University of California
Agriculture and Natural Resources

Hunger Attack!

Feed Your Appetite—Protect Your Wallet

Leader's Guide

with

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& Assessment

November 2013

University of California
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Leader's Guide

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Hunger Attack

This leader's guide is designed to accompany the *Hunger Attack* teen guide. The leader's guide includes: learning objectives, background information, discussion questions, activities with accompanying handouts and visuals, a glossary, and a list of additional resources. The background information is meant to prepare instructors to both teach the unit and to provide lecture material to cover with the teens. It is recommended that each teen receive a copy of the teen guide and read it before participating in the activities outlined in this guide.

The purpose of this unit is to show teens how the food they eat affects both their health and the amount of money they spend. Teens may be surprised to see how a bag of chips here and a soda there can add to their waistlines and drain their wallets! As both a health and/or financial educator you have an opportunity to: help teens explore what motivates their food choices, examine the nutritional quality of the food they eat, identify easy ways to keep their food safe, learn how much money they spend on food, and provide them with concrete ways to make healthier, lower cost food choices.

BACKGROUND INFORMATION

Teens spend a lot of money on food. Over a one week period of time, teens are likely to make the following food and beverage purchases: 40% will buy beverages, 37% candy or gum, 35% snacks, 29% fast food, 22% coffee beverages, 20% school lunches, and 18% meals at sit-down restaurants (Faw, 2010).

Since teen food purchases influence their health status now and in the future, it's important for teens to be aware of what constitutes a healthy diet. Helping teens understand what influences their food purchases and offering options for reducing

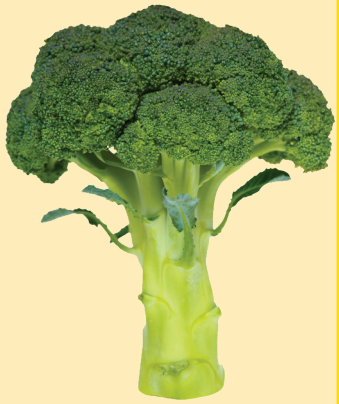
Overall Learning Objectives

Teens will:

- Examine how *MyPlate* recommendations contribute to good health today and in the future
- Read and compare food ingredient and Nutrition Facts labels
- Demonstrate simple techniques for keeping food safe
- Discuss how wise food shopping can save money
- Identify ways to cut food costs when eating out or at home

Key Points to Make

- The food we buy affects our health, as well as the amount of money we spend.
- There are simple ways to select healthy foods.
- Keeping food safe is our responsibility.
- There are many ways to cut food costs.



the cost of the food they buy are critical components to getting the most value for their money.

What affects food choices?

Many factors influence the foods we purchase and eat, including:

- Personal preferences
- Customs and traditions
- Convenience
- Price
- Time available to shop for and prepare food
- Special occasions or events (parties, holidays, etc.)
- Hunger
- Location (home, with friends, vacations, etc.)
- Health considerations
- Dietary restrictions
- Religious preferences
- Availability of food (seasonal foods, transportation)
- Habits
- Food purchasing skills
- Food safety considerations
- Food preparation skills

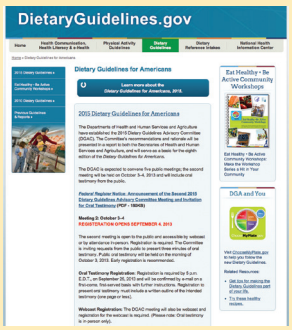
Healthy Food Choices

The food choices teens make influence the nutritional quality of their diet and overall health today and in the future. Healthy eating during the teen years is important for proper growth and development and to help prevent health problems, such as cancer, diabetes, heart disease, osteoporosis, and obesity. Since the teenage years are a period of rapid growth, nutrient needs increase, and the best source of these essential nutrients is from a healthful diet. In particular, teens need extra calcium and iron. Unfortunately, while many teens consume too many calories, most teens' diets do not meet the national dietary recommendations for fruits and vegetables, whole grains, and calcium; and many girls are low in iron (CDC, 2013).

Teens can learn to select healthier foods by following the *Dietary Guidelines for Americans*, eating foods from the five food groups of *MyPlate*, comparing food labels, and reviewing nutritional information at grocery stores and at restaurants.

Dietary Guidelines for Americans

The *Dietary Guidelines for Americans* is a set of recommendations that encourages healthy food choices. Recommendations from the *Dietary Guidelines for Americans* are intended for Americans ages 2 years and older. The *Guidelines* encourage Americans to eat a healthful diet — one that focuses on foods and beverages that help achieve and maintain a healthy weight, promote health, and prevent disease.



While we know that genetics are a major factor in determining health risks, it's also known that diet plays a large role in our overall health. The *Guidelines* were developed to help combat the current trend of eating a diet high in fat, sugar and calories, while consuming too few fruits, vegetables, and whole grains. This combination of food, along with a lack of physical activity, contributes to health problems including obesity and related diseases such as Type II diabetes and heart disease.

The good news is that healthy eating can prevent and reduce the risk of many health problems. To help achieve a healthier diet, the *Guidelines* highlight key dietary recommendations including:

- Make half your plate fruits and vegetables.
- Switch to fat free or 1% milk.
- Make at least half your grains whole.

Teens can move toward achieving these recommendations by identifying simple changes they can make that correspond with their taste preferences and lifestyles. Here are some ideas that teens can consider to achieve a healthier diet:

Did you know?

Current dietary recommendations encourage eating fresh, canned, frozen, or dried fruit instead of drinking fruit juice. If fruit juice is consumed, make sure it is 100% juice and limit the quantity consumed to ½ cup daily.

Make half your plate fruits and vegetables

Here are some ideas for teens to add more fruits and vegetables to their diets.

Breakfast

- Add fruit to hot and cold cereal
- Include vegetables (spinach, zucchini, broccoli, mushrooms, salsa, etc.) in an omelet, egg sandwich, or burrito
- Make a fruit parfait or fruit smoothie with fat free or low fat yogurt
- Make a beverage with fruit, vegetables, and fat free milk

Lunch

- Select a side salad instead of fries or chips
- Add veggies to sandwiches, tacos, and burritos
- Eat raw cucumber chips instead of potato/tortilla chips
- Choose a salad as the main dish
- Include fruit for dessert

Dinner

- Fill up on fruits and vegetables before other foods
- Add vegetables to pasta and rice
- Eat main dishes that include lots of fruits and vegetables, like stir-fry
- Make a fresh fruit salad for dessert

Snacks

- Bring fresh fruit or dried fruit from home
- Try cut up vegetables with a low-fat dip or hummus
- Make veggie bags to bring to school

Switch to fat free or 1% milk and milk products

Some teens find it easy to switch to lower fat milk and milk products. However, for others it may take a few weeks to adjust to the new taste. For teens who want a little more time to make the change, they may find a gradual approach to using lower fat milk products can help them be successful. For example:

- For teens who currently only use whole milk, try 2% milk for a couple of weeks, then move to 1% or fat free a few weeks later.
- Try using lower fat milk with other foods like hot and cold cereals, smoothies, or soups.
- Top baked potatoes with fat free plain yogurt instead of higher fat toppings.
- Encourage teens to try different types and brands of low-fat and reduced-fat cheese to find ones they like.

Make at least half your grains whole

Teens may want to try these ideas for eating more grains.

