HEALTH AND NUTRITION CURRICULUM FOR SECOND, THIRD, AND FOURTH GRADE ELEMENTARY STUDENTS

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HEALTH AND NUTRITION CURRICULUM FOR SECOND, THIRD, AND FOURTH GRADE ELEMENTARY STUDENTS

A Project

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Dr. Julita Lambating, Graduate Coordinator  
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Abstract

of

HEALTH AND NUTRITION CURRICULUM FOR SECOND, THIRD, AND FOURTH GRADE ELEMENTARY STUDENTS

by

Erica A. Olmstead

Overweight and obesity is on the rise with elementary school-aged children in the United States today. Studies show that children are influenced in their eating habits not only from their families, friends, and school environment, but also from the media in both print advertisements as well as televised commercials. Review of literature shows there are many factors that come into play when educating children in the areas of health and nutrition. This curriculum unit instructs children in the second, third, and fourth elementary grades about eating from the food groups in a healthy way and the importance of daily exercise. In addition, children will learn about the ways that consumers are influenced by the media and grocery store gimmicks. Reading nutrition labels and identifying balanced meals are also among the activities involved in this
unit. Proper instruction at this age level is thought to have a positive effect on future
decisions made by children and their parents.

Dr. Elisa Michals
Committee Chair

April 22, 09
Date
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I would like to thank my parents for always reminding me that school is where I could find what I needed. I hope that I can instill the same love of knowledge in my children.

My husband, Todd, who has been through this a few times and still has a pretty good sense of humor about the whole thing. Don’t worry; I’m not going for my Ph.D.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Acknowledgements</th>
<th>vi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Purpose</td>
<td>1</td>
</tr>
<tr>
<td>Statement of Problem</td>
<td>2</td>
</tr>
<tr>
<td>Rationale</td>
<td>3</td>
</tr>
<tr>
<td>Definition of Terms</td>
<td>5</td>
</tr>
<tr>
<td>Organization of Project</td>
<td>6</td>
</tr>
<tr>
<td>2. REVIEW OF RELEVANT LITERATURE</td>
<td>7</td>
</tr>
<tr>
<td>Why Should Nutrition be Taught in School?</td>
<td>7</td>
</tr>
<tr>
<td>Current Trends in Eating</td>
<td>11</td>
</tr>
<tr>
<td>Media Influences on Eating Habits</td>
<td>12</td>
</tr>
<tr>
<td>Commercial Versus Social Marketing of Food</td>
<td>13</td>
</tr>
<tr>
<td>Food and the Brain (Mindless Eating)</td>
<td>15</td>
</tr>
<tr>
<td>Economic Impact of Food</td>
<td>17</td>
</tr>
<tr>
<td>Political Impact of Food</td>
<td>18</td>
</tr>
<tr>
<td>Considerations for Gender, Race, and Ethnicity</td>
<td>21</td>
</tr>
<tr>
<td>Considerations for Socio-economic Status</td>
<td>22</td>
</tr>
<tr>
<td>Accountability</td>
<td>23</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

Obesity and overweight in young children is of an epidemic proportion in the United States today, with nearly 30% of children being identified as overweight or at risk for overweight. Clearly, something needs to be done to stop this continuing escalation. Children who are overweight or obese have considerable associated long term health risks including: diabetes, heart disease, high cholesterol, stroke, gallbladder disease, arthritis, sleep disturbances, problems breathing and certain types of cancers (United States Department of Health and Human Services, 2000). Those children, in turn, are more likely to be overweight adults and the risk of morbidity increases (Serdula et al., 1993). In addition to these various physical maladies, overweight or obese children may develop suicidal thoughts or low self-esteem or be the subject of social humiliation (Tanofsky-Kraff et al., 2004). Efforts to correct the increase in weight related problems need to be addressed; otherwise these disturbing statistics will continue to climb as more children become overweight or obese.

Purpose

The purpose of this project is to develop a curriculum unit for use in the elementary classroom relating to health and nutrition.

Currently, there is no formal health education program set in place in the Northern California school district for which this curriculum is designed. Using the information learned in the graduate program, the writer is creating an educational unit
to be shared with colleagues in order to better educate students about nutrition and healthy living, positively affecting their future.

The end goal is to have a well understood, useable document that any instructor could use easily. Very often curriculum is written that is difficult to use and unrealistic in its expectations of teacher preparation time, school resources, and student capabilities.

Statement of Problem

Students in elementary schools are often not exposed to the effects of detrimental eating habits, nor are they instructed in healthy eating choices in reference to the food pyramid and recommended daily allowances for children. When these poor choices are made, combined with a sedentary lifestyle, the rates of children who are overweight and obese continue to rise. If proper instruction is given and children are then allowed to implement this knowledge in their lives, along with their parents, changes can be made for the better.

Society as a whole needs more exposure to this type of educational material in order to raise the awareness of positive aspects of healthy eating and wise nutritional choices. This curriculum unit will help the community realize the importance in helping children learn about healthy living and all of the learning and vested time will be well spent.

A healthy diet combined with a healthy lifestyle is essential to prolonging families’ well being and positively affecting children’s learning potential. It promotes
an increased attention span thereby increasing the ability to comprehend new material efficiently and an overall increased well being that contributes to each child’s success through their academic years.

Rationale

I have always been bothered by the definition of a “class party”. When I was in elementary school, I remember holidays and special occasions were marked in the classroom by having a “party”. This usually consisted of most of the children bringing sugary treats and drinks and passing them out to the other students. Everyone then sat at their desks, eating the food, and talking quietly.

When I began my student teaching, I was disappointed to discover that this practice was still alive and well. When I finished my student teaching and began teaching second grade in my own classroom, I vowed it would be different. I asked one parent to provide food and another to provide drinks. The rest of the “party” consisted of games or activities relating to the holiday or occasion and more often than not, they were quite educational without the children realizing it.

Several years ago, my teaching partner and I were looking for a field trip we could take our students on as an end of the year “treat”, but could also be described as educational. Since we taught at a Title 1 school and the majority of our students were low income, we really wanted something low cost. Also, we wanted a field trip within walking distance since bus transportation in the district was quite expensive.
After some research into the area, we discovered that the local grocery store, the library, and Hometown Buffet were our only choices. Most of our students had been to the first two selections, but no one had ever visited Hometown Buffet. The restaurant not only offered a tour, but afterward provided lunch at a discounted rate. They had just begun conducting tours at this particular location, so we were excited to find something the students had never experienced.

We arrived at the restaurant and had an absolutely fabulous tour. The children learned about food preparation, sanitary handling of food, and each of the various jobs that were done in order to operate the restaurant in an orderly fashion. After the tour, we spoke with the students about proper restaurant manners (wash your hands, use the tongs to serve yourself, and walk from the food service area to the tables). We then permitted the children to go eat lunch. On occasion, I had eaten with the children in the cafeteria and had never had cause for concern. At this particular time, I was shocked and dismayed with what I witnessed. Since no guidelines had been placed on them, they went to the buffet over and over. The food choices being made at each trip were not healthy or nutritious on most of their plates. We had several children who vomited, they had eaten so much. After this experience, I knew the students needed some prior knowledge before we visited another restaurant again.

The following year, we taught some simple lessons about food groups and serving sizes prior to the visit to Hometown Buffet. In addition, we discussed making balanced choices and healthy eating habits. The outcome after this visit was much
more positive. The children talked about what they were eating with us and with their classmates. They came by our table and showed us what they had chosen, what food groups they had and seemed proud of making those choices.

In my experience with these events, I see that some education and knowledge can go a long way with children and their life understandings. I am looking forward to being the agent of change because it is clear that this type of information is needed for children and I have a strong personal desire as a mother and an educator to promote healthy living amongst our children.

Definition of Terms

**Body Mass Index (BMI):** BMI is a number calculated from a person's weight and height. BMI provides a reliable indicator of body fatness for most people and is used to screen for weight categories that may lead to health problems.

**Diabetes:** A disease in which the pancreas cannot control the level of sugar in the blood.

**Hypertension:** A medical condition of repeatedly elevated blood pressure. It can cause blood vessel changes in the back of the eye (retina), abnormal thickening of the heart muscle, kidney failure, and brain damage.

**Lobbyists:** A person who tries to influence legislation on behalf of an industry, special interest or lobby.

**Morbidity:** A disease or incidence of disease within a population.
Obesity: A condition in which a person’s weight is much more than it should be for his/her height (BMI over 30), and in which the percentage of body fat is also considerably in excess.

Overweight: A condition in which an individual’s weight exceeds that expected for his or her height (BMI 25-29.9), and in which the percentage of body fat is also in excess.

Organization of Project

Chapter 1 includes an Introduction, Statement of Purpose, Statement of Problem, Rationale, and Organization of the Project.

Chapter 2 contains a review of literature.

Chapter 3 is the Methodology.

Chapter 4 provides a summary of the project and recommendations for implementation of Curriculum Unit.

The Project concludes with the Appendices and References.
Chapter 2

REVIEW OF RELEVANT LITERATURE

The purpose of this project is to give elementary educators an easy to use curriculum unit that teaches middle elementary students in grades two, three, and four about nutrition, proper food selection, and the importance of exercise in their daily lives. This literature review describes the reasons the school is the most appropriate venue for this type of education and the importance of teaching this type of curriculum at these ages. This review also includes current trends in eating, the political ties to food, and the reasons people overeat. Educators also need to take into account the factors related to gender, race, ethnicity, and socio-economic impacts on children.

Why Should Nutrition be Taught in School?

The Role of Educators, Parents, and the Community

Children learn myriad information at school. They spend nearly six hours a day in school; therefore it is the most appropriate place to obtain health related information with access to school nurses and existing physical education programs (Story, 1999). Students eat one to two meals per day at school, so focusing on the role of the school in dietary intake is sensible. In addition to the meals provided by nutrition services in a school, students may have the availability of vending machines and other ways to obtain food of a low nutritional value. The secondary role that the school takes in the health of its students is the amount of physical activity provided in a school day (Murnan, Price, Telljohann, Dake, & Boardley, 2006). This may take the form of
regularly planned recess time or scheduled physical education curriculum. 20% to 40% of children’s total daily physical activity is at school (Okie, 2005). The state of California requires that elementary schools provide 200 minutes of physical education for every 10 school days (California Department of Education, 2005). However, school districts in the state of California vary widely in their physical education requirements; some districts provide zero minutes while other districts exceed the state requirements. Therefore, some districts may be out of compliance with state mandates.

When given an equal balance of both nutritional information and physical education, the school is providing much needed information to both the students and the parents. Parents need to be educated in healthy choices as well. “Family, peers, media, and environment influence the health habits, especially eating habits, of children” (Powers, Struempler, Guarino, & Parmer, 2005, p.129). When parents are unaware as to how they can help their children make better choices with regards to their health, then little can be accomplished in educating them at home.

The dietary behaviors learned in childhood are generally carried over into adulthood (Kelder, Perry, Klepp, & Lytle, 1994). Parents who are obese or overweight tend to create environments for children to become obese or overweight (Smith, Vendela, Bartee, & Carr, 2008). The encouraging news is that 96% of parents believe that educating children about nutrition and exercise is important (Murnan et al., 2006).

One might question why health information and education are not more appropriate in the pediatrician’s office rather than on a school campus. Kubik,
Fulkerson, Story, and Rieland (2006) contend that parents have an established relationship with the school and may feel communication is easier there. Parents may be regularly on the school campus and speaking with the various professionals that come in contact with their child. Comfort with the school staff helps parents feel the school is more accessible regarding information about their children.

Additionally, schools have offered health related screenings such as vision and hearing, and California has recently added a dental screening, but hasn’t fully moved into the realm of reporting issues related to weight. Health care providers often miss opportunities to discuss obesity related health issues with their patients (Choi, Ellerbeck, Kaur, Nazir, & Ahluwalia, 2006); having an intervention plan in place in the school may provide that opportunity. Schools should adopt a coordinated model to get all members of the community involved in the execution of a quality nutrition education program. This implementation should include families, community-based organizations, government and the media (Cho & Nadow, 2004).

