Munchy Adventures
Leader/Helper’s Guide

Florida 4-H Nutrition, Health, and Fitness Program
## Project Goals and Objectives

Welcome to the Munchy Adventures Leader/Helper’s Guide. The accompanying Project Book was written for youth, ages 8-10. Activities in the Project Book guide youth through an exploration of nutrition knowledge and practices leading to healthy lifestyle choices. The Project Book may be used in its entirety (five lessons, each containing multiple activities) for either an individual project or in a group setting. Each activity is designed to help youth practice important life skills while learning how to consider their daily choices of physical activities and healthy foods using the information presented. The Leader/Helper’s Guide offers suggestions for assisting youth in successfully completing the project and provides suggested activity tips for working with a group.

### Your Role as Project Leader/Helper

A hands-on approach to learning distinguishes experiential learning from traditional education. The 4-H helper provides the setting for the experiential learning to occur. Youth will make discoveries for themselves as you take on the role of mentor or coach, providing support and guidance when needed.

Youth are encouraged to ask for help from an adult helper on numerous occasions. The leader plays many important roles, helping the youth complete their project learning experience to the fullest. You will need to:

- Read through both the Project Book and the Leader/Helper’s Guide to become familiar with the subject matter, learning objectives, and activities.

- Help facilitate and organize activities as needed by providing transportation, materials, and supplemental activities to enrich the experience.

- Help guide youth through the experiential learning questions (both Reflect and Apply questions are asked at the end of each activity). Validate that their conclusions and answers are correct as they process and learn from their experiences.

- Provide more research-based information to enhance the understanding of various topics within the Project Book.

- Provide a safe, supportive environment for youth. You provide a significant contribution to youth as a mentor and coach through 4-H projects.

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Review of 4-H Experiential Model

The activities in this book were designed using the three basic steps of experiential learning. Each activity begins by teaching a health or nutrition concept using an exploration or investigation experience - “do.” Once the experience is complete, youth strengthen their understanding of the topic through “reflect” questions that help them focus their observations and experiences. Additional questions encourage the learners to “apply” what they’ve learned to new situations for each concept.

Questions You Can Use With the Experiential Model

There are different question types that can be used to help youth understand the concepts as well as the life skills focused on within the activity.

Reflection

Questions for Sharing and Processing Activities
~ Can you explain what you did?
~ What happened?
~ How did you feel?
~ What was the most difficult part of the process?
~ What was the easiest?
~ Did you have any problems or issues that seemed to occur over and over?
~ What have you done that would be similar to this experience?

Application

Questions for Generalizing and Applying
~ Did you learn anything about yourself through this activity?
~ What did you learn about… (life skills i.e., making decisions or subject matter i.e. making healthy food choices)?
~ How do these ideas relate to real life and not just the activity?
~ How did you make your decision?
~ How can you apply what you learned (making decisions) to a new situation?
~ How will you act differently in the future as a result of completing this activity?

Life Skills

The 4-H curriculum focuses on developing skills that are healthy and productive for both youth and their communities. These Life Skills assist youth in learning how to function well in the environments in which they live.

Each lesson identifies the skill(s) within the four 4-H quadrants (head, heart, hands, or health) with age-appropriate lesson content and experiences to teach these skills. The key life skill to be gained throughout this lesson series is the ability to make healthy lifestyle choices. Below are the life skills covered in Munchy Adventures:

Introduction to Project
(Take Charge/Chart Your Adventures)
Goal Setting
Planning

Chapter 1: MyPyramid
Healthy Lifestyle Choices
Critical Thinking

Chapter 2: Fuel Up
Critical Thinking
Self-Discipline

Chapter 3: Fill Up Your Tank
Critical Thinking
Healthy Lifestyle Choices

Chapter 4: Nutrition Facts
Healthy Lifestyle Choices

Chapter 5: The Ultimate Challenge
Critical Thinking
Self-Discipline

1This three-step experiential model is a modified version from various educational researchers, including Kolb (1984) and Pfeiffer and Jones (1983).
LIFE SKILLS: Goal Setting, Planning

Chef Nicky’s Story:
Begin the adventure by engaging youth in a thoughtful discussion about the “real life” Chef Nicky and his family.

Help youth make connections between Chef Nicky and his family and their own families. Also link the idea that animals we love need to eat well and get lots of exercise to be healthy, just as we do!

Welcome
Use the Table of Contents to look ahead at what exciting topics you will cover as you journey through Munchy Adventures.

Pre-Test:
Nicky’s Nutrition Puzzle
Nicky’s Nutrition Puzzle allows youth to test what they know about nutrition before they begin the unit. It will be repeated at the end of the Project Book to help youth realize just how much they have learned.

It is very important to reassure youth that it is okay to not know all the answers now. They can complete the puzzle again at the end of the book to check if they know the answers.

The answer key for Nicky’s Nutrition Puzzle has been provided for you on the right →
Planning and Goal Setting:

Take Charge

Take Charge leads youth through setting goals as they plan additional opportunities to practice new healthy lifestyle skills. Opportunities may include creating an exhibit or demonstration, participating in a health walk, or some other activity of their choice. This will give youth an opportunity to share their new knowledge with friends, family and other club members.

4-H strives to engage youth in their own learning. They are encouraged to plan and make decisions for themselves about what they want to learn and do as part of their chosen project. If you are working with a group of youth, have them brainstorm a list of their own ideas. Then have them agree on one or two things the group will do together. Encourage activities that engage youth in leadership and community service.

Time Line for the Project:

Chart Your Adventures

Youth can record their progress through their Munchy Adventures journey in the Chart Your Adventure section. Here they practice recording skills and accountability as they move through their project. This also allows you, their helper, to monitor their progress each time they bring their book for your initials. Don’t forget to follow up with youth on their previously set goals and plans.
CHAPTER 1: MyPyramid

LIFE SKILLS: Critical Thinking, Healthy Lifestyle Choices

Let’s Get Ready

Background Basics

Chapter 1 focuses on MyPyramid – a resource made available by the United States Department of Agriculture (USDA). MyPyramid is a graphic representation to emphasize important nutrition, health, and physical activity messages from the 2005 USDA Dietary Guidelines. It provides two important messages to help both adults and youth stay healthy throughout their lives. The messages are guidelines for daily food and activity choices. One message is to eat healthy foods in appropriate amounts, and the other is to be physically active every day or most days of the week. You will learn about the specific recommendations for these messages as you journey through the five chapters of this book.

MyPyramid for Kids is an adaptation of MyPyramid for youth ages 6-11. There are several ways that you can familiarize yourself with the concepts covered in this chapter. You can review the basics of these topics on pages 7, 8, and 9 in the Munchy Adventures Project Book or you can visit the MyPyramid for Kids web site at http://www.mypyramidforkids.gov.

Life Skill: Critical Thinking, Healthy Lifestyle Choices

Subject Matter Skill: Recognizing and understanding MyPyramid as a guide to healthier lifestyle choices

Success Indicators:

~ Naming the food groups and related food items represented on MyPyramid
~ Describing how MyPyramid guides one to healthier daily choices
~ Identifying foods choices that should be daily, sometimes, or only on special occasions depending on their fat, sugar, salt, or fiber content
~ Knowing that they need 60 minutes of physical activity daily for good health
The Dietary Guidelines for Americans are the basis for federal nutrition policy. They are jointly issued and updated every five years by the United States Department of Agriculture and the Department of Health and Human Services (HHS). They provide research-based guidance for people two years and older about how good dietary habits and physical activity can promote health and reduce risk for major chronic diseases.

**Facilitating the Activity:**

**What is MyPyramid?**

Introduce MyPyramid with a basic discussion of the food groups and oil. Explain that foods are divided into differently sized groups based on the nutrients they contain. Once youth are confident of their recognition of the five food groups and oil, then enhance your discussion by talking about the next three concepts:

- food group amounts (pyramid band widths)
- making healthier choices (bottom vs. top of pyramid)
- needing physical activity (steps of the pyramid)

**Food Group Amounts**

MyPyramid is constructed of different bands each representing one of the food groups as well as oil. Taking a horizontal (across) look at the very base of MyPyramid, you will see bands of different widths. Here are the key concepts for youth to understand:

- The wider the band, the more of that food group we need each day.
- Likewise, the narrower the band the less we need each day.
- We need food from all of the food groups and oil each day, but should choose the largest amount of our foods from the grains group and the least amount from oil.