Breakfast

Select whole-grain cereals like oatmeal, toasted oats, and whole-wheat varieties

Eat toasted bread or bagels made from 100% whole wheat

Try a whole-wheat tortilla for a breakfast burrito

Lunch

Order a sandwich made with 100% whole-wheat bread

Try a deli salad made with whole grains like quinoa or barley

Order a wrap made with a whole grain tortilla

Dinner

Give whole grain pasta a try

Serve stir-fry over brown rice

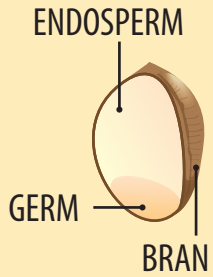
Did you know?

Although milk products are the easiest way to obtain calcium in the American diet, some teens do not consume milk or milk products due to dietary, social, or religious preference. For teens who do not consume milk products, there are other calcium options that can be included in the diet. These products include calcium-fortified milk product substitutes (usually made from soy, almond, or rice), firm tofu (made with calcium sulfate), dark green leafy vegetables, black-eyed peas, baked beans, and calcium-fortified orange juice. Encourage teens to check food labels to select foods higher in calcium.

Did you know?

Whole-wheat bread is made from the entire wheat kernel and has all of the nutrients that naturally occur in wheat, including fiber and micronutrients. The natural color of the wheat kernel contributes to the brown coloring of the bread. To identify whole wheat bread at the grocery store, the first ingredient on the food label should be 100% whole wheat or 100% whole grain.

Wheat bread contains mainly enriched white flour. Only part of the wheat kernel is used to make this flour. The flour has been enriched to replace the major nutrients lost during milling, however the minor nutrients and fiber are not replaced. The brown color of wheat bread comes from other ingredients, such as molasses. (Note: Multigrain bread is not necessarily made with whole wheat.)



Wheat Kernel

Snacks

Popcorn is whole grain—select a reduced fat variety

Try whole-wheat or rye crackers

Cut back on foods high in solid fats and added sugars

The 2010 *Dietary Guidelines for Americans* also recommend reduced intake of added sugars and solid fats in the diet. Solid fats (saturated and trans fats) and added sugars are a concern because while they are a significant part of Americans' diets they offer very little nutritional value. On average, added sugar and solid fats make up 35% of the typical American diet. For most people, no more than 5-15% of total calories should come from solid fats and added sugars.

Calories from added fats and sugars are called "empty calories"—they add to total calories but provide no vitamins or minerals. A small amount of empty calories is OK, but most people eat far too many to be part of a healthy diet. The amount of empty calories that a person can consume is based on total estimated calorie needs for a person of a certain age, gender and level of physical activity. Usually empty calories daily allowances are a small amount of calories (120-330 calories) that can be used up very quickly in the course of a day.

The smartest choices to make are foods that are lowest in fat and added sugar. For example, choose low fat milk over whole milk or baked skinless chicken over fried chicken. To reduce intake of empty calories:

- Choose foods and beverages containing the least solid fats and added sugar;
- Eat and drink foods higher in fat and sugar less often;
- When consuming empty calories, choose a smaller portion.

Solid Fats

Types of solid fats in the diet include beef, chicken and pork fat; milk fat found in butter and whole milk products; and stick margarine and shortening. Solid fats have few nutrients yet they contribute excess calories in the diet and can lead to weight gain or other health problems.

In order to reduce the amount of solid fat in the diet, the *Dietary Guidelines* recommend limiting intake of foods high in solid fats and replacing them with alternative foods that are low in solid fats. For example:

- Choose fat free or low fat versions of milk and milk products or calcium-fortified substitutes
- Choose lean meats
- Cook with heart-healthy oils such as olive or canola oil instead of lard or butter

Added Sugars

Certain types of sugars can be found naturally in foods—such as lactose in milk and fructose in fruits. However, other foods have sugar that is added during processing or preparation, such as breakfast cereals, sodas, and baked goods. Added sugars can contribute many extra calories to the diet and offer zero nutrients. Eating too many calories from any source, including added sugar, can contribute to excess weight gain and increased health risks.

The American Heart Association recommends consuming no more than half of your empty calories on added sugar. This is about 6 teaspoons of sugar per day for women and 9 teaspoons per day for men.

The following strategies can help reduce added sugar in the diet:

- Decrease consumption of sugar sweetened beverages (soda, sports drinks, energy drinks, fruit drinks, teas, lemonade, etc.). Instead, choose water, unsweetened teas, and lower fat milk/calcium-fortified substitutes as healthy drink alternatives

Did you know?

According to MyPlate.gov, the foods and beverages that provide the most empty calories for Americans are:

- Cookies, cakes, pastries and donuts (contain solid fat and added sugars)
- Sodas, energy drinks, sports drinks and fruit drinks (contain added sugars)
- Ice cream (contains solid fat and added sugars)
- Sausages, hot dogs, bacon and ribs (contain solid fat)

Did you know?

Americans eat, on average, 22 teaspoons of sugar a day. However, teens (ages 14-18) have the highest intake of sugar, consuming an average of 34 teaspoons a day.

Sources: National Health & Nutrition Examination Survey (NHANES)

- Choose fruit and vegetable snacks instead of candy, donuts, and granola bars
- Decrease the amount of sugar added to recipes and other foods during preparation and at the table

Energy Drinks—a potentially dangerous buzz

Consuming energy drinks is a growing trend among teens. Research indicates that at least a 1/3 of teens and young adults report consuming these drinks. However, it is recommended that teens and children DO NOT consume energy drinks. Since these products are heavily marketed to young people, there is concern among health experts that consumption trends of energy drinks will continue at or above current rates.

Energy drinks are beverages that are advertised as increasing energy and alertness. These properties come from the caffeine content of the drinks, which can range from 80-300 mg per 8 oz serving. Since most energy drinks are sold in cans or bottles larger than 8 oz, drinking these beverages results in even higher caffeine consumptions. Depending on the brand of energy drink, the caffeine content can be higher than coffee (about 100-150 mg caffeine in 8 oz), tea (8-60 mg in 8 oz), or cola drinks (35-70 mg per 12 oz serving).

Although there are no current government recommendations regarding caffeine consumption for adolescents, some experts recommend limiting caffeine intake to 100mg/day or less for this age group (Heneman, 2007).

Consuming too much caffeine from any source can result in uncomfortable warning signs like restlessness, irritability, nausea, diarrhea, headaches, muscle twitching, body shaking, and sleeplessness. More serious and life-threatening symptoms include trouble breathing, rapid and irregular heartbeat, elevated blood pressure, seizures, hallucinations, confusion, and occasionally, death.

An additional concern about energy drinks is that they can replace more healthful beverages in the diet, such as water and lower fat milk products/calcium-fortified milk substitutes.

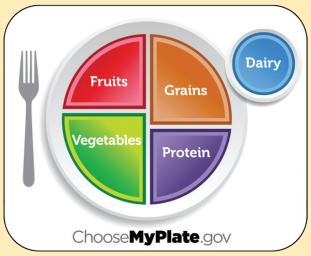
Sugar-sweetened energy drinks, just like other sugar-sweetened beverages, contribute empty calories to the diet and little or no nutrients.

However, the most serious health risk of energy drinks—mixing energy drinks with alcohol—is a growing trend among young people. The result can be life-threatening as the caffeine-buzz in energy drinks masks the effects of alcohol and teens may not realize that they are intoxicated. Teens become drunk faster and drink alcohol in greater quantities-which can lead to alcohol poisoning.

The best way to counteract these potential dangers is to educate teens about the health risks of energy drinks alone, and in conjunction with alcohol.

MyPlate

MyPlate is a pictorial representation of the 2010 *Dietary Guidelines for Americans*. Developed by the U.S. Department of Agriculture (USDA), it provides recommendations for healthy eating focusing on the five food groups—grains, vegetables, fruits, dairy and protein. The goal of *MyPlate* is to assist Americans in learning how to eat a nutritious diet and providing support for healthy eating through online resources.