Budd and Volpe (2006) suggest that the community work with the school environment to combat this health issue as schools have limited resources and time. Epstein (1995) advises that the family and the community should be partners with the school. In addition, she suggests that this partnership helps students by increasing parents’ skills in leadership, creates cohesiveness with others in the school, but most importantly allows for the success of the student. Classrooms can capitalize on the “funds of knowledge” offered by parents of students in the school. These parents have
experiences which can benefit the teachings in a classroom and deviate away from traditional lessons (Moll, Amanti, Neff, & Gonzalez, 1992).

**Early Intervention/Primary Prevention**

Children need to have good eating habits and healthy physical activity habits very early in life in order to prevent obesity or overweight. As cited in Powers et al (2005),

Research has shown that eating habits developed during childhood continue into adulthood. Thus, childhood influences should optimally have positive effects on the elementary school-aged child. These positive influences will help form a basis for good nutrition and physical activity habits to be followed throughout an individual’s adolescent and adult life. (p. 129)

The earlier obesity and overweight prevention programs begin the more effective it is for the health of the child. Health education should take place before the sixth grade so that students are not set in their behaviors and make those patterns more difficult to change (Kelder et al, 1994). The number of school age children being diagnosed with obesity related health problems has gone up considerably and is expected to continue to rise (Budd & Volpe, 2006). Primary prevention by use of monitoring student’s weight and height, growth, eating and physical activity habits are crucial to maximize the effectiveness of decreasing obesity (Smith et al., 2008). Smith et al. go on to state that early intervention is even more important as it appears that overweight and obesity are continuing to occur at earlier and earlier ages, so the
duration of childhood spent overweight or obese is increasing. This may be grounds for the rates of weight related health issues to continue to rise.

Primary intervention is also important because children’s health is related to school performance factors. If a child does not feel well, cannot perform on a similar level physically as his or her peers, or is stigmatized due to his or her weight issues, this child will be more likely to have difficulties learning at school. School health programs provide “tangible” benefits in academic performance for students and schools (Wiley & Howard-Barr, 2005).

Current Trends in Eating

People spend less time in the kitchen cooking home meals now than in years past. In 1999, people spent 32 minutes each day preparing meals compared to 44 minutes in 1965 (Cawley, 2006). Convenience, higher incomes, and more women in the labor force have been the direct causes contributing to this trend (Blaylock, Smallwood, Kassel, Variyam, & Aldrich, 1999). Meals consumed away from home have risen even though the cost of eating out has risen faster than the cost of staying home to eat (Cawley). In addition, the calories consumed away from home have risen; from 1977 to 1995 calories away from home rose from 18% to 34%.

Fast food restaurants and table service restaurants have not ignored this trend. Austin et al. (2005) found a significant cluster of fast food restaurants around schools in the Chicago area. Almost 80% of schools in Chicago had a fast food restaurant within 800 meters. A study conducted by the California Center for Public Health
(2007) found that regions with high obesity and diabetes rates had more fast food restaurants than grocery stores; nearly four times as many. It can be difficult for dieticians to measure the nutrients in meals away from home because of the mixture of foods to make them and the nature in which they are prepared (Blaylock et al., 1999). Consumers may not have all the nutritional knowledge to make informed decisions about eating outside the home and therefore, consume more calories than intended.

Media Influences on Eating Habits

Children watch an average of three hours and twenty-five minutes per day watching television (Television Bureau of Advertising, 2008) and in that time are exposed to 40,000 television commercials each year (Okie, 2005). In one study, of those commercials, 46% of them were food products geared toward children (Stitt & Kunkel, 2008). Of those, 84% were for products with high-sugar, high-fat foods. In another study of children and television watching habits, Powell, Szczypka, Chaloupka, and Braunschweig (2007) found that children between the ages of 2 to 11 viewed 97.8% of food advertisements for foods that were high in fat, sugar, or sodium.

Advertisers use many different techniques to engage children in food marketing commercials. These tactics include: cartoon characters and celebrity endorsements, product placement in movies, TV shows, kids websites, and video games (Calvert, 2008). Television is still the most widely used venue for marketing to children, but online use and video game placement are growing each day.
Children are cognitively incapable of distinguishing between programming and advertising and are not "rational consumers" (Cawley, 2006). Further children cannot understand the motivation behind advertisers and the commercials produced. Children's inability to differentiate between programming and advertisement is used to the advantage of the food companies in that children desire products that may be unhealthy for them and undermine the healthy messages their parents may be trying to teach (Batada & Wootan, 2007).

Advertisers capitalize on the "nag factor" of children on their parents (Bridges & Briesch, 2006). The authors describe the "nag factor" as the influence children have on parental purchases of clothing, shoes, fast food, and grocery purchases. Child-centered advertising focuses on the excitement of the product with its features and character tie-ins. Food companies also pay a premium to then have their products placed in grocery stores at eye level so that parents are more likely to be asked for the product (Institute of Medicine, 2006). Recent studies suggest that children influence the family's budget more and more each year due to decreased family size, higher family incomes, and single parents who give more responsibility to their children (Nestle, 2007).

Commercial Versus Social Marketing of Food

Marketing of food is big business. Advertisers spend nearly seven billion dollars annually to market food to the United States consumer. Nutrition education, demonstrations, and evaluation provided by the United States Department of
Agriculture, compete for the consumer’s ear in the market, but spend considerably less at 333 million dollars (Frazao, 1999). Commercial marketing is the practice of “branding” an item to the consumer. This means that the consumer identifies with the product because it is what the family has always used and there is a sense of loyalty to the product or because marketing of the product has influenced the consumer to think it is something of need and status (Evans, 2008).

Social marketing uses much the same strategies as commercial marketing, but without the intent of selling products or services. Social marketing is used to promote healthy behavior changes and provide alternative attitudes to commercially marketed products. For example, social marketing campaigns that have been successful in recent years include: anti-smoking efforts, encouraging physical activity, increasing fruit and vegetable consumption, and AIDS awareness (Evans, 2008). Peterson, Jeffrey, Bridgwater, and Dawson (1984) did have encouraging outcomes when studying pronutrition programming for children. “This finding speaks positively to the use of this medium specifically for teaching pronutrition concepts” (Peterson et al., p. 61).

Imagery is a commanding tool used in commercial marketing strategies and can be used to further social marketing projects as well (Evans, 2008). Just as children and adolescents identify with the cartoon characters in cigarette advertising and cereal boxes, so too can imagery help to convey a positive behavioral message. These positive messages play into the desire of children and adolescents to be fun, cool, and popular.
The technique of social marketing can be very beneficial in the promotion of healthy habits for children and adolescents. Obviously, commercial marketing funding far outweighs that of the social marketing, but clearly the health benefits for people who receive the messages put forth by social marketing are a good start. Consumers need social marketing “to counter the flood of unhealthful commercial media marketing to which American children and adolescents are exposed” (Evans, 2008, p. 184).

Food and the Brain (Mindless Eating)

Since overeating is often cited as one of the major causes of obesity, Brian Wansink, the author of *Mindless Eating* (2006) states that people eat much more than they think they do. Obese people tend to underestimate the amount of food they eat by as much as 30% to 40%, whereas normal weight people underestimate by 20%.

Wansink (2006) gives many reasons as to why people overeat and they range from the lighting in the room to the size of the plate to the packaging of the food. Many Americans eat until the package is empty or the television program has ended or the plate is clean, but not many cite “being full” as a reason to stop eating. Wansink states that it takes nearly 20 minutes for the stomach to send the “full” message to the brain. For many people, they can set the table, sit down to eat, and clear the table in less than 20 minutes. The brain does not get the message to stop eating if the whole process occurs in less time than that message can travel. This practice leads to overeating.
There are several other reasons people overeat; one of those reasons is perception. People will drink more from a short, fat glass than a tall slender glass. Eating from a smaller plate gives the diner the optical illusion of thinking that the portion they are consuming is larger than it is. The larger the package people eat from, the larger portion they will eat thinking this is the “consumption norm”. Meaning diners think it is typical, normal, and appropriate to make and eat more of the item simply because it is in a larger package.

People also tend to overeat when in the presence of others. In fact, the amount of food people overeat rises proportionately as the number of people in the party increases. Although, if people are given a visual reminder as to how much has been consumed, they tend to slow or stop their ingestion. For example, the author and his research team (Wansink, 2006) conducted an experiment where wait staff at a party was instructed not to remove the bowl of buffalo wing bones remainders the guests had eaten. The people at the tables where the bowl of chicken bones were not removed consumed less than the people at the tables where the bones were removed by the wait staff. The idea is that if people can see how much has been eaten, then they will eat less food than if there wasn’t that visual reminder.

The more convenient a food is to obtain and eat, the more likely a person is to eat it. Wansink (2006) conducted an experiment where people were told they could help themselves to some almonds while they waited for the researcher to return. If the almonds were shelled, the people tended to eat more of them as if they were unshelled.
Of even more interest, obese people were less likely to eat any almonds at all if they were unshelled. People are drawn to foods that are more convenient to obtain rather than those that are difficult to get or prepare. The author goes on to suggest that perhaps this is the reason why fast food continues to remain popular even though it may not be the healthiest choice.

**Economic Impact of Food**

Over 50% of the United States food and beverage sales are attributed to just 10 U.S. based companies (Lyson & Raymer, 2000). These multinational food giants create economic power over smaller farms in the marketing of their food products. Food companies started out relatively small and served the regional community it was near. As the companies have merged and formed larger corporations, small and medium sized farms have lost the buying and selling power they once had. Since these large food conglomerates have a vast array of products, if one market has large losses, it is offset by profits in another market (Yoon, 2006). Because a large portion of the market is dominated by these large food manufacturers, what Americans eat and drink is controlled by a relatively small number of people.

Each of these large food corporations has a board of directors who help direct and focus business for the company in the interest of making money. Serving on the board of directors are men and women from very similar backgrounds, belief systems, and social circles (Lyson & Raymer, 2000). As well, these boards are all comprised of business executives in which “half or more of the boards consist of CEO’s, Presidents,
or Board Chairmen from other corporations” (p. 202). There is no representation from the community either with consumers or with environmental agencies. Making the decisions for the American consumers regarding health, diet, and nutrition are 138 individuals whose sole responsibility is to answer to the stockholder (Lyson & Raymer). “The centralized food system that continues to emerge was never voted on by the people of this country, or for that matter, the people of the world. It is the product of deliberate decisions made by a very few powerful human actors” (Heffernan, 1999, p. 16).

Another economic factor relating to food is the cost in relation to the energy that food provides. Foods that are high in fats and sugars are less expensive than fresh vegetables and fruits when comparing them on energy supply basis (Drewnowski & Darmon, 2005). Lack of access to fresh fruits and vegetables and other unprocessed foods, due to food availability in low income neighborhoods, compounds this problem. The ease in which products are produced, processed, and transported is cheaper for foods with added sugars and fats than meat, dairy, or fresh produce (Drewnowski, 2004). The cost now may be economic for people and their well being, but later in life, the cost will be health related and consumers could pay a heavy toll for not heeding the nutritional warnings.

Political Impact of Food

Marion Nestle, the author of *Food Politics* (2007), writes about the food industry and their political power over what Americans eat. The consumer is
influenced every day by forces in the political arena regarding food choices and most people are unaware of the dramatic effect this has on them. Advertising companies, legislators, lobbyists, and many others may directly or indirectly influence the types of information exposure Americans have or the types of food to which Americans have access.

Because the leading causes of death in the 1900s were tuberculosis and diphtheria, the United States government began advising Americans to “eat more” to encourage better nutrition for the poor. As the 20th century progressed and the population became more affluent, the leading causes of death became and are currently chronic diseases related to overindulgence of food, alcohol, and tobacco. Heart disease is now the leading cause of death among adults. The United States Department of Agriculture began recommending Americans “eat less” to combat these rising health statistics. Lobbyists for the various food industry products were outraged that the government was making recommendations that could label their foods as not good for you. Due to these influences, the wording of these recommendations became much more vague. For example, rather than stating “avoid too much” changed to “choose a diet low in”. These vague terms make it difficult for the average consumer to decide what is meant by specific phrasing.