**Wonderful Web Sites:**

You can use the resources listed below to find out more details about food groups, healthy choices, physical activity, and healthy lifestyles.

- [http://www.nutrition.gov](http://www.nutrition.gov)
  In addition to MyPyramid.gov, there are many other government Web sites that provide in-depth information about food and nutrition from food basics and weight management to shopping, cooking, and meal planning at this site.

  This Web site provides a “kid-friendly” look at health and nutrition.

- [http://www.kidnetic.com](http://www.kidnetic.com)
  This Web site also provides a “kid-friendly” look at health and nutrition (including recipes) in an exciting interactive format.

- [http://www.fruitsandveggiesmorematters.gov](http://www.fruitsandveggiesmorematters.gov)
  This great site from the Centers for Disease Control (CDC) encourages proper consumption of fruits and vegetables every day for good health.

  The President’s Council on Physical Fitness and Sports site provides information about how to stay active and fit for life.

  The Food and Nutrition Information Center Web site provides great resources related to food and human nutrition. It also links to many other USDA sites including Healthfinder.gov, DietaryGuidelines.gov, SNAP-Ed, Eat Smart/Play Hard, and many others.
Facilitating the Activity:  
**Making Healthier Food Choices**

Healthier food choices are illustrated by the **vertical** band size on MyPyramid. When you look at each food group, you can see that the bands get narrower as they go up. The healthiest food choices from all the food groups and oil are those located at the bottom or the widest part of the band. These foods contain vitamins and minerals with little or no solid fat or added sugar. The higher you move up the band, the less healthy the choices are. So, each food group has foods that should be eaten more often than others.

An easy way to help young children better understand this concept is to visually divide MyPyramid into three cross sections.

* **Bottom section:** these are the healthiest foods with little or no solid fat or added sugars and are choices to be eaten **every day.**

* **Middle section:** these are less healthy food choices that contain solid fats and/or added sugars and can be eaten **sometimes.**

* **Top section:** these are the least healthy food choices to be eaten in limited amounts on a **special occasion** since they are rich in solid fat and/or added sugars.

Using “special occasions” is a more descriptive way to help young children understand the concept that these foods should be limited choices within our daily diets. A special occasion, however, is not limited to just birthdays or holidays.

Help youth grasp the meaning by giving examples, like going to a neighbor’s house for a cookout and having potato chips with their hamburgers. This is not something they may do frequently. Have kids think of other times that might be special...where they can make choices for these less healthy food choices. Moderation is the term used with adults, but for youth this age, helping them classify and think about choices with foods in these three groupings will help in understanding this more complex term.

The chart on page 8 of Munchy Adventures gives youth two examples of this concept. The fruit example shows how the nutritional value of a fresh apple is changed by adding sugar. The milk example shows how the nutritional value of milk is affected by its fat content.
First, let’s take a look at the fruit example comparing an apple, sweetened applesauce, and a candy apple. In this example we are looking at the amount of added sugar to the same food. Excess sugar in the diet provides extra calories or energy without providing important nutrients such as vitamins and minerals.

The plain fresh apple is the healthiest choice and is located at the base of MyPyramid. The sweetened applesauce is placed in the middle of MyPyramid in the narrower part of the band because it is less nutritious than the plain fresh apple. Sweetened applesauce is not as nutritious as a fresh apple because it has sugar added. (Most commercial applesauce contains less fiber than a fresh apple which is important for proper digestion. Fresh fruits and vegetables provide important vitamins and minerals as well as fiber. Certain food processes such as heating, grinding, and juicing (fresh apple to applesauce to apple juice) can affect the fiber content of food. The candy apple is placed at the top of MyPyramid because it contains the most sugar added of all three foods.

In the milk example we are comparing three different types of milk based on fat content. Milk contains fat as well as other important nutrients such as protein, carbohydrate, vitamins, minerals, and water. While fat is an essential nutrient needed for proper growth, development, and maintenance throughout our lives, excess amounts can increase risk of heart disease. Most Americans eat foods with too much fat. Therefore, it is important to choose low-fat and fat-free dairy products most often. Fat-free milk is the healthiest choice for most people and is located at the base of MyPyramid because it contains no fat. The 2% milk is placed in the middle of MyPyramid in the narrower part of the band because it contains 5 grams of fat per cup. The whole milk is placed at the top of MyPyramid because it contains 8 grams of fat per cup.

Answers for “How Healthy Are Your Choices?”

Now is a good time to reinforce the concept of healthy food choices. Explain that there are no “bad” foods, but rather the foods we eat most often should be our healthiest choices.

Answers: Cake ..................... Special Occasions
White bread .................. Sometimes
Whole-wheat bread ........ Every Day
Potato Chips ................ Special Occasions
Baked Potato ................. Special Occasions
French Fries .................. Sometimes

Answers for Reflect Questions

Do the solid and dotted lines you drew for each food item go to the same place? Lines may vary with youth answers.

If not, which foods should you eat most often? Foods which are lower in sugars or fats (and higher in fiber) should be consumed more often - e.g., whole wheat bread or baked potatoes. What are some other examples?

Which foods are okay to eat sometimes? White bread and French Fries. What are some other examples?

Which foods should you eat only on special occasions? Foods that are high in sugars or fats should be consumed only on special occasions, e.g., cake and potato chips. What are other examples of foods that we should only eat on special occasions?
Talking Points:

What is a “plain baked potato?”
A potato that has been baked with no fat added.

What is frying?
Frying means cooking food in fat or oil.

How does frying affect the nutritional value of the food?
The food absorbs some of the fat. Some foods absorb more fat than others. The amount of fat absorbed depends on the food, type of fat, cooking time, and temperature of the oil.

What are some examples of fried foods?
French fries, potato chips, fried chicken, donuts, hush puppies, fried fish, fried cheese sticks, etc.

How does frying (food preparation) affect where foods are located on MyPyramid?
Frying adds fat and moves it up the pyramid, meaning we should only eat fried foods sometimes (French fries) or on special occasions (potato chips).

What is fiber?
A part of plant foods (fruit, vegetables, whole grains, and legumes*) that is basically indigestible in the human body. There are two basic types – insoluble and soluble.

What does fiber do for you?
Although we really can’t digest fiber from food it does have an important role in good health by aiding in normal digestion.

What is digestion?
How the body breaks down food so it can be absorbed and used for growth, development and maintenance. The waste that is not used by the body is eliminated. Fiber helps eliminate that waste from the body.

Where are foods with the MOST fiber content most often found on MyPyramid?
At the bottom of the pyramid including foods like fresh fruits and vegetables, whole grains, and legumes.

*Legumes are all types of dried beans (black, pinto, lima, red, etc.) and lentils.

Let’s Go Further:

MyPyramid Skill-a-thon
Create a skill-a-thon to test what youth have learned about the new nutrition pyramid. One idea: use the diagram at right and have youth place pictures of foods in the proper column. Be sure to reinforce the “placement” of types of foods by their added sugar or solid fat content.

You can also have youth look at fiber content. Although this is not part of the basis for food placement on the food bands of MyPyramid, foods high in fiber ARE recommended for a healthy diet.

MyPyramid for My Home
Allow youth to create their own take-home reminder of MyPyramid. This reproducible item can easily be downloaded from http://www.fns.usda.gov/TN/kids-pyramid.html.
Group Activity Tip: Conduct a Food Group Relay

~ Label three paper grocery bags with Every Day on the first, Sometimes on the second, and Special Occasions on the third.
~ Write the name of various foods that are representative of the three food choices on two sets of index cards (use two different colors, one for each team). Be sure to make the foods the same for each color set.
~ Have youth form two teams. Each team is given a deck of index cards.
~ Team players draw a food card and race to place into the correct grocery bag until all their cards are gone.
~ When they complete the relay race, check the bags for how each team “scored” on accuracy of sorting the foods into the appropriate bags based on its fat and/or sugar (or fiber) content.

