

EXPERIENCES AS AN AMERICORPS NUTRITION EDUCATOR FOR
HARVESTERS—THE COMMUNITY FOOD NETWORK

by

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Abstract

Nearly fifteen percent of households in the United States experienced food insecurity in 2008 and 2009 (one-third of which experienced low food security). Malnourishment resulting from food insecurity may lead to developmental disorders and learning difficulties in addition to other poor health outcomes. In the United States, obesity and its related morbidities such as cardiovascular disease and diabetes account for a portion of these poor health outcomes.

Harvesters—The Community Food Network strives to end food insecurity throughout northwestern Missouri and northeastern Kansas through the implementation of four feeding and hunger initiatives. The Nutrition Services Department at Harvesters contributes to two of the initiatives by providing nutrition education to youth and adults in order to facilitate behavior changes which lead to a healthier lifestyle, thereby reducing the prevalence of negative health outcomes among the population served by Harvesters.

The present report contains details regarding a field experience as an AmeriCorps Nutrition Education Specialist for Harvesters. During the experience, the student produced a four week curriculum designed to increase children's awareness about the importance of eating a variety of fruits and vegetables; the lesson further provided the opportunity for children to sample fruits and vegetables prepared in recipes selected for children's enjoyment. The majority of the student's time was spent educating children, teens and adults about nutrition and cooking; the student accrued 974 participant visits by facilitating 73 class sessions.

Table of Contents

List of Figures	v
List of Tables	vi
Acknowledgements.....	vii
Dedication.....	ix
Chapter 1 - Introduction.....	1
Food Insecurity in the United States.....	1
The Relationship between Food Insecurity and Obesity in the Unites States	1
The Food Banking System.....	2
Harvesters—The Community Food Network Mission and Overview	3
Food Insecurity in the Harvesters Service Area	5
Obesity Rates in the Harvesters Service Area	6
Chapter 2 - Field Experience	8
AmeriCorps.....	8
Harvesters’ Nutrition Services Department.....	9
Nutrition Services Programs.....	9
Project STRENGTH	10
Teen Eats.....	15
Kids in the Kitchen	16
One-time Classes	19
Responsibilities as a Nutrition Educator.....	20
Curriculum Development	20
Teaching Outcomes	23
Chapter 3 - Reflection.....	25
References.....	27
Appendix A - Field Experience Description.....	29
Appendix B - Class Guidelines and Rules.....	31
Appendix C - Kids in the Kitchen- Eating Around the Clock- Snack Activity.....	38
Appendix D - Kids in the Kitchen Sample Curriculum and Post Test	39
Appendix E - How to Eat a Rainbow Post-Test	55

List of Figures

Figure 1.1 Food Distribution.....	4
Figure D.1 Picture of Fresh Fruits and Vegetables.....	43
Figure D.2 Pictures of Frozen Vegetables and Frozen Fruits.....	44
Figure D.3 Picture of Canned Fruits and Vegetables	45
Figure D.4 Pictures of Dried Fruits and Vegetables and a Commercial Dehydrator	46
Figure D.5 Example of a Rainbow BINGO Card	47
Figure D.6 Fruits and Veggies they're everywhere Coloring Sheet for Lesson 3	48
Figure D.7 Cover Page and Page 3 of Coloring Booklet for How to Eat a Rainbow Curriculum	49
Figure D.8 Pages 2 and 4 of Coloring Booklet for How to Eat a Rainbow Curriculum	50
Figure D.9 Pages 5 and 7 of Coloring Booklet for How to Eat a Rainbow Curriculum	51
Figure D.10 Pages 6 and 8 of Coloring Booklet for How to Eat a Rainbow Curriculum	52
Figure D.11 Cooking Terminology Matching Activity	53
Figure D.12 Recipe for Lesson 3	54

List of Tables

Table 1.1 Pounds of food donated to Harvesters in 2011	5
Table 1.2 Food Insecurity Rates by County.....	6
Table 1.3 CDC County level Obesity Rate Estimates from 2008.	7
Table 2.1 Teen Eats Curriculum Topics and Activities Guide	15

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Dedication

To my family, especially Brett, Paula, Rod, Gale and Donna, and friends, who have supported and believed in me.

Chapter 1 - Introduction

Food Insecurity in the United States

Food security has been defined as “dependable access to enough food for active, healthy living” (Nord, Andrews, & Carlson, 2009; Nord, Coleman-Jensen, Andrews, & Carlson, 2010). Food insecurity, on the other hand, refers to limited accessibility of adequate food due to limited resources (Nord et al., 2009; Nord et al., 2010). Food insecurity can be further distinguished by the following terms: low food security, which refers to a “reduction in the quality, variety, or desirability of diet” (Spark, 2007), this is marked by “little or no indication of reduced food intake,” (Spark, 2007) (formerly referred to as food insecurity without hunger), and very low food security, which is marked by a reduction in food intake and leads to disrupted feeding patterns (formerly referred to as food insecurity with hunger) (Spark, 2007). Other terms used to refer to food insecurity include: hunger, food accessibility, food insufficiency and food poverty.

Beginning in 1995, food security in the United States has been monitored by the United States Department of Agriculture (USDA). Since that time, food insecurity reached a high in 2008 when 14.6 % of households were identified as food insecure (Nord et al., 2009). The numbers of food insecure households increased to 14.7% in 2009 (Nord et al., 2010). During both years, the percentage of households experiencing very low food security was 5.7%, or approximately one-third of the food insecure households (Nord et al., 2010). Historically, the “Household Food Security in the United States” report has been published in November of the year following data collection; therefore, the 2010 report was unavailable at the time the present report was written.

Food insecurity is more prevalent in densely populated metropolitan areas and in rural areas than in suburban areas of large cities. From a diversity perspective, food insecurity affects Black, Hispanic and single parent households at higher rates as well (Nord et al., 2009; Nord et al., 2010).

The Relationship between Food Insecurity and Obesity in the United States

The consequence of food insecurity in the United States is the same for that of food insecurity throughout the rest of the world- food insecurity can potentially lead to malnutrition

(Campbell, 1991). Malnutrition then leads to further complications such as poor health outcomes, developmental disorders and learning difficulties. In the United States however, malnutrition is not necessarily depicted by the same images of undernourished frail looking children from third-world countries so often seen on television, but instead can manifest as obesity, too. The perception from those unfamiliar with the food insecurity landscape in the U.S. is that anyone who is obese could not possibly be food insecure because they are or have been overeating kilocalories. However, micronutrient deficiencies still occur regardless of macronutrient status.

Two issues exist which have been examined and seem to connect food insecurity and obesity. The first concept is that disordered eating patterns occur as a result of food insecurity; these disordered eating patterns lead to overconsumption of food when it is available because the individual dealing with food insecurity has difficulty knowing or cannot predict when food will be available in the future (Kendall, 1996; Olson, 1999; Townsend, 2001). The second concept is that micronutrient rich foods, such as fresh fruits and vegetables, lean meats and whole grain foods are more expensive (250 kcal/\$ for carrots, as opposed to 1200 kcal/\$ for cookies and potato chips- according to Drewnowski, and typically less available than pre-packaged foods and foods commonly found at fast food restaurants; the latter foods tend to be micronutrient poor and energy dense, overconsumption of these foods leads to obesity (Drewnowski, 2004; Kendall, 1996). Further complicating the second concept is the existence of food deserts, which are areas originally thought to be in urban environments, but now known to also be rural, containing a limited number of supermarkets and, therefore, offer limited food selection typically at higher prices (Morland, 2002). As a result, people residing in food deserts tend to have greater difficulty acquiring fresh, micronutrient-dense foods.

The Food Banking System

The food banking system consists of food banks and member agencies such as homeless shelters, group and children's homes, food pantries and congregates meal sites. In general, food banks collect food and household items and distribute them to agencies which then distribute these items directly to those affected by food insecurity.

Harvesters—The Community Food Network Mission and Overview

Harvesters—The Community Food Network, commonly referred to as Harvesters, is one of 202 food banks in the Feeding America network and has over 620 member agencies throughout a 26 county service area in Northeastern Kansas (16 counties) and Northwestern Missouri (10 counties). The Harvesters Mission: “Harvesters—The Community Food Network feeds hungry people today and works to end hunger tomorrow” is accomplished through various initiatives aimed at gathering food used to feed individuals and families experiencing food insecurity and educating the community and individuals about food insecurity. These initiatives are: The Childhood Hunger Initiative, the Feeding Families Initiative, the Healthy Eating initiative and the Senior Feeding Initiative.

The Childhood Hunger Initiative addresses childhood hunger and provides food and nutrition education to children through three programs. Kids Café is an afterschool and summer meal program designed to provide healthy meals to school aged children. Kids in the Kitchen is an educational program which provides basic nutrition education and teaches kids the importance of healthy snacking; more about the Kids in the Kitchen program will be discussed in Chapter 2. BackSnack is a program which distributes pre-packed backpacks to children once per week on Friday after the school day; the backpack is filled with individually packaged child-friendly foods, providing the child most (or all) of his food and nutrients for the weekend.

The Feeding Families Initiative fights hunger in three ways. The Harvesters’ network provides food to individuals and families via food pantries and congregate meal programs. Fresh produce and other perishable foods are distributed to recipients via Mobile Food Pantry. The third initiative provides holiday meals during November and December.

There are four aspects of the Healthy Eating Initiative. Project STRENGTH is an eight-week class for adults, which focuses on nutrition, food safety, tips for shopping on a limited budget, and a cooking lesson. Project STRENGTH will be discussed in detail in Chapter 4. Plant a Row for the Hungry is a program designed to persuade local gardeners to donate fresh produce to Harvesters by asking them to plant an additional row of fruits or vegetables. Food Rescue is a program designed to reduce the amount of prepared foods being thrown away by local restaurants; nutritious, unserved food items are donated to Harvesters and redistributed to low-income day care centers, and domestic violence and homeless shelters. Food Drives are conducted to collect nutritious, non-perishable items which are then distributed to food pantries-

these items may also be distributed to class participants of Harvesters Nutrition Services programs.

The Senior Feeding Initiative helps provide fresh produce and other perishable items to older adults via the Senior Mobile Food Pantry. This is similar to the Mobile Food Pantry that is part of the Feeding Families initiative, but delivers food directly to senior housing sites.

More than 38 million pounds of food was distributed through the above initiatives throughout fiscal year 2011 (*Harvesters*, 2011). Most of the food is distributed through food pantries in the Harvesters network. Figure 1.1 illustrates their total food distribution.

Figure 1.1 Food Distribution



The majority of the food is resourced from donors in the Feeding America network as well as from the local food industry. Table 1.1 displays the amount of food in pounds donated during fiscal year 2011 and the source of the food. The food provided by the USDA is used to package Commodity Supplemental Food Program (CSFP) and The Emergency Food Assistance Program (TFAP) boxes which are packed by volunteers and distributed throughout the Harvesters service area.

Table 1.1 Pounds of food donated to Harvesters in 2011

Food drives	1,935,534 pounds
Local food industry donors	13,076,574 pounds
Other food banks	595,571 pounds
Food rescue program	629,054 pounds
Purchased food	5,856,946 pounds
USDA	6,563,367 pounds
Feeding America/national and local donors	13,088,943 pounds
Total	41,745,989 pounds

Harvesters also receives monetary donations from corporate donors, foundations and individuals, religious and social service organizations, as well as state and federal grant money which is utilized to carry out the four initiatives mentioned above. Of this money, only 3% is applied toward administrative and fundraising costs (*Harvesters*, 2011).

