herb - minced parsley, or basil or cilantro etc.
Citrus - 1 teaspoon zest and juice of orange or lemon or lime
Chili - roast, peel, discard seeds, puree
*Cocoa - substitute ½ cup of flour with unsweetened cocoa powder
*Spices - add ¼ to ½ teaspoon of spice
FRESH TOMATO SAUCE

Ingredients:
2 tablespoons extra-virgin olive oil or light cooking oil
1/2 cup minced onions
2 cloves garlic, crushed
2 pounds plum tomatoes, cored, peeled, seeded, chopped
1 sprig fresh thyme (1/2 teaspoon dried), minced
1 small sprig fresh oregano (1/4 teaspoon dried), minced
1 bay leaf
1 teaspoon salt
1/2 teaspoon freshly ground black pepper
1/2 teaspoon sugar, optional
1/4 cup basil, minced

Directions:
1. In a heavy saucepan, heat the oil over medium heat. Cook the onions and garlic until soft and glossy but not brown.

2. Add the tomatoes, thyme, oregano, bay leaf, salt, pepper and sugar (if being used). Bring to a slow boil, stirring occasionally. Lower heat to a simmer and cook for 15 minutes. The tomatoes will be soft and sauce will thicken.

TURKEY MEATBALLS

Ingredients:
½ lb ground turkey
¼ cup dry bread crumbs or panko (Japanese style breadcrumbs)
1 egg, lightly beaten
1 tbsp minced fresh parsley
2 tbsp minced onion
1/2 tsp salt
1/4 tsp freshly ground black pepper
1 small bowl of cold water
1 tbsp extra virgin olive oil

Directions:
1. In a medium bowl, mix ground turkey, breadcrumbs, egg, parsley, onion, salt and pepper.

2. Dip your hands in cold water. Divide meat into equal portions. Gently roll each piece of meat mixture into a ball between the palms of your hands. Form into 16 mini or 8 regular sized meatballs.

3. To cook: in a sauté pan, heat the oil over medium heat. Carefully add the meatballs and cook to brown all sides and until internal temperature is 165 degrees F. Use as needed.

*To make Tomato & Turkey Meatball Sauce - add cooked turkey meatballs to finished Tomato Sauce and allow simmering for 5 minutes. Toss in cooked pasta and serve immediately.

Cecilia De Castro
ceciliadc@msn.com
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**CAESAR SALAD**

**Ingredients:**
- 2 heads heart of romaine
- 1/2 cup croutons
- 1/3 cup Caesar Dressing
- 1/4 cup freshly grated Parmesan cheese

**Directions:**
1. Wash and dry the romaine. Trim the romaine and cut into bite sized pieces. Chill until ready to use.
2. Place romaine in a large bowl. Toss with the Caesar dressing. Transfer to serving plates and sprinkle with grated Parmesan cheese.

**CAESAR DRESSING**

**Ingredients:**
- 2 tbsp fresh lemon juice
- 1 clove garlic, minced
- 1/2 tsp Worcestershire sauce
- 1 tbsp Dijon mustard
- 2 anchovy fillets, mashed
- 1/3 cup extra virgin olive oil
- 1/4 cup freshly grated Parmesan cheese
- Pinch each of salt and freshly ground black pepper

**Directions:**
1. In a bowl, combine the lemon juice, garlic, Worcestershire sauce, mustard, and anchovy. Whisk together until well blended. While whisking, slowly add the olive oil in a slow and steady stream. Continue to whisk until thickened. Stir in the cheese and season to taste with salt and pepper. Chill until needed.
## CSUN Summer Cooking Class

**Lesson Plan:** Day 16 – Grains continued/Pizza  
**Objectives:**  
1. Students will be able to identify at least 2 benefits of grains.  
2. Student will be able to state how many servings of the grain group are needed per day.  
3. Students will learn methods of making homemade pizza dough.

<table>
<thead>
<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
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</thead>
<tbody>
<tr>
<td><strong>Lesson (15 min):</strong></td>
<td>• Continue discussion of grains using “Great Grains” presentation</td>
<td>Powerpoint presentation</td>
</tr>
<tr>
<td>Have students take notes.</td>
<td>o benefits</td>
<td>Computer</td>
</tr>
<tr>
<td>Prompt questions during lecture.</td>
<td>o how much we need</td>
<td>Projector</td>
</tr>
<tr>
<td></td>
<td>o samples of grain servings – refer to hand gestures from portion size handout</td>
<td>Notebooks, pencils</td>
</tr>
<tr>
<td><strong>Activity (10 min)</strong></td>
<td>Continue coloring place mat drawings.</td>
<td>Food models</td>
</tr>
<tr>
<td></td>
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<td>Measuring cups</td>
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<tr>
<td></td>
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<td>Portion size handout</td>
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<td></td>
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<td>Boxes of crayons</td>
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<tr>
<td><strong>Cooking Lab (1 hr 20 min):</strong></td>
<td>The students will be making homemade whole wheat pizza dough. Each student</td>
<td>Aprons</td>
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<tr>
<td></td>
<td>will get create their own personal pizza with choice of toppings.</td>
<td>Small paper plates</td>
</tr>
<tr>
<td>Demonstration by chef:</td>
<td>• Techniques of making pizza dough</td>
<td>Plastic forks</td>
</tr>
<tr>
<td></td>
<td>• Introduction to different toppings</td>
<td>Cutting boards</td>
</tr>
<tr>
<td>Menu:</td>
<td>• Whole wheat pizza with choice of toppings</td>
<td>Lettuce knives</td>
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<tr>
<td></td>
<td>• Basil pesto sauce</td>
<td>Mixing bowls</td>
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<tr>
<td></td>
<td>• Homemade turkey sausage</td>
<td>Pizza stones</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pizza paddles and cutters</td>
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<td>Serving plates</td>
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</table>
Benefits of Grains (1)
- Grains provide the body with:
  - Energy
  - Grow up
  - Healthy digestion
  - Healthy nerve function
  - Long term benefits-helps with reduced risk of heart disease

Benefits of Grains (2)
- Grains provide the body with nutrients:
  - Carbohydrates
  - Fiber
  - Vitamin B
  - Minerals (iron, and others)

How much do we need?
6 ounces per day

Examples of grain servings
- 1 ounce of grains is equal to:
  - 1 slice of bread
  - 1 cup of breakfast cereal
  - ½ cup of cooked cereal, rice or pasta

Activity
Continue coloring the placemat.

Review
- Name one of the benefits of grains.
- How much grains should we eat per day?
- What is the best kind of grains?
WHOLE WHEAT PIZZA DOUGH

Ingredients:
1 cup water
2 tsp yeast
1 tsp sugar or honey
1 1/2 cups whole wheat flour
1 1/2 cups unbleached all-purpose flour
1 tsp salt
1 tbsp extra virgin olive oil

Directions:
1. In a small bowl, combine the water, yeast and sugar. Stir until well blended. Allow the yeast to proof.

2. In a mixer, fitted with a dough hook, combine the flours and salt. Over low speed, add the oil and the yeast mixture. Mix until dough is smooth and comes cleanly away from the sides of the bowl, about 8 to 10 minutes. (If you are making the dough by hand, combine the flours and salt on work surface. Make a well and add the oil and yeast mixture into the center of the well. With a fork, gradually draw flour from the inner edge of well into center, and then use your fingers, until flour is incorporated. Knead the dough until it forms a smooth, firm ball.)

3. Divide into 6 sections. Knead each section into a ball. The dough will get firm. Transfer to a baking tray. Repeat process to the 5 remaining pieces. Cover the doughs to rise until double in size (about 40-60 minutes at room temperature or 4-6 hours in the refrigerator).

4. Place a pizza stone on the lower bottom of the oven. Preheat oven to 500 degrees F.

5. To prepare each pizza, dip the ball of dough into a bowl of flour, shake off any excess flour. Place the dough on a clean, lightly floured surface and start stretching the dough. Press down on the center, spreading the dough into an 8-inch circle, with the outer border a little thicker than the inner circle.  

(See back)
6. Transfer dough on pizza peel and spread your favorite sauce or base. Top with choice of cheese and toppings. Transfer to hot oven and bake until golden and crisp, about 6 to 8 minutes.
BASIL PESTO SAUCE

2 cups fresh basil leaves (about 4 ounces)
2 cloves garlic
1/4 cup pine nuts
1/2 cup freshly grated parmesan cheese
1/4 cup extra virgin olive oil

1. With a metal blade in a food processor, combine the basil, garlic, pine nuts and parmesan cheese. With the motor running, slowly add the olive oil through the feed tube. Process until well blended. Use immediately. (Pesto can be kept, covered, for a few days in the refrigerator).
CSUN Summer Cooking Class

Lesson Plan: Day 16 – Meat and Beans/Non-animal Source (Soy)
Objectives:
1. Students will be able to state at least 2 good choices from the meat and beans group.
2. Students will learn that lean cuts of meat are the better choices.
3. Students will learn concept of vegetarianism.
4. Students will be exposed to and learn to cook with soy products.