Apply

Grains Group: Includes foods made from wheat, rice, oats, cornmeal, or barley, such as bread, pasta, cereals, tortillas, and grits. At least half of all grains you eat should be whole grains. Choose foods that have “whole wheat” or another whole grain (such as rolled oats or brown rice) as the first ingredient on the food label.

Name your favorite “every day” food from this group: _____________

Vegetable Group: Includes fresh, frozen, canned, juiced, and dried vegetables. Examples include spinach, broccoli, baked potato, yams, corn, tomato soup, and carrot juice.

Name your favorite food from this group that you eat “sometimes”: _____________

Fruit Group: Includes fresh, frozen, canned, juiced, and dried fruits. Examples include strawberries, orange juice, watermelon, apple sauce, bananas, dried cranberries, and raisins.

What is one of your “sometimes” foods from this group: _____________

Milk Group: Includes milk and milk products. Make most milk group choices free or low fat. Examples include yogurt, hard cheeses like cheddar and wax cheese, processed cheeses, and soft cheeses like cottage cheese. Milk products with little to no calcium and high amounts of fat, such as cream cheese and butter, are not part of this group. These high-fat foods are considered oils.

Name your favorite “every day” food from this group: _____________

Meat & Beans Group: Includes lean meat, poultry, fish, eggs, peanut butter, beans, lentils, nuts, and seeds. Examples include chicken, hamburger, black beans, walnuts, almonds, ham, shrimp, and turkey.

What is one of your “every day” foods from this group: _____________

Oil: Includes corn, cotton, soybean, olive, sunflower, and other plant oils. Other foods that contain oils are nuts, some fish, avocados, mayonnaise, margarine, and salad dressing.

Which of these sandwich favorites is an oil? Mayonnaise.

Answers for Apply Questions

Name your favorite “every day” food from the Grains Group: Best answers include “whole wheat” or “whole grain” choices. Options may include whole grain breads, low-sugar cereals, or oatmeal.

Name your favorite “sometimes” food from the Vegetable Group: Best answers include vegetables that are high in sugar (glazed carrot) or high in fat (creamed spinach). Options may include French fries, spinach dip, or fried vegetables.

What is one of your “sometimes” foods from the Fruit Group: Best answers include sweetened applesauce, dried fruit with added sugar, or canned fruit in light syrup.

Name one of your “every day” foods from the Milk Group: Best answers include choices that contain low levels of fat (such as fat-free or 1% products) with no added sugar.

Name your favorite “every day” food from the Meat and Beans Group: Best answers include lean meat options or items with less fat content. Options may include grilled fish, lean meat, poultry (skin removed), eggs, natural peanut butter with no added sugars, or cooked beans and peas with no added fat.

Which of these sandwich favorites is an oil? Mayonnaise.
Facilitating the Activity:
Answers for Refrigerator Find

List the food item(s) on this shelf that belong in the Vegetable group. **Broccoli & Corn**

List the food item(s) on this shelf that don’t belong in the Milk group. **Mayonnaise, Bananas, & Bread**

List the food item(s) on this shelf that belong in the Grains group. **Cereal**

List the food item(s) on this shelf that belong in the Meat & Bean group. **Kidney Beans & Chicken**

List the food group(s) that are found in each of these foods. ** See note below. **

**Spaghetti and Meat Sauce:** Meat and Beans, Grains and Vegetables

**Hamburger on Bun:** Meat and Beans, Grains, Vegetables and Milk

**Sandwich:** Meat and Beans, Grains, Vegetables and Milk

** * When talking about the foods on the bottom shelf, let youth use their personal experiences to answer the question. If their mom puts meat in the spaghetti sauce, then meat would be an appropriate answer. The same logic applies to what they put on a hamburger or a sandwich. Don’t worry if you can’t “see” it in the picture.

List the food item(s) in the two bins that belong in the Fruit group. **Strawberries & Apple**

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**Group Activity Tip:**

This activity can be done as a group in a club or classroom. Have the youth bring one or two non-perishable food packages from home. Make a display of the food packages by spreading them out on tables with sufficient room between them for easy viewing.

Create a simple worksheet with two columns. The first column heading would be **Name of Food Product** and the second column heading would be **Food Group(s) it Belongs In.**

Provide youth with a worksheet and instruct them to complete it by looking at each food package and writing down the name of the food and what food group(s) they think it belongs in.
Answers for Reflect Questions

Find one food item in the refrigerator on page 10 that is made from more than three different food groups in it.

What is it? Answers will vary, may include the sandwich, the burger, or the spaghetti dish (all on the bottom shelf).

List the different ingredients in the food item you found: **

- **Spaghetti and Meat Sauce:**
  - Grains – spaghetti
  - Vegetables – tomato sauce
  - Meat and Beans – meat in the sauce

- **Hamburger on Bun:**
  - Grains – bun
  - Meat and Beans – hamburger
  - Vegetables – lettuce & tomato
  - Milk – sliced cheese

- **Sandwich:**
  - Grains – bread
  - Meat and Beans – lunch meat
  - Milk – sliced cheese
  - Vegetables – lettuce & tomato

List the food groups in which these foods belong: Responses depend on previous answer, but all should include Vegetables, Meat and Beans, Grains (others may include Oils or Milk).

Answers for Apply Questions

Look in your refrigerator at home. See what foods you find that belong to each of the five food groups. Write down the names of the foods you found. Answers will vary.

Which of the food items listed above would you choose for a healthy snack? Circle those that you would eat as a healthy snack. Answers will vary depending on what foods each youth listed.

Nutrition Nugget:
Add fresh or dried fruit to breakfast items such as cereal, oatmeal, or yogurt to jumpstart your fruit needs for the day!
Facilitating the Activity:

Things to Keep in Mind During Munchy Time

Sweet Tater Fries is a simple recipe that can be served as a snack or vegetable side dish. The size of the potato slice will determine about how long it will take to bake. The thinner the slice, the faster it will cook.

The Yellow Submarine is a great recipe for a quick, healthy snack.

Materials Needed:

Sweet Tater Fries
Ingredients (Per Youth):
- 1 small sweet potato
- Cinnamon or herb seasoning
- Cooking spray

Other Materials:
- Clean, flat cutting surface
- Full oven or small toaster oven
- Water source (a sink is preferable)
- Vegetable brush
- Sharp knife (for cutting/slicing)
- Baking pan or cookie sheet
- Pot holders
- Aluminum foil

Yellow Submarine
Ingredients (per youth):
- 1 (8-inch) flour tortilla
- 2 Tbsp peanut butter *
- 1 small, peeled banana (not too ripe)
- 2 Tbsp raisins or other dried fruit
- 1 tsp honey (optional)

* Another option would be low-fat cream cheese for those youth who may be allergic to peanuts

Other Materials:
- Plates
- Measuring spoons
- Butter knife or spoon (for spreading)

Food Safety Facts:

Foodborne illness is caused by eating contaminated food. According to the Centers for Disease Control and Prevention (CDC), foodborne illnesses affect millions of people every year. Approximately 800,000 illnesses occur in children under the age of ten.

Safe food handling helps reduce the risk of contamination. There are four simple rules you can teach youth to help them practice safe food handling:

- Clean - wash hands and surfaces often
- Separate - keep raw and cooked foods separate
- Cook - cook foods to the proper temperature
- Chill - refrigerate food promptly
**Answers for Reflect Questions**

How did Sweet Tater Fries taste compared to fast-food French Fries?

*Answers will vary.*

Circle which choice you think is healthier for you: Sweet Tater Fries or French Fries. **Sweet Tater Fries**

Why? *Answers should include that the Sweet Tater Fries are baked, not fried. They use less oil in the cooking process.*

**Answers for Apply Questions**

Name the food groups in the yellow submarine: *Answers should include Fruit (banana and dried fruits) and Grains (flour tortilla). Answers may also include Meats and Beans (if peanut butter is used).*

Discuss with your adult helper the differences between baking and frying foods. **Baking is a method of cooking food that uses dry heat such as in an oven. The hot air cooks the food. Frying is a method of cooking food that uses hot oil or fat. The hot oil cooks the food.**

What are some of your favorite fried foods that can be baked instead? *Chicken, potatoes (baked fries or baked chips), breaded cheese sticks, onion rings, fish (baked or broiled), etc.*

Why is baking a healthier choice than frying? *Reduces the amount of fat in foods.*

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**Terrific Food Safety Tips:**

Keep cold foods cold, and hot foods hot!