The USDA website Choose*MyPlate*.gov offers personalized information based on an individual's age, gender, weight, height, and level of physical activity. The *MyPlate* website also has interactive tools that help plan and assess food choices. This interactive component of *MyPlate* is the *Supertracker*. The *Supertracker* provides an opportunity to track food intake and compare intake to individualized recommendations. It also allows users to set goals and receive tips and support from a virtual coach. Visit https://www.supertracker.usda.gov/default.aspx to explore all the features of the *Supertracker*.

MyPlate uses common measurements to indicate how much food to consume from each food group. The most common measurements used by *MyPlate* are cups, ounces, and tablespoons. While the recommended quantity of food will differ between individuals, the measurements used to represent the quantity of food will be consistent regardless of the age, gender,

Did You Know?

When measured in cups, serving sizes for ready-to-eat cereals range from ¼ cup to 1⅓ cups. A 1-oz serving size for more dense cereal like granolas tends to be ¼ - ⅓ cup. Lighter, unsweetened cereals such as puffs and flakes measure closer to 1 to 1⅓ cups per 1-oz serving.

Many people, including teens, are surprised at how small the serving size is for ready-to-eat cereals. When pouring a bowl of cereal, people are likely to pour more than the recommended serving size, meaning they are consuming more than one serving at a time. Depending on the type of cereal eaten, the consequence can be positive health benefits such as eating more fiber, minerals and vitamins. However, it can also lead to eating more calories and more added sugar, especially if sweetened cereal is consumed regularly.

weight, and physical activity. Here are examples of the common measurements *MyPlate* uses for each food group:

Grains

1 ounce—bread (usually 1 slice bread)

1 ounce—ready-to-eat cereal

½ cup—cooked pasta, rice, or cereal

1 serving—6" tortilla

Vegetables

1 cup—raw or cooked

2 cups—raw leafy greens

1 cup—100% vegetable juice

Fruit

1 cup—raw or cooked

½ cup—dried

1 cup—100% juice (current recommendations are to consume no more than ½ cup daily)

Dairy

1 cup—milk or calcium-fortified substitute

1 cup—yogurt

1½ ounce—natural cheese (e.g., cheddar)

2 ounces—processed cheese (e.g. American)

Protein

1 ounce—lean meat, poultry, or seafood

1 egg

1 tablespoon—peanut butter

½ ounce—nuts or seeds

¼ cup cooked beans, dried peas, or tofu

2 tablespoons—hummus

MyPlate also recommends consuming a small daily quantity of healthy oils, such as olive and canola oils. One teaspoon is the measurement used for healthy oils.

To learn more about *MyPlate* visit www.ChooseMyPlate.gov.

Vegetarian and Vegan Diets

MyPlate is a flexible plan that provides healthy choices for vegetarian and vegan diets. Those choosing not to include meat products in their diets can achieve a healthy diet by eating a wide variety of foods and focusing on the following nutrients:

- Protein (e.g., dried beans and soy; milk and eggs for lacto-ovo vegetarians)
- Iron (iron-fortified cereals, lentils, whole-wheat bread)
- Calcium (e.g., calcium-fortified soy/almond/rice milk, orange juice, and tofu; dark leafy greens; dairy products for lacto-vegetarians)
- Zinc (e.g., dried beans and zinc-fortified cereals)
- Vitamin B_{12} (B_{12}-fortified breakfast cereals, soy/almond/rice milk, and veggie burgers; milk and eggs for lacto-ovo vegetarians)

For more tips on healthy vegetarian eating visit: http://www.choosemyplate.gov/healthy-eating-tips/tips-for-vegetarian.html

Reading & Understanding Food Labels

Today's food labels provide information about ingredients and nutrient content. Reading the ingredient and Nutrition Facts labels will assist teens in selecting healthy foods.

Ingredient Labels

Ingredient lists indicate what is in food products. By law, food packages must list all of the ingredients in a product. This information is always printed on the outside of the package. Food ingredients are listed according to the amount of each ingredient

Did you know?

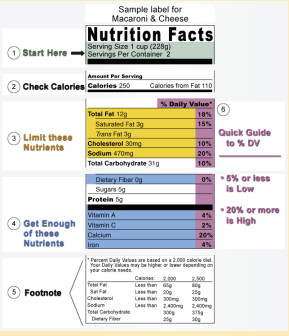
When the ingredient list is very long, the first two or three ingredients usually make up most of the product.

A Quick Guide to % Daily Value

- 5% or less is low
- 20% or more is high

Learn More About the Nutrition Facts Label

http://www.fda.gov/Food/IngredientsPackagingLabeling/LabelingNutrition/ucm274593.htm



in the package. The ingredient that weighs the most is listed first, and the ingredient that weighs the least is listed last.

Nutrition Facts Label

The Nutrition Facts label is used to select nutritious foods. This label always states the nutritional value in a single serving of the product. For each serving of the product, the label gives the:

- serving size
- amount of fat, cholesterol, and sodium
- amount of carbohydrates, including fiber and sugar
- amount of protein
- amount this food provides of the daily needs for vitamin A, vitamin C, calcium, and iron (some labels list additional nutrients in this section)

% Daily Value (% DV)

The Nutrition Facts label also includes the % Daily Value (% DV). This shows how the food fits into an overall diet. The % Daily Value column in the Nutrition Facts label indicates whether a food is high or low in nutrients. A 5% Daily Value or lower means that the food provides a small amount of the nutrient. A food with a 20% Daily Value or higher provides a large amount of the nutrient. Use % Daily Value to select foods that are low in fat, saturated fat, cholesterol, and sodium and to select foods that are high in fiber, vitamins, and minerals.

Food Safety

Keeping food safe is equally as important as eating nutritious foods.

Food poisoning occurs when food is mishandled and becomes contaminated with harmful bacteria or viruses. Contaminated food can lead to illness. Common symptoms of food poisoning include upset stomach, nausea, cramping, and diarrhea. More serious symptoms include kidney failure, blurred vision, meningitis, paralysis, chronic arthritis, nerve and brain damage, and even death.

One in six people living in America become sick from food poisoning each year. Plus, more than 100,000 are hospitalized and 3,000 people die from food poisoning yearly. Practicing food safety techniques in educational situations and at home can help to prevent teens from becoming victims of food poisoning.

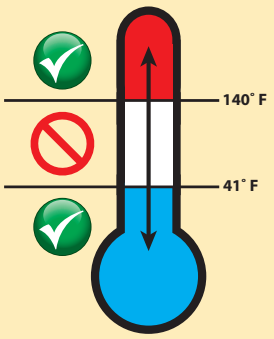
Susceptible foods, warm temperatures, and enough time for the bacteria to multiply can lead to food poisoning.

Susceptible foods include animal foods, such as meat, poultry, seafood, eggs, and dairy products. Cut fruits and vegetables are also considered susceptible foods.

The danger zone for food is between 40°F - 140°F. Bacteria and viruses will grow very rapidly when susceptible foods are left in the danger zone.

Food poisoning bacteria can double every 20 minutes, making susceptible foods unsafe in as little as 2 hours. **Any susceptible foods left at room temperature for 2 or more hours should be thrown away.**

Fortunately, most food poisoning can be prevented.