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<tbody>
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<td>Lesson (20 min):</td>
<td>• Using “Magnificent Meat and Beans” presentation, the following topics will be discussed</td>
<td></td>
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<tr>
<td></td>
<td>o what belongs in the group</td>
<td>Powerpoint presentation</td>
</tr>
<tr>
<td></td>
<td>o making good choices vs. bad choices</td>
<td>Computer</td>
</tr>
<tr>
<td></td>
<td>o examples of lean cuts of meat</td>
<td>Projector</td>
</tr>
<tr>
<td></td>
<td>o other choices including egg, seafood, and dairy</td>
<td>Notebooks, pencils</td>
</tr>
<tr>
<td></td>
<td>o introduction to vegetarianism</td>
<td></td>
</tr>
<tr>
<td>Methods of evaluation:</td>
<td>Ask students what from this group they like to eat the most and if any are familiar with anyone practicing vegetarianism.</td>
<td></td>
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<tr>
<td></td>
<td>Review questions from Powerpoint presentation.</td>
<td></td>
</tr>
<tr>
<td>Cooking Lab (1 hr 25 min):</td>
<td>The students will be working with an alternative (non-animal) source of protein, soy. All groups will be cooking with tofu.</td>
<td>Aprons</td>
</tr>
<tr>
<td>Demonstration by chef:</td>
<td>• Introduction to soy products and tofu</td>
<td>Small paper plates</td>
</tr>
<tr>
<td></td>
<td>• Preparation of recipes</td>
<td>Plastic forks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cutting boards</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lettuce knives</td>
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<tr>
<td>Menu:</td>
<td></td>
<td>mixing bowls</td>
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<td>--------------------------------</td>
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<tr>
<td></td>
<td>• Pan-fried Sesame Tofu</td>
<td>Mixing spoons</td>
</tr>
<tr>
<td></td>
<td>• Brown rice</td>
<td>fry pans</td>
</tr>
<tr>
<td></td>
<td>• Macaroni and Cheese with silken tofu sauce</td>
<td>wok</td>
</tr>
<tr>
<td></td>
<td></td>
<td>large pot</td>
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<tr>
<td></td>
<td></td>
<td>serving plates</td>
</tr>
</tbody>
</table>
Magnificent Meat & Beans

What belongs in this group?
- Meat
- Poultry
- Fish
- Dry beans
- Peas
- Eggs
- Nuts
- Seeds

Making Wise Choices
- beans
- peas
- nuts
- seeds
- fish
- skinless poultry
  - white meat
  - lean cuts of meat
- hot dog
- bologna/pepperoni/salami
- bacon
- chicken wings
- inards - inside organs
- high fat meat - ribs, pork belly

Lean cuts of meat
- Example
  - beef - round steak and roast, top loin, top sirloin, chuck shoulder and arm roasts
  - ground beef - "extra lean", "90-95% lean"
  - pork - pork loin, tenderloin, center loin, ham

Other choices
- eggs
  - mainly without the yolk as you get older
- dairy
  - milk, cottage cheese (lowfat)
- shellfish
  - shrimp, crab, lobster - not eaten as much

Key Phrase
GO LEAN WITH PROTEIN!
Vegetarianism

Questions of the day
1. Name 2 wise choices from the meat and bean group?
2. Name 2 poor choices from the meat and bean group?
3. What is the key phrase for making choices from this group?
4. How much grains should we eat per day?
5. What is the best kind of grains?
Pan-Fried Sesame Tofu
Dairy-Free, Vegetarian

Ingredients:
- 14 ounces organic extra-firm tofu
- ½ cup cornstarch or flour for dusting
- canola or corn oil for frying
- ½ cup sesame seeds, lightly toasted
- 1 bunch scallions, trimmed and cut into 1" pieces Sauce
- 1/3 cup honey
- 3 tablespoons tamari
- 3 tablespoons finely minced ginger
- 2 tablespoons sesame oil (not toasted)
- 2 tablespoons rice wine vinegar
- 2 cloves finely minced garlic
- 1-2 teaspoons red chili flakes

Directions:
1. Wrap tofu with paper towels and place on a cutting board. Put another cutting board or heavy plate on top to press out liquid about 20 minutes.

2. Stir together sauce ingredients in a saucepan. Simmer sauce while you cook tofu. Dry drained tofu with paper towels and cube. Dust very lightly with corn starch or flour. Heat 1 inch of oil in a deep frying pan. Fry tofu in 350°F oil until golden brown. Place fried tofu on a large platter or bowl and toss with 2/3 cup warmed sauce, sprinkle liberally with sesame seeds and scallions, toss gently. Serve with remaining sauce for dipping or to drizzle over vegetables.

3. Serve with steamed bok choy or broccoli, sautéed watercress or eggplant, and brown rice.

http://www.wholefoodsmarket.com/recipes/vegetarian/tofu_sesame-wc.html
BROWN RICE

6 ounces brown rice
2 cups water
1/2 teaspoon salt
1 tablespoon butter or extra virgin olive oil

1. In a medium saucepan, combine all ingredients. Slowly bring to a boil, then lower to a simmer. Cover and cook until done, about 40 to 45 minutes. Test rice for doneness. Cook further if necessary.

*Note: Brown rice takes about twice as long to cook as white rice. It will have a crunchy texture and nutty flavor.

Cecilia De Castro
ceciliadc@msn.com
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Macaroni and Cheese with a Secret Silken Tofu Sauce

Ingredients:
10 - 12 oz. elbow macaroni (or other short pasta shape such as cavatappi)
12.3 oz. package silken tofu
2 tbsp non-hydrogenated margarine
1 ½ cups firmly packed organic grated cheddar cheese or cheddar-style nondairy cheese
Salt to taste

Directions:
1. Cook the macaroni in plenty of rapidly simmering water until al dente, then drain.

2. Meanwhile, puree the tofu until perfectly smooth in a food processor or blender. Transfer to a medium sauce pan and add the margarine and cheese. Slowly bring to a gentle simmer, stirring often, and then cook over low heat until the cheese is thoroughly melted.

3. Combine the cooked macaroni and sauce in a serving container and stir together. Season with salt to taste and serve at once.

Variation:
Bake in a casserole dish at 400 degrees for 20 to 30 minutes, or until the top is golden and crusty.

Recipe from: In a Vegetarian Kitchen with Nava Atlas
# CSUN Summer Cooking Class

**Lesson Plan:**
Day 17 – Meat and Beans continued/Seafood

**Objectives:**
1. Students will be able to identify 2 benefits of the meat and beans group.
2. Students will learn one function of protein.
3. Students will be able to state how many servings of the protein group are needed per day.
4. Students will learn to prepare a type of seafood dish as an alternative choice to meats and chicken.

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<tr>
<th>METHODS</th>
<th>LESSON CONTENT</th>
<th>MATERIALS</th>
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| **Lesson (20 min):**
Have students take notes. Prompt questions during lecture. Guide with MyPyramid poster. | • Continue discussion on meat and beans group using “Magnificent Meat and Beans”
- benefits of meat and beans group
- stay active to keep our muscles strong
- how much do we need – refer to MyPyramid
- example of servings using food models | Powerpoint presentation
Computer
Projector
Notebooks, pencils
Food models
MyPyramid poster |
| Methods of evaluation: | • Review questions from Powerpoint presentation | |

**Cooking Lab (1 hr 25 min):**
The students will learn to cook with seafood (shrimp) as an alternative choice to meats and chicken.

**Demonstration by chef:**
- Introduction to ingredients
- Handling of shrimp
- Cutting of vegetables
- Stir-frying techniques

**Menu:**
Stir-fried shrimp and vegetables with orange sweet and sour sauce

**Materials:**
Aprons
Small paper plates
Plastic forks
Cutting boards
Lettuce knives
Stir-fry spatulas
Wok
Fry pans
Serving plates
Benefits of meat and beans group (1)

- Contain something called protein
  - many functions inside our body system
  - helps build strong muscles

Benefits of meat and beans group (2)

- Give us iron
  - carries oxygen through our body and zinc (mineral)
    - keeps our immune system healthy - helps your body fight germs and illness

What else do we need to do everyday to keep our muscles strong?

Stay active!

How much do we need?