In addition to providing relief from food insecurity, Harvesters works alongside the Federal Emergency Management Agency (FEMA) to assist in disaster relief. At any given moment Harvesters may be called upon to release stores of household products, such as garbage bags and cleaning supplies, food items and potable water. Harvesters provides further assistance to disaster victims by communicating relief information via their website.

Food Insecurity in the Harvesters Service Area

According to Map the Meal Gap, a feature on the Feeding America website, the national average food insecurity rate in the U.S. in 2009 was 16.6 percent (*Feeding America*.2011). Kansas was below the national average with a food insecurity rate of 14.3 percent and Missouri was slightly above with a rate of 16.8 percent (*Feeding America*.2011). Only one Kansas county in the Harvesters service area had a food insecurity rate above the national average; Wyandotte at 20.5 percent. On the other hand, Missouri had four counties in the Harvesters service area with a food insecurity rate above the national average. Table 1.2 contains food insecurity rates for all of the counties in the Harvesters service area.

Table 1.2 Food Insecurity Rates by County

<i>Kansas Counties</i>	<i>Percent</i>	<i>Number of people</i>	<i>Missouri Counties</i>	<i>Percent</i>	<i>Number of people</i>
Clay	11.3	980	Bates	18.0	3,050
Douglas	15.7	17,800	Carroll	17.7	1,740
Franklin	14.5	3,820	Cass	14.4	14,010
Jackson	13.6	1,810	Clay	13.6	29,580
Jefferson	13.0	2,380	Henry	17.4	3,890
Johnson	11.3	59,250	Jackson	18.4	126,620
Marshall	12.5	1,270	Johnson	16.3	8,460
Miami	13.4	4,100	Lafayette	15.6	5,120
Nemaha	11.0	1,110	Platte	12.7	11,150
Osage	14.5	2,380	Ray	15.3	3,590
Pottawatomie	11.6	2,250			
Riley	16.5	11,480			
Shawnee	14.7	25,630			
Wabaunsee	13.2	900			
Washington	12.9	750			
Wyandotte	20.5	31,440			

Obesity Rates in the Harvesters Service Area

In 2008, 26.1 percent of the U.S. adult population was obese (*Centers for Disease Control and Prevention, 2011*). During the same year, the obesity rates for Kansas and Missouri were 28.1 and 29.1 percent, respectively (*Centers for Disease Control and Prevention, 2011*). Obesity rates for most counties in the Harvesters service area were above those for the states of Kansas and Missouri; only one county, Johnson County, KS, had rates below that of the country; on the other hand, Wyandotte County, had not only the highest obesity rates in the Harvesters service area, it held the highest obesity rates for the entire state of Kansas. Table 1.3 contains obesity rates in the counties served by Harvesters; this data was estimated from data collected by

the 2007, 2008 and 2009 Behavioral Risk Factor Surveillance Survey (BRFSS) (*Centers for Disease Control and Prevention, 2011*).

Table 1.3 CDC County level Obesity Rate Estimates from 2008.

<i>Kansas Counties</i>	<i>Percent</i>	<i>Missouri Counties</i>	<i>Percent</i>
Clay	30.3	Bates	29.5
Douglas	26.7	Carroll	29.8
Franklin	31.3	Cass	29.6
Jackson	30.3	Clay	29.5
Jefferson	31.9	Henry	30.3
Johnson	23.1	Jackson	31.0
Marshall	31.4	Johnson	31.1
Miami	28.6	Lafayette	30.2
Nemaha	29.1	Platte	28.6
Osage	32.4	Ray	30.5
Pottawatomie	29.6		
Riley	26.4		
Shawnee	30.5		
Wabaunsee	29.4		
Washington	29.5		
Wyandotte	35.4		

Chapter 2 - Field Experience

AmeriCorps

AmeriCorps, a program of the Corporation for National and Community Service, began in 1994 when the already established Volunteers in Service to America (VISTA) program, created by President Lyndon Johnson in 1964 and the National Civilian Community Corps (NCCC) program were combined (*About AmeriCorps.2011*). The purpose of AmeriCorps is to provide service which improves the lives of community members; service opportunities focus on education, public safety, health, and the environment (*About AmeriCorps.2011*). Every member takes the AmeriCorps Pledge: “I will get things done for America - to make our people safer, smarter, and healthier. I will bring Americans together to strengthen our communities. Faced with apathy, I will take action. Faced with conflict, I will seek common ground. Faced with adversity, I will persevere. I will carry this commitment with me this year and beyond. I am an AmeriCorps member, and I will get things done.” (*About AmeriCorps.2011*)

AmeriCorps members serve agencies such as local nonprofit organizations, community and faith-based organizations, state, local, and higher education institutions, state and local governments across the United States, as well as in U.S. Territories (*About AmeriCorps.2011*). Harvesters—The Community Food Network is one such nonprofit agency; the Nutrition Education Specialist position at Harvesters is an AmeriCorps State Member position.

In order to fulfill the field experience requirements as an AmeriCorps Nutrition Education Specialist at Harvesters, the author committed to a half-time service commitment from January 10 through September 30, 2011. The half-time service requirement is 945 hours; these hours may be completed in the following manner: up to 20% (189 hours) may be for professional development and training purposes, 80% (756 hours) are to be applied toward direct service in the community. The actual hours completed were 189 training hours, 784 service hours- the service hours exceeded Kansas State University’s Master of Public Health program field experience requirement by 304 hours.

Harvesters' Nutrition Services Department

As previously mentioned, Harvesters has implemented four initiatives to help fight hunger. Components of the Childhood Hunger Initiative and the Healthy Eating Initiative are carried out through the Nutrition Services Department. The overall objective of the department is to educate anyone receiving food assistance about nutrition and to facilitate behavior changes, which will lead to a healthier lifestyle. This is achieved through a variety of means: serving as a nutrition resource to Harvesters agencies, providing cooking demonstrations at agencies when they receive unusual or unfamiliar food items (one example from few years ago was an ostrich egg donated by an ostrich farmer in the Kansas City metropolitan area- the egg was turned into an omelet which fed about a dozen people), training agencies on safe-food handling practices and offering a variety of programs to educate agencies' clientele.

Nutrition Services Programs

Nutrition Services offers a variety of classes to help educate individuals about nutrition and to provide them with cooking skills. Three classes are taught in series: Project STRENGTH, Teen Eats and Kids in the Kitchen. Participants who attend Project STRENGTH and Teen Eats are incentivized with a free bag of groceries for each week they attend. The grocery sacks are packed with non-perishable items and typically contain three pounds each of grains or grain products, canned vegetables, canned fruit, canned protein or peanut butter, two pounds of meal-entrees (i.e., "helper-type" meals, instant noodles, or macaroni-and-cheese) or soup, and one pound each of dairy, spices and condiments, personal care items, and cleaning supplies or paper products. In addition to the series-classes, Nutrition Services offers three stand alone classes designed to meet specific health and nutrition concerns of Harvesters agencies' clientele: Diabetes 101, Healthy Desserts and Nutrition during Pregnancy.

Every nutrition class taught through the Nutrition Services Department consists of two components: a nutrition curriculum and a cooking lesson. The purpose of including the cooking component in all classes is multi-faceted: it demonstrates that healthy cooking can taste delicious without being difficult or time-consuming, it improves self-efficacy when shopping (i.e., being able to distinguish between instant, par-boiled and dried rice) and in the kitchen (by teaching new proficiencies such as knife skills and proper measuring technique), as well as introduces people to new foods they may have never seen or heard of, or have been unwilling to try.

Furthermore, cooking in class encourages individuals to try foods they believe they don't like, prepared in new and different ways. Recipes for all of the adult classes and teen classes are taken from the Harvesters Cookbook which was created by the 2008-2009 team of AmeriCorps Nutrition Educators in collaboration with a registered dietitian. Each recipe in the cookbook was created or adapted to maximize nutrient content and minimize calories, sodium and added sugar while still providing a satisfying flavor and texture profile. An important aspect of the Harvesters Cookbook is the cost associated with each recipe; the highest cost per serving is \$2.62, about one-third of the recipes are less than \$2.00 per serving, and about half of the recipes are less than \$1.00 per serving. Each recipe utilized in the Kids in the Kitchen program is developed or adapted specifically for use during each unit of the series.

All participants (adults, teens and kids) are asked to take a post-test at the conclusion of the last class in a series. Nutrition educators rely on these tests to evaluate their effectiveness in conveying the concepts presented in class, Harvesters utilizes the overall scores and answers regarding behavior change to assess the value of the classes; these outcomes are also utilized when applying for grants in order to maintain funding.

Project STRENGTH and Teen Eats participants fill out a participant evaluation form during the second to last week of each series to provide feedback regarding what they have learned, what they enjoyed and how the class can be improved to better suit their needs. A representative from each site is also asked to provide feedback regarding their client's participation in the classes and recommend improvements to better serve their clients.

Project STRENGTH

Project STRENGTH is an eight-week nutrition and cooking class for adults; the curriculum addresses topics in nutrition, such as food safety, tips for shopping on a limited income and label reading. Each lesson also includes a Strengthen and Stretch activity designed to encourage participants to engage in physical activity by providing them with simple exercises which can be performed without the use of any special equipment.

Each week, the lesson focuses on the title that comes from the acronym STRENGTH:

Simple Eating Guidelines

Tips for a Safe Kitchen

Reading Food Labels and Smart Shopping

Eating for Prevention

Nutrition Messages

Good Nutrition Away from Home

Training Your Body

Home Cooking

The Simple Eating Guidelines class is an introduction to the eight-week course; what is expected of each participant (full participation in the nutrition and cooking lesson, including clean-up, and to arrive on time and stay for the duration of the class) and what the participants may expect from the educator (a 2-3 hour lesson, including recipe preparation time, all the materials to be used in class and the ability to use the educator as a nutrition resource for any questions or concerns they may have- educators emphasize that they are not registered dietitians). The first lesson also introduces the Food Guide Pyramid as a tool which can be used for balanced eating and making healthier food choices; the Pyramid serves as the backbone of every lesson and is reviewed each week. Participants use an activity level, age and weight table to estimate their calorie needs and learn simple ways to estimate portion size using everyday objects such as dice, a deck of cards, even their own hand. At the end of the nutrition lesson, participants are asked to set one activity goal and one eating goal they wish to achieve over the following week by using the acronym SMART:

Specific- the goal should address one aspect of healthy eating or physical activity, such as focusing on consuming fruits and vegetables.

Measurable- the goal should state by how much and how often the behavior is to be performed, for example, walking for *30 minutes, 3 times*.

Attainable- the goal needs challenging, but also do-able; if someone is new to exercise they may not be able to engage in 30 minutes of physical activity, instead, they could set a shorter length of time for their goals until they work up to 30 minutes.

Realistic- the goal should be within one's abilities and resources; it would be unrealistic for someone who does not have access to fresh produce to set a goal of eating one banana per day- it would be more realistic to set a goal of eating one-half cup of fruit per day if they had access to frozen or canned fruit.

Timeframe- an important aspect of goal setting is stating by when something should be accomplished; for goals set during the duration of the Project STRENGTH course

the timeframe is automatically set as one week. Once the course has concluded, participants may set their own timeframe as they continue to set goals.

During subsequent weeks the participants are given time in class to reflect on whether they achieved their goal and are asked to set new goals for the following week.

The focus of the Tips for a Safe Kitchen lesson is on food safety. Participants learn about food borne illness, steps for proper hand washing, safe food handling procedures, safe cooking temperatures, proper food storage, understanding dates printed on food packages, and about dented cans and how to distinguish a safe dent from an unsafe dent.