Watch these two-minute videos

http://www.foodsafety.gov/keep/basics/ads/index.html

Clean

Separate

Clean

Chill

Clean, Separate, Cook & Chill

The U.S. Food and Drug Administration (FDA) recommends four techniques for keeping our food safe:

Clean

- Wash hands with soap and water
- Clean food surfaces and utensils
- Rinse all fruits and vegetables in cold water

Separate

- Use separate cutting boards and plates to separate produce from meat, poultry, seafood, and eggs
- Keep meat, poultry, seafood, and eggs separate from all other foods in the grocery store and in the refrigerator

Cook

- Use a thermometer when cooking
- After cooking, keep hot foods hot (140°F or hotter)
- Cook microwave foods thoroughly to 165°F

Chill

- Set the refrigerator at 40°F or below
- Refrigerate perishable food within 2 hours (1 hour if outside temperature is over 90°F)
- Thaw food in the refrigerator, under cold running water, or in the microwave---never leave food out on the counter to defrost

Additional important information for keeping food out of the Danger Zone includes:

- For brown bag lunches, potlucks, and picnics, always transport cold perishable foods in an insulated container with ice or ice packs.
- Transport hot foods in separate insulated containers.
- Never put both hot and cold foods in the same insulated containers.

The single most important food safety practice for teens, and everyone else, is to wash hands thoroughly before preparing or

eating food. To be most effective, hands need to be rubbed under warm running water with soap for 20 seconds or more.

The steps for effective hand washing include:

- Wet hands with warm water
- Apply liquid soap
- Rub hands for 20 seconds
- Rub between fingers; around nails
- Rub forearms; then rinse
- Use single use towel to dry
- Use towel to turn off faucet
- Discard towel

Another important food safety practice to introduce to teens involves how to thoroughly clean food preparation surfaces and utensils before and after preparing food. This includes washing all surfaces, utensils, and cleaning cloths or sponges with hot soapy water. Automatic dishwashers can also be used for cutting boards, utensils, cleaning sponges and dishcloths.

Food Dating

Food dating is used to help manufacturers, grocers, and consumers know when foods should be used for best quality and/or safety. Understanding these dates can assist teens in selecting fresh and safe foods.

While there are few federal standards for food dating, nearly half of the states in the U.S. have state food dating requirements. Therefore, food dating requirements will vary by state, with some states having no requirements other than the minimal federal standards.

Federal standards classify food dates as Open Dating or Closed Dating. Open Dating uses a calendar date, while Closed Dating uses a code.

Did you know?

Gel hand sanitizers are not recommended as a substitute for thorough hand washing. Sanitizers kill most of the organisms on the hands, but not all of them. The ones that survive will multiply and be more resistant when hand sanitizers are used again. Additionally, sanitizers do not remove dirt from hands.

Try This

If the facility where this activity is being conducted allows the use of disinfecting solutions, consider this inexpensive and effective solution. Mix 1 tablespoon liquid bleach with 1 quart water. Use this solution to spray washed counter tops/cutting boards, soak dishcloths, and clean cooking utensils. When spraying on surfaces, let the solution sit for 5 minutes, then rinse with water. Use running water for rinsing cutting boards, dishcloths, and utensils.

Important Note:
Make a new batch of this disinfectant daily as it loses its potency after 24 hours.

Dating Tip:

An easy way to remember which expiration date refers to food safety is to remember the letter S. Both the word safety and the term Sell By begin with the letter S.

Open Dating

Open Dating can be found on a variety of refrigerated, frozen, canned, and boxed foods. Open Dating is commonly referred to as an Expiration Date.

When a manufacturer uses Open Dating, the date must include both a month and day of the month for perishable foods. Refrigerated foods, such as dairy products and lunch meats, are classified as perishable. An example of what this type of date looks like is: May 15.

For frozen and non-perishable foods the date must include the month, day of the month, and the year. Non-perishable foods include boxed and canned foods. An example of what this type of date looks like is: May 15, 2015.

When a calendar date is used, it is often, but not always, accompanied with a phrase that explains the date. Examples of calendar dates with phrases that can be seen on foods purchased in grocery stores include:

Sell By Date: this date tells the store how long to display the product for sale. Foods with Sell By Dates should be purchased before the date expires, then eaten within a couple of days. This is the only date on food packages that relates to food safety. Milk, fresh meats, and refrigerated salsa are foods that might have a Sell By Date stamped on the package.

Use By Date: this is the last date recommended for use of the product while at peak quality. The manufacturer of the product determined this date based on flavor, texture, and color of the food. This is not a food safety date. Eggs are an example of a food that might carry a Use By Date.

Best if Used By Date: this is a date that indicates when to use a food for best flavor or quality. Also known as Best if Used Before Date, this is not a purchase or food safety date. Cheese and canned foods are examples of products that might display a Best if Used By Date.

Any product with Open Dating will assist teens in selecting food that has good quality. However, the Sell By date will be most helpful in choosing foods that are less likely to be at risk for food poisoning.

Closed Dating

When a code of numbers and letters is used to date food, it's known as Closed Dating. Manufacturers use these numbers and letters to assist in rotating stock. Closed dates can also be used during a food recall to remove food from grocery store shelves as the code includes the manufacturing location, date, batch number, and other identifying information that can trace the food back to the processing plant. Canned foods are an example of the type of food that might have closed dates.

Many food manufacturers give both an open and closed date on foods. These might be displayed together or separated on the food package. When both dates are used on the same package, the consumer can find the safety and freshness information they need, while the grocer and manufacturer can use the information to rotate stock and pull foods in a recall.

A word of caution: *Open Dating assumes the perishable food has been handled safely along the food chain from the farm, to the processing plant, to the grocery store, and finally into the home. This means that refrigerated and frozen foods have been kept at optimal temperatures—40°F or lower for refrigerated foods and 0°F or lower for frozen foods. If the food was mishandled anywhere along the food chain, it is possible that the food could become unsafe to eat.*

Teens can help to ensure the foods they purchase remain safe by promptly refrigerating cold foods and keeping hot foods hot. Any perishable food that is in the Danger Zone of 40°F to 140°F for more than 2 hours should be disposed of so it cannot be eaten.

Did you know?

Many food coupons are for less nutritious foods—foods that are high in fat and added sugar. Many grocery store and restaurant coupons may not be good money saving options for teens who want to eat healthy diets.

Food Buying

The amount and type of food teens purchase, whether from a restaurant or the grocery store, influences how much they spend on food. There are many strategies teens can use to get the best food buys, such as:

Eating Out

- Sharing a meal with a friend
- Taking advantage of early bird specials
- Using restaurant coupons
- Participating in loyal customer clubs
- Bringing food to a park or a friend's house
- Avoiding vending machine foods
- Asking for a glass of water rather than buying a beverage
- Selecting less expensive restaurants

At the Grocery Store

- Comparing ingredients and Nutrition Facts labels
- Using unit pricing
- Shopping when not hungry
- Shopping when the store is not crowded
- Shopping alone
- Using coupons wisely
- Making and using a shopping list
- Buying foods on sale
- Buying fresh fruits and vegetables in season
- Choosing foods with less packaging
- Buying in bulk
- Buying store brands rather than national brands
- Enrolling in grocery store club card programs

Many of the money saving techniques listed above are self-explanatory, however short descriptions of a few of these strategies are listed below:

Coupons: Coupons are small discounts given on specific products either at restaurants or in grocery stores. They are commonly found in newspaper ads, grocery store and restaurant ads, and online. Coupons can save money if they are used for products that will be eaten. However, just because a product has a coupon doesn't mean it's the best buy. To be sure they are saving money, teens should calculate the price of the product when using a coupon and compare to similar products, such as store brands. Sometimes a similar product will be less expensive than the product with a coupon.