During the 1970s and 1980s, several government agencies were vying to be the leading authority on health and nutrition for Americans. Each agency had their own agenda; some were interested in furthering agriculture, others focused on the needs of
consumers groups. Eventually, Congress granted the USDA the final word on giving nutritional advice to the public, leaving agencies like the Department of Health and Human Services (DHHS), the Food and Drug Administration (FDA), Centers for Disease Control and Prevention (CDC), and National Institutes of Health (NIH) out of the decision making process when it came to making dietary recommendations to the public.

Food industry lobbyists have long worked to persuade legislators to pass policy that benefits the food production companies. Lobbying isn’t the only way the government is influenced to make pro-food industry decisions. Companies use their influences in many ways. The food industry makes campaign contributions to legislators they feel will best benefit the interests of food production and distribution. There are also gifts given to these legislators, fees paid to attend certain industry functions, and lavish meals all paid for by large companies with an interest in obtaining special favors or considerations.

The American Heart Association (AHA) is an organization that promotes research of coronary disease and prevention. In 1988 AHA instituted a new program to raise money for the organization called the Heart Healthy program. The organization would label foods that met certain criteria for saturated fat, cholesterol, sodium and fat with a symbol and the words, “American Heart Association Tested & Approved”. This seemed to be an excellent system for helping the consumer make healthy food choices, but there is a part that most consumers don’t know; food
companies pay a fee to receive this stamp of approval. Also, these foods may have low cholesterol and fat, but nothing has been examined regarding sugars or other nutrients; therefore many high-sugar cereals, juices, and other unlikely foods are deemed “Heart Healthy”. This is an example of another marketing ploy that confuses the consumer about proper nutrition choices.

Nestle (2007) sheds light on practices that take place in our government and food supply that consumers should be aware of. Knowing the factors that go into the decisions for the food pyramid, laws and policies regarding manufacture and distribution of food, and the ways that the food supply is influenced gives the consumer the information needed to make informed decisions regarding their own food practices.

Considerations for Gender, Race, and Ethnicity

When developing a health curriculum, special considerations need to be made for children with differing backgrounds. Gender, race, and ethnicity are factors that may affect a student’s ability to learn and change from this knowledge. Gender is an issue when speaking of health curriculum as parents were less likely to share results of a school body mass index (BMI) calculation with their female children than male possibly because parental concern over eating disorders in girls (Kubik et al., 2006). Another issue regarding gender is that females are more likely to believe they do not have control over their weight than males and have placed importance on the cultural idea that thinness equates personal success (Klaczynski, Goold, & Mudry, 2004).
Race and ethnicity can be an issue when developing a health curriculum. According to Bacardi-Gascon, Leon-Reyes, and Jimenez-Cruz (2007), Mexican children have a higher risk of becoming overweight than Anglo-American children. Lewis et al. (2006) also found that students of African American or Hispanic backgrounds were more likely to be overweight or obese. The National Health and Nutrition Examination Survey conducted by the Centers for Disease Control and Prevention found that children of ethnic minorities are at increased risk for overweight and obesity (Centers for Disease Control and Prevention, 2002). African American children are more likely to discuss weight related issues with their doctors perhaps because of the increased risk in the African American population for obesity and overweight connected health problems (Choi et al., 2006). Educators need to be aware of these discrepancies so that children may be best served in their schooling.

Considerations for Socio-economic Status

The National Health and Nutrition Examination Survey conducted by the Centers for Disease Control and Prevention found that children from poorer families are at increased risk for overweight and obesity (Centers for Disease Control and Prevention, 2002). Children in lower socio-economic areas are more likely to be overweight or obese. This is possibly attributed to several factors; less accessibility to healthy foods such as fresh fruits and vegetables, more sedentary activities due to availability of extra-curricular sports or unsafe neighborhoods (Lutfiyya, Garcia, Dankwa, Young, & Lipsky, 2008). Other factors may include lack of health insurance,
local schools and the resources provided there, and access to fitness clubs or gyms (Vieweg, Johnston, Lanier, Fernandez, & Pandurangi, 2007). Children who face such factors are at a disadvantage when it comes to nutritious food choices and proper physical activity. Programs to reduce obesity should center on those areas with a higher instance of lower socio-economic status (Vieweg et al., 2007).

Accountability

Implemented in March 2008, are the health standards for the state of California. The complete text of Education Code Section 51210.8 states:

(a) On or before March 1, 2008, based on recommendations of the Superintendent, the State Board of Education shall adopt content standards in the curriculum area of health education. (b) The content standards shall provide a framework for instruction that a school may offer in the curriculum area of health education. This section does not require a school to follow the content standards. (paragraph 6).

The standards are clearly stated, yet a caveat has been added to the end of the Education Code that indicates it isn’t necessary to enforce these ideals. Additionally, there is no accountability for the teaching of health related information in any of the state mandated testing materials, nor in the No Child Left Behind (NCLB) act. NCLB was enacted by former President George W. Bush for education reform in the United States. The purpose of NCLB is “to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education” (United States Department
of Education, 2001, paragraph 4). When legislation or educational policies do not reflect the values of health and nutrition in education, students suffer. Educators and policy makers alike need to indicate support for the well rounded student in all areas, not just academia.

Educational Theory

Of the ways that a health curriculum could be presented to young children, the one used the most and cited most frequently is Bandura’s social cognitive theory (Budd & Volpe, 2006). The social cognitive theory states that if a person were to learn a behavior, that behavior would be acquired through behavioral observation (Bandura, 1986). Health curriculum needs to be written with the thought that these new behaviors for eating and exercise should not only be taught, but in a sense, learned so that children may benefit from the example provided to them.

For example, if a teacher were to teach a lesson on proper nutrition, and then bring fast food for lunch each day, children learn the “do as I say, not as I do” approach. Furthermore, if a teacher were to teach the same lesson and then join the children for lunch with a meal that provided an example of nutritious and balanced choices, the children would learn based on this modeled behavior. This particular approach transfers the classroom experience into actual behavior change in a natural environment (Blom-Hoffman, Kelleher, Power, & Leff, 2004).

John Dewey’s ideas align themselves with the social cognitive theory such that school itself should represent life and the process of living. Dewey also stated that
education is a social process and the school is a community (Dewey, 1897). It is a teacher’s responsibility to give students the tools to take command of future life and to train students to use everything that has been taught to them in a useful way. Teaching a student to make wise and healthy choices regarding food and fitness would give that child the information to go out into the world with these necessary tools for taking command of his life.

Constructivism theory also works well into health and nutrition curriculum in that it shows that the individual subjects do not stand alone, but rather work together (Tanner & Tanner, 2007). Literature, social science, and mathematics can be used successfully in an interdisciplinary manner to reinforce health and nutritional concepts. Constructivist teachers use many subjects interwoven together to teach students the concepts they need to know.

Philosopher Herbert Spencer put forth the question that educators have asked many times, “What knowledge is of most worth?” Spencer felt it is science that is of most worth, especially science that has a direct correlation to life and self-preservation (Tanner & Tanner, 2007). Health and nutrition curriculum certainly falls under the category of self-preservation. People require the knowledge of proper nutrition in order to live longer, healthier lives.

Teaching Strategies

Many recommendations have been made regarding proper implementation of a health curriculum in the elementary school setting. There are many that need to be
addressed: identifying foods by food group, proper serving size and portion control, fitness or activity level, and constructing a balanced meal. In addition, there are many other factors that should be considered: perceptions of weight control and self-esteem, the causes of and cultural attitudes toward obesity, the effects of advertising and the media, conducting annual assessments of student’s height, weight, and BMI measurements, and changing the offerings in the school cafeteria or vending machines available to the students.

Weight control is a topic which has been in the media numerous times in the last several years. Overweight is perceived as a personal failure among children in our society. The message that we “should take control of our bodies” causes children to believe that they could control their weight, but lack the willpower to do so (Klaczynski et al., 2004). These feelings in turn affect children’s self-esteem, making them feel helpless and inadequate.

When teaching a health curriculum unit, one must be careful to address the cause for obesity and society’s attitude toward obese and overweight people. Numerous stereotypes exist when speaking of causes of obesity. They include: lack of willpower, little or no self-control, not very intelligent, and irresponsible (Klaczynski, 2004 et al.). When these stereotypes are taught and believed, it prolongs the cultural norm of stigmatizing overweight or obese people.

Annual assessments of student’s height, weight, and body mass index (BMI) have proven to be appropriate tracking measures for elementary school children taking
into account the relationship between childhood and adult obesity (Smith et al., 2008). Communications regarding student health between the school and parents is a standard and usual practice (Kubik et al., 2006). When parents are given reliable information regarding the health of their children, it can open the door for parents to seek further information regarding healthy eating and good exercise habits.

Use of Technology in Health and Nutrition Education

Health and nutrition education at the elementary level is needed for students to develop into successful, healthy, productive adults. Using multimedia tools to obtain this much needed curriculum can be very beneficial to students. Children enjoy using computers, watching and creating videos related to the subject being taught, and using other multimedia tools such as digital cameras. Students who are engaged in this technology usage often learn much more than they realize. Use of multimedia technology can increase student cooperation with the assignment and other students, increase time efficiency, and can help students learn through many different methods (Chickering & Ehrmann, 1996).

Conclusion

This review of literature has investigated many aspects of nutrition, health, food, and fitness. Children are influenced in every area of their lives. It is important that nutrition and health education be addressed at school and the student's parents agree. It is important as well, that nutrition education is taught with several considerations by the educator; gender plays a key role in body awareness, low socio-
economic status can be an indicator to the instructor that these children have special needs and influences. Children in the ethnic minority groups have unique needs that should be taken into consideration. Knowing these limitations help educate students with their needs in mind.

Why Americans eat the way they do can help to educate students in some of the “mindless eating” activities in which people engage themselves. Understanding that the environment consumers place themselves in can affect the way they react to eating and food. Also understanding the current trends in food consumption; the amount of time it takes to prepare meals and the amount of meals eaten away from home can help us to better plan for the future of eating and food.

Politics plays a very important role in the production and distribution of the food available in the United States today. Many people and factors play into the way our food makes it from farm to grocery. Several large food companies control the food distribution in America and those products to which we have access.

Media exposure to young children is on the rise especially in the online and video game markets. Children and their parents should be aware of the motivations of large food manufacturers and advertisers. This type of knowledge helps parents to limit the amount of media in which they choose to expose their children. In addition time spent in front of the television is time spent away from other activities that children should be engaged.
All these factors are influential in helping to educate students in proper nutrition and health practices. Trends, politics, and educational theory have a relevant connection to the instruction of health in the classroom. Using what has been found in the literature review, this research now moves to Methodology.
Chapter 3

METHODOLOGY

The project compiled health and nutrition education lessons with the author's classroom experience and integrated them with both National and California state standards in Health Education. The purpose of the project is to create an easy to use resource for teachers of second, third, or fourth grades in the teaching of nutrition education. This resource is attached as Appendix A.

Setting

This unit is designed to be taught to regular education second, third, and fourth graders. Lessons could be taught in a Special Day Class setting with little or no modifications.

Participants

This project is intended for elementary school students in grades two, three, or four. It is expected that these students have little or no background in health and nutrition curriculum. The Northern California district for which this curriculum is written services a population of students who qualify for Title 1 services, belong to minority groups, and have a lower socio-economic status.

Instruments

This curriculum unit was written using the California Health Education Content Standards for California Public Schools, Kindergarten through Grade Twelve adopted in March of 2008. In addition, the lessons take into consideration the National
Health Education Standards (2007) published by the American Cancer Society and written by the American Association of Health Education, the American School Health Association, the American Public Health Association, and the Society of Directors of Health, Physical Education and Recreation. Many of the lessons also incorporate California English-Language Arts Content Standards (December, 2007) for grades two, three, and four, as well as History-Social Science Content Standards for California Public Schools (October, 1998).

Design/Procedure

The curriculum unit is designed so that the lessons take place over the course of a full school year. Each week a 30-45 minute lesson is presented with the week’s materials and objective. Thereby, the lessons are not a learn it and forget it type, but rather keeping the ideas of nutrition and healthy eating on student’s minds the entire school year.