Make sure perishable food does not stay in the temperature danger zone more than two hours.

The temperature danger zone is between 40°F and 140°F.

For More Information: Check out the Food and Drug Administration (FDA) Food Safety Web sites. You can start from their home page [www.fda.gov](http://www.fda.gov). At FDA for You, select “Kids” to begin your search.

FDA Fight BAC! Partnership for Food Safety Education at [http://www.fightbac.org/content/view/5/12/](http://www.fightbac.org/content/view/5/12/) - “Education Outreach”
Facilitating the Activity:

**Time to Get Moving**

Now is the time to add regular physical activity to the concept of healthy living. Living a healthy life means making healthy choices every day, which includes eating healthy foods and being physically active. Remind youth that staying healthy is all about living healthy.

The increase in overweight children is a major public health problem. Youth who are overweight, often as a result of physical inactivity and poor nutrition, are at increased risk of developing serious health problems. Some of these include type 2 diabetes, high blood pressure, high cholesterol, asthma, and arthritis.

**Answers for Reflect Questions**

**Answers to the following questions will vary:**

~ Where did you go on your walk?
~ Who did you take with you on your walk?
~ How did you feel after your walk?

Generate a discussion of how often they go for walks, or other daily exercise and physical activity.

**Fitness Fundamentals:**

Encourage youth to gather friends in their neighborhood and play games like tag, hide-and-seek, ball, or red rover instead of sitting inside watching TV.

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**Physical Activity**

Do you like to play outside with your friends? How about taking your dog for a walk, riding your bicycle, or swimming? These are just a few ways for you to be physically active. Being physically active for at least 60 minutes every day will help you stay healthy and grow properly.

Chef Nicky knows it’s important to be physically active. Throughout your “Munchy Adventure” you will have several fun ways to be active. If you are unable to do any of the physical activities in this book, have your adult helper select an activity for you.

**Time to Get Moving:** Take a 15-minute walk with your adult helper and/or friends. If you have a dog, take it for a walk too. Walking is a great way to get physical activity, plus it can be done almost anywhere and doesn’t require any special equipment.

**Reflect**

Where did you go on your walk?

Who did you take with you on your walk?

How did you feel after your walk?

If you need 60 minutes of physical activity each day, how many more minutes do you need today?

List other activities and the amount of time for each you plan to do today.

**Apply**

If the walk was 15 minutes, they need 45 more minutes of physical activity.

List other activities and the amount of time for each you plan to do today. Answers will vary. Help them think about what they do for their daily 60 minutes.
Having Fun With Fitness:

So why is physical activity so important?

Regular physical activity supports bone, muscle, and joint health, and improves mental health. Being physically inactive (sedentary) can increase risk of becoming overweight as well as developing other serious health conditions such as diabetes, heart disease, or high blood pressure.

What is the difference between physical activity and exercise?

Physical activity is any body movement that uses energy or calories. Exercise is physical activity that is planned. It involves repeated movements to improve or maintain a certain level of physical fitness. The components of fitness include: cardiorespiratory endurance (aerobic), muscular strength, muscular endurance, flexibility, and body composition.

What are the different types of physical activity?

There are two types of physical activity: aerobic and anaerobic.

Aerobic activity is any continuous movement that uses large muscle groups such as the arms and legs to strengthen the heart, lungs and blood circulation. The activity gets the heart and lungs working at an increased but safe pace beyond what is necessary for daily functioning. Some examples include walking, dancing, jogging, bicycling, skating, swimming, lawn mowing, and leaf raking.

Anaerobic activity builds and tones muscles. Some examples include baseball, sprinting, tennis, weightlifting, curl-ups, and washing windows.

Sources: American Heart Association, CDC Physical Activity for Everyone and CDC Healthy You!

http://www.americanheart.org/presenter.jhtml?identifier=3003065
http://www.cdc.gov/nccdphp/dnpa/physical/everyone/glossary/index.htm
http://www.cdc.gov/healthyyouth/physicalactivity/facts.htm

Group Activity Tip:

If you cannot take the group for a walk, choose another physical activity that will get the youth moving for at least 15 minutes to introduce this topic. You might consider Exercise Exchange! — a form of musical chairs.

Have youth form a circle (several circles if a large group) with one person in the center. Have each person mark his or her spot with chalk or masking tape on the floor.

The person in the center will ask their peers if they have ever (blank), completing the question with a form of exercise/physical activity (without repeating the same activity).

The members of the circle that have not performed the activity remain where they are. Those in the circle that have performed the activity must move to another spot in the circle—but NOT to their immediate left or right. The person in the center then moves into a spot in the circle—leaving another person to be in the center.

Continue to play until most people have had a chance to move.

Going Further:

As you continue through the rest of this activity guide, be sure to incorporate outside games and activities into each day’s plan. This will allow youth to have time outside to enjoy the world around them, and to get some much-needed physical activity!

Some fun games might include:

Capture the Flag
Duck, Duck, Goose
Hide and Seek
Hopscotch
Red Light/Green Light
Let's Get Ready

Background Basics

Chapter 2 focuses on the connection between the body’s energy needs and food.

Fuel is a source of energy. Just like cars get their energy from gasoline, people get their energy from food.

Using the pyramid image, physical activities are categorized into MyActivity Pyramid. To become familiar with the concepts covered in this lesson, be sure to review the basic information on pages 15, 17, and 19 in the youth Project Book.

The physical activity portion of the MyPyramid Web site is found online at http://www.mypyramid.gov/pyramid/physical_activity.html.

This section answers questions such as: What is physical activity? Why is physical activity important? How much physical activity is needed? How many calories are used when I perform a certain activity? What are some ways that I can increase my physical activity? You can also use the resources listed on Wonderful Web Sites to find out more details about physical activities, choices, and healthy lifestyles.
Additional Information on Fueling Up:

Importance of Breakfast

Breakfast, the first meal of the day, breaks a 10–14 hour fast. This can stretch into an 18-hour fast if breakfast is not eaten. For youth who have not had breakfast, the morning’s school work may be lost altogether. Common sense says that it is not reasonable to expect a child to learn and work on no fuel, and research studies support this premise. Skipping breakfast has been found to decrease visual and motor functions as well as cognitive functions. Most of the scientific literature reports that healthy, normally nourished children cannot do their best work without breakfast. Effects of skipping breakfast include physical, behavioral, and scholastic consequences.

Consequences of Skipping Breakfast

Physical Consequences. Breakfast supplies our bodies with a variety of nutrients needed for energy, tissue growth and repair, and other bodily functions. Eating breakfast correlates positively with daily intakes of iron, calcium, vitamin A, magnesium, and vitamin B6. School-age children often have low intakes of these nutrients, especially when breakfast is not eaten. Because of their size, the effects of fasting occur more quickly in children than in adults.

Behavioral Consequences. Negative classroom behavior may occur when breakfast is skipped. An increase in nervous habits and hyperactivity as well as decreases in attention span and frustration tolerance have been reported. Behavior problems and distraction may result from hunger pains themselves, or they may be caused by the release of adrenaline as a consequence of a decrease in blood glucose levels.

Scholastic Consequences. Two studies found an increase in errors made on tests by children that had not eaten breakfast. Reading and arithmetic skills also suffer in breakfast skippers. These children also had decreased continuous task problem-solving abilities on the morning that they did not eat breakfast.

Building a Nutritious Breakfast

A nutritious breakfast is one that provides adequate energy (calories) along with a variety of nutrients like protein, certain fats, carbohydrates, vitamins, and minerals. Generally, children should be encouraged to eat a meal which includes at least one serving from each of the following food groups: Milk, Fruits or Vegetables, and Grains.

Facilitating the Activity: 
**Four-Day Activity Journal**
Remind youth to be honest as they record the activities that they do each day for their journals. Encourage them to try to do at least one new or different activity each day to provide a healthy variety.

**Answers for Reflect & Apply Questions**
*Answers will vary to the following questions:*

~ Out of the four days, how many days did you do 60 minutes or more of physical activity?