The third week of class, titled Reading Food Labels and Smart Shopping, provides participants with tips and resources for saving money when shopping for food. Harvesters Nutrition Educators provide information about other food resources such as Angel Food Ministries which specializes in providing consumers with prepackaged boxes of food for prices much lower than those of a supermarket. Information regarding services provided by local grocery stores, such as Hy-Vee Dietitians and budget friendly meal plans is also provided to class participants. Educators share information about community gardens, local farmers markets, and programs such as Beans and Greens- a program at the Kansas City farmers markets which allows Supplemental Nutrition Assistance Program (SNAP), formerly known as Food Stamps, recipients to utilize their benefits at the market, typically allowing them to acquire more produce from the market than from the grocery store for the same amount of SNAP credit. During week three Project STRENGTH participants also learn how to read and understand food labels and receive tips for making healthier food choices when shopping, such as looking for canned fruits packed in water or natural juices as opposed to heavy syrup. If they do not have a choice regarding food items they may receive, participants are given tips to deal with those items, for example, if they receive peaches packed in heavy syrup, they may drain and rinse the peaches in order to remove some of the added sugar before consuming them. The STRENGTH spotlight focuses on fruits and vegetables; participants learn the recommended amount of fruits and vegetables to be consumed daily: two to two-and-one-half cups of vegetables and two cups of fruit, and how much equals a half cup. The nutrient benefits of fruits and vegetables are reviewed, as are some tips for choosing organic produce should an individual choose to purchase organic items.

Eating for Prevention, the fourth lesson is all about helping participants make healthier food choices in hopes of preventing chronic diseases such as cardiovascular disease and diabetes. Participants learn about overweight and obesity and obesity's relationship to the chronic diseases previously mentioned. Each participant utilizes a body mass index (BMI) table to calculate their own BMI. The STRENGTH spotlight draws attention to grains and sugars. Participants learn the nutrient benefits of grains, in addition to the daily recommendation of six ounces of grains-half of which should be whole grains, and some one-ounce equivalents of grains (i.e., one slice of bread, one-half cup cooked rice, one six-inch flour tortilla). This lesson also teaches participants how to read an ingredient list in order to identify whether a product truly contains whole grains despite what the advertising and fancy product names may indicate; the first ingredient on the label must contain the word "whole", as in "whole wheat flour". Participants also learn the different names for sugar that may appear in an ingredient list. Visual aids are utilized to demonstrate the amount of sugar in various products.

Lesson five, Nutrition Messages, brings awareness to marketing and advertising schemes; participants are encouraged to be cautious about products or programs which promise quick fixes and sound too good to be true, restrict an entire food group, or which make claims that are not based upon scientific evidence or backed by a reputable organization such as the Centers for Disease Control (CDC), USDA, etc.. The STRENGTH spotlight of lesson five is on meat and beans; nutrient benefits, including a discussion of omega-3 fatty acids are covered, sources of meats and beans and one ounce equivalents (one tablespoon of nut butter, one-half cup dry, bake or refried beans, one egg) are presented, and five to seven ounces are recommended for daily consumption. The lesson also provides information about consuming protein through a vegetarian based diet and highlights some sources of protein, such as tempeh, miso and textured vegetable protein, with which non-vegetarian eaters may be unfamiliar.

During week six, participants learn about making healthier choices when eating away from home; they are presented with three questions to ask themselves when making food choices: What is in it? How is it prepared? How much? The "What is in it?" questions helps people to understand how a food item is contributing to the food guideline recommendations, i.e. does the item contain fruit, vegetables, whole grain, lean protein or low-fat dairy, and does it contain added sugar, fat and salt? The "How is it prepared?" question encourages people to choose foods that are prepared in more healthful ways other than frying or being topped with

creamy/cheesy/buttery sauces. The “How much?” question brings to one’s attention portion size and calls into question whether the extra-large size French fries are necessary- perhaps a small size would suffice, or a side salad could be substituted if a side item is even desired. Participants utilize fast-food restaurant nutrition information to calculate the total calories, fat and sodium they consume when eating a typical meal they would choose at a fast food establishment; the exercise helps illustrate the importance of asking the questions mentioned above when eating out. The STRENGTH spotlight focuses on both fat and salt; participants learn that while both are important for maintaining certain biological functions, each should be consumed in limited quantities. The fat spotlight educates participants about the different types (saturated, trans, polyunsaturated and monounsaturated) and sources of fat and the effects each of these have on the body. The lesson encourages the consumption of unsaturated fats found in canola and olive oils, avocados and fatty fish. The salt spotlight conveys the daily recommendation of sodium (approximately 1600 milligrams at the time the curriculum was written). Salt models are utilized to illustrate that many Americans are consuming double this amount. Participants are also informed that salt is an acquired taste and that over time, one can “lose” their preference for salt by gradually reducing the amount of salt added to food during cooking and after preparation.

“Training Your Body” is the title of week seven; participants learn about the importance and benefits of physical activity, they also receive and share simple tips on fitting physical activity into their everyday routines, such as parking in a stall farthest from the entrance of a building, or using stairs instead of an elevator. Current physical activity recommendations for reducing the risk of chronic disease, weight maintenance and weight reduction are also reviewed. Participants are made aware that physical activity does not have to be performed in thirty-minute sessions for it to “count”; they are informed that a minimum of ten minutes at a time is recommended for those who do not have the endurance, ability or time to be active for thirty consecutive minutes. The STRENGTH spotlight is on beverage choices; participants learn about the benefits of consuming water and how much is recommended for daily consumption. They also learn and share tips for drinking more water and are provided with alternate healthy choices such as skim milk, 100% fruit juice and sometimes tea and coffee.

The last week is titled Home Cooking; the lesson helps participants integrate many of the concepts taught over the series. At the conclusion of the week seven lesson participants are asked to bring a copy of a favorite main dish recipe to week eight, the recipe is used to reveal

how healthier cooking techniques and ingredients may be substituted or added to any recipe. The strength spotlight is on dairy; participants learn the three-cup (or it's equivalents. i.e., one ounce of hard cheese, one-half cup ricotta cheese, eight ounces of yogurt,) recommendation for dairy and the nutrient benefits of dairy- they also learn about lactose intolerance and alternative, non-dairy products.

Teen Eats

Teen Eats is a six week program which meets once per week for two hours and is designed to be a fun interactive way for teenagers, preferably high school aged, to learn about healthy eating and cooking. The Teen Eats curriculum was designed to encourage communication among teenage participants about the topic presented each week; as a result, the curriculum serves as a guideline for discussion rather than a strict protocol that must be followed. Table 2.1 features the weekly topics and a list of suggested songs, videos, or activities for each topic that may be utilized to facilitate discussion.

Table 2.1 Teen Eats Curriculum Topics and Activities Guide

Week	Topic	Suggested Activities, Songs or Videos
1	Food Glorious Food	Videos: Tamale tales ‘Persuade me’ “Do you mind reading what you’re eating - Ranch dressing” Timon and Pumba Swedish Chef SuperSize Me
2	Feed ME	Songs: The Cucumber Song The Carrot Song The Potato Song The Cauliflower Song Activities: Portion distortion Wasted food project Whole grain – yay or nay?

3	Dieting and the Media	<p>Videos:</p> <ul style="list-style-type: none"> Model Airbrushed videos Crank Dat Good Nutrition Healthy Eating Advertisement <p>Songs:</p> <ul style="list-style-type: none"> The Vegetable Song <p>Activities:</p> <ul style="list-style-type: none"> Sticky notes Advertise for Health Ad Buster Make a workout CD
4	Snack Attack	<p>Videos:</p> <ul style="list-style-type: none"> Drive Thru Rap Weird Al “Eat It” <p>Activities:</p> <ul style="list-style-type: none"> Vending machine options poster board Trail Mix Iron Chef game Evaluate fast food menus Grocery Store Scavenger Hunt? Fast Food Game
5	Cooking 101	<p>Activities:</p> <ul style="list-style-type: none"> Knife skills Crazy produce taste test Plan a healthy day of meals Food Math Fruit + Veggie Scattergories Evaluate school lunch menu
6	Let’s Get Physical	<p>Activities:</p> <ul style="list-style-type: none"> Jeopardy or Family Feud Is it worth it? Restaurant IQ post test

Kids in the Kitchen

Each semester (Fall, Spring and Summer) the Kids in the Kitchen curriculum is re-written by the AmeriCorps Nutrition Education team, in order to keep the curriculum new and interesting so that it may be presented multiple times throughout the year to participants at the same site. The class meets one time per week for four weeks. Each lesson is designed to be one

hour in length and appropriate for school age children (6-18 years of age) and includes a nutrition curriculum, a cooking lesson and optional activities (typically a coloring page and a game), which reinforce the topic of the curriculum. Tasks during the cooking lesson are divided among participants so that each child has at least one duty to perform which may be direct recipe preparation or may include cleaning or dishwashing. The kids are always encouraged to take a “thank you” bite once the recipe has been prepared. A “no yuck” rule is also implemented in class in an effort to reduce preconceived notions that they will not like the foods before trying them. During the author’s time at Harvesters, three Kids curricula were developed and taught: Eating around the World, Eating Around the Clock and How to Eat a Rainbow.

Eating around the World took kids on a culinary adventure around the globe. Each week the lesson focused on a different food group and foods from that group which are common in various parts of the world. Each week had two recipes options the educator chose from in advance. During the first week, the lesson was about the meat and beans group. The country “visited” was India; this allowed the lesson to be focused on non-meat sources of protein. The recipes for the first week were Yummy Hummus- a hummus recipe using both chickpeas and black beans which was eaten on a variety of fresh vegetables, and Curry Flatbread Frisbees- half of a pita, spread with store-bought hummus to which curry powder was added, topped with black beans, chopped tomatoes and sprinkled with feta cheese, then toasted in an electric skillet. The second week, the kids “traveled to” South America where they learned about grains and prepared either Arapes- pancake-like tortilla made from ground cornmeal, with fresh guacamole or Carnival Fruit Salad- made with quinoa, apples, oranges, bananas, grapefruit, kiwi, a dressing made with lime juice, honey and cinnamon, and topped with a tablespoon of mango sorbet. The third week of class took the kids to the continent of Asia where they learned about fruits and vegetables, the dishes they prepared during week three exposed them to vegetables or flavors they may have never heard of or tried before; Curry Potato and Peas- a brown rice, potato and green pea curry dish for which the kid’s made their own curry spice mixture and added fresh mint or Rice Noodles and Vegetables- a noodle dish containing many vegetables including black fungus (dried mushrooms) and seaweed. During the final week of their tour, the kids learned about the milk group and Europe. The recipes prepared were Italian Panini’s- home-made basil vinaigrette, turkey pepperoni and part-skim milk mozzarella cheese were place between halves of a whole wheat sandwich thin, the sandwich was then toasted in and electric skillet or Italian

“Cone-oli’s”- a kid friendly version of a cannoli using an ice cream cone filled with a chocolate chip and non-fat, sugar-free vanilla pudding mixture, topped with a strawberry fan.