The lessons begin with an introduction to the food pyramid, followed by literature which supports the basis of the food group and gives students a deeper understanding of the material being studied. The lessons then move into the study of snack selection, physical education, and balanced meals. The lessons then move into the area of grocery store layout, reading nutrition labels, and media influences on eating habits.
Chapter 4
SUMMARY AND RECOMMENDATIONS

Summary

Children who are overweight or obese are a rising epidemic in the United States today. It is of utmost importance for children and their parents to understand the health and social consequences their poor eating habits can cause. The purpose of the curriculum unit is to provide students in the early elementary grades with proper serving size, portion control, and healthy food selection education in order to better serve their health and nutrition needs. Many factors affect students ability to learn such information, including gender, ethnicity, and socio-economic concerns, but educators should be aware of these factors, so that students can build better habits for them and their families.

Limitations

One of the limitations of this project is the lack of complete parent participation in the curriculum. Parents are a key element to the success of children’s diet and exercise regimen. There is an element of partial participation in that parents are notified of the learning occurring in the classroom and are asked to participate when students are experimenting with new foods. A second limitation is the student’s inability to choose foods and food selections for themselves. Parents and guardians are the grocery shoppers of the household and are directly responsible for what goes on that child’s plate. As stated in the Literature Review section, children do have a heavy
influence in what is purchased, and could have an influence in the area of healthy foods. A final limitation of the project is the student’s inability to effect what foods are selected for the lunch program at school. School nutrition services tend to select foods for sale which the children will most likely buy and therefore make a profit for the school. Unless all student’s demand fresher, healthier products, nutrition services of a school will not change.

Recommendations

Adding a section for parent education of health and nutrition would be of utmost importance. Parents have a direct effect on the health of their children and must purchase and supply foods that are healthy and rich in the nutrients needed for growing children. It is also recommended that a study be performed to determine the effectiveness of the nutrition program itself on student choices and knowledge regarding proper serving size and balanced selections.
APPENDIX A

Health and Nutrition Curriculum for Second, Third, and Fourth Grade Elementary Students
### Appendix A

#### TABLE OF CONTENTS

1. Introductory Lesson ................................................................. 1  
   a. Mr. Eagle’s Three Ideas Worksheet ..................................... 3  

2. Table Manners ........................................................................... 4  
   a. Table Manners List (3 pages) ............................................ 6  

3. Food Pyramid Introduction .......................................................... 9  
   a. My Pyramid Reproducible Page .................................... 11  
   b. My Pyramid Extension Page ........................................ 12  
   c. Food Journal Worksheet .................................................. 13  

4. Grains Group ........................................................................ 14  
   a. Grains Word Search ....................................................... 16  
   b. Grains Word Search answers ............................................. 17  
   c. Grains Group Home letter ............................................... 18  

5. Book Selection-Grains ............................................................... 19  
   a. Venn diagram .................................................................. 21  

6. Vegetable Group ..................................................................... 22  
   a. Vegetable Cloze Activity ................................................ 24  
   b. Vegetable Cloze Activity Answers .................................. 25  
   c. Vegetable Home Letter .................................................. 26  

7. Book Selection-Vegetables .......................................................... 27  
   a. Stone Soup Sample Script (3 pages) ................................. 29
8. Fruit Group ................................................................. 32
   a. Fruit Group Crossword ............................................. 34
   b. Fruit Group Crossword Answers .................................. 35
   c. Fruit Group Home Letter .......................................... 36
9. Book Selection-Fruits .................................................... 37
   a. Map of the World for Coloring Sample 1 ....................... 39
   b. Map of the World for Coloring Sample 2 ....................... 40
10. Fruits and Vegetables-A Plate Full of Color ...................... 41
    a. Personal Favorites Worksheet .................................... 43
11. Milk Group ............................................................... 44
    a. Dairy Foods Matching Worksheet ............................... 46
    b. Dairy Foods Matching Worksheet Answers .................... 47
    c. Dairy Foods Home Letter ........................................ 48
12. Book Selection-Milk ..................................................... 49
    a. Anatole Cartoon Grid Blank ..................................... 51
13. Meat and Beans Group ................................................ 52
    a. Meat and Beans Word Scramble Worksheet .................... 54
    b. Meat and Beans Word Scramble Worksheet Answers .......... 55
    c. Meat and Beans Group Home Letter ............................ 56
14. Book Selection-Meat and Beans ...................................... 57
    a. Mucumber McGee and the Half-Eaten Hot Dog Reproducible .. 59
    b. When I’m Hungry…Worksheet .................................... 60
15. Fats and Oils .................................................................................................................. 61
   a. Fats and Oils Outcome Worksheet (2 pages) ......................................................... 63
16. Snacks-Tricky Treats .................................................................................................. 65
17. Knees Lifted High-Exercise and Physical Education .................................................. 67
   a. Physical Activity Diary Sheet Blank ...................................................................... 69
   b. Directions for Physical Activity Diary ................................................................. 70
18. Food Pyramid Tag Game ........................................................................................... 71
19. Balanced Meals I ....................................................................................................... 74
20. Balanced Meals II ...................................................................................................... 76
21. Gregory, the Terrible Eater ....................................................................................... 78
22. Grocery Store Lesson ............................................................................................... 80
23. Food Nutrition Labels .............................................................................................. 82
24. Media Influences ..................................................................................................... 84
25. Final Assessment ...................................................................................................... 86
Introduction

- Objective: Students will understand the benefits of making healthy choices.

- California Health Education Standard 3.7.G.9: Determine behaviors that promote healthy growth and development.

- National Health Education Standard 1.5.1: Describe the relationship between healthy behaviors and personal health.

Materials

- Internet access

- Through the Eyes of the Eagle-Eagle Book-Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/CDCTV/EyesOfTheEagle/

- LCD projector

OR

- TV/computer connection

- Mr. Eagle’s Three Ideas worksheet

Directions

Anticipatory set
1. Have students brainstorm as a class the definition of “healthy”.

2. Write ideas on the board or poster paper.

Direct Instruction
1. Show students the video “Through the Eyes of the Eagle”

2. Discuss with students the ideas of the book: eat healthy and be active.
3. Possibly redefine "healthy".
4. Discuss other diseases caused by not eating properly or not being physically active: heart disease, high blood pressure, high cholesterol, joint pain, and others.

**Guided Practice**
1. Brainstorm with class what they think are healthy choices to make regarding food and physical activity.

2. Write some ideas on the board. Discuss the message the eagle gave Rain That Dances.
   a. Eat healthy foods
   b. Eat proper portions
   c. Be active

3. Have students write these three big ideas on Mr. Eagle’s Big Three Ideas page.

**Independent Practice**
1. Have students complete the sentence on Mr. Eagle’s Three Ideas page.

**Closure**
1. Review some ideas students have written and discuss ideas presented today.

2. Tell students they will be learning about the food pyramid and how to make good choices throughout this unit.
Mr. Eagle's Three Ideas

1. ____________________________

2. ____________________________

3. ____________________________

These three ideas mean

________________________________

________________________________

________________________________

________________________________

________________________________
Table Manners

- Objective: Students will become familiar with proper table manner rule and place settings.

Materials
- List of table manners for discussion
- Construction paper
- Glue
- Scissors
- Paper scraps
- White board
OR
- Overhead

Directions
Anticipatory set
1. Ask students what manners they are required to use at home when eating.
2. Make a list on the board or overhead.

Direct Instruction
1. Working from the list already made, continue adding to it using the attached list.
2. Discuss with students the meaning of each rule on the list.
Guided Practice
1. Show students a correctly set place at the table.

2. Discuss the different placements of utensils and proper usage.

Independent Practice
1. Students will make a placemat and a correct table setting out of construction paper and paper scraps.

2. Set up a mock lunch or dinner using paper scraps or plastic food.

3. Optional: Take place settings to the cafeteria at lunch time and practice the newly learned table manners with a real meal

Closure
1. Encourage students to use these manners and place setting ideas with their families.

2. Tell students that they will be using these manners and place settings in the coming weeks in “tasting parties” for tasting new foods.
Table Manners List

1. Eat with a fork unless the food is meant to be eaten with fingers.

2. Don't stuff your mouth full of food, it looks gross, and you could choke.

3. Chew with your mouth closed. No one wants to be grossed out seeing food being chewed up or hearing it being chomped on. This includes no talking with your mouth full.

4. Don't make any rude comments about any food being served. It will hurt someone's feelings.

5. No elbows on the table. When your hands are not being used, they should remain in your lap.

6. Always say thank you when served something because it shows your appreciation.

7. If the meal is not buffet style, then wait until everyone is served before eating.

8. Make appropriate table conversation. Nobody wants to hear gross things at the table.
9. Eat slowly and don't gobble up the food. Someone took a long time to prepare the food, enjoy it slowly. Slowly means to wait about 5 seconds after swallowing before getting another forkful.

10. When eating rolls, break off a piece of bread before buttering it.

11. Don't reach over someone's plate for something. Politely ask that the item to be passed to you.

12. Do not pick anything out of your teeth, it's gross. If it bothers you that much, excuse yourself and go to the restroom.

13. Always use a napkin to dab your mouth, which should be on your lap when not in use. Remember, dab your mouth only. Do not wipe your face or blow your nose with a napkin. Excuse yourself from the table and go the restroom to do those things.

14. When eating at someone's home or a guest of someone at a restaurant, always thank the host and tell them how delicious it was, even if it wasn't.

15. Again, someone took time, energy, and expense to prepare the food, so show your appreciation.
16. Learn the proper way a table should be set and learn the use of each utensil.

17. Eat only after the host or hostess has begun eating. When attending a birthday party, wait for the guest of honor to begin eating.

18. Do not leave the table or begin clearing the table until everyone is finished eating.
Food Pyramid

Introduction

- Objective: Students will develop an understanding of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  
  http://teamnutrition.usda.gov/resources/mypyramidclassroom.html

- Fill-in My Pyramid for each student*
  

- Food Journal recording page(s)

- My Pyramid extension page

*Materials available to teachers and child care providers at no charge.

Directions

Anticipatory set
1. Review last lesson concepts.

2. Ask students if they know what the food pyramid is.

3. Show poster.
**Direct Instruction**
1. Discuss with students the different food groups shown on the poster.

2. Show the different stripe sizes for each group. Briefly describe each group.

**Guided Practice**
1. Have students label the fill-in pyramids with the appropriate food group and color the stripe the appropriate color.

**Independent Practice**
1. Introduce the "food journal" page to students.

2. Tell them they will be keeping track of everything they eat for the next five days. Show them how to do a sample entry on the journal page.

**Closure**
1. Review with students the food groups discussed in the lesson.

2. When completed retain Food journals pages for later lessons.
Grains

- Objective: Students will develop an understanding of the grains portion of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*

[Link](http://teamnutrition.usda.gov/resources/mypyramidclassroom.html)

Fill-in My Pyramid for each student*

[Link](http://teamnutrition.usda.gov/resources/mpk_coloring.pdf)

- Book: *Grains* by Lola M. Schaefer-Accelerated Reader level 3.7 (or similar general knowledge food pyramid publication.)

- Grains word search

- Tasting Party letter-Grains

*Materials available to teachers and child care providers at no charge.

Directions

Anticipatory set

1. Review last lesson concepts.

2. Ask students if they recall what the food pyramid is.

3. Show poster.
Direct Instruction
1. Discuss with students the grains food group shown on the poster.

2. Read the book, Grains, aloud to the class.

Guided Practice
1. As a class, fill in the different grains on large poster.

2. Have students list the different grains in their food pyramid chart. Also include the serving size of 6 ounces for children of this age.

3. Have students identify various selections from the grains group in their food journals.

Independent Practice
1. Students complete grains word search.

Closure
1. Review with students the food groups discussed in the lesson.

2. Send home the “Tasting Party” letter with the students.

Further Resources
1. Meet the Grains group PowerPoint
   http://lancaster.unl.edu/food/grains.shtm
Grains Word Search

barley  oatmeal
bread  popcorn
bulgur  rice
cereal  rye
corn  spaghetti
crackers  tortilla
macaroni  wheat
millet

http://www.puzzle-maker.com/cgi-bin/wswo.cgi
Grains Word Search

barley  oatmeal
bread  popcorn
bulgur  rice
oatmeal  rye
barley  spaghetti
bread  tortilla
bulgur  wheat
oatmeal  macaroni
barley  millet
Dear Families,

This week we have learned about the Grains group on the food pyramid. In order to give the students a better understanding of this group, we’d like to host a “tasting party”. On __________ of next week, please send in a sample of a food from the Grains group. This could include:

- Brown rice
- Bulgur
- Barley
- Popcorn
- Oatmeal
- Corn
- Whole oats
- Breads (rye, whole wheat, white, sourdough)
- Wild rice
- Bagels
- Muffins
- Crackers
- Pita bread
- Cereals

Please try to pick a food which may be a little out of what the children would normally eat. We’d like to experience something new. Also, remember this is just a taste, so there is no need to send a whole serving for each child, but rather a bite-sized portion!