4-6 ounces per day

Best way to measure is to visualize

- Deck of cards
- Box of crayons
- Palm of your hand

Examples of meat and bean servings

- Deck of card size (3 oz.)
  - chicken breast
  - steak
  - hamburger patty
- ½ cup dried beans or peas
- 1 tbsp. peanut butter

Questions for the day

1. How much from the meat and bean group do we need per day?
2. If I eat one 3 oz. serving (box of crayon) of chicken for lunch, how much more chicken or meat can I eat for the rest of the day?
STIR FRIED SHRIMP AND VEGETABLES WITH
ORANGE SWEET & SOUR SAUCE

Ingredients:
8 oz. medium shrimp, shelled, deveined, butterflied
Pinch each of salt and freshly ground black pepper
2 tbsp light cooking oil, (such as canola or corn)
1 small onion, peeled, cut into 1-inch squares
2 cloves garlic, peeled, minced
1 inch ginger, peeled, julienned
1/4 cup shiitake mushrooms, stems removed, julienned
1/4 cup sliced waterchestnuts
1/4 cup baby corn
1/4 cup bamboo shoots
1/4 cup snow peas, trimmed or asparagus, cut into 2-inch length
1/4 cup green onions, cut into 1-inch pieces

Orange Sweet & Sour Sauce:
1 tsp grated orange or tangerine zest
1/3 cup freshly squeezed orange or tangerine sauce
1/3 cup chicken stock
3 tbsp oyster sauce
3 tbsp honey
1 tbsp sesame oil
1 tbsp cornstarch

Directions:
1. Shell the shrimp. Cut along the top of each shrimp and remove the vein. Butterfly. Refrigerate until needed.

2. In a small bowl, combine all the ingredients for the orange Sweet & Sour Sauce. Set aside.

3. Remove the shrimp from the refrigerator. Season with salt and pepper. Reserve.

4. Heat the wok over highest possible heat until very hot. Add the oil and when there is a whisper of white smoke, add the onion, garlic, ginger (See back)
and shiitake mushrooms and stir fry until glossy, about 1 minute. Add the shrimp, and continue to stir fry until they start to turn pink, about 2 minutes. Then add the rest of the vegetables, waterchestnuts, baby corn, bamboo shoots and snow peas, and continue to stir fry for another 1 minute.

5. Pour in the reserved sauce mixture and stir and toss until sauce glazes the food, about 1 minute. Transfer to a serving plate and serve with brown rice.
## CSUN Summer Cooking Class

### Lesson Plan:
Day 18 – Menu Development/Snack Option

### Objectives:
1. Students will be able to develop their menu for the graduation banquet the following week.
2. Students will create their own healthy homemade snack.

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<th>METHODS</th>
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| **Lesson (1 hr):** | • Discuss developing the menu for next week’s graduation banquet  
                          • Discuss students’ recipe preferences, set-up, organization, and assign role and responsibility for each student for the graduation. | |
| **Activity (40 min):** | Freestyle exercise  
                          Have students perform their own physical activities including dancing, sample of a sports performance, stretching, role-playing, etc and have fun. | |
| **Cooking Lab:** | During freestyle exercise, some of the students will go back in the kitchen to create their own popcorn snack with choice of healthier flavorings. | Parchment paper  
                                                               Big bowls  
                                                               Popcorn popper machine |
| **Menu:** | Air-popped popcorn with no salt or oil  
                          Choice of toppings: no-fat butter and cheese flakes, no-salt herb mix, maple syrup, spices, garlic powder, ranch powder mix, honey | |
Week 5: Graduation Preparation

Tasks Breakdown by Days and Recipes

**Monday**
- Pot stickers
- Vanilla bean ice cream
- Turkey meatballs (2 lbs with extra seasoning for pizza-sausage)

**Tuesday**
- Pasta dough
- Pizza dough
- Tomato sauce
- Tuile cookies

**Wednesday**
- Caesar salad dressing
- Chocolate beet cupcakes

**Thursday**
- Cut up all veggies
- Do Hummus dip
- Grill chicken
- Pre-make ½ tortillas

**Friday**
- Sushi
- Caesar salad
Graduation Mini-Banquet
Set-Up

Station 1
- Bit size (Angela)
  - Crudité (Hummus dip) = ryan
  - Pot stickers = taline
  - Sushi = yotam, peyton

Station 2
- Dessert (Danny) = justin, hilton
  - Vanilla ice cream
  - Tuile cookies
  - Different toppings

Station 3
- Pasta station (Amanda D.)
  - Pasta & Meatballs
  - Caesar salad

Station 4
- Pizza (Amanda M.) = Gabriella, Shayok, Helena
  - Portobello mushroom

Smoothies = jessica, devin (Christine)

Grilling station
(?) = emily, victoria, sophia
- Taco
- Chicken
- Beef

Stir frying station
(John) = luke, christopher
- Shrimp
- Vegetables

Tiffany, Melanie, Molly, Rose

Dessert
- Cup cakes
Marilyn Magaram Center
Tung-Shan Chen, PhD, Director
Annette Besniliian, MPH, RD, CLE, Associate Director

Summer Academic Program for Elementary School

Students (SAPESS)
Marilyn Joshua, PhD, Director

Teacher
Chef Cecilia deCastro

Graduate Students/Nutrition Educators
Rania Dabboussi
Arlyn Sabado

Student Volunteers
John Chang
Amanda Degnan
Cheri Kaczmarek
Amanda Monforte
Angela Tse
Kristin Henson
Danny Rogers

Junior Chefs
Gabriella Barbarino
Justin Bell
Melanie Besniliian
Shayok Chakraborty
Victoria Daniels
Ryan Fletcher
Tiffany Giron
Rose Hattar
Yotam Hatush
Hilton Hunter
Helena Kevorkian
Jessica Krieg
Emily Lennon
Devin O'Brien
Luke Sapir
Molly Stone
Peyton Suzuki
Taline Vartanian
Sophia White
Christopher Wong

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• Department of Family & Consumer Sciences in the College of Health & Human Development
• Department of Elementary Education in Michael D. Eisner College of Education
• Special Guest Assistant Chef Sandy Leon
• Marilyn Magaram Center Staff
• Kinesiology Students

Graduation Ceremony
August 3rd, 2007
California State University Northridge
Sequoia Hall 112
Summer Cooking Class
Graduation Program

12:00 pm Reception

12:25 pm Welcome by Annette Besnilian

12:30 pm Awards & Recognition by Chef Cecilia de Castro

12:40 pm Graduation Certificate Presentation by Arlyn Sabado & Rania Dabboussi

Congratulations!

Graduation Menu

Appetizer
Crudités with hummus dip
Portobello mushroom
Pot stickers
Sushi

Main course
Grilled chicken or beef tacos, from freshly made tortillas
Whole wheat pizza with tomato or pesto sauce
Whole wheat pasta with turkey meatballs
Shrimp stir-fry
Brown rice

Dessert
Vanilla bean ice cream in tuile cookie cups
Chocolate beet cup cakes
Fruit kabobs

Drinks
Fruit smoothies
Water
APPENDIX C

The Food Adventures Workshop:
A Pilot Cooking and Nutrition Education Program Cookbook Memoir
Chapter 1: Introduction

In the summer of 2007, a pilot cooking class program geared for elementary grade school students was developed and implemented in San Fernando Valley, California. This class was a new addition to the Summer Academic Program for Elementary Students (SAPESS), which offers learning experiences for grade school students during summertime at California State University, Northridge (CSUN). Under the guidance of their professors, two graduate students, Arlyn P. Sabado (author) and Rania Dabboussi, were the primary coordinators for this first-ever class, which was their project to complete for their master’s degrees in nutrition and dietetics. Rania and I developed a five-week curriculum for the summer program. Our primary goal for the class was to have the children learn about nutrition through cooking. Childhood obesity prevalence has significantly increased in the last three decades and is a major health concern in the U.S., as well as in many developed countries. This program was meant to address this issue within the local community by promoting nutrition education and healthy eating habits amongst the youth.

When I started putting ideas together for this class, my personal intention was to have the children experience everything that food has to offer. I wanted to create a sense of adventure for them to learn about and experience the nutritional benefits and consequences of food, the chemical and physical interactions involved, the gastronomic results created from cooking, and the history and culture of food in society. When we were creating our curriculum, I wanted to include the nutrition, food science, and culinary skill components as well as food history and culture and artistry. I wanted to introduce them to new, exotic, and gourmet foods they might not have tried before. I didn’t want them to just learn how to cook healthy but also create sophisticated, elegant dishes with gourmet flavors and ingredients. Altogether, this was meant to educate and also enable the students to appreciate and be more conscious of what they eat.