Eating Around the Clock taught the kids about healthy eating habits throughout the day. The first week of class focused on the importance of eating a breakfast and the kids learned how to make Breakfast Burritos- whole wheat flour tortillas wrapped around a mixture of eggs scrambled with potatoes, green onions, and green bell peppers and 2% milk cheddar cheese, served with salsa. Week two was about making healthy choices for lunch whether at home or at school or packing a lunch to take to school. The recipe for week two was a B.L.A.T. Sandwich- Harvesters’ healthier version of a BLT in which the “A” stands for Avocado Spread, made by mashing together avocados, edamame, garlic, lime juice and olive oil. The third week helped the kids to realize there are often healthier options available when eating at fast food restaurants and that their favorite fast food items can usually be prepared in a healthier way at home. The recipe for week three was a healthier version of a Taco Bell Mexican Pizza which had a mixture of very lean ground beef, fat-free refried beans and green onions, seasoned without salt, placed on top of a corn tortilla, the mixture was topped with 2% milk cheddar cheese and placed in an electric skillet, once the cheese melted and the tortilla turned crisp the pizza was removed and topped with chopped tomatoes and salsa. During the last week in the series, the kids learned that snacking can be a healthy practice depending on which foods are selected as snacks and that while treats such as cake, candy bars, and chips are “yummy” items which can be included in a healthy diet, they should not be relied upon as regular snack items. The kids learned that healthier snacks could be items like low-fat string cheese, vegetable sticks with low-fat dressing, homemade trail-mix, or fresh fruit; they prepared one such snack called Tutti Frutti Salsa- a mixture of partially-thawed and mashed frozen strawberries, apples, bananas, mango, kiwi, lime juice and a bit of jalapeño, served with Cinnamon Crisps- whole wheat flour tortillas sprinkled with cinnamon-sugar, toasted and cut into triangles.

How to Eat a Rainbow utilizes the concept of thinking of fruits and vegetables as representing all the colors of the rainbow and that if a person tries to eat each color everyday they will be consuming many of the micronutrients provided when eating a variety of fruits and vegetables. This curriculum was developed by the student; details are provided in the Curriculum Development section of this chapter.

One-time Classes

The Diabetes 101 class provides straightforward information about Diabetes; participants learn about why diabetes occurs, the different types of diabetes, and some facts about the disorder- myths regarding how diabetes develops are also dispelled. Participants also take a quick “Are you at risk?” assessment and are strongly encouraged to see a medical expert if their score indicates a possible risk. Tips for, and the importance of, exercising and eating healthy are also discussed. A brief lesson about carbohydrates and carbohydrate counting are included in the curriculum, as are lessons on label reading and estimating portion sizes. Participants are given the opportunity to plan a day’s worth of meals utilizing food models and their newly acquired carbohydrate counting and label reading skills. Any recipe in the Harvesters Cookbook featuring the “diabetic-friendly symbol” (D) may be selected for use in this class.

The Healthy Desserts class was developed on the premise that no food, including dessert, should be “off-limits” to anyone, and that all foods can be included in a well-balanced diet. The key message of this class is that dessert does not have to be loaded with fat or sugar, and therefore unnecessary calories, for it to taste good and to be satisfying. Participants discuss ideas for including items from each of the food groups when selecting desserts, as well as how items from the various food groups can be added to traditional dessert recipes to increase the micronutrient content of a dessert. Tips for substituting different ingredients for some, or all, of the fat or sugar in a recipe are also shared. Participants learn proper measuring technique for dry ingredients such as flour and sugar and for liquids such as water and oil. Typically, the class participants prepare one to two healthy dessert recipes. All participants receive a Healthy Desserts Cookbook which includes all of the dessert recipes found in Harvesters’ full-length cookbook.

The Nutrition during Pregnancy class presents information regarding healthy weight gain and how the weight is distributed, dietary food guidelines and nutrients required during gestation and breast feeding, as well as information regarding foods and ingredients that should be avoided or limited during pregnancy. Information about cravings and food related symptoms, as well as information regarding post-partum nutrition is also included in the lesson. The importance of physical activity is discussed and participants are led in a short Strengthen and Stretch routine created specifically for pregnant women. Nutrition Educators may select from any of the recipes in the Harvesters Cookbook featuring a specific symbol for pregnancy, indicating that the recipe

contains ingredients which provide micronutrients, such as folic acid, essential for maintaining a healthy pregnancy.

Responsibilities as a Nutrition Educator

Prior to commencement of the field experience, a Field Experience Description (Appendix A), was outlined and agreed upon by the agency preceptor, the MPH student, and representatives of the MPH program (program director and major professor). In addition to the responsibilities listed in the Field Experience Description, the student also attended regular Nutrition Services department meetings and participated in recipe tastings; these tastings allow the Nutrition Educators the opportunity to prepare and sample recipes found in the Harvesters Cookbook before preparing them in class.

Nutrition education classes have been offered and taught in the Kansas City metro area for approximately thirteen years; 2011 was the first year Nutrition Services has been able to offer programs to agencies and their clients throughout Harvesters' entire service area. Before relationships with new agencies, agency coordinators and participants could be cultivated, relationships first had to be established; particularly in the Topeka area and in counties served by Harvesters' newly established Topeka facility. During the early part of the field experience, many hours were dedicated to calling agencies and offering Nutrition Services' programs. Once agencies accepted these offers, site visits were conducted by the student to ensure that the space where the classes would be taught was conducive to learning and suitable for food preparation, and that the agency and its representatives were willing to comply with all program guidelines (Appendix B).

The majority of the field experience hours were applied toward securing resources for classes, recording class data and teaching classes. Outcomes from the teaching experience are presented in the Teaching Outcomes section of this chapter.

Curriculum Development

The student contributed to the development of two children's curriculums during the field experience. The Eating Around the Clock curriculum was developed in collaboration with the entire Nutrition Services team. The student's contribution was an activity (Appendix C) used in the segment on snacking. Inspiration for the activity came from the folk song "My Bonnie Lies over the Ocean"; the lyrics were re-written by the student.

The student was the primary author of the How to Eat a Rainbow curriculum; other members of the Nutrition Services department assisted by finding two coloring activities, making a bingo game for the curriculum and by finding a recipe. The entire department worked together to test recipes and provide feedback for refining them for use in class.

The student was asked to write this curriculum utilizing the Dole Food Company Inc. There's a Rainbow on My Plate curriculum as inspiration for a theme; the entire curriculum was to be centered on the importance of eating fruits and vegetables. Each week the lesson was to contain three to five learning objectives. The majority of the material presented in the curriculum was gathered from the MyPyramid or MyPlate websites; information regarding phytochemicals was borrowed from a document written by Mary Meck Higgins, R.D., PhD. of Kansas State University's Research and Extension. The information for each objective was delivered via question and answer format, brainstorming activities, through pictures, and handouts. Each week the kids learned about a different health benefit gained from eating fruits and vegetables, and about the various color groups for fruits and vegetables, a safety guideline or skill was also taught or demonstrated. A full lesson plan from week three has been provided in Appendix D; all supplemental material for the lesson has been included as Figures D.1 through D.12. Appendix E contains the How to Eat a Rainbow curriculum Post-test. Following is an overview of each module in the four week series:

Week 1

Title: Introduction to Fruits and Vegetables

Learning Objectives:

- To know how many servings of fruit and vegetables we need each day
- To be able to understand that fruits and vegetables can be grouped by color (Red, Orange/Yellow, Green, White, Blue /Purple)
- To be able to Taste Test a new fruit or vegetable
- To be able to demonstrate proper Hand-washing

Class Content:

- Introduction to MyPlate and how many fruits and vegetables to eat
- Grouping fruits and vegetables by color
- Activities: New Name Game and coloring sheet OR booklet
- Safety or Skill: Hand-washing

- Recipe: Lady Bug Pizzas
- Verbal Review

Week 2

Title: Going Green (and Orange/Yellow)

Objectives:

- To know about the vitamins and minerals provided by fruits and vegetables
- To know where fruits and vegetables come from
- To understand seasonality
- To know how to wash fruits and vegetables
- Color Focus: Green and Orange/Yellow

Class Content:

- Health benefit: vitamins and minerals
- Where fruits and vegetable come from and how they grow
- Grouping Green, Orange and Yellow fruits and vegetables
- Activities: Fruit and Veggie Mania and coloring sheet/booklet
- Safety or Skill: Washing fruits and vegetables
- Recipe: Green Goddess Dressing w/Veggie Dippers
- Verbal Review

Note: Fruit and Veggie Mania is a game developed and produced by University of Missouri Research and Extension.

Week 3

Title: Don't forget that White and Brown are Colors Too!

Objectives:

- To know why fiber is important for our bodies
- To know that fruits and vegetables come in different forms (fresh, frozen, canned, dried, juiced)
- To learn about terminology and cutting fruits and vegetables (slice, chop, dice, shred, julienne, etc.)
- Color Focus: White/Brown

Class Content:

- Health benefit: Fiber
- The many forms fruits and veggies come in
- Activities: Rainbow BINGO
- Safety or Skill: Cooking Terminology
- Recipe: Root Vegetable Patties

Week 4

Title: Red, Blue, and Purple Power

Objectives:

- To know what phytochemicals are and what they do for the body
- To be able to picture a serving
- To understand how fruits and vegetables can be added to our meals
- To know how to store fruits and vegetables
- Color Focus: Blue/Purple and Red

Class Content:

- Health benefit: phytochemicals
- Serving size
- Adding fruits and veggies to meals
- Safety or Skill: Storing fruits and vegetables
- Recipe: Harvesters' Mixed Berry Swirls
- Activities: Post Test and coloring booklet

Teaching Outcomes

The student taught a total of 73 classes during the field experience; this resulted in 974 participant visits. These numbers were in-line with goals for the anticipated products of the field experience. The anticipated product for AmeriCorps Nutrition Educators was a combined 750 classes, when divided between seven full-time educators; this equals approximately 107 classes per person. Since the student's position was half time, that number would then be approximately 54 classes. Incidentally, the preceptor predicted that the number of classes taught by the student would be close to 75. The goal of the department is to have 10-20 participants attend each nutrition class; the actual number of participant visits (974) was also in line with that goal.

Test scores greater than 70 percent is the second anticipated product of the nutrition education classes. The student's participant test scores averaged 77 percent for the adults, 90percent for the teens and 80 percent for the kids.

The third anticipated product of Nutrition Education classes is reports of positive behavior change from over half of class participants. Within the adult and teen curriculum, this is assessed from the post-test by the statement: "I have achieved an eating or activity goal in the last 8(6) weeks that has lead to a healthier lifestyle." The participants select True or False and are then asked to list a goal achieved if they indicated the statement to be a true. Within the kid's curriculum, the question focuses on exposure to new foods- the question typically asks them to name a food or recipe they tried for the first time while attending Kids in the Kitchen. The student's participant's behavior change reports averaged 95 percent, 92 percent and 80 percent for the adult, teen and kids classes respectively.

Chapter 3 - Reflection

There were a few downsides to this field experience. On an emotional level, it was difficult at times to see hungry children and kids frequently asked for “seconds”, explaining that they hadn’t had breakfast that morning or they would ask to take some of the food home to eat later. From a personal perspective, this field experience required a significant time commitment as it required, on average, six hours of commuting each week in addition to working an average of twenty-five hours in order to fulfill the AmeriCorps commitment. The result was less time to spend on school, at the student’s research assistant position and with family; that is not to say it was not worth the sacrifice, but it would be something for future students to contemplate when considering the same opportunity for their own field experience. The third weakness of the field experience was the absence of a pre-test assessment for the curriculums; without such, it is difficult to know if the classes are having a statistically significant effect on the class participants.

Given the opportunity to begin again, two of the above issues could be given more consideration. The time issue might be resolved by taking a year-off from school and work to fully commit to a full-time AmeriCorps service commitment. Regarding the pre-test, the student did inquire once as to the reason for not having one; however, the reason was unknown. Looking back, the student would have liked to further explore this issue, particularly since funding for the Nutrition Services programs is partly based on results from the post-tests. Furthermore, the student would have appreciated the opportunity to learn more about the grant writing process for the Nutrition Services programs. Additionally, of interest to the student is the original planning process for implementation and development of the Nutrition Services Department and its programs. Given more time or the chance to relive the experience, the student would want to examine documentation of the process.