Thank you for helping our class,
Book Selection - Grains

- Objective: Students will complete a Venn diagram about two literature selections relating to the grains group of the food pyramid.

- California English Language Arts Standard-Grade Two-Reading-Narrative Analysis of Grade-Level-Appropriate Text 3.1 Compare and contrast plots, settings, and characters presented by different authors.

Materials

- Book: *The Little Red Hen* - Jerry Pinkney - Accelerated Reader level 3.1
- Book: *Cook-a-Doodle Doo* - Stevens & Crummel - Accelerated Reader level 2.7
- Venn diagram for all students
- Traditional Venn diagram on overhead projector
  OR
- Kidspiration Venn diagram
- Computer screen all students can see

**Remember: This is the day of the tasting party with the students. They can be enjoying their food while the teacher is reading.**
Directions

Anticipatory set
1. Ask students if they can recall the story of the Little Red Hen.

2. Tell the students we'll be reading the traditional story of the little red hen, and a similar story with a twist.

Direct Instruction
1. Read both books to class, pointing out similarities and differences in the stories.

Guided Practice
1. Using Kidspiration Venn diagram have students contribute similarities and differences in the stories.

Independent Practice
1. Students work together in pairs copying the Kidspiration Venn diagram and adding ideas of their own to a Venn diagram.

Closure
1. Students report to class any new ideas they have added.
Vegetables

Objective: Students will develop an understanding of the vegetables portion of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  http://teamnutrition.usda.gov/resources/mypyramidclassroom.html
- Fill-in My Pyramid for each student*
- Book: Vegetables by Lola M. Schaefer-Accelerated Reader level 4.0 (or similar general knowledge food pyramid publication.)
- Vegetable cloze activity worksheet
- OR
  The Internet TESL Journal-vegetable scramble:
  http://a4esl.org/q/h/vm/sw-vegetables.html
- Tasting Party letter-Vegetables

*Materials available to teachers and child care providers at no charge.

Directions

Anticipatory set
1. Review last lesson concepts.

2. Ask students to recall the food pyramid.
3. Show poster.

Direct Instruction
1. Discuss with students the vegetables food group shown on the poster.

2. Read the book, Vegetables aloud to the class.

Guided Practice
1. As a class, fill in the different vegetables on large poster.

2. Have students list the different vegetables in their food pyramid chart. Also include the serving size of 2 ½ cups for children of this age.

3. Have students identify various selections from the vegetables group in their food journals.

Independent Practice
1. Students complete cloze activity on vegetables OR the Vegetable scramble on the Internet TESL Journal webpage.

Closure
1. Review with students the food groups discussed in the lesson.
Every year I plant a huge vegetable garden. I like to plant beautiful, red _________ and luscious orange _________ for our summer salads. My mom makes pickles out of the _________ and they are delicious. My family’s favorite is fresh grown sweet _______. It is so good that you don’t even have to cook it! _________ are fun to dig up, but not very fun to scrub off. The last few years, it has been hard to grow green _______. We think the squirrels and other small animals are eating the seeds before they can sprout! My mom also likes to plant green _________, yellow _________, and orange _________. The pumpkins are good for jack-o-lanterns and my boys love to carve them. Red, green, orange, and yellow bell _________ are used in lots of recipes in my home, so we plant lots of those. I’m looking forward to planting a garden this year too!

<table>
<thead>
<tr>
<th>tomatoes</th>
<th>potatoes</th>
<th>cucumbers</th>
<th>peppers</th>
</tr>
</thead>
<tbody>
<tr>
<td>carrots</td>
<td>beans</td>
<td>zucchini</td>
<td></td>
</tr>
<tr>
<td>corn</td>
<td>squash</td>
<td>pumpkins</td>
<td></td>
</tr>
</tbody>
</table>
Vegetable cloze activity answers

Every year I plant a huge vegetable garden. I like to plant beautiful, red tomatoes and luscious orange carrots for our summer salads. My mom makes pickles out of the cucumbers and they are delicious. My family’s favorite is fresh grown sweet corn. It is so good that you don’t even have to cook it! Potatoes are fun to dig up, but not very fun to scrub off. The last few years, it has been hard to grow green beans. We think the squirrels and other small animals are eating the seeds before they can sprout! My mom also likes to plant green zucchini, yellow squash, and orange pumpkins. The pumpkins are good for jack-o-lanterns and my boys love to carve them. Red, green, orange, and yellow bell peppers are used in lots of recipes in my home, so we plant lots of those. I’m looking forward to planting a garden this year too!
Dear Families,

This week we have learned about the Vegetable group on the food pyramid. In order to give the students a better understanding of this group, we’d like to host a “tasting party”. On _________ of next week, please send in a sample of a food from the Vegetable group. This could include:

- Broccoli
- Spinach
- Carrots
- Lettuce
- Tomatoes
- Cabbage
- Collard greens
- Okra
- Sweet potatoes
- Green beans
- Onions
- Squash
- Zucchini
- Peppers
- Cauliflower
- Mushrooms

Please try to pick a food which may be a little out of what the children would normally eat. We’d like to experience something new. Also, remember this is just a taste, so there is no need to send a whole serving for each child, but rather a bite-sized portion!

Thank you for helping our class,
Book Selection - Vegetables

- Objective: Students will write, plan, and present a retell of the story *Stone Soup* relating to the vegetable group on the food pyramid.

- California English Language Arts Standards-Grade Three-Speaking Applications- 2.2 Plan and present dramatic interpretations of experiences, stories, poems, or plays with clear diction, pitch, tempo, and tone.

**Materials**
- Book: *Stone Soup*—Marcia Brown Accelerated Reader level 3.3
- Stone Soup sample script
- Stone
- Large soup pot
  OR
- Crock pot
- Soup vegetables**

**Remember: This is the day of the tasting party with the students. You'll be using the vegetables they brought for the tasting party to make the soup.**

**Directions**

*Anticipatory set*
1. Discuss with students how they would go about making stone soup.
Direct Instruction
1. Read book to class.
2. Show students the sample script. Discuss the elements of the script.

Guided Practice
1. Direct students in developing their own version of Stone Soup as a play.
2. List each character, their actions and what they might say.
3. Students brainstorm script as a class.
4. Divide class into appropriate groups for performance of the play.

Independent Practice
1. Students practice performing their play.

Closure
1. Have students present their play to the class, using the stone and vegetables in their reenactments.
2. Teacher or parent volunteer takes soup ingredients home to prepare soup for the class to enjoy the following day OR cook the soup in a crock pots to enjoy later in the day. (You may wish to add seasonings, noodles, meat, or beans to the soup).
Stone Soup, A Readers Theater Script

Characters:
- Kind Woman
- Hungry Man

Hungry Man: I am a very poor man. But I can get soup from a stone, so I don't go hungry. Now this is the way I do it: I pick up a stone from the roadway. Then I knock at a door, like this. Good morning to you, Kind Woman!

Kind Woman: Good morning to you.

Hungry Man: Have you ever seen a stone like this before?

Kind Woman: No, what is it?

Hungry Man: Oh, it's my soup stone.

Kind Woman: What is a soup stone?

Hungry Man: It's a stone for making soup, of course.

Kind Woman: Oh no, no, no! A stone can't make soup.

Hungry Man: Oh yes it can! A soup-stone like this can make really good soup. You may never have, heard of such a thing, but I can tell you, a soup stone like this can make really good soup.

Kind Woman: Oh no, no, no! A soup stone can't make good soup.

Hungry Man: Oh yes it can! It makes wonderful soup. I'll tell you what. If you will let me come in and lend me a pan, I'll show you how to do it.

Kind Woman: Come in. Come in and I'll lend you a pan. Here you are, but a soup stone can't make good soup.
Hungry Man: Well, you have to put the stone at the bottom of the pan like this, and cover it with water like this. Help me to stir. Hmm! Hmm! Lovely, lovely soup! Boil away, soup, boil away. Don't worry, Kind Woman, it will soon be ready.

Kind Woman: Oh no, no! A soup-stone can't make good soup. Is it ready yet?

Hungry Man: Oh no, not yet, but it's going to be gorgeous soup. It will be the most delicious soup you have ever tasted. Just one thing. Have you got such a thing as a carrot?

Kind Woman: Yes, I have. I've got a carrot.

Hungry Man: Well, if you put it in the soup, it will bring out the flavor.

Kind Woman: I will go and get the carrot. Here it is.

Hungry Man: Help me to stir. Hmm! Hmm! Lovely, lovely soup. Boil away soup, boil away. Don't worry, Kind Woman, it will soon be ready.

Kind Woman: Is it ready yet?

Hungry Man: Oh no, but it's going to be gorgeous soup. It's going to be the most delicious soup you ever tasted. Just one thing. Have you got such a thing as an onion?

Kind Woman: Yes, I have. I've got an onion.

Hungry Man: Well, an onion would make it better still. It's gorgeous soup, but an onion would bring out the full flavor.

Hungry Man: Help me to stir. Hmm! Hmm! Lovely, lovely soup. Boil away, soup, boil away. Don't worry, Kind Woman, it will soon be ready.

Kind Woman: Is it ready yet?

Hungry Man: Nearly! Take a good smell. Doesn't it smell good?
Kind Woman: It smells good, Yes it smells good.

Hungry Man: Put some pepper and salt in. Go on, shake in lots of pepper and salt.

Kind Woman: It smells good. It must be ready now.

Hungry Man: No! Just one more thing. It's gorgeous soup. It will be the most delicious soup you have ever tasted, if you put in one last thing... have you got such a thing as a chicken?

Kind Woman: Yes, I have. I've got a chicken.

Hungry Man: Well, a chicken would make it better still. It's gorgeous, delicious soup, but a chicken would bring out the full flavor.

Kind Woman: I will go and get the chicken. Here it is.

Hungry Man: Let's stir together. Hmm! Hmm! Lovely soup! You have a stir on your own.

Kind Woman: Hmm! Hmm! Lovely soup!

Hungry Man: Now then, we'll take out the chicken bones, and leave the soup a little longer. The soup stone has to boil just that little bit longer, because as I said, it's the stone that really brings out the proper flavor.

Kind Woman: It smells good. I wish I had a soup-stone like that.

Hungry Man: Let's taste it. You taste it first. I bet it tastes wonderful.

Kind Woman: Hmm! Hmm! It tastes wonderful. I do wish I had a soup stone like that.
Fruits

- Objective: Students will develop an understanding of the fruits portion of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  [Link]
- Fill-in My Pyramid for each student*
  [Link]
- Book: *Fruits* by Lola M. Schaefer-Accelerated Reader level 3.7 (or similar general knowledge food pyramid publication.)
- Fruits crossword puzzle
- Tasting Party letter-Fruits
- Dole 5 a Day-Drop N Catch game:
  [Link]

*Materials available to teachers and child care providers at no charge.
Directions

Anticipatory set
1. Review last lesson concepts.
2. Ask students to recall the food pyramid.
3. Show poster.

Direct Instruction
1. Discuss with students the fruits food group shown on the poster.
2. Read the book, Fruits aloud to the class.

Guided Practice
1. As a class, fill in the different fruits on large poster.
2. Have students list the different fruits in their food pyramid chart. Also include the serving size of 1 ½ cups for children of this age.
3. Have students identify various selections from the fruits group in their food journals.

Independent Practice
1. Students complete fruits crossword puzzle.
2. Optional-Play Dole 5 a Day's Drop N Catch game.