Loyal Customer Clubs: Some restaurants offer discounts to customers who frequent their restaurants. Usually this is in the form of a small card that is stamped or punched each time a purchase is made. Some restaurants do this electronically using a club card or phone number. After a certain number of purchases, the customer is offered free or discounted foods or beverages.

Unit Pricing: Unit pricing is the price of an item per unit of measure (such as by ounce, count, or pound). Comparing unit pricing can help teens select the best buy. Most large grocery stores list the unit price on the shelf. It is usually found on the same tag that indicates the cost of an item. Unit pricing is useful in comparing similar products—such as two brands of fat free yogurt. It is also helpful in finding the best price on different sizes of the same product—such as two different sizes of ready-to-eat cereal. Unit pricing is not helpful in comparing two different products such as carrots and bread. It is also less useful when a store uses different measurements to show unit pricing. As an example, the unit price for oatmeal may be listed by the ounce for one size or brand, but by the pound for a different size or brand.

Buying store brands rather than national brands: National brands are products identified by the name of the manufacturer and are advertised and sold nationally. They are usually high quality products and priced higher than store brands. Store brands are products manufactured or packaged for a particular store. Store brands are the same high quality as national brands, but are often priced lower. Store and national brands are usually very similar, however, store brands often use a slightly different recipe than the national brands. Ready-to-eat cereals, canned fruits and vegetables, yogurts, milk, and cheeses are examples

The discussion questions below can be used to introduce the topic to teens and get them thinking about the food choices they make.

Opening Discussion Questions

- Ask teens why people choose less nutritious foods over healthy options.
- Ask teens how often they make a conscious effort to keep food safe.
- Ask teens how they could save money when they eat out and/or at home.

of foods that are typically available as store brands. Teens can usually save money by purchasing store brands, but it's always important to compare prices, as national brands may be less expensive if they are on sale.

Shopping when not hungry: Eat first and save money. Food looks more tempting and will more likely be added to the grocery cart when shopping hungry.

Shopping alone: The less time spent in a grocery store, the less money will be spent. Shopping at the grocery store alone usually results in less time inside the store. Shopping alone also eliminates influences from others who may want to add additional groceries and less nutritious items to the shopping cart.

Shopping when the store is not crowded: Just like shopping alone, going to the store when it is less crowded will usually result in a shorter shopping trip and less money spent.

Grocery Store Club Cards: A program that offers discounts and other incentives to customers who enroll.

Common Abbreviations

Volume Measurements

Teaspoon ..... tsp or t
Tablespoon ..... Tbsp or T
Fluid ounce ..... fl oz
Cup ..... c or C
Pint ..... pt
Quart ..... qt
Gallon ..... gal
Milliliter ..... ml
Liter l

Weight Measurements

Ounce ..... oz
Pound ..... lb
Microgram ..... mcg
Milligram ..... mg
Gram ..... g
Kilogram ..... kg

Common Equivalents

1 tbsp = 3 tsp
2 tbsp = 1 oz
4 tbsp = ¼ c
5 tbsp + 1 tsp = ⅓ c
8 tbsp = ½ c
12 tbsp = ¾ c
16 tbsp = 1 c
1 c = 8 oz or ½ pt
2 c = 1 pt
4 c = 1 qt
4 qt = 1 gal

Additional Resources

Websites

Money Talks is a financial literacy website for teens that is available in both English and Spanish. It contains downloadable versions of money management teen guides, interactive games, simple exercises, videos and links to other financial websites. Teachers/leaders have access to a special section of the site containing leader's guides for each unit, research articles, and additional links. Accessed May 2013. http://moneytalks4teens.org

About.com Southern Food website links to several fast food restaurants. At each restaurant site, nutritional information is available. Accessed May 2013. http://southernfood.about.com/library/weekly/aa081402a.htm

Childhood Obesity Facts is a Centers for Disease Control and Prevention website that provides statistics regarding childhood obesity trends, potential health and social issues related to children being overweight, and the role schools can play in providing a safe environment for children to practice healthy lifestyles. http://www.cdc.gov/healthyyouth/obesity/facts.htm Accessed July 2013.

Dietary Guidelines for Americans website summarizes the 2010 Dietary Guidelines recommendations. Accessed May 2013. http://www.cnpp.usda.gov/dgas2010-policydocument.htm

Empty Calorie Chart is a chart that makes it easy to compare empty calories in common foods. Accessed May 2013. http://www.choosemyplate.gov/food-groups/emptycalories_count_table.html

Food Facts for Consumers is an FDA website that provides specific food safety information on a variety of food safety topics. Accessed May 2013. http://www.fda.gov/Food/ResourcesForYou/Consumers/ucm077286.htm

Healthy Dining Finder website suggests healthier food choices at restaurants listed in the database. This site includes chains and local restaurants that can be searched by city or zip code. Accessed May 2013. http://www.healthydiningfinder.com/home

Interactive Fast Food Menu with Activity website provides an opportunity to determine nutritional information about fast food meals and learn how much physical activity is needed to work off the calories in the selected meal. Accessed May 2013. http://www.extension.org/pages/Interactive_Fast_Food_Menu_with_Fitness

Interactive Nutrition Facts Label website allows visitors to click on parts of the Nutrition Facts Label and learn what the components represent. Accessed May 2013. http://www.extension.org/pages/Interactive_Nutrition_Facts_Label

Nutritious Eating Out website offers tips for making healthy choices when eating in restaurants. Accessed May 2013. http://www.uhs.wisc.edu/health-topics/healthy-lifestyle/eating-out.shtml

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Take Charge of Your Health—A Guide for Teens is designed to help teens take small and simple steps to keep a healthy weight, while providing basic facts about nutrition and physical activity. Weight Control Information Network (U.S Department of Health and Human Services, National Institute of Health, and National Institute of Diabetics, Digestive and Kidney Health). August 2009. http://win.niddk.nih.gov/publications/PDFs/teenblackwhite3.pdf

Rate Your Restaurant Diet is a quiz about restaurant food choices. Accessed May 2013. http://www.cspinet.org/nah/quiz/index.html

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Peterson, Shirley (2007). The Lunch Box Series: Safe Lunches for Preschool Children. UCANR Publication #8109. http://anrcatalog.ucdavis.edu/LunchBoxSeriesLaLonchera/8109.aspx

Scannell, Edward E. and John W. Newstrom. (1994). Even More Games Trainers Play: Experiential Learning Exercises. McGraw-Hill, Inc.

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Americans. http://www.cnpp.usda.gov/DietaryGuidelines.htm

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U.S. Department of Agriculture, Food Safety and Inspection Service. Food Product Dating. September 16, 2011. http://www.fsis.usda.gov/factsheets/food_product_dating/

U.S. Department of Health and Human Services and U. S. Department of Agriculture. Eating Healthier and Feeling Better Using the Nutrition Facts Label. August 2006. http://www.fda.gov/downloads/Food/LabelingNutrition/ConsumerInformation/ucm120909.pdf

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This publication has been anonymously peer reviewed for technical accuracy by University of California scientists and other qualified professionals. This review process was managed by the ANR Associate Editor for Youth Development.

To simplify information, trade names of products have been used. No endorsement of named or illustrated products is intended, nor is criticism implied of similar products that are not mentioned or illustrated.

ANR Publication 8274

Hunger Attack Glossary

Closed Dating A food dating system that uses letters and numbers to indicate the manufacturer, the location where the product was made and packaged, and the age of the product.

Club Card A card from a particular store that gives special incentives and/or discounts for purchasing certain items in their store.

Coupon Part of a printed, online, or mobile advertisement used to receive a discount on the purchase of an item.