Regardless of the drawbacks and missed opportunities, the student is grateful to have had the opportunity to teach and reach out to others to help them improve their lives. Although the student produced the desired products of the field experience, the sense of helping people did not come from data alone; responses from the individuals with whom the student interacted contributed to the sentiment. Children would rush up to the student after class to give hugs and

thank the student for bringing them food- they couldn't wait to share their excitement upon learning they liked a recipe even though it contained ingredients they "don't like". Additionally, the emotional aspect, mentioned previously, acted to reinforce the understanding that there is a need for these classes. Adults were eager to share their success stories, such as how much weight they had lost during the eight weeks they attended class, or that they were reducing (and not missing) the amount of salt they added to food. Other participants were anxious to talk about the types of foods they were trying for the first time outside of class, or that they were cooking for themselves instead of heating-up frozen dinners or going through the drive-thru. These stories strengthened the sense of accomplishment.

AmeriCorps members choose to serve in their communities to improve the lives of people. Public health, in essence, is about helping to improve the lives of people. The opportunity to serve as an AmeriCorps member for the public health field experience was an invaluable means of completing the capstone project for the MPH degree.

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Appendix A - Field Experience Description

Scope of Work

Teach low-income adults and seniors how to apply concepts of proper nutrition to everyday eating by providing hands-on, creative cooking classes. Serve as a food and nutrition resource to Harvesters' agencies, and build relationships with coordinators and participants at nutrition program sites. Teach children (6-14 yrs) how to understand the nutritional value of food, interpret a nutrition curriculum into exciting, fun, and easy to understand lessons. Assist in curriculum writing and revision of nutrition programs, including the preparation and testing of new recipes. Coordinate all resources, including food needed for classes. Occasionally conduct cooking demonstrations with food pantry items. Help educate community and volunteers about nutrition- related hunger issues in the region during annual community outreach events. Assist in developing service learning activities related to hunger awareness in conjunction with volunteer opportunities.

Development Plan

- Gain experience working directly with clients and helping them acquire knowledge about nutrition and cooking techniques
- Become comfortable with teaching and public speaking to a wide range of audiences
- Develop curriculum revision and writing skills,
- Interpret nutrition concepts and research into easy to understand, exciting and applicable lessons and activities for low income adults and children

Activities to be performed

- Teach low income children, adults, and seniors nutrition education curriculums
- Collect and report required data from participants and program sites
- Cultivate new agencies and build relationships with coordinators and participants at nutrition program sites
- Secure food and resources to be used in nutrition classes
- Collaborate with a team of fellow nutrition educators and supervisors to ensure quality programs

Anticipated products

- Nutrition Educators will provide 750 nutrition education sessions or 7,500 participant visits annually
- A completed 4 week Kids in the Kitchen curriculum (will be written before summer semester)
- Nutrition Education class participants will exhibit post-test scores of greater than 70%
- Over half of Nutrition Education class participants will report positive behavior change

Appendix B - Class Guidelines and Rules

project
STRENGTH

Topeka Program Guidelines

Classes will be held once a week for eight consecutive weeks. Class hours shall be two to three hours in length. Project STRENGTH Leaders shall have access to the site at least fifteen minutes before class and fifteen minutes after class.

HARVESTERS SHALL:

- Provide a nutrition educator to lead classes
- Provide the food supplies and supervise direct preparation of meal
- Provide all nutritional information and handouts
- Provide a flyer for publicity regarding classes
- Order and provide grocery sacks for all eligible participants

THE AGENCY SHALL:

- Recruit at least **ten** new but no more than **twenty** total participants for each class in the session. No new participants after week 2.
- Provide a quiet space free of dirt, trash, pests or rodents for classes that can hold up to twenty-five people.
- Provide space and sufficient tables and chairs for preparing and eating meals and clean up facilities for hand washing and dishwashing near the classroom.
- Have electrical outlets, a refrigerator (optional) and stove (optional).
- Provide a secure storage space for Project STRENGTH equipment to be stored between classes.
- Provide space for child care if necessary.
- Complete an evaluation at the end of the program and return it to the educator.
- One agency representative to be the contact and:
 - To attend all or part of each class
 - With ability to pick up participant sacks from Harvesters the week of class and distribute at the end of class. If you are not picking up sacks for a certain date, you need to call your educator to let them know.

THE PARTICIPANTS SHALL:

- Commit to attending the 8-week program. Be able to actively participate in the nutrition lesson and activities as well as in meal preparation and clean-up.
- Arrive on time for each class and stay until completion. If a participant arrives more than 15 minutes after start time or must leave early, they will not be eligible to receive groceries that day.
- Be respectful of the educator and other class participants. The nutrition educator reserves the right to ask participants exhibiting inappropriate behavior to leave the class and not return.

SACK DISTRIBUTION GUIDELINES:

- One sack should be given to each participant who attends the entire Project STRENGTH class. If more than one person living in the same household attends a class, they each would be eligible to receive a sack of groceries.
- Program coordinators are not eligible to take home groceries, only participants.
- Sacks should be stored at least 6 inches off the floor at all times.
- If the program coordinator has sacks remaining at the end of class, they **must** be stored for use until the next class.
- If in the event that unregistered participants show up for class, let them know that we will be happy to order groceries for them next week.
- If a program coordinator is unable to account for the number of sacks ordered, they will be subject to suspension from future ordering and/or from the Project STRENGTH program.

Harvesters-The Community Food Network
215 SE Quincy Street Topeka, KS 66603

11/1/2011

Curriculum Topics

1. Nutrition Overview
2. Home Food Safety
3. Smart Shopping on a Budget and Food Label Reading
4. Eating for Prevention (Diabetes & Heart Disease)
5. Healthy Eating Messages and Media
6. Choosing Well when Eating Out
7. Being Active
8. Healthy Cooking at Home

What's in a grocery sack?

Everything is shelf-stable. We choose the healthiest of what is available from Harvesters' donations. Every sack will have different brands, but similar items.

Protein
Vegetables
Fruit
Dairy
Grain
Cereal
Personal item
Condiment

Teen Program Guidelines with Grocery Sacks

Classes will be held once a week for six weeks. Class hours shall be two to three hours in length. Teen EATS educators shall have access to the site at least fifteen minutes before class and fifteen minutes after class.

HARVESTERS SHALL:

- Provide a nutrition educator to lead classes
- Provide the food and class supplies and supervise direct preparation of meal
- Provide all nutritional information and handouts
- Provide a flyer for publicity regarding classes
- Order and provide shelf-stable pre-packed grocery sacks for all eligible participants

THE AGENCY SHALL:

- Recruit at least **ten** new but no more than twenty total participants for each class in the session to attend of their own accord. The students will take a post – test, so continuity is necessary to determine behavior and knowledge change. The same 10-20 participants must be there for as many of the classes as possible.
- Provide a quiet space free of dirt, trash, pests or rodents ready for classes that can hold up to twenty people
- Provide space and sufficient tables and chairs for preparing and eating recipes and clean up facilities for hand washing and dishwashing near the classroom. Have classroom set up and ready for use when instructor arrives.
- Be supportive and enthusiastic about the food and recipes in order to encourage children to try new things.
- Have electrical outlets, a refrigerator (optional) and stove (optional)
- Provide a secure storage space for Teen EATS equipment to be stored between classes
- Inform educator of any (nut) allergies as we may have recipes containing them.
- Provide space for child care if necessary, no children are allowed in class.
- An agency representative:
 - To attend the entire class
 - To educate the Harvester's leader on current classroom policies, disciplinary policies and reward policies that are being used.
 - To assist the leader with any disciplinary action or problems that may arise
 - To provide Harvesters with an agency and participant background, so that we are better able to serve your population
 - With ability to pick up participant sacks from Harvesters the week of class and distribute at the end of class. *
 - To complete an evaluation at the end of the program.

THE PARTICIPANTS SHALL:

- Commit to attending the 6-week program
- Be able to actively participate in the nutrition lesson and activities as well as in meal preparation and clean-up
- Arrive on time for each class and stay until completion. If a participant arrives more than 15 minutes after start time or must leave early, they will not be eligible to receive groceries that day.
- Be respectful of the educator and other class participants. The nutrition educator reserves the right to ask participants exhibiting inappropriate behavior to leave the class and not return.

SACK DISTRIBUTION GUIDELINES:

- One sack should be given to each participant who attends the entire Teen EATS class. If more than one person living in the same household attends a class, they each would be eligible to receive a sack of groceries.
- Program coordinators are not eligible to take home groceries, only participants.
- Sacks should be stored at least 6 inches off the floor at all times.
- If the program coordinator has sacks remaining at the end of class, they **must** be stored for use until the next class. All perishable groceries need to be handed out that day.
- If the event that unregistered participants show up for class, let them know that you will be happy to order groceries for them next week.
- If a program coordinator is unable to account for the number of sacks ordered, they will be subject to suspension from future ordering and/or from the Teen EATS program.

* We may have a volunteer available to deliver sacks to Lawrence *

Curriculum Topics

1. Nutrition and Health Overview
2. Portion Control and Reading Food Labels
3. Dieting and the Media
4. Snack Attack Tips
5. Cooking Techniques and Meal Planning
6. Let's Get Physical

What's in a grocery sack?

Everything is shelf-stable. We choose the healthiest of what is available from Harvesters' donations. Every sack will have different brands, but similar items.

Protein
Vegetables
Fruit
Dairy
Grain
Cereal
Personal item
Condiment

Teen Program Guidelines – without Grocery Sacks

Classes will be held once a week for six consecutive weeks. Class hours shall be two to three hours in length. Nutrition Educators shall have access to the site at least fifteen minutes before class and fifteen minutes after class.

HARVESTERS SHALL:

- Provide a nutrition educator to lead classes
- Provide at least one session
- Provide the food and class supplies and supervise direct preparation of meal
- Provide all nutritional information and handouts
- Provide a flyer for publicity regarding classes

THE AGENCY SHALL:

- Recruit at least **ten** new but no more than twenty total participants for each class in the session to attend of their own accord. The students will take a post – test, so continuity is necessary to determine behavior and knowledge change. The same 10-20 participants must be there for as many of the classes as possible.
- Provide a quiet space free of dirt, trash, pests or rodents ready for classes that can hold up to twenty people
- Provide space and sufficient tables and chairs for preparing and eating recipes and clean up facilities for hand washing and dishwashing near the classroom. Have classroom set up and ready for use when instructor arrives.
- Have electrical outlets, a refrigerator (optional) and stove (optional)
- Be supportive and enthusiastic about the food and recipes in order to encourage children to try new things.
- Provide a secure storage space for equipment to be stored between classes
- Inform educator of any (nut) allergies as we may have recipes containing them.
- Provide space for child care if necessary
- An agency representative:
 - To attend the entire class
 - To educate the Harvester’s leader on current classroom policies, disciplinary policies and reward policies that are being used.
 - To assist the leader with any disciplinary action or problems that may arise
 - To provide Harvesters with an agency and participant background, so that we are better able to serve your population
 - To complete an evaluation at the end of the program.

THE PARTICIPANTS SHALL:

- Commit to attending the 6-week program
- Be able to actively participate in the nutrition lesson and activities as well as in meal preparation and clean-up
- Arrive on time for each class and stay until completion.
- Be respectful of the educator and other class participants. The nutrition educator reserves the right to ask participants exhibiting inappropriate behavior to leave the class and not return.

Curriculum Topics

1. Nutrition and Health Overview
2. Portion Control and Reading Food Labels
3. Dieting and the Media
4. Snack Attack Tips
5. Cooking Techniques and Meal Planning
6. Let's Get Physical

Kids in the Kitchen Program Guidelines

Any school-age (ages 5-18) children are eligible to take Kids in the Kitchen. Classes will be held once a week for four weeks. Class hours shall be one hour in length. Kids in the Kitchen leaders shall have access to the site at least 15 minutes before and after class. *Harvester's Educators can travel up to an hour to provide classes from either Topeka or Kansas City.*

HARVESTERS WILL:

- Provide a nutrition educator to lead classes.
- Provide the food, cooking supplies and supervise direct preparation of recipe.
- Provide all nutritional newsletters, handouts and recipes.
- Provide a name badge for each child to be filled out by the agency prior to class.