~ How many days did you do 30 minutes or less of physical activity?

~ What’s your activity level? If you did 60 minutes or more every day, you are considered ACTIVE. If you did 30 minutes or less every day, you are INACTIVE. If some days you did more than 30 minutes but not quite 60, then you are MODERATELY ACTIVE.

Nutrition Nugget:
The common value used to express food energy is a kilocalorie (Kcal), usually written as calorie. The energy nutrients are: carbohydrate, protein and fat. Carbohydrate and protein both provide four calories per gram. Fat provides 9 calories per gram.

~ What types of physical activity do you perform every day? **Answers will vary since activity levels vary throughout a day.**

~ What could you do to be more active? **Answers will vary, but may include walking to the bus stop, playing outside instead of watching TV, etc.**
Group Activity Tip:
Have youth work in small groups of four to six people. Using the data for each person, have them chart their activity level by age and gender. Post the charts around the room, discuss their similarities and differences and how this influences how much food they need for energy each day.

Facilitating the Activity:

How Do You Measure Energy?

Be sure to review the answers that each youth came up with for their Daily Energy Needs (in the middle of the page) to confirm a reasonable answer. This answer will affect other responses later in the unit.

Answers for Who’s Jar Contains the Most Marbles?

Use the picture on the right and the chart below to find the answer.

Kadeem needs more energy because he is a boy, he is older, and he is active. That means he will have more marbles in his jar.

Answers for Reflect & Apply Questions

How does your physical activity level affect your daily energy or calorie needs? The more active you are the more energy or calories you need.

What else makes a difference in the amount of food you need each day? Other factors to consider are age and gender (boy or girl).

Fill out the questions below to figure out how many calories a friend or relative (ages 4-13) needs each day. Answers will vary, but be sure they have used the appropriate figure.
Facilitating the Activity: 
**Things to Keep in Mind During Munchy Time**

When preparing Loony Tuna in a Cone, remember to practice and reinforce food safety skills. Since this recipe added mayonnaise to a high protein food (i.e. tuna, chicken or eggs), the pH of the food is increased, providing a very favorable environment for bacteria to quickly grow. So be sure to refrigerate any unused portions immediately.

**Materials Needed:**

**Loony Tuna in a Cone**

Ingredients (per youth):
- 1/2 can chunk light tuna in water, drained (can substitute canned chicken)
- 2 tablespoons low-fat mayonnaise
- 1 small dill pickle, finely chopped
- 1 plain ice cream cone (flat bottom)
- 8 fresh spinach leaves
- 7—12 pieces of shredded carrots
- 1 grape tomato
- 3 slices of black olive

Other Materials:
- Measuring spoons
- Can opener
- Sharp knife
- Mixing bowls
- Mixing spoons

---

**Answers for Reflect & Apply Questions**

What food groups provide your body with fuel when you eat “Loony Tuna in a Cone?” *Meat and Beans (tuna), Grains (cone), and Vegetables (spinach leaves, carrots and tomato). Also, the mayonnaise is an Oil.*

How many calories does this snack provide your body? *Answer is at the top of the page – 187 calories.*

Imagine that “Loony Tuna in a Cone” is the only thing that you have eaten so far today. If this were true, how many more calories would you need to eat today? *This answer will vary based on the information that they calculated on the previous page. Check to see if answers are correct.*
Facilitating the Activity:

Time to Get Moving

Do you enjoy the wind in your hair as you cycle downhill, or the thrill of beating your best time as you swim laps in a pool, or do you simply enjoy leisurely walks at your favorite nature trail? Either way, be sure to share your favorite ways to “get moving” when you discuss physical activity with the youth. It is always interesting to hear new ideas and to share stories about our favorite sports or activities.

Answers for Reflect & Apply Questions

Which food did you select? **Answers will vary.**

Was it the healthiest choice?  
**Healthiest Choice** - apple  
**Less Healthy Choice** - 2% milk  
**Least Healthy Choice** - soda & chocolate

Was it an everyday, sometimes, or special occasion food?  
**Apple** - everyday  
**2% Milk** - sometimes  
**Soda & Chocolate** - special occasion

What were some other foods you ate today for energy? **Answers will vary.**

What other physical activities did you do today that burned lots of calories? **Answers will vary.** Have them go back to the MyActivity Pyramid to think about the level of activities.
Let's Get Ready

Chapter 3 focuses on the types and amounts of foods we need each day to grow properly and stay healthy.

The daily recommended intake of food from each food group are found on the MyPyramid Web site at http://www.mypyramid.gov/steps/howmuchshouldyoueat.html. This section contains links to helpful information including photos of sample amounts of each properly measured food group and a food and activity tracking resource. You can also use the resources listed throughout this guide to find out more details about daily food choices and healthy lifestyles.

How Much Food Do You Need?

Keep in mind the relationship between ounce-equivalents and common portions when helping youth understand the connection between energy/calorie needs and choosing the right amount of food.

MyPyramid provides information about the amounts of food to eat each day in ounces, cups, and table measures. Generally, grains, meats, and beans are measured in ounces, cups, and tablespoons. Vegetables, fruits, and milk are measured in cups. Oils are usually measured in teaspoons.

Life Skill: Critical Thinking, Healthy Lifestyle Choices

Subject Matter Skill: Determining recommended food amounts to make healthier food choices

Success Indicators:
~ Identifying correct amounts of each food to consume daily
~ Proper use of measuring tools
~ Correct use of visual ‘cues’ to size up portion sizes

LIFE SKILLS: Critical Thinking, Healthy Lifestyle Choices

How Much Food do You Need?

Do you ever wonder how much cereal to pour in your breakfast bowl? Or how much milk to pour into your glass? Staying healthy means eating healthy foods in the right amounts each day. Do you remember how many calories you need each day?

Look at page 17 and write your calorie needs here: 

Use this number and the chart below to find the amount of food you need every day from each group:

<table>
<thead>
<tr>
<th>Food Group</th>
<th>1,200</th>
<th>1,400</th>
<th>1,600</th>
<th>1,800</th>
<th>2,000</th>
<th>2,200</th>
<th>2,400</th>
<th>2,600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains*</td>
<td>4 oz-eq</td>
<td>5 oz-eq</td>
<td>5 oz-eq</td>
<td>6 oz-eq</td>
<td>6 oz-eq</td>
<td>7 oz-eq</td>
<td>8 oz-eq</td>
<td>9 oz-eq</td>
</tr>
<tr>
<td>Vegetables</td>
<td>1 1/2 cups</td>
<td>1 1/2 cups</td>
<td>2 cups</td>
<td>2 1/4 cups</td>
<td>2 1/4 cups</td>
<td>3 cups</td>
<td>3 cups</td>
<td>3 1/4 cups</td>
</tr>
<tr>
<td>Fruits</td>
<td>1 cup</td>
<td>1 1/2 cups</td>
<td>1 1/2 cups</td>
<td>2 cups</td>
<td>2 cups</td>
<td>2 cups</td>
<td>2 cups</td>
<td>2 cups</td>
</tr>
<tr>
<td>Milk</td>
<td>2 cups</td>
<td>2 cups</td>
<td>3 cups</td>
<td>3 cups</td>
<td>3 cups</td>
<td>3 cups</td>
<td>3 cups</td>
<td>3 cups</td>
</tr>
<tr>
<td>Meat &amp; Beans*</td>
<td>3 oz-eq</td>
<td>4 oz-eq</td>
<td>5 oz-eq</td>
<td>5 oz-eq</td>
<td>6 oz-eq</td>
<td>6 oz-eq</td>
<td>6 oz-eq</td>
<td>6 oz-eq</td>
</tr>
<tr>
<td>Oil</td>
<td>4 tsp</td>
<td>4 tsp</td>
<td>5 tsp</td>
<td>5 tsp</td>
<td>6 tsp</td>
<td>6 tsp</td>
<td>7 tsp</td>
<td>8 tsp</td>
</tr>
</tbody>
</table>

*oz-eq means ounce equivalent; tsp means teaspoon

How Much of Each Food Group and Oil do You Need Each Day?