We were so excited about this startup project that we put everything we can think of to try to make it fun, interesting, interactive, and at the same time educational. We wanted to include food science demonstrations, math problems, physical exercises, culinary skills, history and culture, artistry and games. The unofficial name of the class was the Food Adventures Workshop because the intention was for the overall experience and appreciation for food.

The planning and preparation for the class was very time-consuming and labor intensive. One of the first things we needed to do was to get a chef for the cooking portion of the class. We were able to get the help of Chef Cecilia de Castro, who I’ve had the pleasure of working with and be her culinary student in her Let’s Get Cookin’ program. We also enlisted the help of CSUN students as well who were willing to volunteer and be a part of this exciting new program. Next was to obtain funding for the program. Through registration lab fees, SAPESS provided for the learning materials, school supplies, and the chef’s salary. As our idea was to expose students to gourmet types of ingredients, we needed additional money and assistance for food and kitchen equipments. The Marilyn Magaram Center, auxiliary organization with the Family and Consumer Sciences (FCS) department and Associate Director, Annette Besnillian, helped us to apply for and receive grant money from CIELO program and receive sponsorship
from Whole Foods Market which graciously provided us with all kinds of staple ingredients as well as their fresh produce. I thought it was also important to get chef uniforms for the staff and the students to make it look official, not to mention adorable, for everyone involved. This showed we were serious about cooking with fancier ingredients and making it look elegant. We were fortunate enough to use the FCS kitchen lab and its equipments.

We used the NCES Food n’ Fitness teaching tool kit to develop our curriculum. Using MyPyramid, we organized our lectures based on the food groups indicated in the pyramid. The class began on July 2nd and ended on Aug 3rd. The first week was an introduction of the class and rules, Mypyramid, portion sizes and servings. The following days and weeks were divided into topics: fruits, vegetables, grains, protein sources, and sugars and fats. The setup of the class was to start with the nutrition lecture and then transition to the cooking exercises which used the food group indicated in the lecture. The Chef always started with engaging the students in a demonstration before they started cooking. The recipes were mainly produced by the Chef and we wanted to make sure we included ingredients that the children might not be familiar with. We wanted the children to create dishes beyond peanut butter and jelly sandwich or a typical macaroni and cheese. The lectures were mainly presented using Powerpoint computer program. The kids were given notebooks to write their notes own and handouts to be piled in their own folders.

There were 20 children between the ages 7-11 years old that were enrolled in the class. Consent forms were given to the parents prior to for the children’s participation in the class as well as the study conducted by Rania for her thesis completion. Her thesis included an evaluation of the students’ knowledge and intake of fruits and vegetables via pre and post assessment test. Permissions were also obtained for the children’s photographs and participation in the production of a planned cookbook at the time. As part of my project requirement, I wanted to create a cookbook with the plan that the students will be able to create their own recipes by the end of the summer course. At the end of course, the students still needed ample guidance and coaxing with creating dishes. The duration of the class was not long enough for them to independently develop their own recipes. This cookbook memoir was developed instead to detail their experiences as well as the staff and highlight some of their favorite recipes from the class. The following chapters will capture some of the experiences divided into the five weeks. Consents were also given for allergies/intolerances and other considerations based on culture and/or religion. We had one child who was allergic to milk and gluten and this posed some challenges in the cooking activities in accommodating this student’s needs.
Chapter 2: Week 1

The first day of class for me was nerve-wracking. I had never actually taught grade school students before and I wasn’t sure how they would react to us. I was anticipating some parents to be present for the first day but there were none. The first thing we wanted to do was to introduce ourselves as the educators, the CSUN volunteers as the teacher assistants (TA’s), and the Chef. As an icebreaker, we had everyone in the room pick two things to describe themselves that were listed on the board, which included topics such as nicknames or pet names, cultural/ethnic background, why they are in the class, talent, hobbies, what they like to eat. It was nice to hear and somewhat surprising that they knew a lot about food and cooking. They mentioned about watching cooking shows and helping with the cooking at home. Some have tried sushi and even calamari. One even mentioned the term, “sous chef.” The children’s responses indicated they were excited about cooking and eating and ready to participate in the class. After the introduction, we discussed the setup of the class including starting with the lecture portion, break time, and then the cooking activities. We also discussed rules and regulations in particular to safety use of the kitchen and its equipments. Since we didn’t want the risk of accidents from the use of knives, we had decided that the children use lettuce knives. The TA’s used the real knives with the students. There were four stations in the kitchen lab and five randomly picked students were assigned to each station. One TA was responsible for each station and this was to be the set-up during the whole summer course. We did end up switching some of the children around during the course because of their behavior and some being more comfortable with others.

To give the students an introduction to the cooking and get them excited about food, the first cooking exercise involved making vegetable (veggie) chips from root vegetables including such uncommon foods as parsnips and rutabaga along with yam. The goal was mainly to have the students practice using their lettuce knives. Since the lettuce knives were made of plastic and not sharp at all, they made for uneven cuts of the root vegetables and some of the chips did not crisp up because of their thickness. While the veggie chips were cooking, the Chef did a demonstration of food tasting. She cut some watermelon slices and had the kids guess what she put on them. This was to emphasize using their taste buds for sensing the taste of saltiness, sweetness, spiciness, and bitterness. The kids enjoyed this exercise and kept lining up for more. The first day
was a learning experience for everyone involved. The class itself was from 10:40 am to 12:30 pm. The lecture took longer than we had anticipated so we cut short on some of the topics. It was an adjustment period towards the setting, the students, the organization, and the timing.

The pretests were given on the second day since we ran out of time the day before and we asked some of the students to see what they’ve learned on the first day. On this day (Day 2), the concepts of nutrition, food science and culinary arts were briefly defined, with an emphasis on the importance of healthy eating. MyPyramid was also introduced using a poster size and individual handout for each student. For this lesson, I also wanted to share some foods and ingredients that they might not be familiar with and give them an exposure to something new. We played a fun game I named the “Fascinating Factor,” which was a variation of the TV show, Fear Factor. Participants were to taste a food item without seeing it. Four to five students were blindfolded at a time sitting by the table in front of the class. Each was given a food item to experience using four senses: smell, feel, taste and sight. The audience provided the sense of sight as the participants were blindfolded. Based on smelling, feeling, hearing the description from the audience, and finally tasting the item, the participants guessed what the food was and where in the MyPyramid food groups it belonged in. They were given some familiar foods to guess including mango, turkey deli meat, yogurt, broccoli, and even ethnic foods that some of the students already know such as bread from the Philippines called pan de sal and green tea frozen yogurt. Some of the exotic foods unfamiliar to them were tamarind, edamame (soybeans), arugula, gaya melon, and avocado. Some of the students, at first, were really excited to participate but once they started actually sensing the food items, some became hesitant, scared, and even wanted to back out. Their reactions ranged from feelings of delight to facial gestures of disgust. The children and the staff had a great time playing this game and everybody was really into it. It generated lots of excitement, laughs, and noise.
Day 3 of the program was right after the 4th of July holiday. Homework activity was given to the students to work over the holiday so they will not forget the previous lesson. Initially we had intended to have the students write in their notebook a journal of what they’ve learned for the day, but given the limited time and the students’ lack of desire to voluntarily write, we decided to start putting review questions as a method of evaluation in every lesson from here on. On this day, 6 basic nutrients were introduced: carbohydrates, fats, proteins, vitamins, minerals, water. To make the students remember what they were, Rania turned the first letter of each word into an acronym that spelled out CFPVMW and created a sentence out of it, “Could Fanny Play Violin Much Worse”. The importance of portion sizes and number of servings were also detailed on this lesson with the use of props including a CD case, a tennis ball, a box of crayons, and a die and the use of the hands to gesture cup and ounce servings. The recipe for this day was to make a chicken sandwich and portion out the appropriate serving. The Chef showed the kids how to use the scale and trim the bun to 1 oz size each side and the chicken breast to approximately 3 ounces each serving. She also showed them how to flatten the chicken so it cooks evenly and had the kids smell fresh herbs to use for flavoring. We had different variations on the toppings for the sandwiches and included such items as grilled eggplant slices, tomatoes, low-fat Swiss cheese, avocado, teriyaki sauce, hummus, grilled...
red bell peppers, and pineapple slices. We encouraged the students to include all the
different food groups in their sandwich to have a well-balanced dish. The chicken breast
were cooked in four different ways: en papillote (steamed in parchment paper), poached
in broth, grilled, and deep-fried. This was to show the different ways of cooking as well
as to recognize the healthier versus the not so healthy version of cooking, which was the
deep-fried. The children enjoyed this dish because it was simple and familiar enough for
them and they were able to try toppings they’ve never tried before on a sandwich. The
students were very receptive to this day’s lesson.