THE AGENCY WILL:

- Provide no less than 10 and no more than 20 consistent children for the program.
- Have classroom set up and ready for use when instructor arrives.
- Provide a quiet and private space free of dirt, trash, pests or rodents for classes that is conducive to children's learning.
- Provide space and sufficient tables and chairs for preparing and eating recipes and clean up facilities for hand washing and dishwashing near the classroom.
- Be supportive and enthusiastic about the food and recipes in order to encourage children to try new things
- Have working electrical outlets and microwave, a refrigerator (optional) and stove (optional)
- Provide a secure storage space for KITK equipment to be stored between classes
- Inform educator of any (nut) allergies as we may have recipes containing them.
- Provide Harvesters with a calendar including days your program is closed
- An agency representative:
 - To attend the entire class
 - To educate the Harvester's instructor on current classroom policies, disciplinary policies and reward policies that are being used and assist the educator with enforcing those policies.
 - To fill out name badges for each child and ensure they are in place before the educator arrives for class.
 - To complete an evaluation at the end of the program.

THE PARTICIPANTS WILL:

- Wash hands before coming to KITK class
- Commit to attending the full KITK program including arriving on time each week and staying for the duration of the class.
- Be able and allowed to actively participate in the nutritional lesson and activities as well as in food preparation and clean-up.
- Be respectful of the educator and other class participants. The nutrition educator reserves the right to ask participants exhibiting inappropriate behavior to leave the class and not return.

Appendix C - Kids in the Kitchen- Eating Around the Clock- Snack Activity



Lesson 4: Snack Attack

Activity:

Sneak My Snack

Have every other kid stand-up. On each "S" word, the kids should change positions (if they are sitting, they should stand-up; if they are standing, they should sit).

Go through the song the first time VERY SLOWLY so that everybody can get a feel for the way it works and for the song.

The next two times, the song should be sung faster each time.

If time permits you can keep going faster and faster or you can split into two different groups; the first group starts as normal, then the second group starts when the first group begins to sing "Sneak my Snack..."

(To the tune of My Bonnie Lies Over the Ocean)

I had a snack that was salty,

I had a snack that was sweet

I had a snack that was sour,

But somebody stole my snack from me.

Sneak my snack, sneak my snack,

Sneak my snack back to me, to me.

Sneak my snack, sneak my snack,

Sneak my snack back to me.

Appendix D - Kids in the Kitchen Sample Curriculum and Post Test



Lesson # 3 How to Eat a Rainbow: Don't forget that White and Brown are colors too!

Objectives:

- To know why fiber is important for our bodies
- To know that fruits and vegetables come in different forms (fresh, frozen, canned, dried, juiced)
- To learn about terminology and cutting fruits and vegetables (slice, chop, dice, shred, julienne, etc.)
- Color Focus: White/Brown

Class Content

- Health benefit: Fiber
- The many forms fruits and veggies come in
- **Activities:** Rainbow BINGO
- **Safety or Skill:** Cooking Terminology
- **Recipe:** Root Vegetable Patties

Time Allotted:

- 30 minutes pre-class set up
- 1 hour in class
- 15 minutes pack up

Materials Needed

- Sign-in Sheet
- MyPlate Poster
- Rainbow Poster
- Laminated Pictures of fresh, frozen and dried fruits and vegetables
- Giant Flip Paper
- Marker(s)
- BINGO Cards and dry beans
- Laminated Picture of Cooking Terminology
- Culinary matching activity sheet in color - 1 per person
- Coloring Sheet (optional): Fruits and veggies: they're everywhere.
- Volunteer Info. Sheet
- Coordinator Eval

Extra Cooking Utensils:

- Extra peeler
- Extra graters (4)
- Extra skillet

Introduction:

Anything to be said out loud should be in italics.

ANYTHING TO BE SHOWN WILL BE IN ALL CAPS.

Leader/instructor notes will be in normal font.

- *"Last week we learned about the Green color group and the Orange/Yellow color group; this week we will be learning about the Brown/White color group. We also learned that different fruits and vegetables are ready to be harvested in different seasons. We learned that fruits and vegetables grow on plants and that we eat all the parts of plants. Do you remember some fruits and vegetables that come from different parts of plants?"*

"We also learned about some nutrients and why they are important for our bodies? Who remembers which nutrients we talked about last week?"

- Vitamin A; good for eyes
- Vitamin C; good for gums, helps heal cuts
- Folate/Folic Acid; needed for making red blood cells and for healthy babies
- Potassium; may help with blood pressure

"This week we are going to learn about another health benefit of fruits and vegetables: fiber."

Nutrition Lesson:

- Why fiber is important for our bodies: *"Fruit and vegetables are part of an overall healthy diet and provide fiber which is also important for our health. Foods like fruits and vegetables that contain a lot of fiber help us feel full faster and longer. Fiber is also important to aid in digestion."*

"Does anybody know where most of the fiber is in many fruits and vegetables?"

- The Skin/Peel

"Who can name a food that people sometimes peel but you can eat the skin?"

- Apples, potatoes, carrots, pears, cucumbers, sweet potato, eggplant, peaches.

1



Lesson # 3 How to Eat a Rainbow: Don't forget that White and Brown are colors too!

"We should leave the skin on whenever possible; whole or cut-up fruits and vegetables with the skin on are good sources of fiber- fruit juices usually don't have any fiber."

- Different forms of fruits and veggies: *"We can purchase fruits and vegetables in different forms including, fresh, frozen, canned, dried, and juiced."*

SHOW DIFFERENT PICTURES OF FRUITS AND VEGETABLES IN DIFFERENT FORMS.

Explain that eating fresh and frozen forms are preferred.

Color Focus: White/Brown

SHOW RAINBOW POSTER

Ask the kids to name some white/brown fruits and vegetables- remind them that we group them by the part we eat. List the ones they name on a big sheet of paper.

(examples follow)

White/Brown fruits and vegetables:

Bananas
Black-eyed peas
Brown pears
Cauliflower
Dates
Figs
Garbanzo beans or chick peas
Garlic
Ginger
Great northern beans
Jerusalem artichoke
Jicama
Kohlrabi
Leeks
Lentils
Mushrooms
Onions
Parsnips
Peanuts
Pinto beans
Russet potatoes
Shallots
Turnips
White Asparagus
White corn
White-fleshed potatoes
White nectarines
White peaches



*Lesson # 3 How to Eat a Rainbow:
Don't forget that White and Brown are
colors too!*

Activities:

- Rainbow BINGO
- Coloring sheet/booklet (optional): Hand out crayons and the Fruits and veggies: They're Everywhere coloring sheet **OR** hand out the Eat a Rainbow booklets; since there isn't a Brown/White page, the kids can finish coloring the front page or the orange, yellow, or green pages from previous weeks.

Safety or Skill:

- Cooking Terminology and cutting fruits and vegetables (slice, dice, shred, julienne, etc.):
SHOW/LAMINATED PICTURE OF COOKING TERMINOLOGY
Chop- To cut foods with a knife, cleaver or food processor into smaller pieces.
Dice- To cut food into uniform pieces, usually 1/8- to 1/4-inches on all sides.
Grate/ Shred- To rub or push food, especially hard cheeses, vegetables, or whole nutmeg or ginger, across a grating/shredding surface to make very fine pieces. A food processor also may be used.
Mince- To chop foods into tiny irregular pieces.
Mash- To press or beat food to remove lumps and make a smooth mixture. This can be done with a fork, potato masher, food mill food ricer, or electric mixer.
Pit/Seed- To remove the seed from a piece of fruit or vegetable
Slice- To cut flat, thin pieces.



Lesson # 3 How to Eat a Rainbow: Don't forget that White and Brown are colors too!

Recipe Prep. Jobs for Kids

2 kids to peel parsnips
2 kids to shred parsnips
1 kid to wash carrot and potato
1 kid to shred carrot
2 kids to shred potato (halve the potato first)
1 kid to measure flour
1 kid to measure salt and pepper
2 kids to crack and beat eggs
1-2 kids to mix ingredients (have them wear gloves and mix with their hands)
1 kid to measure oil
The rest of the kids can glove-up and help measure patties- divide the 20 patties to be made by the number of kids left who haven't had a job yet. OR if you have older kids, they can also help with the cooking of the patties.

Recipe Preparation: Root Vegetable Patties

• *"Do you remember that we talked about eating all the parts of plants last week? What part of the plant are potatoes/carrots?"*

–Roots

"This week we are going to make a recipe called Root Vegetable Patties; the root vegetables in the recipe are: potatoes, carrots and parsnips."

• While the kids are eating the patties, ask: *"Which colors of the rainbow are we eating?"*

–Parsnips= white

–Potatoes= brown

(also):

–Carrots= orange

–Parsley= green

Thumbs up or down?

Verbal Review:

1. *Why should we leave the peel or skin on many fruits and vegetables?*
(the peel is where the fiber is)
2. *Why is fiber good for us?*
(helps us feel fuller for longer and helps with digestion)
3. *What are the different forms fruits and vegetable come in?*
(fresh, frozen, canned, dried, juiced)
4. *What is one way to prepare or cut vegetables?*
(they may say any of the terms, then we should review the definition)

Give the evaluation to the site coordinator and explain that they need to complete it and you will discuss with them in person at the end of the next week and keep a copy for our records.

Figure D.1 Picture of Fresh Fruits and Vegetables



http://www.google.com/imgres?q=fresh+fruit+and+vegetables&hl=en&biw=1280&bih=885&gbv=2&tbn=isch&tbnid=Z-j6jSBwhMzmM:&imgrefurl=http://wallpapers-diq.com/wp/40_Fresh_Fruits_and_Vegetables.html&docid=cg7bv3KAIQ5PPM&w=1600&h=1200&ei=3CtRTvLoDs6ftgetpNzKCQ&zoom=1&iact=rc&dur=383&page=1&tbnh=143&tbnw=180&start=0&ndsp=27&ved=1t:429,r:4,s:0&tx=78&ty=88

Figure D.2 Pictures of Frozen Vegetables and Frozen Fruits



<http://www.celebritydietdoctor.com/wp-content/uploads/2010/03/frozen-veggies-may-be-more-nutritious-than-fresh-ones.jpg>



<http://estrip.org/content/users/tinypliny/0209/FrozenFruitDisplay0207.jpg>

Figure D.3 Picture of Canned Fruits and Vegetables



http://www.organicnation.tv/storage/canned%20vegetables%20at%20the%20homegrown%20country%20fair%20St%20Louis.jpg?__SQUARES_PACE_CACHEVERSION=1257780746249

Figure D.4 Pictures of Dried Fruits and Vegetables and a Commercial Dehydrator



http://www.pleasanthillgrain.com/Images/CDS%20Dehydrator%20Images/R5_1.jpg



<http://www.bbaskets.com/images/Dried%20Fruit%20Elegante%20300.jpg>



<http://nogmoseedbank.files.wordpress.com/2010/08/sun-dried-tomatoes.jpg>



http://us.123rf.com/400w/400/400/svet_lana/svet_lana0807/svet_lana080700035/3272468-dried-peas-on-a-white-background.jpg