Danger Zone The temperatures between 40°F -140°F. Perishable foods held in this temperature zone can become unsafe in as little as 2 hours.

Dietary Guidelines for Americans A set of recommendations, developed by the United States government, that encourages healthy food choices for individuals ages 2 years and older living in the United States.

Ingredient Label A label on a food item that lists the food ingredients contained in the product. The ingredients are listed by weight starting with the ingredient that weighs the most.

Fat Free Foods with less than 0.5 grams of fat per serving.

Low Fat Foods with 3 grams or less fat per serving.

MyPlate.gov Dietary recommendations for healthy eating focusing on the five food groups – grains, vegetables, fruits, dairy and protein—that were developed by the USDA.

National Brands Items identified by the name of the manufacturer and that are advertised and sold nationally.

Nutrition Facts Label A label on a food item that lists nutritional information about the food product in a standard format.

Open Dating A food dating system that uses a calendar date to indicate safety and/or freshness of a product.

% Daily Values (% DV) Information on a nutrition facts label that can be used to compare the nutritional value of foods and

determine how a food fits into an overall diet.

Reduced Fat Foods with at least ¼ less fat than the regular version of the product.

Refined Grain Grains that have been milled to remove the bran and germ portions of the kernel.

Serving Size A recommended amount of food that is considered a serving by the U.S. Food and Drug Administration; different foods have different serving sizes.

Store Brands Item manufactured or packaged for a particular store.

Unit Pricing The price of an item per unit of measure (such as by ounce, count, or pound).

UPC (Universal Product Code) A group of lines, that when scanned, states the name of the product, the manufacturer, and the price.

Whole grain A food ingredient or product that contains the entire grain kernel, which consists of the bran, germ and endosperm.

Money Talks…Should I Be Listening? Is a series of teen and leader's guides designed for teens. The topics and subject matter content are based on the results of a survey completed by teens. The goals of these teen guides and leader's guides are to assist teens in 1) identifying their money spending and saving habits; 2) understanding the importance of long-term savings; and 3) developing savings plans that meet their lifestyles. This Hunger Attack unit also addresses how good nutrition and safe food handling contribute to healthy lifestyles of teens.

Comments regarding these teen guides and leader's guides can be addressed to: Consumer Economics Department, University of California Cooperative Extension (UCCE), 4501 Glenwood Drive, Riverside, CA 92521.

Authors: Shirley Peterson, Margaret Johns, and Brenda Roche Wolford; Development Team: Susan Cortz, Patti Wooten Swanson, Susan Algert, Charles Go, Keith Nathaniel, Karen Varcoe, Drusilla Rosales, Katherine Soule and UCCE Money Talks Workgroup. Special thanks to Claudia Carlos and Mathew Larson for their insightful comments; to Beverly J. Snowden for editing; to Katherine Breyer for development of assessment tools, and to Kerry Decker for the design and illustration. 2007, revised, 2011, 2013.

Hunger Attack Evaluation Tools

Evaluation tools are provided in two formats:

1. Pre/post-test format – Teens are asked to complete the pre-test survey at the first class, prior to the implementation of the program. The Hunger Attack curriculum is then delivered. After the last class is completed, teens should be asked to fill out the post-test survey. The teen's name must be noted on the top of the first page of both survey tools so they can be matched. Once matched, the names should be removed and ID numbers assigned to the surveys.

2. Retrospective format – With the retrospective format teens complete the survey at the last class of the Hunger Attack program. They are asked about their behavior and knowledge now "After Hunger Attack." Then they answer the same questions, but thinking back to "Before" they participated in the Hunger Attack program. Teen names are not required since all the information is contained on one form.

With your supervisor or appropriate program state office, determine the correct tool to use with your participants.

Hunger Attack! Feed Your Appetite, Protect Your Wallet

First Name _____ Last Name _____

PRE-TEST

Check the box that best matches your answer. You will not be graded and all your answers will be kept private.

1. Yesterday, how many times did you…	**Number of Times**				
	0	**1**	**2**	**3**	**4 or More**
eat vegetables, not counting French fries? Include cooked vegetables, raw vegetables, and salads. Count each type of vegetable separately, like if you ate a salad with lettuce and tomato = 2 times.	☐	☐	☐	☐	☐
eat fruit, not counting fruit juice? Include fresh, frozen, canned, and dried fruits. Count each type of fruit separately, like if you ate a mango pineapple fruit cup = 2 times.	☐	☐	☐	☐	☐
drink milk (nonfat, 1% low-fat milk, chocolate or flavored) and/or ate food made with milk like cereal, yogurt, smoothies, cereal, etc.?	☐	☐	☐	☐	☐
drink sweetened drinks like soda, fruit-flavored drinks, sports drinks, energy drinks, and vitamin water? Do not include 100% fruit juice.	☐	☐	☐	☐	☐

2. How often do you...	**Never**	**Seldom**	**Sometimes**	**Often**	**Always**
choose to eat whole grain products, like 100% whole wheat bread or brown rice vs. white bread or white rice?	☐	☐	☐	☐	☐
choose low-fat foods when eating out, like low-fat dressing, plain baked potato, or grilled chicken?	☐	☐	☐	☐	☐
wash your hands before eating?	☐	☐	☐	☐	☐
wash fruits and vegetables before eating them?	☐	☐	☐	☐	☐
check the expiration date before eating or drinking foods?	☐	☐	☐	☐	☐
help your family by using store coupons, going to a food pantry, or finding other free or low-cost food resources?	☐	☐	☐	☐	☐

3. What do you know?	**True**	**False**
Snacks are cheapest at convenience stores.	☐	☐
Snacks can be healthy and inexpensive.	☐	☐
Food from a vending machine costs more than food from most other sources.	☐	☐
A good time to go grocery shopping is after you have eaten.	☐	☐
Food displayed at the end of the aisle is always on sale.	☐	☐
Food displayed on the bottom shelves usually costs more than food at eye-level.	☐	☐
Making food at home is usually cheaper than buying food out.	☐	☐

4. How <u>often</u> do you...	**Never**	**Seldom**	**Sometimes**	**Often**	**Always**
use coupons at the grocery store?	☐	☐	☐	☐	☐
buy snacks at the movies?	☐	☐	☐	☐	☐
use vending machines to buy beverages or food?	☐	☐	☐	☐	☐
buy from food cart at school?	☐	☐	☐	☐	☐
track how much you spend on food each week?	☐	☐	☐	☐	☐
use coupons at restaurants?	☐	☐	☐	☐	☐
join a frequent buyers club at your favorite restaurants or coffee houses?	☐	☐	☐	☐	☐
look for special offers at the places you like to eat?	☐	☐	☐	☐	☐

5. How <u>often</u> do you...	**Never**	**Seldom**	**Sometimes**	**Often**	**Always**
keep track of what you eat?	☐	☐	☐	☐	☐
share a meal with a friend instead of buying two individual meals?	☐	☐	☐	☐	☐
drink water with a meal instead of buying a beverage?	☐	☐	☐	☐	☐
carry snacks so you don't have to buy them while you're away from home?	☐	☐	☐	☐	☐
worry about too much fat and sugar in your food?	☐	☐	☐	☐	☐

<u>ABOUT YOU</u>

A) How old are you? _____ years

B) What grade are you in? _____ grade

C) What is your gender?
☐ Female ☐ Male

D) Are you (Check one or more):
☐ Asian
☐ Native American
☐ Black or African American
☐ White

F) Hispanic?
☐ Yes ☐ No

E) Do you worry about having enough food to eat?
☐ Yes ☐ No

For Office Use Only
Teacher Name:
School Name:
City:

Hunger Attack! Feed Your Appetite, Protect Your Wallet

First Name _____ Last Name _____

POST-TEST

Check the box that best matches your answer. You will not be graded and all your answers will be kept private.