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**“Deck of Cards” Chicken Sandwich**

*Cooked in three methods*

**Ingredients:**

- 3-4 oz. chicken breast
- **Choice of herbs and seasonings:**
  - Fresh rosemary
  - Basil
  - Cilantro
  - Parsley
  - Salt
  - Thyme
  - Dried Oregano
  - Lemon
  - Pepper

- 1 (2 oz. total) whole wheat hamburger bun

**Choice of toppings:**

- 1 cup veggies, 1 oz. or 1 slice cheese, ½ cup fruit, ½ - 1 tsp. condiment
- Romaine lettuce
- Tomatoes
- Grilled eggplant slices
- Grilled red bell pepper slices
- Grilled onion slices
- Low-fat Swiss cheese
- Pineapple slices
- Avocado
- Teriyaki sauce
- Barbecue sauce
- Lite mayo
- Salsa
- Hummus
- Mustard
- Ketchup
Directions:
Cut chicken breast to about the size of a deck of cards (3-4 oz). Place chicken in a “Ziploc” bag. Pound the breast using a mallet or heavy pan and make sure the breast has same thickness all around to ensure even cooking. Season with salt and pepper.

Method 1: Grilled
Chop fresh herbs finely. Sprinkle either dried or fresh herbs and/or squeeze of lemon. Using grilling pan or outside grill, spray with canola oil and cook chicken for 2 minutes. Turn same side counterclockwise to 10 o’clock placement to get grilled marks and cook for another 2 minutes. Flip chicken and cook for another 2 minutes. Using grilling machine, cook 3 minutes first, then turn to 10 o’clock position, and cook for another 3 minutes. (See back)

Method 2: En Papillote – steamed in parchment paper
Preheat oven to 350° F. Cut a large piece of parchment paper into a circle the size of large serving plate. Fold in half and place onto a baking sheet. Place chicken breast on ½ of the parchment paper. Place a lemon slice and a whole herb of choice. Fold the other half of the parchment paper over and seal tightly by folding creases. Bake for 10 minutes or until paper pops up. Open paper using scissors or knife and be careful to let the steam out. Do not put face directly on top.

Method 3: Poached
Heat ready-made chicken stock or broth in a quart size pot, or dissolve 1 bouillon cube into 2 cups of water. Place whole or chopped herbs and let simmer in low heat. Add chicken breast and cook for 6 minutes.

To grill vegetables and fruit
Slice large eggplant onion across the width. Slice red bell pepper into quarters. Use one can of pineapple slices drained. Spray grilling pan or machine lightly with canola oil and grill for 3 minutes.

Southwest flavor: Mediterranean flavor:
Romaine lettuce Romaine lettuce
Tomatoes Tomatoes
Low fat Swiss cheese Low fat Swiss cheese
Avocado Grilled pepper and eggplant
Salsa Hummus

Hawaiian/Asian flavor: Western flavor:
Romaine lettuce Romaine lettuce
Tomatoes Tomatoes
Low-fat Swiss cheese Grilled onions
Pineapple slice Cheddar cheese
Teriyaki sauce Barbecue sauce
The fourth day lesson consisted of emphasizing the recommended servings of each food group for the day. The exercises included math problems and the students were given place mat drawings that illustrated how their plate should look like in each meal. The children liked the place mats as they were able to color on them but they were not very interested in doing math problems. The cooking exercise was to make an omelet with different vegetable and cheese fillings and complete a well-balanced breakfast which included a blueberry waffle with maple syrup and fresh fruit on top and a cup of milk. Again, there was an emphasis on having variety, balance of food choices throughout the day, and moderation following the food groups indicated in MyPyramid. At the end of the cooking session, the class observed a prepared complete lunch, dinner, and two snacks to add to the breakfast meal to showcase the variety and balance as well as the recommended servings of each food group for the day. It was also important to show the students levels of hunger/fullness using a diagram drawn on the board, from Level 1 (starving) to Level 5 (I ate way too much! I don’t feel so well.) Level 3 indicated “I feel just right- not too hungry or too full.” The students were receptive to this concept. The lecture portion took longer because of the content. Looking back, the lesson content seemed excessive for the students to be able to fully absorb and understand the concepts introduced.

Another notable experience from this day were the three variations of cooking omelet, we (the staff also), learned from the Chef, which were the regular, the Spanish omelet version, and the French. The children did a great job separating the yolks from the egg whites. They measured out juice and milk for one serving as well.
Junior’s Omelet

Ingredients:
1 egg
1 egg white
Dash of salt and pepper

Choice of fillings:
Herbs: cilantro, parsley, rosemary, oregano, thyme
Bell peppers – assorted colors, diced
1 oz. nonfat cheddar cheese, grated
Green onion, diced
Mushroom, sliced
Spinach leaves
Tomato, diced
Onion, diced

Regular omelet version: beat egg and egg white using a fork until slightly bubbly. Add salt and pepper. Add choice of fillings. Spray canola oil onto small fry pan. Pour omelet mixture and let cook for 2 minutes. Fold one half over the other and serve.

Spanish omelet version: separate egg whites from the yolk. Whisk egg whites until foamy. Add the yolk and pour on fry pan. Add fillings. Cook for 2 minutes. Fold one half over the other and serve.

French omelet version: mix all ingredients and pour onto fry pan. Fold over one-third and the other one-third to create a roll and serve.

For a well-balanced breakfast, complete with choice of 1 oz. or ½ cup serving of grain, ½ cup serving of fruit, 1 cup dairy (optional). Example: Serve omelet with ½ blueberry waffle with blueberry compote, ½ cup orange juice, 1 cup milk.
Chapter 3: Week 2

On Day 5 of the curriculum, the students were exposed to the different types of vegetables from the different parts of the plants, their health benefits, and recommended servings for the day. I didn’t anticipate this to be a favorite food subject with children but we wanted to emphasize on colors and pictures with this lesson. In the kitchen, the children mainly cut up a variety of raw vegetables which included such unique and colorful produce as orange cauliflower, radishes and bell peppers. The vegetables were paired with 4 different dipping sauces: yogurt and mint, hummus, roasted pepper mayo, and baba ghanoush. We challenged each of the 4 stations to create one of the sauces and assemble a crudite platter or vegetable tray. Whichever came up with the prettiest and most creative decoration won a prize. Even though the children enjoyed working with vegetables, enticed with creating something colorful and artistic, they were not as enthusiastic in eating their creation. By this time, we, the staff, were getting used to the timing and setting and we felt that today was a lot smoother. For the most part, after the end of the classes for each day, we took some time to reflect on what transpired and how we can improve for the upcoming days.

Day 6 involved teaching about the benefits of fruits again with emphasis on colors and choosing whole fruits and 100% juice products. The cooking activity consisted of making fruit kabobs and dipping it in yogurt and also mixing fruits with yogurt and milk to make smoothies. The Chef had the kids smell, cut, and peel the fruits, as well as introduce garnishing technique
using an apple. This day was also a more comfortable day for everyone. There were no significant concerns observed.

The lesson for Day 7 of the curriculum was more involved as we discussed vitamins and minerals and introduced food science concepts, again working with fruits and vegetables. We indicated common vitamins and minerals that help support growth, bones, muscles, healing, and healthy vision. We touched on vitamins A, B, C, D, E, and K and the minerals, calcium, potassium, iron. With our Food Science 101 presentation, we discussed how acid/base products affect the colors and textures of certain fruits and vegetables. We demonstrated the use of sliced red cabbage to alter its texture and color by mixing some with vinegar and some with baking soda. Another food science concept we demonstrated was the enzymatic browning of fruits and vegetables due to exposure of the flesh to oxygen. Apple wedges were soaked under water in a bowl while the others were exposed to air. The third food science concept involved osmosis in which we covered strawberries with sugar and let it sit and take effect. These concepts transitioned to the cooking activities as the recipes for the day consisted of making salads with vinaigrettes. We understood that teaching about specific vitamins and minerals might be overwhelming for the children. We tried to explain it as simple as possible but the most important part was to reinforce the health benefits of fruits and vegetables and get the children more exposed to different varieties. They were fascinated with the food science demonstrations as some were asking beforehand why and how foods change when cooking.

The kids liked the corn salad the best and did a great job cutting the corn off the cob.
**Corn & Arugula Salad**

**Ingredients:**
- 2 white corn
- 2 cups baby arugula
- 2 red onions
- 1 bundle of Thyme
- ¼ cup of Olive Oil
- ¼ cup of White Wine Vinegar
- ½ tsp salt
- ½ tsp pepper
- ¼ cup of canola Oil

**Directions:**
Boil corn for 15-20 minutes. Let cool. Shuck corn kernels from the cob. Tear off arugula into smaller pieces. Finely chop red onions. Pull out thyme leaves from stem. Combine all ingredients in a bowl. Mix it well and serve.