Figure D.5 Example of a Rainbow BINGO Card






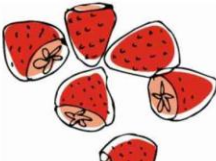


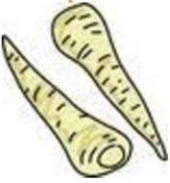


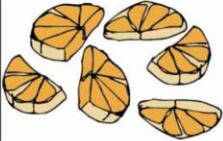





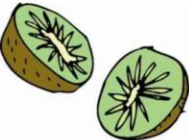

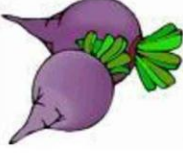
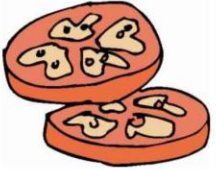




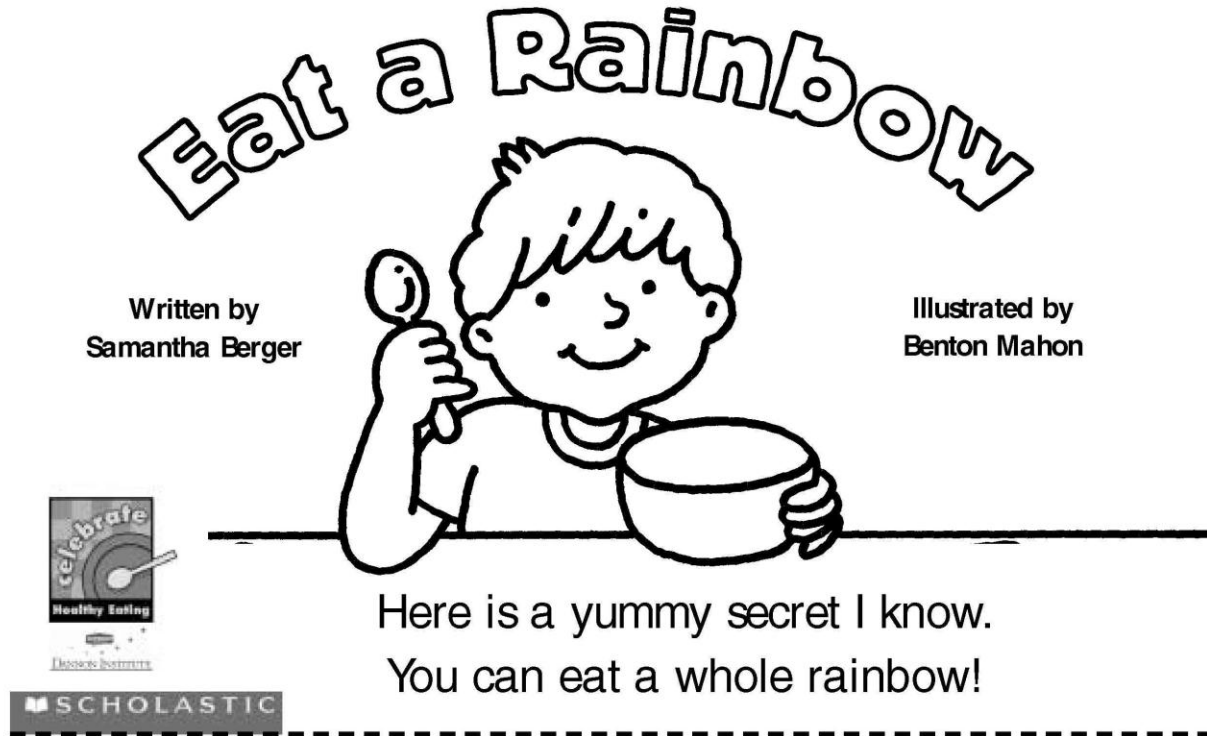
Red	Orange & Yellow	Green	White & Brown	Purple & Blue
 <p>red bell pepper</p>	 <p>sweet potato</p>	 <p>artichoke</p>	 <p>cauliflower</p>	 <p>raisins</p>
 <p>strawberries</p>	 <p>pumpkin</p>	 <p>brussel sprouts</p>	 <p>parsnip</p>	 <p>plum</p>
 <p>apple</p>	 <p>orange</p>	 <p>green beans</p>	 <p>mushrooms</p>	 <p>purple grapes</p>
 <p>watermelon</p>	 <p>pineapple</p>	 <p>kiwi</p>	 <p>potato</p>	 <p>beets</p>
 <p>tomato</p>	 <p>mango</p>	 <p>green pepper</p>	 <p>garlic</p>	 <p>blackberries</p>

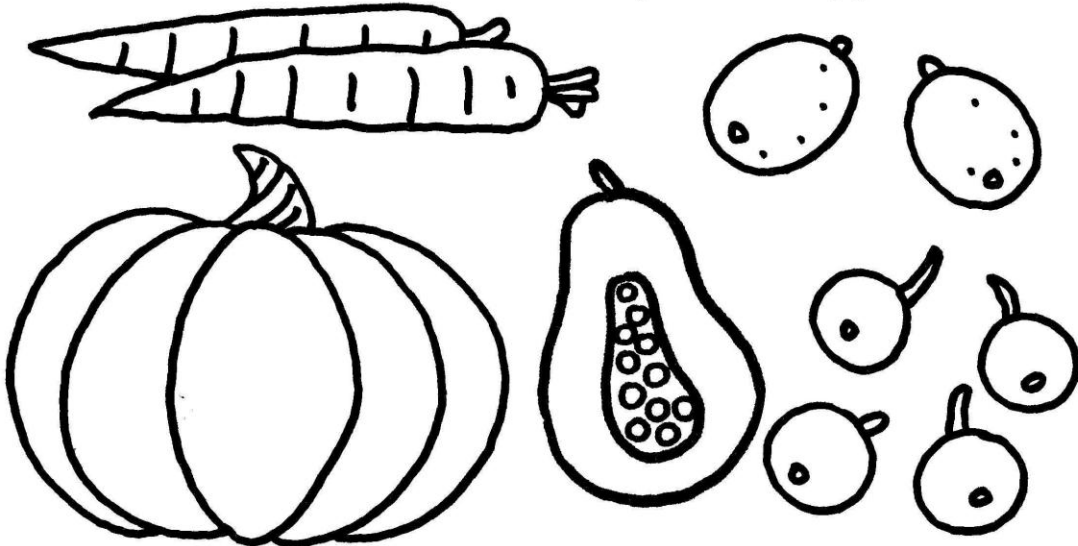
Figure D.6 Fruits and Veggies they're everywhere Coloring Sheet for Lesson 3



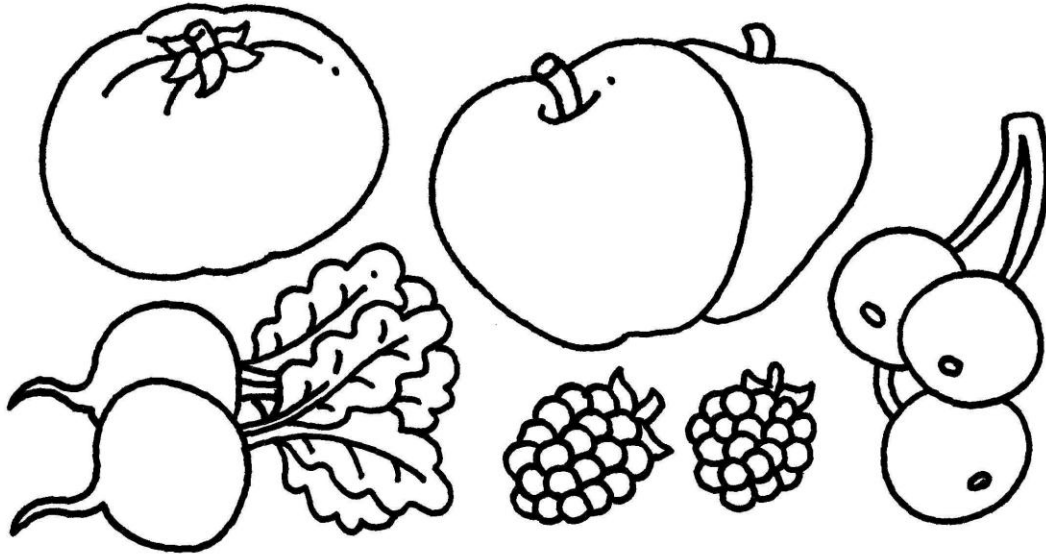
Figure D.7 Cover Page and Page 3 of Coloring Booklet for How to Eat a Rainbow Curriculum



Cut along dotted lines. Put the pages in order to make a book.

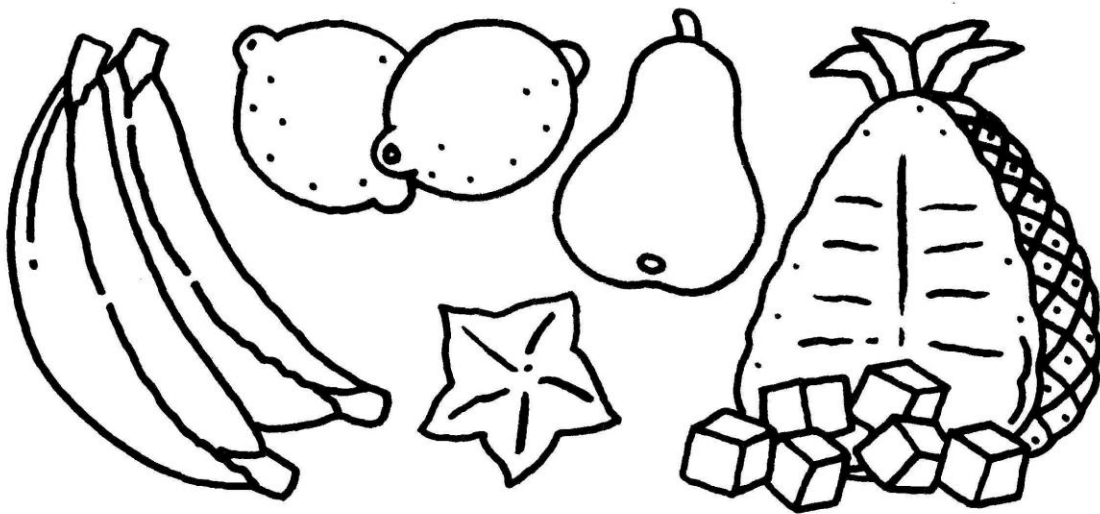


Orange carrots and apricots,
pumpkins, papayas, and kumquats.



Red tomatoes, apples, and cherries,
radishes, and red raspberries.

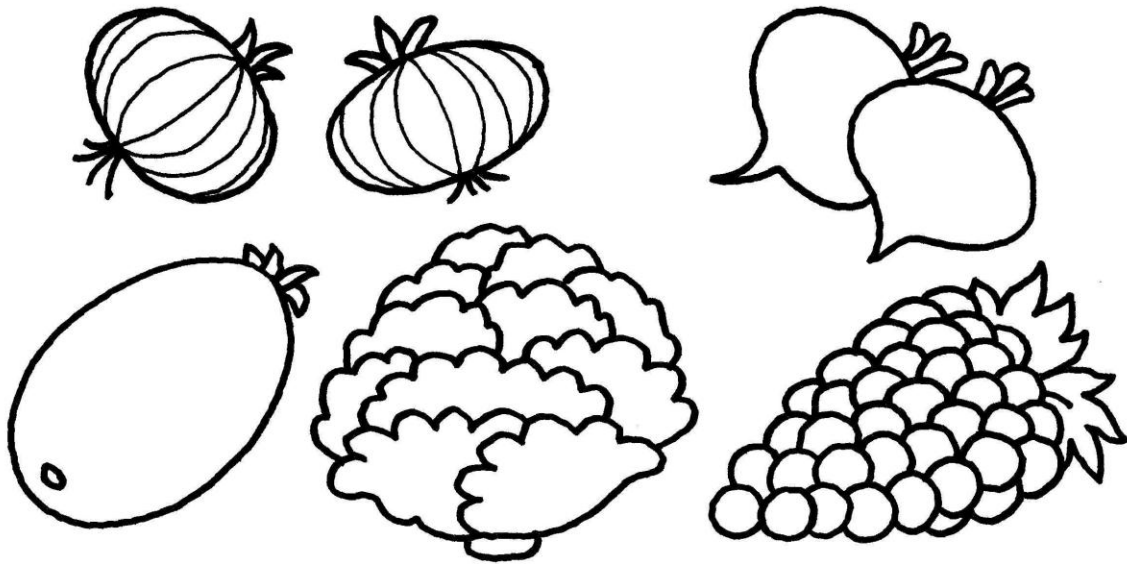
2



Yellow bananas, lemons, and pears,
star fruit slices, and pineapple squares.