1. Yesterday, how many <u>times</u> did you…	**Number of Times**				
	0	**1**	**2**	**3**	**4 or More**
eat vegetables, not counting French fries? Include cooked vegetables, raw vegetables, and salads. Count each type of vegetable <u>separately</u>, like if you ate a salad with lettuce and tomato = 2 times.	☐	☐	☐	☐	☐
eat fruit, not counting fruit juice? Include fresh, frozen, canned, and dried fruits. Count each type of fruit <u>separately</u>, like if you ate a mango pineapple fruit cup = 2 times.	☐	☐	☐	☐	☐
drink milk (nonfat, 1% low-fat milk, chocolate or flavored) and/or ate food made with milk like cereal, yogurt, smoothies, cereal, etc.?	☐	☐	☐	☐	☐
drink sweetened drinks like soda, fruit-flavored drinks, sports drinks, energy drinks, and vitamin water? Do not include 100% fruit juice.	☐	☐	☐	☐	☐

2. How <u>often</u> do you...	**Never**	**Seldom**	**Sometimes**	**Often**	**Always**
choose to eat whole grain products, like 100% whole wheat bread or brown rice vs. white bread or white rice?	☐	☐	☐	☐	☐
choose low-fat foods when eating out, like low-fat dressing, plain baked potato, or grilled chicken?	☐	☐	☐	☐	☐
wash your hands before eating?	☐	☐	☐	☐	☐
wash fruits and vegetables before eating them?	☐	☐	☐	☐	☐
check the expiration date before eating or drinking foods?	☐	☐	☐	☐	☐
help your family by using store coupons, going to a food pantry, or finding other free or low-cost food resources?	☐	☐	☐	☐	☐

3. What do you <u>know</u>?	**True**	**False**
Snacks are cheapest at convenience stores.	☐	☐
Snacks can be healthy and inexpensive.	☐	☐
Food from a vending machine costs more than food from most other sources.	☐	☐
A good time to go grocery shopping is after you have eaten.	☐	☐
Food displayed at the end of the aisle is always on sale.	☐	☐
Food displayed on the bottom shelves usually costs more than food at eye-level.	☐	☐
Making food at home is usually cheaper than buying food out.	☐	☐

4. How <u>often</u> do you...	Never	Seldom	Sometimes	Often	Always
use coupons at the grocery store?	☐	☐	☐	☐	☐
buy snacks at the movies?	☐	☐	☐	☐	☐
use vending machines to buy beverages or food?	☐	☐	☐	☐	☐
buy from food cart at school?	☐	☐	☐	☐	☐
track how much you spend on food each week?	☐	☐	☐	☐	☐
use coupons at restaurants?	☐	☐	☐	☐	☐
join a frequent buyers club at your favorite restaurants or coffee houses?	☐	☐	☐	☐	☐
look for special offers at the places you like to eat?	☐	☐	☐	☐	☐

5. How <u>often</u> do you...	Never	Seldom	Sometimes	Often	Always
keep track of what you eat?	☐	☐	☐	☐	☐
share a meal with a friend instead of buying two individual meals?	☐	☐	☐	☐	☐
drink water with a meal instead of buying a beverage?	☐	☐	☐	☐	☐
carry snacks so you don't have to buy them while you're away from home?	☐	☐	☐	☐	☐
worry about too much fat and sugar in your food?	☐	☐	☐	☐	☐

6. Thinking of "Hunger Attack", write down 3 or more words that come to mind.

7. After finishing, what are some things you learned?

8. How do you plan to use the things you learned?

9. Did you make any changes in your daily food and food buying choices?

10. Do you worry about having enough food to eat? ☐ **Yes** ☐ **No**

For Office Use Only
Teacher Name:
School Name:
City:

Today's Date: ____/____/____

Hunger Attack! Feed Your Appetite, Protect Your Wallet

Congratulations, you have completed the "Hunger Attack" curriculum. Thinking about NOW, *After Hunger Attack*, please fill in the gray column for questions 1-5 below first. Then, thinking back to *BEFORE Hunger Attack*, please fill in the right column for questions 1-5 below. For questions 6-9, please provide short answers.

1. Yesterday, how many times did you…	**AFTER Hunger Attack** Number of Times					**BEFORE Hunger Attack** Number of Times				
	0	**1**	**2**	**3**	**4 or More**	**0**	**1**	**2**	**3**	**4 or More**
eat vegetables, not counting French fries? Include cooked vegetables, raw vegetables, and salads. Count each type of vegetable separately, like if you ate a salad with lettuce and tomato = 2 times.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
eat fruit, not counting fruit juice? Include fresh, frozen, canned, and dried fruits. Count each type of fruit separately, like if you ate a mango pineapple fruit cup = 2 times.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
drink milk (nonfat, 1% low-fat milk, chocolate or flavored) and/or ate food made with milk like cereal, yogurt, smoothies, cereal, etc.?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
drink sweetened drinks like soda, fruit-flavored drinks, sports drinks, energy drinks, and vitamin water? Do not include 100% fruit juice.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

2. How often do you…	**AFTER Hunger Attack**					**BEFORE Hunger Attack**				
	Never	**Seldom**	**Sometimes**	**Often**	**Almost always**	**Never**	**Seldom**	**Sometimes**	**Often**	**Almost always**
choose to eat whole grain products, like 100% whole wheat bread or brown rice vs. white bread or white rice?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
choose low-fat foods when eating out, like low-fat dressing, plain baked potato, or grilled chicken?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
wash your hands before eating?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
wash fruits and vegetables before eating them?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
check the expiration date before eating or drinking foods?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
help your family by using store coupons, going to a food pantry, or finding other free or low-cost food resources?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

3. What do you <u>know</u>?	**AFTER Hunger Attack**		**BEFORE Hunger Attack**	
	True	**False**	**True**	**False**
Snacks are cheapest at convenience stores.	☐	☐	☐	☐
Snacks can be healthy and inexpensive.	☐	☐	☐	☐
Food from a vending machine costs more than food from most other sources.	☐	☐	☐	☐
A good time to go grocery shopping is after you have eaten.	☐	☐	☐	☐
Food displayed at the end of the aisle is always on sale.	☐	☐	☐	☐
Food displayed on the bottom shelves usually costs more than food at eye-level.	☐	☐	☐	☐
Making food at home is usually cheaper than buying food out.	☐	☐	☐	☐

4. How <u>often</u> do you…	**AFTER Hunger Attack**					**BEFORE Hunger Attack**				
	Never	**Seldom**	**Sometimes**	**Often**	**Almost always**	**Never**	**Seldom**	**Sometimes**	**Often**	**Almost always**
use coupons at the grocery store?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
buy snacks at the movies?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
use vending machines to buy beverages or food?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
buy from food cart at school?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
track how much you spend on food each week?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
use coupons at restaurants?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
join a frequent buyers club at your favorite restaurants or coffee houses?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
look for special offers at the places you like to eat?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. How <u>often</u> do you…	AFTER Hunger Attack					BEFORE Hunger Attack				
	Never	Seldom	Sometimes	Often	Almost always	Never	Seldom	Sometimes	Often	Almost always
keep track of what you eat?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
share a meal with a friend instead of buying two individual meals?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
drink water with a meal instead of buying a beverage?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
carry snacks so you don't have to buy them while you're away from home?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
worry about too much fat and sugar in your food?	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

6. Thinking of "Hunger Attack", write down 3 or more words that come to mind.

7. After finishing, what are some things you learned?

8. How do you plan to use the things you learned?

9. Did you make any changes in your daily food and food buying choices?

10. Do you worry about having enough food to eat?

☐ Yes ☐ No

For Office Use Only
Teacher Name:
School Name:
City

Hunger Attack Assessment Tools

The assessment tools are intended for leaders to use at their discretion. Depending on the group of teens and the setting, leaders may want to use the assessments as:

- additional activities,
- homework, or
- as a means to determine a formal grade for completing the unit.