To no surprise, the children were excited about the lessons for Days 8 and 9 of the curriculum because they involved baking and decorating cakes. The topic was about fats and sweets and lessons emphasized on minimal intake of foods containing sugars and unhealthy fats. The Powerpoint presentation concentrated on the two types of oils, solids and liquids, and their benefits and detriments. We emphasized on making wise choices of foods lower in fat. The students also did a “tooth decay” worksheet that focused on which foods are healthy and good for the teeth. We decided to combine these topics into a 2-day lesson because of the cooking activity. Baking the cakes took a longer time than one class period allowed and so the following day was scheduled for decorating the cakes. The children made 4 kinds of cupcakes: red beet chocolate cake, carrot cake, coconut cake, and maple syrup cake, while the Chef baked a large cake for the class which became our inauguration cake to celebrate the class and the accomplishments the students and the staff have done so far. By this time, everyone involved in the class were comfortable with each other. The TA’s were used to their groups. We were adjusted to the students and vice versa. Day 9 was a review of the week’s lessons and everybody was truly having fun decorating the cupcakes. For awhile, there was no feeling of stress, pressure, incompetence and weariness, and it seemed that the staff was also child-like and innocent in their demeanor. We took several fun and impromptu pictures as showcased. At the end of these lessons, we had decided that the coconut and maple syrup cake did not properly represent the message we were lecturing and we decided to stick with just the red beet chocolate cake and carrot cake. As we expected, these two days were very much enjoyed by the students because they got to make their cake and eat it too.
RED BEET CHOCOLATE CAKE
Makes 1 cake or 2 dozens cupcakes

Ingredients:
2 cups pureed cooked beets
2 1/2 cups sifted unbleached all-purpose flour
1 tsp double-acting baking powder
2 tsp baking soda
1/2 tsp salt
1 tsp cinnamon powder
5 oz. unsweetened chocolate
5 eggs
2 cups granulated sugar
1 1/2 cups corn or canola oil
1 tsp vanilla extract

Directions:
1. Preheat oven to 350° F.

2. Spray with oil three 9-inch round layer cake pans. Line them with parchment paper, spray the paper and lightly dust with flour. Tap off any excess flour. If making cupcakes, line standard-sized cupcake pans with cupcake liners.

3. In a blender or food processor, puree the cooked or canned beets. Measure and set aside.

4. Sift together the flour, baking powder, baking soda, and salt. Set aside.

5. In a small plastic or glass bowl, place the chocolate and melt on low temperature in a microwave, until just beginning to melt. Stir until completely melted.

6. In a large bowl of a mixer, beat the eggs just to mix. Beat in the sugar, oil, vanilla extract, melted chocolate, beets and lastly, the dry ingredients. Beat until incorporated.

7. Pour mixture into prepared pans or cupcake pans. Bake for 50 minutes or when top springs back when gently pressed with your fingertip. For cupcakes, check in 25 to 30 minutes. Allow to cool before frosting and decorate as desired.
Chapter 4: Week 3

On Day 10 of the curriculum, the lesson plan taught about the benefits of dairy foods in the diet and making smart choices from the milk group. For the cooking lab portion, the Chef made vanilla ice cream with the students using 1% milk. She discussed the purpose of adding rock salt and how that lowered the temperature, and what the freezing temperature of water was. We were fortunate to have enough ice cream makers for each group and everyone took turns cranking the machine. Since one of the students was allergic to milk, we decided to make soy based ice cream to experiment with. That turned out to be the worst ice cream we’ve ever tasted, to say the least. That was something we laughed about the rest of the time. The ice cream was topped with fresh fruit including berries and the Chef demonstrated making tuile cookies, which are similar to rolled wafers, and acted as the cones for the ice cream. The students also made cheese fondue to dip cut-up vegetables in. The students particularly liked the ice cream and there was nothing more perfect than a freshly churned ice cream on a hot summer day. The students also received their junior chef uniforms at this time and they looked adorable.
Day 11 topic was about calories and energy and where calories come from. The lesson included math exercises in which the students were asked to tally the number of calories indicated on the Nutrition Facts Label of a particular food product and see if the number matched the total calories labeled. From this they were able to determine also from which source most of the calories are coming from, whether from carbohydrates, protein, or fat. We explained to the students that some products have most of their calories from fats and sugars (under carbohydrates) and to limit intake of these types of products. We also discussed about how consuming too much and not enough energy affects the body resulting in overweight/obesity and malnourishment shown in pictures to help them visualize the concept. The concept of “burning off” calories through physical activity as part of a healthy lifestyle was also discussed. For this day’s cooking activity, the children were shown how different methods of preparation affect the total calories in a food. This was briefly introduced in the first week when the students made chicken sandwiches and grilled/poached options were encouraged than the deep-fried version. This time, baked apples versus caramel candy apple were made in comparison. The children enjoyed the baked apples as they decorated them with gummy worms.

Day 12 of the curriculum focused on the 2005 Dietary Guidelines for Americans describing key recommendations on adequate consumption of fruits and vegetables, whole grain, low-fat milk products, and limiting consumption of bad fats and sugars. The lecture portion emphasized on the importance of exercise, with a goal of 60 minutes per day most days of the week. Rania was fortunate enough to get two kinesiology students to come and be the guest educators. This was an impromptu moment. The stretching exercises which the children happily participated in, were the bulk of the lesson for the day. The staff enjoyed the exercises as well and everyone participated. The cooking portion consisted of appetizer type of recipes which
included making portobello mushroom pizza, stuffed mushroom, and salmon salad. We had planned on having each of the groups do all recipes but we didn’t have enough time for the cooking activities. In the end, we realized it was too many recipes crammed into one day.

**Portobello Mushroom Pizza**

**Ingredients:**
2 large Portobello mushrooms
2 tbsp of ready made pizza sauce
Choice of topping: ¼ cup total for each mushroom
- Leftover low fat meats (sausage, etc…)
- Chopped bell peppers
- Sliced olives
- Chopped onions
- Broccoli flowers
2 ounces shredded low fat mozzarella cheese
Directions:
Preheat oven at 350° F. Take the stem off the mushrooms. Spread the pizza sauce over the Portobello mushroom and place toppings and cheese. Bake at 350° F for 15-20 minutes.

The lesson plans for Days 13 and 14 involved more of a personal touch with the students in which we discussed about food history and culture. We knew more than likely the class will comprise of students with different ethnic backgrounds and so it was important to include in the lesson plans, topic about food as part of culture, history, and how it defines us. We talked about food practices involving religion, how food was used as a form of symbolism and money, foods associated with the holidays and fun food facts. We gave the students homework for them to do and their task was to write down at least one dish made or eaten often at home. They were to indicate at least 3 ingredients from the dish in a blank MyPyramid sheet. The next day, they shared their home recipes and it was interesting to learn from the students their backgrounds through food. There were backgrounds from Armenia, Japan, Mexico, as well as different regions in the U.S. For the cooking lab, we wanted to create international flavors and we decided on Asian foods from China, Japan, and Philippines on Day 13 and Latin theme for Day 14. For Day 13, there were three recipes planned but the students ended up just accomplishing one full recipe, the potstickers. Some were able to try doing the sushi but due to improper timing, the other recipes were not made. The Chef ended up just demonstrating the sushi and some took turns to roll. On Day 14, the students made quesadillas with lowfat-cheese, grilled chicken, and Anaheim chile and carne asada with freshly pressed corn tortillas. The children enjoyed using the tortilla presser and putting the tortillas on the grill. Although the TA’s were always present whenever the children worked with fire, there was one unfortunate incident in which one of the students burned her arm from the grill. We made the incident report and informed her parents. It was our first accident involving a student and even though we did feel panicked, it was handled appropriately. On this day, we decided to take the time to review due to the complexity of the week’s lessons and also to catch up on finishing coloring the place mats they received from last week.
Chapter 5: Week 4