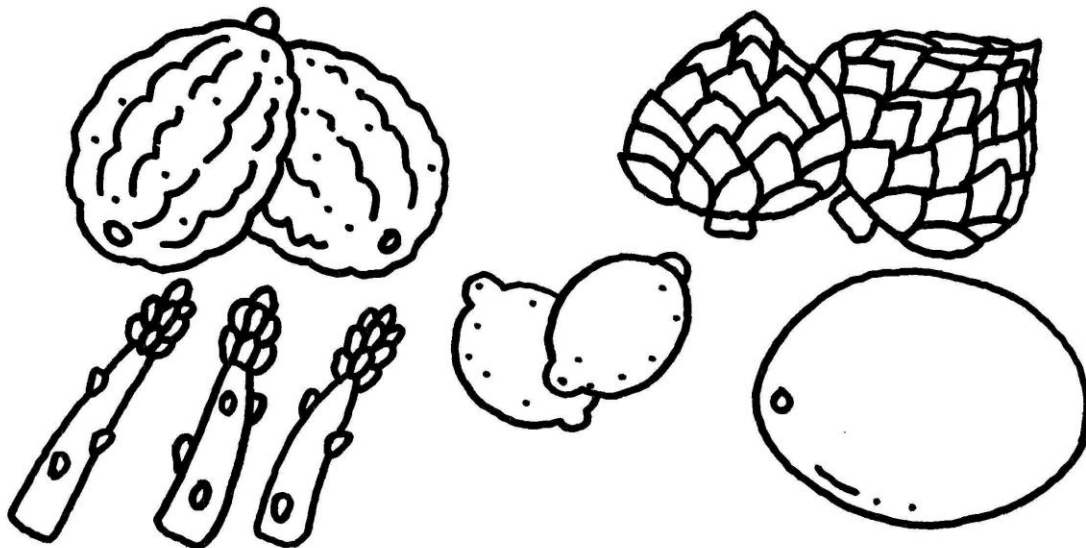
4

Figure D.9 Pages 5 and 7 of Coloring Booklet for How to Eat a Rainbow Curriculum



Purple eggplant, onions, and beets,
Purple cabbage, and grapes to eat.

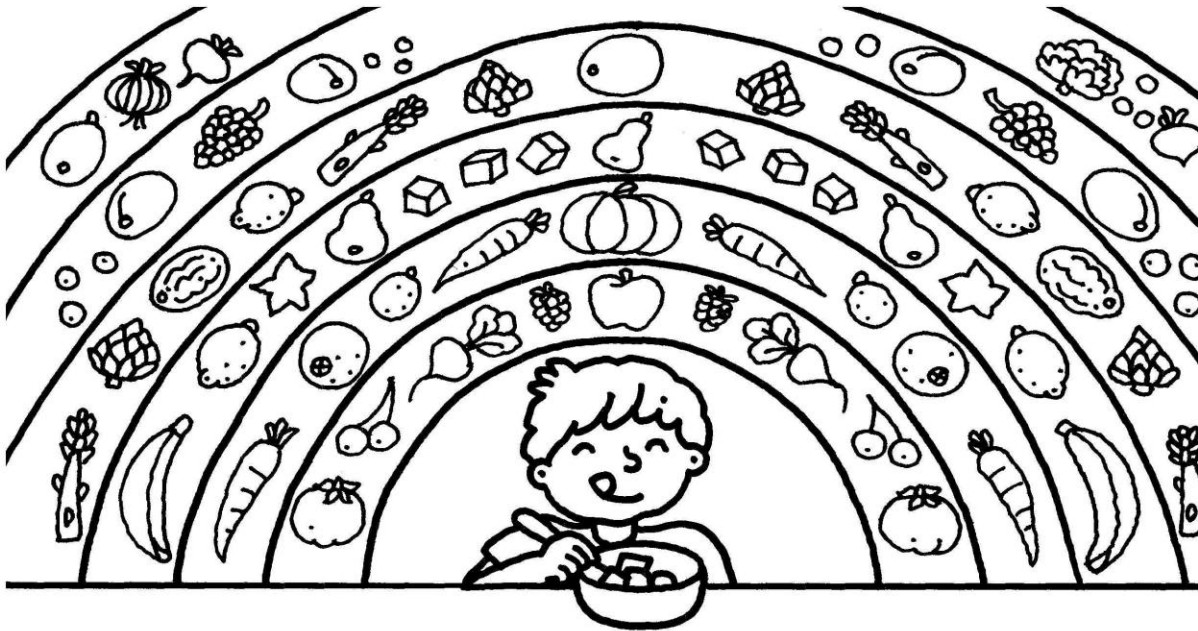
7



Green avocados, artichokes, too,
asparagus, limes, and honeydew.

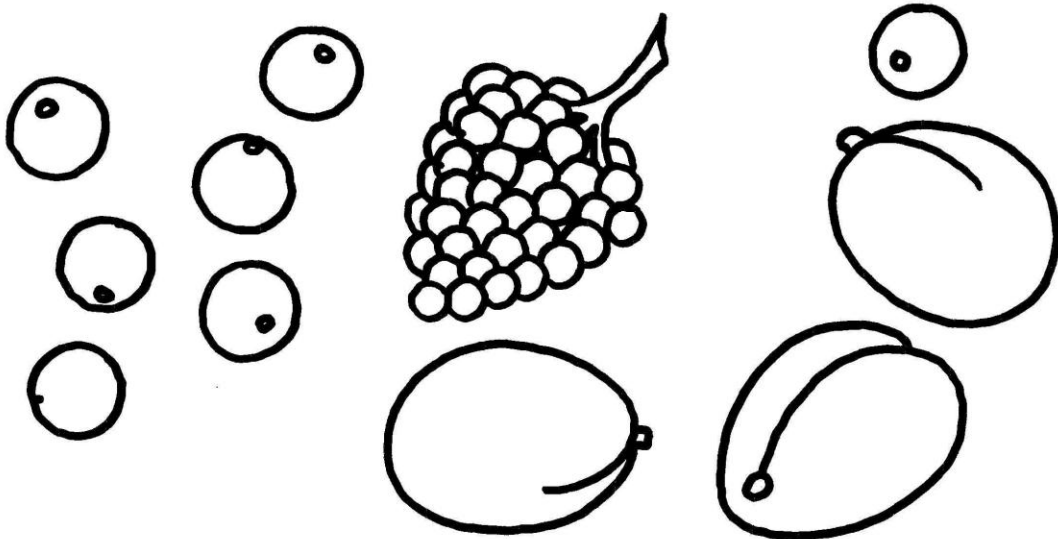
5

Figure D.10 Pages 6 and 8 of Coloring Booklet for How to Eat a Rainbow Curriculum



Now you are finished, and now you know.
You can eat the whole rainbow!

8



Blue blueberries, of course, are blue,
huckleberries, and sugar plums, too.

6

Figure D.11 Cooking Terminology Matching Activity

Draw a line from the cooking term and definition on the left side of the page to the picture that matches it on the right side of the page.

•Chop- To cut food with a knife, cleaver or food processor into smaller pieces.



•Dice- To cut food into uniform pieces, usually 1/8- to 1/4-inches on all sides.



•Grate/ Shred- To rub or push food, especially hard cheeses, vegetables, or whole nutmeg or ginger, across a grating/shredding surface to make very fine pieces. A food processor also may be used.



•Mince- To chop foods into tiny irregular pieces.



•Mash- To press or beat food to remove lumps and make a smooth mixture. This can be done with a fork, potato masher, food mill food ricer, or electric mixer.

•Pit/Seed- To remove the pit or seed(s) from a fruit or vegetable.

•Slice- To cut flat, thin pieces.



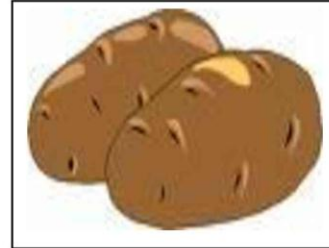
Figure D.12 Recipe for Lesson 3

Root Vegetable Patties

YIELD: 20 servings
SERVING SIZE: 1 patty
PREPARATION TIME: 35 minutes

THE INGREDIENTS

2 parsnips, peeled and grated
1 large carrot, grated
1 large potato, grated (2 cups)
3 scallions, whites and greens chopped
A handful flat-leaf parsley, finely chopped
2 Tbsp. flour
2 eggs, beaten
 $\frac{1}{4}$ tsp. salt
 $\frac{1}{2}$ tsp. black pepper
 $\frac{1}{4}$ canola oil



DIRECTIONS (HOW TO MAKE IT):

1. Heat electric skillet to medium-high heat.
2. Combine all ingredients, except oil in a large bowl.
3. Heat 2 Tbsp. canola oil in skillet.
4. Drop $\frac{1}{4}$ cup mounds of vegetable mixture into the skillet and flatten each mound a bit.
5. Cook patties 3-4 minutes on each side, drain on paper towels.
6. Add additional oil as needed and repeat, making 20 patties total.
7. Serve at room temperature

NUTRITION FACTS:

58 Calories; 3g Fat; 1g Fiber; 1g Protein; 1% Calcium; 3% Iron;
13% Vitamin C



Appendix E - How to Eat a Rainbow Post-Test

Kids in the Kitchen 2011/2012 Post Test Name _____

1. Which colors of the rainbow should we eat every day?



None of them

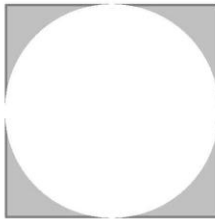


Green only

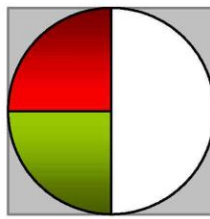


All of them

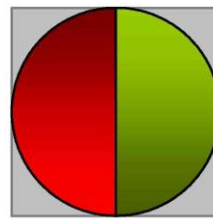
2. How much of our plate should be fruits and vegetables?



None

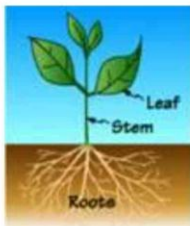


Half



All

3. We eat all parts of plants when we eat fruits and vegetables, what part of the plant is a potato?



Roots

Stem

Leaf

4. What do we need to do with fruits and vegetables before we eat or cook them?



Smell them



Wash them to remove dirt and germs



Nothing

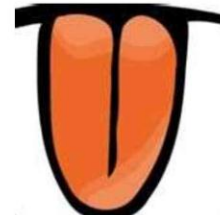
5. Fruits and vegetables provide vitamins and minerals; carrots are a good source of Vitamin A. Why is Vitamin A good for us?



Eyes/Sight



Nose/Smell



Tongue/Taste

6. Which picture shows a fruit or vegetable being seeded?



7. Can you name a new fruit or vegetable you have tried during Kids in the Kitchen?