Closure
1. Review with students the food groups discussed in the lesson.
ACROSS

2. one of these a day, keeps the doctor away
5. the only fruit with seeds on the outside
6. monkeys are said to love this fruit (also the only fruit to bruise from the inside out)
7. teardrop-shaped fruit
9. one variety is the freestone
11. used to make a popular summertime drink
13. this fruit dried is a prune
14. American colonists used this fruit and milk to make the blueish-grey paint for their homes
15. one third of the world's supply of this fruit is grown in Hawaii

DOWN

1. brown and fuzzy on the outside and bright green on the inside
3. the most popular type is the Thompson seedless
4. the most common is the Valencia
8. like a peach, but without the fuzzy skin
10. has a yellow netted rind with bright orange flesh on the inside
12. life is like a bowl of...
ACROSS
2. one of these a day, keeps the doctor away
5. the only fruit with seeds on the outside
6. monkeys are said to love this fruit (also the only fruit to bruise from the inside out)
7. teardrop-shaped fruit
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1. brown and fuzzy on the outside and bright green on the inside
3. the most popular type is the Thompson seedless
4. the most common is the Valencia
8. like a peach, but without the fuzzy skin
10. has a yellow netted rind with bright orange flesh on the inside
12. life is like a bowl of...
Dear Families,

This week we have learned about the Fruit group on the food pyramid. In order to give the students a better understanding of this group, we’d like to host a “tasting party”. On ___________ of next week, please send in a sample of a food from the Fruit group. This could include:

- Apple
- Orange
- Grapes
- Pineapple
- Cantaloupe
- Watermelon
- Peach
- Nectarine
- Plum
- Banana
- Pear
- Strawberries
- Blueberries
- Lemon
- Lime
- Cranberries
- Apricot
- Papaya
- Mango

Please try to pick a food which may be a little out of what the children would normally eat. We’d like to experience something new. Also, remember this is just a taste, so there is no need to send a whole serving for each child, but rather a bite-sized portion!

Thank you for helping our class,
Book Selection - Fruits

- Objective: Students will identify various countries for which each ingredient originates from the story *How To Make an Apple Pie and See the World* relating to the fruits group on the food pyramid.

- California History-Social Science Standards-Grade Three-3.5 Students demonstrate basic economic reasoning skills and an understanding of the economy of the local region. Understand that some goods are made locally, some elsewhere in the United States, and some abroad.

Materials

- Book: *How to Make an Apple Pie and See the World*-Marjorie Priceman
  Accelerated Reader level 3.1. Also available on Reading Rainbow
- Colorable world map for each student
- Recipe cards (traditional or printable online)
- Wall mounted world map

**Remember: This is the day of the tasting party with the students. They can be enjoying their food while the teacher is reading.**

Directions

Anticipatory set
1. Ask students if they have ever wondered where their food comes from.
Direct Instruction
1. Read book to class, pointing out on a wall mounted world map the location of each country where each ingredient is found.

Guided Practice
1. Read story again, while students color in the corresponding country for each ingredient.

Further Investigation
1. Students could read How to Make a Cherry Pie and See the USA – Marjorie Priceman Accelerated Reader level 3.1, and repeat activity of coloring in the States on a map of the USA.

2. Students write down their favorite fruit recipe “from memory” on recipe card. Cards can then be combined to make a class cookbook. OR

3. Students bring a favorite fruit recipe from home and write it out on recipe card. Cards can then be combined to make class cookbook.

Closure
1. Discuss with students today’s lesson, and where else in the world they may find their ingredients.
A Plate Full of Color

- Objective: Students will develop an understanding of the vegetable and fruits portion of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.

Materials

- Internet access
- A Plate Full of Color Book-Centers for Disease Control and Prevention (CDC) website at http://www.cdc.gov/CDCTV/PlatefulOfColor/index.html
- LCD projector
  OR
- TV/computer connection
- “Personal Favorites” worksheet

Directions

Anticipatory set
1. Ask students if they know the best choices to make when choosing fruits or vegetables to eat.

Direct Instruction
1. Show the video “Plate Full of Color” to the students.
2. Tell students that fruits and vegetables have more vitamins and minerals that are good for their bodies than those with little or no color (i.e. potatoes). Their goal is to eat with as much color on their plates as possible.

Guided Practice
1. Brainstorm with the class the different types of fruits and vegetables discussed in the video.

2. Challenge the students to think of more to share with the class.

3. If possible, have students search the internet for some lesser known fruits and vegetables to add to the list.

Independent Practice
1. Have students make a “Personal Favorites” list of their favorite food of each color.

Closure
1. Have students share their favorite food of each color.

Extension
1. Make class graphs of the favorite foods in each color.
Personal Favorites

My Favorite Reds

My Favorite Oranges

My Favorite Yellows

My Favorite Greens

My Favorite Blues/Purples
Milk Group

- Objective: Students will develop an understanding of the dairy foods portion of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  http://teamnutrition.usda.gov/resources/mypyramidclassroom.html
- Fill-in My Pyramid for each student*
- Book: Milk by Lola M. Schaefer-Accelerated Reader level 3.1 (or similar general knowledge food pyramid publication.)
- Dairy foods matching activity worksheet
- Tasting Party letter-Milk
- Daily Council of America website-Dairy Farm game:

*Materials available to teachers and child care providers at no charge.

Directions

Anticipatory set
1. Review last lesson concepts.
2. Ask students to recall the food pyramid.
3. Show poster.

*Direct Instruction*
1. Discuss with students the dairy food group shown on the poster.
2. Read the book, *Milk* aloud to the class.

*Guided Practice*
1. As a class, fill in the different dairy foods on large poster.
2. Have students list the different dairy foods in their food pyramid chart.
   Also include the serving size of 3 cups for children of this age.
3. Have students identify various selections from the dairy foods group in their food journals.

*Independent Practice*
1. Students complete dairy foods matching activity.
2. Optional: Dairy Farm Game on Dairy Council website.

*Closure*
1. Review with students the food groups discussed in the lesson.
### Dairy Foods Matching Worksheet

<table>
<thead>
<tr>
<th>Food Type</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ice cream</td>
<td>F</td>
</tr>
<tr>
<td>Whole Milk</td>
<td>I</td>
</tr>
<tr>
<td>Yogurt</td>
<td>G</td>
</tr>
<tr>
<td>Cottage cheese</td>
<td>E</td>
</tr>
<tr>
<td>Pudding</td>
<td>C</td>
</tr>
<tr>
<td>Ice milk</td>
<td>J</td>
</tr>
<tr>
<td>Frozen yogurt</td>
<td>A</td>
</tr>
<tr>
<td>Cheddar cheese</td>
<td>L</td>
</tr>
<tr>
<td>Mozzarella cheese</td>
<td>M</td>
</tr>
<tr>
<td>Parmesan cheese</td>
<td>D</td>
</tr>
<tr>
<td>Ricotta cheese</td>
<td>K</td>
</tr>
<tr>
<td>Skim milk</td>
<td>B</td>
</tr>
<tr>
<td>Swiss cheese</td>
<td>H</td>
</tr>
<tr>
<td>2% milk</td>
<td>N</td>
</tr>
</tbody>
</table>

**Answers:**

- **A:** TCBY is famous for this dessert
- **B:** Fat free milk
- **C:** Smooth and creamy dessert from Jell-O
- **D:** Grated and sprinkled on your spaghetti
- **E:** The curds and whey that Little Miss Muffet was eating.
- **F:** The most important ingredient in a sundae
- **G:** Bacteria (that's good for you!) added to milk to make this creamy treat
- **H:** Made in Switzerland and has large holes
- **I:** Milk with all the fat left in
- **J:** Similar to ice cream but without the fat
- **K:** Soft cheese used in Italian dishes such as lasagna
- **L:** Bright orange cheese
- **M:** Most popular cheese on pizza
- **N:** Milk with a reduction in milk fat

**Name:** 

---

**Note:**

1. **TCBY** is famous for this dessert
2. **Fat free milk**
3. **Smooth and creamy dessert from Jell-O**
4. **Grated and sprinkled on your spaghetti**
5. **The curds and whey that Little Miss Muffet was eating.**
6. **The most important ingredient in a sundae**
7. **Bacteria (that's good for you!) added to milk to make this creamy treat**
8. **Made in Switzerland and has large holes**
9. **Milk with all the fat left in**
10. **Similar to ice cream but without the fat**
11. **Soft cheese used in Italian dishes such as lasagna**
12. **Bright orange cheese**
13. **Most popular cheese on pizza**
14. **Milk with a reduction in milk fat**
Dairy Foods Matching Worksheet

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ice cream</td>
<td>A. TCBY is famous for this dessert</td>
</tr>
<tr>
<td>2. Whole Milk</td>
<td>B. Fat free milk</td>
</tr>
<tr>
<td>3. Yogurt</td>
<td>C. Smooth and creamy dessert from Jell-O</td>
</tr>
<tr>
<td>4. Cottage cheese</td>
<td>D. Grated and sprinkled on your spaghetti</td>
</tr>
<tr>
<td>5. Pudding</td>
<td>E. The curds and whey that Little Miss Muffet was eating.</td>
</tr>
<tr>
<td>6. Ice milk</td>
<td>F. The most important ingredient in a sundae</td>
</tr>
<tr>
<td>7. Frozen yogurt</td>
<td>G. Bacteria (that's good for you!) added to milk to make this creamy treat</td>
</tr>
<tr>
<td>8. Cheddar cheese</td>
<td>H. Made in Switzerland and has large holes</td>
</tr>
<tr>
<td>9. Mozzarella cheese</td>
<td>I. Milk with all the fat left in</td>
</tr>
<tr>
<td>10. Parmesan cheese</td>
<td>J. Similar to ice cream but without the fat</td>
</tr>
<tr>
<td>11. Ricotta cheese</td>
<td>K. Soft cheese used in Italian dishes such as lasagna</td>
</tr>
<tr>
<td>12. Skim milk</td>
<td>L. Bright orange cheese</td>
</tr>
<tr>
<td>13. Swiss cheese</td>
<td>M. Most popular cheese on pizza</td>
</tr>
<tr>
<td>14. 2% milk</td>
<td>N. Milk with a reduction in milk fat</td>
</tr>
</tbody>
</table>
Dear Families,

This week we have learned about the Dairy group on the food pyramid. In order to give the students a better understanding of this group, we’d like to host a "tasting party". On __________ of next week, please send in a sample of a food from the Dairy group. This could include:

- Milk (cow, goat, soy, chocolate)
- Yogurt
- Cheese (any type)
- Ice cream
- Ice milk
- Cottage cheese

*All liquid milk products and many foods made from milk that retain their calcium content are considered part of this food group. Foods made from milk that have little to no calcium, such as cream cheese, cream, and butter, are not, so be careful when choosing for this group.

Please try to pick a food which may be a little out of what the children would normally eat. We’d like to experience something new. Also, remember this is just a taste, so there is no need to send a whole serving for each child, but rather a bite-sized portion!

Thank you for helping our class,
Book Selection – Milk

- Objective: Students will sequence the events of the story *Anatole* using cartoon cells to complete their project relating to the Milk group of the food pyramid.

- California English Language Arts Standards-Grade Four-Writing Applications-2.4 Write summaries that contain the main ideas of the reading selection and the most significant details.

**Materials**

- Book: *Anatole*—Eve Titus Accelerated Reader level 3.9.
- Cartoon sequencing worksheet page for each student.
- Whiteboard or overhead projector
- Optional video “How Cheese is Made” available on Wisconsin Milk Marketing Board website:
  http://www.wisdairy.com/AllAboutCheese/Cheesemaking/MakingCheese.aspx

**Directions**

*Anticipatory set*
1. Ask students how they think cheese is made.

2. Show video “How Cheese is Made”.

*Direct Instruction*
1. Read book to class.
Guided Practice
1. Have students retell the story while teacher writes their observations on whiteboard.

Independent Practice
1. Students complete cartoon drawing/sequencing activity.

Closure
1. Have students share their creations in groups of four.
Meat and Beans

- Objective: Students will develop an understanding of the meat and beans portion of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  
  http://teamnutrition.usda.gov/resources/mypyramidclassroom.html
- Fill-in My Pyramid for each student*
  
- Book: Meat and Protein by Lola M. Schaefer-Accelerated Reader Level 3.7 (or similar general knowledge food pyramid publication.)
- Meat and Beans word scramble
- Tasting Party letter-Meat and Beans
- National Pork Board website games:  
  http://www.pork4kids.com/Games2.aspx#
- Virginia-Carolina Peanuts website games:  

*Materials available to teachers and child care providers at no charge.
Directions

Anticipatory set
1. Review last lesson concepts.
2. Ask students to recall the food pyramid.
3. Show poster.