For the last week of formal instruction, our topics were the grains and protein foods, and we knew the next few days were going to be very involved and challenging in the kitchen. We decided to tackle these topics towards the end of the course because of the content material and the planned recipes. So we dedicated two days for each topic and spent more time on the cooking for these days. For Days 15 and 16, the lesson plans were divided into first, where grains are found and knowing the good versus bad choices, and second, the benefits and serving recommendations of grains. Day 15 recipes consisted of making whole wheat pasta dough, turkey meatballs, and fresh tomato sauce. The children had lots of fun making the pasta. This was something they had never done before. There was even variation on the color of pasta using vegetables for coloring. We used spinach, carrots, and beets to make green, orange, and pink pasta. The students were having fun using the pasta machine and creating multicolored pasta. They also enjoyed making their own meatballs as it involved working with their bare hands. The Chef demonstrated the tomato sauce and made a big pot for the entire class and the class collectively prepared a Caesar’s salad. For Day 16, the students made whole wheat pizza dough and basil pesto sauce. We had the children go straight to the kitchen first before lecture to allow time for the dough to proof or rise. Again, this was a very involved activity that the students enjoyed because they were using their hands to manipulate the dough. The toppings for their pizza included a variety of fresh vegetables and the tomato sauce and meatballs, which was turned into sausage, from the previous day.
Days 16 and 17 covered the topics of meat and beans as protein sources of food. The lessons for the two days consisted of types of foods that belonged in this category including meat, poultry, egg, seafood, dairy, and beans/legumes. We also discussed the nutritional benefits of these foods, choosing lean cuts and lowfat options, and reiterating the recommended serving sizes. Again, we allowed more time for cooking instead of lecture activities to be able to complete the recipes. By this time, we’ve learned from previous days to give more time for students to grasp the cooking and have them enjoy tasting their creation instead of feeling rushed and ready to go once the class is over for the day. Since we’ve cooked with meat and poultry the previous days, we wanted to concentrate on vegetarian sources of protein and seafood for the cooking labs. This gave another layer on the exposure of foods we wanted to present to the children as well as the caliber of program we intended to set up. On Day 16, we were fortunate to have a special guest from Whole Foods Market, whom without their generous food supply, we couldn’t have made possible the types of foods and recipes we had planned and created for the class. He discussed about vegetarianism from his personal point of view and he was our Chef for the day. He made pan-fried sesame tofu and macaroni and cheese with secret silken tofu sauce. Both recipes were a hit with the children and they enjoyed having our guest to enlighten them with some new information. Everybody, students and staff, were quite surprised and delighted with the mac’n cheese version. It turned out to be very creamy, delicious, and one wouldn’t have guessed it was made with tofu. Day 17 was seafood day, and the recipe was stir-fried shrimp and vegetables with orange sweet and sour sauce. Much was devoted to handling of the ingredients for this dish. The Chef demonstrated the cleaning of shrimp (peeling and deveining), cutting of vegetables, and proper stir-frying technique. We made a contest out of the stir-frying and had the children try flipping the vegetables with just the frying pan, with supervision. Three small frying pans were set up and three students were cooking at the same time. They pretended to be contestants in the TV cooking show, “Iron Chef”. It was at this time that a reporter from
Daily News Los Angeles was present to do a report on our class. He interviewed some of the students and administration from the Marilyn Magaram Center. So everyone was especially attentive and up on our feet. During this time, there was a misunderstanding with the Chef involving the interview and she walked out of the class. The reporter ended up interviewing her at a later time. Overall, it was an unusually emotional day for everyone involved.

**STIR FRIED SHRIMP AND VEGETABLES WITH ORANGE SWEET & SOUR SAUCE**

**Ingredients:**

- 8 oz. medium shrimp, shelled, deveined, butterflied
- Pinch each of salt and freshly ground black pepper
- 2 tbsp light cooking oil, (such as canola or corn)
- 1 small onion, peeled, cut into 1-inch squares
- 2 cloves garlic, peeled, minced
- 1 inch ginger, peeled, julienned
- 1/4 cup shiitake mushrooms, stems removed, julienned
- 1/4 cup sliced waterchestnuts
- 1/4 cup baby corn
- 1/4 cup bamboo shoots
- 1/4 cup snow peas, trimmed or asparagus, cut into 2-inch length
- 1/4 cup green onions, cut into 1-inch pieces

**Orange Sweet & Sour Sauce:**

- 1 tsp grated orange or tangerine zest
- 1/3 cup freshly squeezed orange or tangerine sauce
- 1/3 cup chicken stock
- 3 tbsp oyster sauce
- 3 tbsp honey
- 1 tbsp sesame oil
- 1 tbsp cornstarch

**Directions:**

1. Shell the shrimp. Cut along the top of each shrimp and remove the vein. Butterfly.
Refrigerate until needed.

2. In a small bowl, combine all the ingredients for the orange Sweet & Sour Sauce. Set aside.

3. Remove the shrimp from the refrigerator. Season with salt and pepper. Reserve.

4. Heat the wok over highest possible heat until very hot. Add the oil and when there is a whisper of white smoke, add the onion, garlic, ginger (See back) and shiitake mushrooms and stir fry until glossy, about 1 minute. Add the shrimp, and continue to stir fry until they start to turn pink, about 2 minutes. Then add the rest of the vegetables, waterchestnuts, baby corn, bamboo shoots and snow peas, and continue to stir fry for another 1 minute.

5. Pour in the reserved sauce mixture and stir and toss until sauce glazes the food, about 1 minute. Transfer to a serving plate and serve with brown rice.

Macaroni and Cheese with a Secret Silken Tofu Sauce

Ingredients:
10 - 12 oz. elbow macaroni (or other short pasta shape such as cavatappi)
12.3 oz. package silken tofu
2 tbsp non-hydrogenated margarine
1 ½ cups firmly packed organic grated cheddar cheese or cheddar-style nondairy cheese
Salt to taste

Directions:
1. Cook the macaroni in plenty of rapidly simmering water until al dente (cooked but firm to the bite), then drain.

2. Meanwhile, puree the tofu until perfectly smooth in a food processor or blender. Transfer to a medium sauce pan and add the margarine and cheese. Slowly bring to a gentle simmer, stirring often, and then cook over low heat until the cheese is thoroughly melted.
3. Combine the cooked macaroni and sauce in a serving container and stir together. Season with salt to taste and serve at once.

**Variation:**
Bake in a casserole dish at 400 degrees for 20 to 30 minutes, or until the top is golden and crusty.

We’ve covered all the topics we wanted to teach within the timeframe. Our plan for the last day of formal instruction was to develop the menu for the graduation mini-banquet. It turned out to be a relaxed, impromptu day. We hadn’t anticipated on finishing early with the menu development and so we took the time to just relax and enjoy each other’s company and reflect on all the things we’ve accomplished. We made homemade popcorn that was air-popped and flavored with different kinds of seasonings and syrup including maple syrup, cayenne pepper, honey, and ranch dressing powder. We also encouraged the students to do freestyle physical activities. Some danced, some demonstrated martial arts techniques, and everyone was enjoying themselves having a relaxed moment before the big preparation the following week.
Chapter 6: Week 5

The first four days of this week was dedicated to just prepare for the graduation mini-banquet. The mini-banquet was planned into the curriculum as a way to showcase what the children had learned from the class and to be able to impress their family and friends with the creations they made. There was much excitement, anticipation, and lots of hard work put in heading towards graduation day. Due to the amount of foods that needed to be prepared, there were no more lessons for the week, just a review of concepts to see if the students have learned from the lessons. We also asked them of their feedback about the classes, what they liked and didn’t like. Rania also distributed her post-test questionnaire for her thesis project. The children worked really hard preparing for their graduation and were very excited to have this event. Some of the preparations were finished by the staff when class was over for the day.

**Graduation Menu**

**Appetizer**
- Crudité with hummus dip
- Portobello mushroom
- Pot stickers
- Sushi

**Main course**
- Grilled chicken or beef tacos, from freshly made tortillas
- Whole wheat pizza with tomato or pesto sauce
- Whole wheat pasta with turkey meatballs
- Shrimp stir-fry
- Brown rice

**Dessert**
- Vanilla bean ice cream in tuile cookie cups
- Chocolate beet cup cakes
- Fruit kabobs

**Drinks**
- Fruit smoothies
- Water
The graduation mini-banquet became an even bigger event than we imagined. Formal invitations were given to the parents of the students, faculty and administration from FCS and Education departments and sponsors. The event was anticipated to be a semi-formal occasion with VIP guests in the culinary and entertainment businesses. The media (two camera crews from local stations) were also present to cover the event and be televised. The students were delighted to serve their loved ones with the food they made. We received many compliments from the parents in regards to how much their children enjoyed being in the class. The educators, volunteers, and students were all recognized on this day for their accomplishments. One by one, the students received their diploma from two celebrity chefs, who were special guests for the event. Along with their diploma, the students each received a bag compiled of their work and all the recipes they did in the class. The event was very rewarding for everyone, particularly the students, who have accomplished so much within the program and enjoyed themselves along the way.
Chapter 7: Reflection

Overall the class was an experience I will never forget. I count it as one of my greatest accomplishments in life being able to develop a program and teach a class about something I was and still passionate about, which is food and nutrition. As this was a brand new class, there was a lot of trial and error that we experienced along the way and lots of room for improvement. There were times when we had to create the lessons as we went along and reformulate some ideas we already had, based on daily experiences with the children. There were a lot of last-minute changes and rushed moments which put a lot of pressure on everyone involved in the program. Some of the TA’s main concern was that they were not properly oriented to the recipes, lessons, and techniques beforehand which made it difficult for them to work with the children and fulfill daily goals. Many times we felt disorganized, frustrated, and overwhelmed with some of the lecture and cooking activities because of lack of preparation. When the children were restless and distracted, it became more of challenge to accomplish our daily agenda. Looking back, we were so excited in putting so many ideas into the program that it was too much to complete for the timeframe we had. In the end, it was all about giving our best intentions to the students and providing them with a learning experience while having fun.