Grains: 
Vegetables: 
Fruits: 
Meat and Beans: 
Oil: 

Did you know an ounce of meat is equivalent to one egg, one tablespoon of peanut butter, or 1/2 cup dried beans?
Facilitating the Activity:

Eat Right

Grains are measured in ounces or cups and are described as ounce-equivalents. For example, one slice of bread, one cup of dry cereal, ½ cup of cooked cereal, ½ cup cooked rice, and one small tortilla are each considered one ounce-equivalents.

Meats and beans are measured in ounces, cups, or tablespoons and are also described as ounce-equivalents. For example, an ounce-equivalent in this group could be one egg, one ounce of meat, ¼ cup cooked beans, or one tablespoon of peanut butter.

The estimated daily energy needs chart shows the total amounts of all the foods for the day. Therefore, if a child estimated his or her daily needs to be 1,800 calories, that would include six ounce-equivalents of grains and five ounce-equivalents of meat or beans, 2½ cups of vegetables, 1½ cups of fruit, and 3 cups of milk.

Explaining The Concepts of Equivalents:

Grain Equivalents: For a total amount of six ounce-equivalents of grains for the day, the child might choose one cup of dry cereal for breakfast (one ounce-equivalent), two slices of bread for lunch (two ounce-equivalents), melted cheese on a small tortilla for snack (one ounce-equivalent), and one cup of cooked pasta (two ounce-equivalents) for dinner.

Meat and Beans Equivalents: For a total amount of five ounce-equivalents of meat and beans for the day, the child might choose one egg for breakfast (one ounce-equivalent), two slices of turkey on a sandwich for lunch (two ounce-equivalents), and ½ cup cooked beans for dinner (two ounce-equivalents).

Wonderful Web Sites:
You can use the resources listed below to find out more details about food groups, healthy choices, and healthy lifestyles.

http://www.healthierus.gov/dietaryguidelines/Dietary Guidelines
http://www.nutritionexplorations.org/parents
Family Guide to Healthy Eating
Facilitating the Activity: How the Food Groups & Oils Measure Up

Introduce this activity by explaining the importance of making sure we get the right amount of food each day from the five food groups and oil. A fun and easy way to learn appropriate food amounts is by measuring. The goal is to first use measuring utensils to learn what certain amounts of food (½ cup cooked vegetables, ½ cup cooked pasta, one cup of milk, 3 ounces cooked meat, etc.) look like. Eventually we should be able to look at our plates and cups and tell if we have the amount we want without measuring.

Explain that food can be measured in volume or weight.

Measuring cups and spoons measure the volume of food. Volume also means the space or area something takes up or occupies. Measuring cups measure liquid and solid food in whole cups as well as parts of a whole cup such as ¼, ½, or ¾. Measuring spoons measure smaller amounts of liquid and dry food in tablespoons and teaspoons, as well as fractions (or parts) of these.

A food scale measures the weight of food in grams and kilograms (metric system) or ounces and pounds (United States customary units).

Demonstrate the use of these utensils before doing the activity.

<table>
<thead>
<tr>
<th>Food Groups &amp; Oil</th>
<th>Food-item Selected</th>
<th>Amount to Measure</th>
<th>Amount You Need Daily</th>
<th>Is this the amount you normally eat in a meal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains</td>
<td></td>
<td>1 cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td></td>
<td>1 cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruits</td>
<td></td>
<td>1 cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk</td>
<td></td>
<td>1 cup</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat/Beans</td>
<td></td>
<td>3 ounces*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td></td>
<td>1 teaspoon</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* This is about the size of a duck’s cord

Compare the amount of each food you measured to the amount you usually eat. Were the amounts more or less than what you normally eat, and why?

Now, think about all the meals and snacks you usually eat in a day. Is the total amount of food you eat from each food group in one day close to what you should be eating?

Discuss with your helper changes you need to make in the amount of food you eat. What foods do you need to eat more of each day?

Answers for Reflect & Apply Questions

Answers to the following questions will vary.

~ Compare the amount of each food you measured to the amount you usually eat. Were the amounts more or less than what you normally eat, and why?

~ Discuss with your helper changes you need to make in the amount of food you eat. What foods do you need to eat more of each day?
Facilitating the Activity:

Fuel-for-a-Day Journal

Once youth have a good visual understanding of the amount of foods they are consuming, having them record their daily consumption aids them in looking at a total day of their choices. It will also help them think about their total needs balanced with their physical activity levels.

Answers for Reflect Questions

Answers will vary to the following questions:

Guide them through their assessments as they compare the chart on page 20 of the Project Book with their food journals on this page. Follow through with these questions:

~ Did you eat the proper amount of all the food groups for the day?

~ If not, which food groups do you need to eat more or less of?

For “Create a snack with 3 different colors of food”:

Suggestions for this activity could be peanut butter sandwich on whole wheat bread with sliced banana; container yogurt sprinkled with dry cereal and raisins; cheese and crackers with baby carrots; mixed fruit salad; tossed salad (tomatoes, carrots, green pepper and lettuce) with low-fat dressing; nachos (melted cheese on tortilla chips) with chopped tomatoes; etc.

~ Did you have problems making a snack for the food journal on this page?

~ If yes, what were they?
Facilitating the Activity:
Answers for Apply Questions
Planning healthy meals and snacks is very important to help youth practice the basic concepts of MyPyramid. It helps to strengthen an understanding of how important healthy food choices are to staying healthy.

Help them draw upon their own experiences, keeping in mind personal preferences, cultural practices, availability, and cost.

Be realistic! Encourage youth to be creative, but at the same time realistic. As long as the foods are safe and wholesome anything goes!

Facilitating the Activity:
Time to Get Moving
Ask youth to explain what type of music they chose to dance to. What is it about the music that they like so much — beat, lyrics, artist?

Ask youth to identify what types of dances that are traditionally connected with certain types of music (e.g., ballet and classical music).

Encourage youth to keep their mind open to the use of non-traditional music in dance (e.g., sometimes ballet is choreographed to rock-n-roll or jazz music).

Group Activity Tip:
Pyramid Choices: Using a set of food models or cut-outs of foods from food advertisements, create a cafeteria of foods. Organize youth into groups of four, giving each a paper plate and assigning them a meal/snack to select. Let group members go through the “cafeteria” for their selections.

Reflect and apply: Have them assess their total day’s choices as a group. Did the group have all the food groups represented. What about the amounts? How healthy were their choices?
Facilitating the Activity: 
**Things to Keep in Mind During Munchy Time**

Though it may be tempting to lick the spoon, be sure to remind youth to practice their food safety skills when preparing Porridge Pudding Drops.

First, using a utensil that you have licked can spread germs to others who may want to share your creation, but not your germs! Also, it is not safe to taste uncooked cookie batter since it contains raw eggs. Raw eggs may contain salmonella bacteria that can cause food-borne illness.

### Materials Needed:

**Porridge Pudding Drops**
The recipe below makes 60 cookies.

**Ingredients (per batch):**
- 3/4 cup all-purpose flour
- 1/2 cup whole-wheat flour
- 1 teaspoon baking soda
- 1/2 cup light margarine spread
- 3/4 cup brown sugar, firmly packed
- 1 package instant vanilla pudding mix
- 2 large eggs
- 3 1/2 cups quick-cooking rolled oats (not instant oatmeal)
- 1 cup raisins (optional)

Other Materials:
- Measuring spoons
- Measuring cups
- Mixing bowls
- Mixing spoons
- Baking sheet
- Oven or small toaster oven
- Pot holders

### Reflect and Apply Questions

**Use these questions to generate discussion.**

**Answers will vary.**

- What kind of grain do you usually use to make cookies? If youth answer flour, ask them what kind.
- What are the two whole grains in this recipe?
- How does the flavor and texture of Porridge Pudding Drops compare to regular homemade or store-bought cookies?
- Next time you are at the store, check out the cookie aisle. Look at the ingredient lists of two of your favorite cookies. Do either of them list “whole grains” as their first ingredient?
- What foods does your family like to prepare that are made with whole grains?
CHAPTER 4: Nutrition Facts

LIFE SKILL: Healthy Lifestyle Choices

Let’s Get Ready
Background Basics
Chapter 4 focuses on the individual nutrients found in the five food groups and oil. In addition to learning about the nutrients found in foods, youth will also be introduced to reading labels found on standard food packaging. To become familiar with the concepts covered in this chapter, be sure to review the basic information on pages 26 and 28 in the Youth Project Book.