Direct Instruction
1. Discuss with students the meat and beans food group shown on the poster.
2. Read the book, Meat and Protein aloud to the class.

Guided Practice
1. As a class, fill in the different meats and beans on large poster.
2. Have students list the different meats and beans in their food pyramid chart. Also include the serving size of 5 ounces for children of this age.
3. Have students identify various selections from the meat and beans group in their food journals.

Independent Practice
1. Students complete meat and beans word scramble.
2. Optional-National Pork Board website games or Virginia-Carolina Peanuts website games.

Closure
1. Review with students the food groups discussed in the lesson.
Meat and Beans Word Scramble

cekichn
sgge
mehgrbaur
bckla enasb
tnau
tureyk
bcoan
aupten brutte
vlire
hspmir
isfh
ahm
mial nabse
onadslm
twnlusa
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rokp coph
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<table>
<thead>
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<th>Scrambled Word</th>
<th>Unscrambled Word</th>
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<td>cekichn</td>
<td>chicken</td>
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<td>salmon</td>
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<td>cbar</td>
<td>crab</td>
</tr>
</tbody>
</table>
Dear Families,

This week we have learned about the Meat and Beans group on the food pyramid. In order to give the students a better understanding of this group, we’d like to host a “tasting party”. On __________ of next week, please send in a sample of a food from the Meat and Beans group. This could include:

- Turkey
- Hamburger
- Chicken
- Black beans
- Fish
- Nuts
- Seeds
- Eggs
- Pork

Please try to pick a food which may be a little out of what the children would normally eat. We’d like to experience something new. Also, remember this is just a taste, so there is no need to send a whole serving for each child, but rather a bite-sized portion!

Thank you for helping our class,
Book Selection - Meat and Beans

- Objective: Students will write a response to the story *Mucumber McGee and the Half-Eaten Hot Dog* relating to the meat and beans groups on the food pyramid.

- California English Language Arts Standards-Grade Four-Writing Applications- 2.2 Write responses to literature: a. Demonstrate an understanding of the literary work. b. Support judgments through references to both the text and prior knowledge.

Materials

- Book: *Mucumber McGee and the Half-Eaten Hot Dog*–Patrick Loehr
  Accelerated Reader level 3.1.

- Mucumber McGee fill-in sheet for each student on the Harper Collins Children's Books Website:
  

- Writing prompt worksheet for each student "When I am hungry, I like to eat..."

Directions

Anticipatory set
1. Ask students if they have ever been so hungry they would eat just about anything.
2. Discuss what they chose to eat on that occasion and why.

*Direct Instruction*
1. Read book to class.

*Guided Practice*
1. Brainstorm with students their “so hungry” foods.

2. Complete the Mucumber McGee fill-in sheet.

*Independent Practice*
1. Students complete writing prompt worksheet “When I am hungry, I like to eat...”

*Closure*
1. Have students share what they have written with the class.
"Oh, my goodness, golly gee. I was simply hungy."

What's in Mucumber's belly?

Mucumber McGee was too hungry to wait for dinner and secured the pantry for something to eat. What do you think Mucumber found to put in his belly? Draw your favorite food in the circle.
Name________________________

When I'm hungry, I like to eat....

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

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____________________________________________________________________

____________________________________________________________________
**Fats and Oils**

Objective: Students will develop an understanding of how fats and oils relate to the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

**Materials**

- Large poster of My Pyramid*
  

- Fill-in My Pyramid for each student*
  

- Book: *Oils* by Lola M. Schaefer-Accelerated Reader level 3.8 (or similar general knowledge food pyramid publication.)

- Assorted foods (i.e. carrot, cookie, potato chip) to test for fat content.

- Colored napkins

- Fat Prediction/Outcome Worksheet

*Materials available to teachers and child care providers at no charge.

**Directions**

*Anticipatory set*

1. Review last lesson concepts.
2. Ask students to recall the food pyramid.

3. Show poster.

*Direct Instruction*
1. Discuss with students how fats and oils are a necessary part of proper health and nutrition, but not listed as a food group in the food pyramid.

2. Read the book, *Oils* aloud to the class.

3. Using colored napkin, show students how a drop of oil appears on the napkin.

*Guided Practice*
1. As a class, fill in the different fats and oils on large poster.

2. Have students list the different fats and oils in their food pyramid chart.

3. Place assorted foods on napkins, while students predict which ones will stain the napkin.

*Independent Practice*
1. Students complete meat and beans word search.

2. Next day, students will observe which foods stained the napkins.

*Closure*
1. Review with students the amount of fat found in each of the tested foods.
<table>
<thead>
<tr>
<th>Prediction/Outcome</th>
<th>Food:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. 1 piece of bread</td>
</tr>
<tr>
<td></td>
<td>2. 1 piece of cheese</td>
</tr>
<tr>
<td></td>
<td>3. 1 piece of cheese</td>
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<tr>
<td></td>
<td>4. 1 piece of cheese</td>
</tr>
<tr>
<td></td>
<td>5. 1 piece of cheese</td>
</tr>
<tr>
<td></td>
<td>6. 1 piece of cheese</td>
</tr>
</tbody>
</table>
Snacks-Tricky Treats

- Objective: Students will identify healthy snack choices.

- California Health Education Standard 2.1.N.4: List the benefits of healthy eating, including beverages and snacks.
- California Health Education Standard 2.1.N.7: Identify a variety of healthy snacks.
- National Health Education Standard 1.5.1: Identify relationships between healthy behaviors and personal health.

Materials

- LCD projector
  OR
- TV/computer connection
- White board or poster paper
- Print ads for snack foods
- Paper
- Markers/colored pencils

Directions

Anticipatory Set
1. Review the food groups.

2. Ask students to tell the class their favorite snacks and write these on the board or poster paper.
Direct Instruction
1. Show students Tricky Treats video.

2. Discuss the ideas from the video.

Guided Practice
1. Refer students back to the list of snacks they made earlier.

2. Have them discuss whether they are good choice or “tricky” treats.

3. Show students print ads for snack foods they like.

4. Discuss the words and pictures on the ads and how they are designed to make children want to get them.

Independent Practice
1. Students make their own ad for a healthy snack.

Closure
1. Students share advertisements.

2. Review the idea that snacks as well as meals need to be healthy.
**Knees Lifted High**

- Objective: Students will keep track of activities for one week and recognize healthy activity choices.

- California Health Education Standard-Grade Two-2.1.N.8 Identify and explore opportunities outside of school to participate regularly in physical activity. 2.1.N.9 Explain how both physical activity and eating habits can affect a person's health.

**Materials**

- Internet access
- LCD projector
- OR
- TV/computer connection
- White board or poster paper
- Activity journal

**Directions**

*Anticipatory set*

1. Ask students what they do with their free time after school and on weekends.
2. Make a list on the board or poster paper.
Direct Instruction
1. Show students the Knees Lifted High video.

Guided Practice
1. Review the activities students listed for the white board and discuss whether these are healthy choices that "get your whole body moving".

Independent Practice
1. Show students the activity journal and discuss how they will keep track of the activities they do to "get their whole body moving" for one week. Have them set goals to encourage follow through (30 minutes per day is a good goal to start with).

2. Encourage students to include their parents or families to join them in their activities.

3. Have a 2-3 minute discussion each day of their journal keeping to ask about activities they have been doing.

Closure
1. Have students share their journals with the class.
<table>
<thead>
<tr>
<th>Leisure time</th>
<th>Evening</th>
<th>Afternoon</th>
<th>Lunchtime</th>
<th>Morning</th>
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</thead>
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</table>

**Physical Activity Diary**

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

Sunday
1. Always use the stairs instead of taking the lift or escalator.

2. Park as far away as possible from your destination.

3. Make a commitment to fit activity into your day. By setting aside a regular time, it will soon become a habit.

4. Activity is always more fun with a friend. Get an exercise buddy or partner to go for a walk or a swim.

5. Go for a brisk walk during lunch breaks.

**Top Tips for increasing your daily physical activity level**

- the more likely you will be to keep it up.

4. Remember, don't give up if you're not happy with your new activities - try a new one, the more you enjoy it, the more likely you will be to keep it up.

- walks or swimming.

2. At the end of four weeks, try to identify a period of thirty to forty-five minutes. You may need to swap some things around and create a new routine. You should find that some breaks that you were doing stand alone and create a new routine.

3. At the end of eight weeks, try to identify a period of thirty to forty-five minutes. You may need to swap some things around and create a new routine. You should find that some breaks that you were doing stand alone and create a new routine.

1. At the end of the first week, try to find a ten or fifteen minute period when you could do something physical.

- record periods when you had spare time. These will help you identify when you could fit more activity into your day.

- for example: housework, climbing stairs, brisk walking and leisure activities.

- write in your diary that makes you feel warm and increases your breathing rate.

- fill out the diary to reflect an average week of physical activity.
Food Pyramid Tag

(Courtesy of Heather Deckard, CSUS)

- Objective: Students will be able to describe nutritious foods that provide energy for physical activity. Culminating activity to introduction of the food pyramid.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  http://teamnutrition.usda.gov/resources/mypyramidclassroom.html
- Large area for tag game (multi-purpose room, blacktop area, or grass)
- Fluff balls or soft foam balls (2 white, 1 Orange, 1 Green, 1 Blue, 1 Red, 1 Purple)
- Foam soccer balls (1 per child)
- 4 Hula hoops
- Children’s music on CD or I-pod loud enough for everyone to hear

*Materials available to teachers and child care providers at no charge.

Directions

Anticipatory set
1. Review My Pyramid.
2. Remind students that My pyramid is a tool we use to help us build good eating habits and remind us to be active every day.
3. Show poster and review the colors of each group.

Direct Instruction
1. Instruct the students that we’ll be playing a tag game using the colors of the food pyramid. Orange is for grains, green for vegetables, blue for milk, and red for fruits, and purple for meat/beans. White will represent extras or junk food.

2. 2 students are the taggers with white balls, 5 other students will be helpers with each of the other colored balls.

Guided Practice
1. If a tagger with junk food (white ball) gently tags you, you freeze and pretend to yawn. Cover your mouth when you yawn because that is good manners. Junk food makes us tired and it is difficult to concentrate.

2. Students with colored balls help you have more energy again by giving you the colored ball and you must say, “Thanks for the ______” (Name a food from the color of group you’ve been given).

3. They must say, “Your welcome” and then they run away.

4. That student must then give the ball to someone who has eaten too much junk food.

5. The taggers with junk food don’t give up their balls, only the colored balls do.

Independent Practice
1. Change taggers periodically.


Closure
1. Review with students the food groups and colors discussed in the lesson.
Balanced Meals I

- Objective: Students define and create balanced meals representing guidelines on the food pyramid.

- California Health Education Standards N.1.N.2. Recall the recommended number of servings and serving sizes for different food groups

Materials

- White board
- Balanced meal PowerPoint available at: http://docs.google.com/Presentation?id=dfmpec5tr40dmqqiznh
- LCD projector and screen OR Computer connected to TV screen
- Food magazines to cut pictures
  (Examples include Bon Appetite, Gourmet, Cooking Light)
- Glue
- Scissors
- Construction paper
  OR
  (instead of magazines)
- Provide students with crayons, markers, and drawing paper
  OR
- Provide students with plastic “play” food
Directions

Anticipatory set
1. Brainstorm with students the definition of a balanced meal.
2. Recall with students the food groups and serving sizes of each from previous lessons.

Direct Instruction
1. Define balanced meal as "a meal that has enough, but not too much food from each of the food groups" and write it on the board. Discuss with students what they think that definition means.
2. Show students balanced meal examples on PowerPoint presentation.

Guided Practice
3. Continue PowerPoint presentation with both unbalanced and balanced meals having students determine what group is missing in the examples.

Independent Practice
1. Students form groups of 2 or 3, clip foods from food magazine pictures (OR have students draw and color foods to cut out) and create one balanced meal to share with the class.