Four years after the inception of the pilot class, I conducted a follow-up focus group study, in which I interviewed five students that participated in the first class and the subsequent classes that followed to see whether the class(es) produced positive effects on the their dietary
habits since then. When asked what they thought about the cooking class, the subjects liked that they learned new ways of eating. One indicated that it was “educational, informative, and fun.” What they learned the most were new techniques of cooking and “cooking from scratch” instead of from a box. One indicated that she learned to follow recipes and cook more healthfully. Their favorite part of the class was eating and cooking and “being with friends while making food.” In response to how the class changed the way they eat, they generally said that they eat more healthfully and know “the right amount of eating.” One indicated portion sizes and another, the “food pyramid.” Another mentioned that she is aware of “bad” versus “good” foods. When asked how the class changed the way they see food, one subject said that she used to be picky but now is open to trying new foods. The types of food they eat now include meat, fish, chicken, fruits, and vegetables. One indicated that she picks healthier choices in restaurants. For example, she would choose a salad instead of something fried. Another subject indicated that she eats “everything.” Another mentioned that she “learned what’s good for my body” and would choose salad over pasta with chicken. Another mentioned fish, meat, pasta, and sushi. In response to questions about their favorite foods, one indicated ribs, broccoli, corn, pasta once in a while, and cucumbers. Another indicated meat and pasta. One said “sweets, desserts, fruits” including strawberries, cherries, bananas, and melons. Another mentioned pasta, cucumber, cantaloupe, watermelon, and chicken. Another said that her favorite are Italian and Japanese foods. When asked how many times they cook in a week, students predominantly said once a week on Saturdays because of school. One subject indicated that she cooks every morning: eggs, pancakes, waffles, and smoothies. Generally, they indicated that they go to the grocery store twice a week and help pick out foods. One mentioned that she goes to Whole Foods daily with her mother as they do not keep anything frozen.

Some of the new foods they tried included portobello mushroom pizza, seaweed, fried rice, guava, sweet potato, jicama, kiwi, lychee, passionfruit, tofu, and tilapia. One subject said that she used to “refuse” to eat sushi, but now she likes it, and she tried passionfruit after seeing it at a major grocery chain store. One mentioned that she likes kiwi after tasting it in class. Another indicated that her family used to eat only salmon but now likes tilapia as well. When asked to name some foods they have cooked or made, one cited “cupcakes, sushi, chicken stir-fry.” Another indicated omelets, pancakes, chicken, and tofu. One indicated that she made a dish similar to shrimp scampi with pasta, rosemary, and olive oil that has become a regular dish at the table on New Year’s. Another said that she makes bell peppers stuffed with salad. Another said that she makes brownies and once made carrot cupcakes with the recipe used in the cooking class and brought them to school. Another said that she makes salad and bowtie pasta.

The parents’ feedback from the focus group study also reaffirms the selected students’ interest and affinity in trying new foods, cooking, and learning/knowing nutritional concepts. The following are excerpts from their responses.

1. What changes did you notice about your child regarding his/her eating habits after taking the class?
   • “She was willing to try new foods all the time. She would ask about ingredients. She would force us to order a variety of foods. We started preparing and eating sushi.”
   • “While she was taking the class, she was more aware of what foods are healthier than others. She seemed to be more excited about eating healthier foods. She was pleasantly surprised about really liking and enjoying the different ingredients and dishes, and would encourage me to try to make them at home. She was particularly excited about the
macaroni and cheese made with tofu. In fact, after she got the cookbook, she and I prepared that dish at home a few times.”

- “She was definitely more enthusiastic about the preparation of food, measuring the right amount of food, and further, trying new items such as portobello mushroom pizzas. This was something she would have never tried before the class. She definitely began thinking [sic] and looking at ingredients differently after the class.”
- “She was paying more attention to serving sizes and nutrition content of the food item. She liked to be more involved in preparing dinner. She cares about what she would eat.”

2. How do you compare their food choices before and after taking the cooking class?
- “Choose more flavors, different types of foods.”
- “After taking the class, she would try to make some of the healthier snacks they made in class for herself at home. She was never a picky eater; she’s very adventurous when it comes to food. I think the class got her more excited about eating more vegetables. She still eats fairly healthy[sic], [sic] as time went on the excitement faded as far as making the recipes from the cookbook.”
- “Although she was younger at the time of the class, she was definitely more open to making healthier choices.”
- “Her food choices have not changed since. She already ate nutritious food before the class. What has changed is the amount that she eats. She understands more about serving sizes.”

3. How involved is your child in preparing meals, shopping, and choosing foods?
- “She is very involved. She asks for cookbooks as gifts for Christmas.”
- “She has always been involved (at a very young age) in food preparation, shopping, and making food choices.”
- “She is very involved in wanting to prepare meals, actually preparing meals (mostly salads), making wiser decisions at the market, [sic] enjoys going food shopping.”
- “She is more involved in preparing meals after taking the class. She has always been involved in shopping for food and loves choosing healthy food.”

4. How much nutrition knowledge does your child possess at this time?
- “She knows what is healthy and what is not so healthy; knows food groups.”
- “I think she knows enough to know the difference between healthy food and junk food.”
- “She sometimes slips and then catches herself sometimes making not a wise choice. When choosing a food option that is not quite right, she’ll turn to me and say, ‘Mom, I know this isn’t very healthy, but I really feel like it[sic] and I won’t have it again until next month.’ This is a doughnut we were talking about. She does try to look at the nutritional content of some items, and sometimes I remind her to take a look. I also tell her that if she can’t read the ingredients and understand what they are, then most likely, it’s not a healthy choice.”
- “She is very knowledgeable in regards to nutrition content of food. She does tend to pick more[sic]nutritious snacks.”

The pilot program was well-received by the community and enjoyed by the students that participated in it. The students enjoyed the cooking activities the most and lecture portion the least because it reminded them of being in their regular school. The parents indicated that their children enjoyed being in the class, learned to eat healthier, and that they made some of the recipes at home. Overall, the students made positive changes in the short-term and long-term.
Based on the studies and feedbacks from the students and the parents, the Food Adventures Workshop pilot program was a positive influence towards food attitudes and eating habits on the children. In the short-term pre/post-test study, the children did increase their consumption of fruit and preferences for fruits and vegetables as well as their attitudes and behaviors towards healthy eating and exercise. In the longer-term focus group study, the five students interviewed were very enthusiastic when recalling the activities they’ve experienced in the cooking class(es). All indicated that they had fun and learned new ways of eating and generally eat healthier. Some specified nutritional concepts including “food guide pyramid” and portion sizes. What was most exciting for them was trying out new foods in the class and continuing to do so afterwards, particularly fruits, such as lychee, kiwi, and the root vegetable, jicama. Some indicated they didn’t like certain foods such as tofu and sushi prior to taking the class(es) but now they love it. They are all involved in cooking and shopping and enjoy picking out foods and making the recipes from the class(es) such as the tofu macaroni and cheese, tofu stir-fry, sushi, and Portobello mushroom pizza. When asked about some recipes they’ve made since the classes and foods they like to eat, all indicated use of fruits and vegetables in their dishes and choices. The feedback responses from the parents of the focus-group study subjects confirm their children’s enthusiasm and developed affinity for cooking, trying out new foods and eating healthy. The parents indicated their children are more aware of what is healthy versus not healthy foods and tend to make wiser choices. Their children enjoy participating in cooking and shopping and are more particular at the right amount of servings and the nutritional contents of food. The parents indicated that their children are more open to trying new and different foods and a wider variety of flavors. These feedbacks not only show the children’s positive changes at home, but also highlight the support of parents in their food practices.

This implies how influential an educational and practical program such as this is in shaping young children’s attitude and behavior towards healthier choices in food and a healthier lifestyle in the future.