As a review from Chapter 2 Fuel Up, here’s a quick summary about nutrients. There are six nutrient groups representing over 50 different nutrients. The six nutrient groups are carbohydrates, proteins, fats, vitamins, minerals, and water.

While the MyPyramid Web site does not have a specific section on nutrition facts, it does contain many helpful links. These links can be found at http://www.mypyramid.gov/related_links/index.html. This section contains links to more specifics on nutrition, dietary guidelines, food safety, and physical activity. You can also use the resources listed in this guide to find out more details about nutrition, food labels, and healthy lifestyles.

![Nutrition Facts Chart]

**What are Nutrients?**

Nutrients are found in the foods and beverages you eat and drink every day. They are needed for proper growth and development and to keep your body healthy. There are six groups of nutrients: carbohydrates, proteins, fats, vitamins, minerals, and water.

Each group, except for water, has many different kinds of nutrients. In this project, you will learn about seven of them.

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>What It Does</th>
<th>Food Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbohydrates</td>
<td>Main source of fuel or energy</td>
<td>Breads, rice, cereal, pasta, fruits, vegetables, milk, and yogurt</td>
</tr>
<tr>
<td>Fats</td>
<td>Regulates body temperature, protects internal organs, helps use vitamins A, D, E, and K, and is a source of energy</td>
<td>Butter, margarine, salad dressing, cooking oil, nuts, and seeds</td>
</tr>
<tr>
<td>Proteins</td>
<td>Building blocks necessary for growth and healing</td>
<td>Meat, poultry, fish, eggs, beans, nuts, and milk products</td>
</tr>
<tr>
<td>Vitamin A</td>
<td>Helps you see well at night, keeps skin healthy, and is necessary for growth</td>
<td>Milk, eggs, fortified cereals, green leafy and dark-colored orange vegetables, cantaloupes and mangoes</td>
</tr>
<tr>
<td>Vitamin C</td>
<td>Builds healthy bones, teeth, gums, blood vessels, and growth and repair of tissues</td>
<td>Citrus fruits, kiwi, bell peppers, tomatoes, broccoli, spinach, and strawberries</td>
</tr>
<tr>
<td>Calcium</td>
<td>Builds strong bones and teeth</td>
<td>Milk and other dairy foods like yogurt and cheese, green leafy vegetables, and fortified cereals, breads, and juices</td>
</tr>
<tr>
<td>Iron</td>
<td>Helps red blood cells carry oxygen to all parts of the body</td>
<td>Red meat, poultry, lentils, beans, green leafy vegetables, radishes, and fortified cereals and breads</td>
</tr>
</tbody>
</table>

Life Skill: Healthy Lifestyle Choices

Subject Matter Skill: Nutrients and their food sources

Success Indicators: Youth will:

~ Identify important nutrients and associate them with food choices
~ Read food labels for nutrient content
Nutrition Nuggets:

Nutrients are the parts of food that provide nourishment to help the body grow properly and stay healthy.

While there are many different nutrients necessary for life, the nutrients included in this chart are those listed on the Nutrition Facts label.

Some other nutrients you might want to mention include:

**Vitamins:** vitamin D, vitamin E and folate

**Minerals:** phosphorus, magnesium and zinc

Have you noticed the terms “fortified” and “enriched” on some food labels?

These terms mean that nutrients, typically vitamins and/or minerals, have been added to the food to make it more nutritious.

Fortified refers to adding nutrients that were not originally in the food. For example, many breads and cereals are fortified with vitamins and minerals to make them healthier. Milk is fortified with vitamin D to help the body better absorb the calcium and phosphorus found in milk.

Enriched refers to adding back nutrients that were lost as a result of food processing. For example, when whole wheat is processed to produce white flour some of the B vitamins and iron are lost. Therefore, many breads and cereals made with wheat flour (white flour) are enriched with these nutrients.

Wonderful Web Sites:

You can also use the resources listed below to find out more details about food groups, choices, label reading, and healthy lifestyles.

http://www.cfsan.fda.gov/~dms/foodlab.html
Nutrition and How to Read a Label

http://www.nal.usda.gov/fnic/foodcomp/
Composition of Foods

Talking Points:

There are six nutrient groups or classes that our bodies require in specific amounts everyday to live and stay healthy.

They are:
Carbohydrates
Proteins
Fats
Vitamins
Minerals
Water

The energy nutrient groups are carbohydrates, proteins and fats. They provide the calories (energy) we need to live and grow. Vitamins and minerals do not provide energy, but certain ones are needed for our bodies to get the energy from carbohydrates, protein, and fat.

We get these nutrients in the foods and beverages we consume.

Food energy is the amount of energy we get from food as a result of normal digestion.

Every day our bodies require a certain amount of energy to maintain our body at rest as well as when we are active.
Facilitating the Activity:
Identify That Nutrient!
This activity reinforces why we need to choose certain foods for our health. If helping an individual member, check his or her solutions and discuss the Reflect and Apply questions.

Group Activity Tip:
There are a variety of ways to teach this for a group of youth. This is another great place to incorporate active learning games and use the grocery sack relay game. This time label the grocery bags with the six nutrient groups and use the food cards for youth to sort into the correct nutrient sacks. (Remember that most foods contain several nutrient groups.)

Identify That Nutrient!
An alternative is to turn this into a game or skill-a-thon. Create a board and let youth match the food group to the nutrient.

Answers for Reflect & Apply Questions
Does each food group provide you with key nutrients? Yes

What food groups contain more than one nutrient?
Grains - carbohydrates, vitamin A, calcium, iron
Milk - calcium, protein, vitamin D (fortified), fat (except fat-free)
Meat - protein, iron, vitamin A, fat
Vegetables - calcium, iron, vitamin A, vitamin C, and carbohydrates
Fruits - vitamin C, vitamin A, iron, and carbohydrates

Draw a line from each food ingredient to the nutrient it contains:
Cantaloupe ........................................ Vitamin A
Cheddar Cheese .......................... Calcium
Fortified bread ................................... Iron
Bell Peppers .................................... Vitamin C
Mayonnaise ..................................... Fat

Conduct a Nutrient and Food Quiz Tournament
Create a fun quiz game using the nutrients, what it does for the body and food sources.
Facilitating the Activity:

What is a Food Label?

The goal of this activity is to teach youth how to use food labels in order to choose healthy foods.

To learn more about food labels, check out the Food and Drug Administration (FDA) Web site at www.fda.gov.

Answers for Can You Read This Label?

How much is one serving size of macaroni and cheese?

1 cup

How many servings are in this package of macaroni and cheese?

2 servings

Answers for Reflect Questions

How many boxes of macaroni and cheese would you need to feed a family of six?

3 boxes

When you eat macaroni and cheese, how much do you normally eat?

Answers will vary — encourage youth to use the measurement ideas from Lesson 3 to provide a more precise answer.

Answers for Apply Questions

Which food has the most vitamin C per serving?

Orange juice

Which food has the most vitamin A per serving?

Carrots

Which food has the most fiber per serving?

Bread

Which food has the most iron per serving?

Meat

Which food has the most calcium per serving?

Milk

Which food is high in protein and low in fat?

Tuna
Facilitating the Activity:  
**Making Healthier Choices**

The *Making Healthier Choices* food label reading activity is a wonderful opportunity to help youth practice label reading. To build and strengthen this skill, try doing it individually as well as in a group setting, if appropriate.

First, have youth individually compare two dry cereal packages from home or at a local market. Encourage them to report their observations to their family and/or club members.

Second, if the opportunity for a group activity exists, have each child bring at least one food package from home to practice label reading in a group. Using a blackboard, whiteboard, or poster board, write the parts of the food label as shown for this activity. Then have each child in turn discuss his/her food package label, filling in the blanks with information written on sticky notes. After each child reports on his/her package the sticky notes are removed for the next person.

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**Making Healthier Choices**
Look in your pantry or visit a local supermarket with your family to practice reading food labels. Compare the food labels on two different boxes of dry breakfast cereal. Use the cereal boxes below to record your observations.