Closure
1. Have students share their creations with the class. Students give feedback as to whether the meal created was balanced.
**Balanced Meals II**

- Objective: Students define and create balanced meals representing guidelines on the food pyramid.

- CA Standards N.1.N.2. Recall the recommended number of servings and serving sizes for different food groups

- National Educational Technology Standards 1b. 1. Students know how to use basic input and output devices including digital cameras.

- National Educational Technology Standards 3a. Students identify and apply common productivity software features such as menus and toolbars to plan, create, and edit word processing documents, spreadsheets, and presentations.

**Materials**

- Student created balanced meal designs
- LCD projector/screen
  
  OR

- computer connected to TV screen

- How-To PowerPoint presentation:  
  [http://docs.google.com/Present?docid=dfmnc5tr 24mvwnx7fr](http://docs.google.com/Present?docid=dfmnc5tr 24mvwnx7fr)

- Digital camera(s) for student use
- Ability to download student photos to computer
- Computer for each student with PowerPoint application
Directions
Anticipatory set
1. Recall with students the food groups and serving sizes of each from previous lessons.

2. Recall student created balanced meal designs

Direct Instruction/Guided Practice
1. Show students how to operate digital cameras.

2. Have students take 1 picture of each balanced meal creation.

3. Download student pictures onto computer for their use.

4. Show students the How-To presentation to manipulate photos into a PowerPoint presentation.

Independent Practice
1. Have students create their PowerPoint presentation.

Closure
1. Have students share their presentations with the class. Students give feedback as to whether the meals created were balanced.
Gregory, the Terrible Eater

- Objective: Students identify the food groups and plan a meal for a family of four using grocery store circulars.

- California Health Education Standard 2.1.N.1: Classify various foods into appropriate food groups.
- California Health Education Standard 4.7.N.21 Identify ways to establish and maintain healthy eating practices consistent with current research-based guidelines for a nutritionally balanced diet.
- California Health Education Standard 4.6.N.17 Make a plan to choose healthy food and beverages.
- California Mathematics Standards Number Sense 5.0 Students model and solve problems by representing, adding, and subtracting amounts of money.

Materials

- Book: Gregory, the Terrible Eater by Mitchell Sharmat-Accelerated Reader level 2.8 Also available on Reading Rainbow-PBS: http://pbskids.org/readingrainbow/books/episodes.html
- Grocery Store circulars from the newspaper or mail
- Paper
- Pencils
- Scissors
- glue
Directions

Anticipatory set
1. Ask children to recall a balanced meal and ask them if their parents ever talk with them about eating healthy meals.

Direct Instruction
1. Read the book, Gregory, the Terrible Eater aloud to the class.

Guided Practice
1. Discuss with the class Gregory's "unbalanced" meals.
2. Guide students toward the idea that a little of the junk is okay to have as long as it's not their entire daily intake.
3. Show students the grocery circulars.
4. Have students work in pairs or threes and develop a balanced meal for a family of four.
5. Have students cut out the ads and glue to one page for display.
6. Students will add prices of each item for a total meal price.

Independent Practice
1. Students will share their findings with the class
2. Point out lower priced meals and balanced choices to the class.

Closure
1. Review with the students the concept of healthy portions of junk.
Grocery Store Lesson

- Objective: Students will know where to find healthy and nutritious foods in the grocery store.

  - California Health Education Standard 4.3.N.12 Identify resources for valid information about safe and healthy foods.
  
  - California Health Education Standard 4.7.N.20 Practice how to take personal responsibility for limiting sugar consumption in foods, snacks, and beverages.
  
  - National Health Education Standard 3.5.2: Locate resources from home, school and community that provide valid health information.

Materials

- Large poster of My Pyramid*
  

- Grocery store map (Google search: ‘typical grocery store layout’, then click “images”)

- LCD projector
  
  OR
  
  - TV/computer connection

- Field Trip: Local Grocery Store

*MATERIALS AVAILABLE TO TEACHERS AND CHILD CARE PROVIDERS AT NO CHARGE.*
Directions

Anticipatory set
1. Ask students to recall the food pyramid.

2. Ask students where they can find certain products in their local grocery store.

Direct Instruction
1. Discuss with students the typical layout of a grocery store.

2. Show students layout map on an overhead or computer LCD projector.

3. Point out that food from the food groups we’ve been studying can be found on the outer edge of a grocery, while more processed products are found in the middle aisles.

4. End shelves display products that aren’t necessarily a good buy because food companies pay to have their foods displayed there.

5. Discuss where cereal is placed (sugared cereals at children's eye level, healthier choices up high), candy and gum, and other child related products.

Guided Practice
1. As a class, practice by suggesting foods and their locations in a grocery store.

Independent Practice
1. Arrange for students to tour a local grocery store.

2. Discuss tour with conducting person beforehand specifically telling him/her what your students have been learning, so that the tour guide may follow up during the tour.

Closure
1. Review with students the foods are where they are found in the grocery store.
Food Nutrition Labels

- Objective: Students will develop an understanding of the information contained on food nutrition labels.

- California Health Education Standard 4.3.N.13 Use food labels to determine nutrient and sugar content.
- California Health Education Standard 4.1.N.1 Identify and define key nutrients and their functions.
- National Health Education Standard 7.5.2: Demonstrate a variety of healthy practices and behaviors to maintain or improve personal health.

Materials

- Nutrition labels from several different types of foods (30-40 would be ideal)
- Nutrition facts sheet
- Scale that measures grams
- Sugar
- Salt

Directions

Anticipatory set
1. Ask students to recall serving size.

2. Ask students what the serving size is of the breakfast cereal they eat.

82
Direct Instruction
1. Show students the nutrition label found on the back of a favorite food like macaroni and cheese.

2. Talk about each of the nutrients found on the label.

Guided Practice
1. Select several labels and discuss amounts of certain nutrients.

2. Choose 2-3 high sugar or high sodium foods and show students using measuring tools how much salt or sugar that really is.

Independent Practice
1. Give students the labels you’ve collected.

2. Have students discuss with one another which foods they feel are healthy or not so healthy.

Closure
1. Review with students the nutrients and other concepts discussed in the lesson.
Media Influences

- Objective: Students identify advertisements geared toward children and the techniques used to engage them.
- California Health Education Standard 4.2.N.10 Analyze advertising and marketing techniques used for food and beverages.
- National Health Education Standard 4.2 Students will explain how media influences thoughts, feelings, and health behaviors.

Materials

- Two or three taped food commercials geared toward children
- Recording sheet for commercial watching

Directions

Anticipatory set
1. Ask students what they had for breakfast.
2. Ask them to identify who made that selection (the child or parents).
3. Tell them maybe someone else made the decision and they don’t even know it.

Direct Instruction
1. Show students one commercial.
2. Discuss the reasons they know it was a commercial for children and not adults.
3. Point out the tactics used such as a cartoon character or a celebrity. Then talk about the motives of using that character or person (getting paid or do they really believe in the product?)
4. Discuss other advertising tactics such as bright colors, words that depict how great the product is, how popular it can make you or how fun it is.

Guided Practice
1. Show 1 or 2 more commercials and have children point out things they see that make them want to purchase the product (popularity or brings more fun product?)

Independent Practice
1. Have students tally the number of times they see a commercial for children during a ½ hour show they like to watch.

2. Have students write down any tactics used to get them to buy the product (ie: character or cartoon or how fun the product is made to look).

Closure
1. Share findings with the class.

Extension
1. Have students look through newspapers and magazines for cartoon or celebrity endorsements or other advertising tactics and show to class.
Name_______________________________

A. Write 2 foods that fit into each of the food groups:

Grains________________________________

Fruits________________________________

Vegetables______________________________

Milk___________________________________

Meat and Beans__________________________

B. Choose the word from the word box to complete the sentence.

<table>
<thead>
<tr>
<th>blow</th>
<th>balanced</th>
<th>children</th>
<th>exercise</th>
<th>served</th>
</tr>
</thead>
<tbody>
<tr>
<td>snacks</td>
<td>labels</td>
<td>fats and oils</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. It is important to ____________ each day to stay fit and healthy.

2. ____________ as well as meals should be healthy choices.

3. Commercials with cartoon characters are meant to make ____________ want to buy the product.

4. Each day we should be eating ________________ meals as much as possible.

5. ________________ should be used sparingly (not very much).

6. Food ________________ give all the nutrient information in a food including the amount of sugar, salt, and fat.
7. Excuse yourself from the table to _______________ your nose.

8. You should not begin eating until everyone at the table has been ________________.

C. Write a paragraph about your favorite book we've read for this unit.
   
   Please give at least three reasons this was your favorite. Be sure to include details from the story to support your answer.

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
APPENDIX B

Complementary Literature List With Accelerated Reader Levels
for the Health and Nutrition Curriculum Unit
Complementary Literature to the Health and Nutrition Unit

"Apple Pie Fourth of July" Janet S. Wong AR 3.0

"The Bake Shop Ghost" Jacqueline K. Ogburn AR 4.7

"Bananas, From Manola to Margie" George Ancona

"Bee-bim Bop!" Linda Sue Park AR 2.6

"Bread and Jam for Frances" Russell Hoban AR 3.4

"Chocolate Touch" Patrick Skene Catling AR 4.7

"Cloudy with a Chance of Meatballs" Judi Barrett AR 4.3

"Cook-a-Doodle-Doo" Janet Stevens & Susan Crummel AR 2.7

"Corn is Maize: The Gift of the Indians" Aliki AR 4.2

"Dumpling Soup" Jama Kim Rattigan AR 3.4

'Ella Takes the Cake" Carmela D'Amico AR 2.7

"Fannie in the Kitchen: The Whole Story from Soup to Nuts of How Fannie Farmer Invented Recipes with Precise Measurements" Deborah Hopkinson AR 3.9

"Fast Food" Saxton Freymann and Joost Elffers AR 2.2

"From Seed to Plant" Gail Gibbons AR 3.4

"Full, Full, Full of Love" Trish Cooke AR 2.6

"The Giant Turnip" Aleksei Tolstoy AR 3.8

"The Gingerbread Baby" Jan Brett AR 3.5

"The Giving Tree" Shel Silverstein AR 2.6

"Good Enough to Eat" Lizzy Rockwell AR 4.2
"Growing Vegetable Soup" Lois Ehlert AR 2.0

"The Have a Good Day Café" Frances and Ginger Park. AR 3.3

"How to Make an Apple Pie and See the World" Marjorie Priceman AR 3.1

"I Will Never Not Ever Eat a Tomato" Lauren Child AR 2.7

"Jamie O'Rourke and the Big Potato" Tomie De Paola AR 4.0

"Johnny Appleseed" Carol Beach York AR 4.5

"Johnny Appleseed" Steven Kellogg AR 4.4

"Latkes and Applesauce" Fran Manushkin

"Let's Eat! What Children Eat Around the World" Beatrice Hollyer, AR 5.1

"The Little Red Hen" Jerry Pinkney AR 3.1

"The Little Red Hen" Paul Galdone AR 2.9

"Mama Panya's Pancakes: A Village Tale from Kenya" Mary and Rich Chamberlin, AR 3.8

"Mama Provi and the Pot of Rice" Sylvia Rosa-Casanova AR 4.6

"The Monster Health Book" Edward Miller

"Mystery of the Flying Orange Pumpkin" Steven Kellogg AR 2.6

"Ox-Cart Man" Donald Hall AR 4.5

"Pizza for the Queen" Nancy Castaldo AR 4.6

"The Popcorn Book" Thomas Anthony Depaola AR 4.3

"The Potato Man" Megan McDonald AR 3.2

"Saturday Sancocho" Leyla Torres AR 4.4
"Stone Soup" Marcia Brown AR 3.3

"Strawberry Girl" Lois Lenski AR 4.8

"Strega Nona" Tomie de Paola AR 3.9

"The Thief and the Beanstalk" P.W. Catanese AR 5.7

"Thunder Cake" Patricia Polacco AR 3.5

"Tiny Tortilla" Arlene Williams AR 4.0

"Uncle Willie and the Soup Kitchen" Dyanne DeSalvo-Ryan AR 3.3

"Yoko" Rosemary Wells AR 2.9
REFERENCES