### Reflect

Compare the nutrition contents of the two cereal boxes.

- Which cereal has the most iron?
- Why is it important to eat foods with iron?
- Which cereal has the least amount of sugar?
- Which cereal do you think is the healthiest choice and why?

### Apply

- What types of food contain iron?

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**Answers for Reflect Questions**

- Which one has the most iron? *Answers depend on the cereals chosen — be sure youth are reading labels properly.*
- Why is it important to eat foods with iron? *Iron helps the red blood cells carry oxygen to the rest of the body.*
- Which one has the least amount of sugar? *Answers depend on the cereals chosen — again, check for accuracy.*
- Which one do you think is the healthiest choice? Why? *Answers depend on the cereals chosen. Less sugar is better.*

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**Answers for Apply Questions**

- What types of foods contain iron? *Red meat, poultry, lentils, beans, leafy vegetables, raisins.*
Facilitating the Activity:
Things to Keep in Mind During Munchy Time
Just like in Loony Tuna in a Cone, remember to practice and reinforce food safety skills while preparing the Spinach Dip Roll Bowl. Since this recipe calls for mayonnaise and sour cream, be sure to refrigerate any unused portions.

Materials Needed:
Spinach Dip Roll Bowl
The recipe below makes 20 servings.

Ingredients:
1 10-ounce package frozen chopped spinach, thawed
1 14-ounce box dry vegetable soup, dip & recipe mix
1 8-ounce can water chestnuts, drained and chopped
1 cup reduced-fat sour cream
1 cup light mayonnaise
2 cups shredded low-fat Cheddar cheese
1 small soft roll (per person)

Other Materials:
Measuring cups
Mixing bowls
Mixing spoons
White paper towels (see note below)
Can opener
Cheese grater (if using block cheese)
Plastic wrap

NOTE:
There are two ways to squeeze the excess liquid from the thawed chopped spinach. One way is to wrap the thawed spinach in a few clean white paper towels and squeeze. The other way is to put the thawed chopped spinach in a strainer and with a large spoon press on the spinach pushing the liquid out the bottom.

Remember, whichever method you choose make sure you do it over a sink or bowl to catch the liquid.

Time to Get Moving:
Ask youth to describe their favorite outdoor game. Once everyone has shared their favorite, ask them to decide which one burns the most calories. Make sure that they are using their critical thinking skills by having them justify their answers.

If youth would not have an opportunity to perform this task at home, set time aside to perform a group activity with your club.

Illustration for making & filling Roll Bowl:
Step 1
1. Rinse spinach and squeeze dry with paper towels.
2. In a medium bowl, stir together spinach, dip mix, water chestnuts, sour cream, mayonnaise, and cheese until well mixed.
3. Cover and chill for 2 hours to blend flavors.
4. Just before serving, stir and spoon dip into your "roll bowl." Extra dip can be served with cut-up vegetables or whole grain crackers.

Step 2
1. Prepare your bowl by making an opening in the roll using your fingers to pinch off enough of the top and inside to make a space for the spinach dip.
2. Spoon the spinach dip into the opening in the roll. You can use the extra bread pieces for dipping.

Materials Needed:
Spinach Dip Roll Bowl
The recipe below makes 20 servings.

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Facilitating the Activity: The Ultimate Challenge

Chapter 5 provides youth the ultimate challenge of this project - applying what they have learned about nutrition and fitness choices each and every day. After completing this activity, ask them to reflect on their experiences using these questions for discussion:

1. How many days did it take you to complete the challenge?

2. What fruits and vegetables did you enjoy eating the most during the challenge?

3. What were some of the key healthy practices that you chose to do as a result of this challenge? **Answers should include:** eating more fruits and veggies each day; choosing low-fat milk products; choosing whole grains and lean meats or a serving of beans; getting physical exercise/ activity each day.

4. Which of these practices do you do each day?

5. How has completing this project with Chef Nicky helped you think about choices you make each day?
Group Activity Tip:

Provide each youth an ultimate challenge board; have them draw and report back each day (if appropriate) what and how they accomplished their challenge. Have youth complete their own puzzle.

Celebrate everyone’s accomplishment with a fun, energizing activity of the youth’s choice that includes healthy snacks and lots of physical activity.

Facilitating the Activity:
Nicky’s Nutrition Puzzle

Nicky’s Nutrition Puzzle allows youth to test what they have learned about nutrition since they began the unit.

The answer key is provided for you below (these answers are the same as those on page iii). Have youth look back at what they knew at the beginning of the project, and compare it to what they know now.

Help them celebrate their accomplishments!

**Nutrition Puzzle: How Much do You Know Now?**

Remember back in the beginning of this book when you were asked to answer as many questions in the crossword puzzle as you could? Well here is your chance to try the same crossword puzzle again. Let’s see how well you do compared to the first time you did it.

Across:
1. Energy from food is measured in _______.
2. An ounce of meat is equivalent to one _______ of peanut butter.
3. Eat different colors of _______ every day.
4. Daily _______ for at least 60 minutes is important for good health.
5. _______ is an excellent source of iron.
6. There are _______ food groups in MyPyramid.
7. The three levels on the activity pyramid that help you stay healthy are the _______ activities.

Down:
1. Everyday foods, located on the bottom of MyPyramid, are the _______ choices.
2. _______ your hands before and after touching food to decrease germs that can make you sick.
3. _______ is not a food group, but you need some for good health.
4. _______ helps you see well at night.
5. _______ are an excellent source of vitamin C.
6. _______ is an excellent source of calcium and other nutrients.

**Facilitating the Activity:**

Nicky’s Nutrition Puzzle

Nicky’s Nutrition Puzzle allows youth to test what they have learned about nutrition since they began the unit.

The answer key is provided for you below (these answers are the same as those on page iii). Have youth look back at what they knew at the beginning of the project, and compare it to what they know now.

Help them celebrate their accomplishments!
Did You Take Charge?

Time to Get Moving

Encourage youth to complete this report of their accomplishments as part of the project. Help them go back and look at the goals and plans they made. Did they follow through with their plans? Why or why not? Discuss how you can help them complete their goals, if needed.

Be sure to sign-off on their final report of their project accomplishments when completed. Recognize each participant with a project certificate. Encourage youth to turn in their project reports for county recognition if appropriate.

You can download the certificate of completion by visiting http://florida4h.org/projects/munchyadventures.shtml.

Food Group Search (Inside Back Cover)

Answer Key

UF
University of Florida
IFAS Extension

Check out the Munchy Adventures’ website for bookmarks, posters and other cool stuff.
http://florida4h.org/projects/munchy-adventures.shtml

CREDITS:

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FOOD GROUP SEARCH: Can you find all the food-group and oil items listed below by searching the picture above? When you find an item, check it off.

**FRUITS**
- Apple
- Banana
- Pineapple

**VEGETABLES**
- Cabbage
- Eggplant
- Radish

**GRAINS**
- Loaf of Bread
- Spaghetti
- Cereal

**MILK**
- Cheese
- Milk
- Ice Cream

**MEAT & BEANS**
- Fish
- Hot Dog
- Steak

**OIL**
- Mayonnaise
- Peanut
- Salad Dressing
**The 4-H Pledge**

The HEAD represents:
1. Thinking, planning and reasoning.
2. Gaining new and valuable knowledge.
3. Understanding the whys.

The HEART represents:
1. Being concerned about the welfare of others.
2. Accepting the responsibilities of citizenship.
3. Determining the values and attitudes by which to live.
4. Learning how to live and work with others.
5. Developing positive attitudes.

The HANDS represent:
1. Learning new skills.
2. Improving skills already known.
3. Being useful, helpful, and skillful.
4. Developing respect for work and pride in accomplishment.

The HEALTH represents:
1. Practicing healthful living.
2. Enjoying life.
3. Using leisure time wisely.
4. Protecting the well being of self and others.

Munchy Adventure Leader’s Guide Credits:
Produced by: University of Florida Institute of Food & Agricultural Sciences (UF/IFAS)/Florida 4-H Youth Development Program, August 2009.

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Visit the Munchy Adventures’ web site for bookmarks, posters and other cool stuff.

http://florida4h.org/projects/munchy-adventures.shtml