Hunger Attack

ASSESSMENT ONE:

- **Knowledge**
  - o T / F One in six people living in America become sick from food poisoning each year.
  - o T / F On average, added sugar and solid fats make up 35% of the typical American diet.
  - o T / F Food poisoning bacteria grows very slowly.

- **Comprehension**
  - o Explain what the *Dietary Guidelines for Americans* are.
  - o Explain what the % Daily Value column on a Nutrition Facts Label is and how you can use it to make healthy food choices.

- **Application**
  - o How can a closed dating code help in the event of a foodborne illness outbreak?

- **Analysis**
  - o Identify the four techniques recommended by the USDA for keeping food safe. Analyze how these techniques can be incorporated into your life and help keep you healthy.

- **Synthesis**
  - o Using the USDA's My Plate guidelines, create a meal that follows the appropriate proportions for each group.

- **Evaluation**
  - o Take a minute to think about food buying habits and decide if you make healthy and money wise shopping decisions. Explain and support your answer in a short paragraph.
  - o How can you use the information you learned in *Hunger Attack* to help your family make healthy and inexpensive food buying decisions? Explain?
  - o Why do people eat out of habit? Identify and evaluate two situations when you eat out of habit.
  - o Think about food you prepare or purchase on a regular basis. What can you do to make sure the food is safe from foodborne illnesses?

Hunger Attack

ANSWER KEY FOR ASSESSMENT ONE:

- **Knowledge**
  - TRUE One in six people living in America become sick from food poisoning each year.
  - TRUE On average, added sugar and solid fats make up 35% of the typical American diet.
  - FALSE Food poisoning bacteria can double every 20 minutes, making susceptible foods unsafe in as little as two hours.

- **Comprehension**
  - *The Dietary Guidelines for Americans* is a set of recommendations that encourages healthy food choices. The Guidelines encourage Americans to eat a healthful diet — one that focuses on foods and beverages that help achieve and maintain a healthy weight, promote health, and prevent disease.
  - The % Daily Value column in the Nutrition Facts label indicates whether a food is high or low in nutrients. A 5% Daily Value or lower means that the food provides a small amount of the nutrient. A food with a 20% Daily Value or higher provides a large amount of the nutrient. Use % Daily Value to select foods that are low in fat, saturated fat, cholesterol, and sodium and to select foods that are high in fiber, vitamins, and minerals.

- **Application**
  - Closed dates can be used during a food recall to remove food from grocery shelves as the code includes the manufacturing location, date, batch number, and other identifying information that can trace the food back to the processing plant.

Hunger Attack

- **Analysis**
  - The U.S. Food and Drug Administration (FDA) recommends four techniques for keeping our food safe:
    - **Clean**
      Wash hands with soap and water
      Clean food surfaces and utensils
      Rinse all fruits and vegetables in cold water
    - **Separate**
      Use separate cutting boards and plates to separate produce from meat, poultry, seafood, and eggs
      Keep meat, poultry, seafood, and eggs separate from all other foods in the grocery store and in the refrigerator
    - **Cook**
      Use a thermometer when cooking
      After cooking, keep hot foods hot (140°F or hotter)
      Cook microwave foods thoroughly to 165°F
    - **Chill**
      Set the refrigerator at 40°F or below
      Refrigerate perishable food within 2 hours (1 hour if outside temperature is over 90°F)
      Thaw food in the refrigerator, under cold running water, or in the micro wave---never leave food out on the counter to defrost

- **Synthesis**
  - Did the teen apply what they learned in Activity 1 to create a meal which follows the My Plate guidelines?

- **Evaluation**
  - Does the teen provide logical reasons and explanations for their response?

Hunger Attack

ASSESSMENT TWO:

Things I learned:	Before doing the *Hunger Attack* Unit			After doing the *Hunger Attack* Unit		
	Not at All	**A Little**	**Pretty Well**	**Not at All**	**A Little**	**Pretty Well**
I look for special offers at the places I like to eat						
I track how much I spend on food each week						
I use vending machines to buy beverages or food						

Fact or Fiction?	Before doing the *Hunger Attack* Unit			After doing the *Hunger Attack* Unit		
	Fact	**Fiction**	**Not Sure**	**Fact**	**Fiction**	**Not Sure**
Snacks can be healthy and inexpensive						
Keeping food safe is not as important as eating nutritious foods						
A good time to go grocery shopping is after I have eaten						
It is difficult to replace foods that are high in solid fats with healthier options						
Food labels provide information about ingredients and nutritional content						

Hunger Attack

1. **These are some things I liked most about this Teen Guide and Activities:**

2. **The most important things I learned are:**

3. **I will use what I learned by...**

Hunger Attack

ANSWER KEY FOR ASSESSMENT TWO:

Fact or Fiction?

	Fact	Fiction
Snacks can be healthy and inexpensive	X	
Keeping food safe is not as important as eating nutritious foods		X
A good time to go grocery shopping is after I have eaten	X	
It is difficult to replace foods that are high in solid fats with healthier options		X
Food labels provide information about ingredients and nutritional content	X	

Hunger Attack

ASSESSMENT THREE:

T F 1. Unit pricing is used to compare similar types of food.

T F 2. If you make a pizza at home and it costs $5 to make and has 10 servings, the cost per serving is $0.50.

T F 3. Foods placed on the lower shelves in the grocery store usually cost less than foods at eye level.

T F 4. Store brands are similar in quality to national brands.

T F 5. Small packages of food are usually a better buy than larger packages.

T F 6. Using unit pricing is an easy way to compare different types of food, like oranges versus bread.

T F 7. Comparing the following two bottled waters, B is the best buy.

Label A

Bottled Water		
12 pk/ 16.9 fl oz bottles	$2.99	$0.05 cents per ounce

Label B

Bottled Water		
6 pk/ 1 liter bottles	$2.99	$0.03 cents per ounce

T F 8. If you buy a drink that has 8 grams of sugar per serving, and you drink two servings, you will consume a total of 4 teaspoons of sugar.

T F 9. The following are different ways sugar can be listed on a food label: high fructose corn syrup, honey, lactose, and brown sugar.

T F 10. In the grocery store, the food displayed at the end of the aisle is always on sale.

Hunger Attack

Here are some extra T/F questions you can use for Assessment #3

T F 1. No more than 5-15% of total calories should come from solid fats and added sugars.

T F 2. *MyPlate*, by the USDA, is not flexible for vegetarians.

T F 3. The first two or three ingredients on a food label usually make up most of the product.

T F 4. The Nutrition Facts Label always states the nutritional value in the entire package of the product.

T F 5. Food poisoning occurs when food is mishandled and becomes contaminated with harmful bacteria or viruses.

T F 6. Gel hand sanitizers are a good substitute to washing your hands with soap and water.

Hunger Attack

ANSWER KEY FOR ASSESSMENT THREE:

1. **True** Unit pricing is used to compare similar foods such as different sizes of the same type product.

2. **True** To find the cost per serving, divide the total cost of the food by the number of servings. In this example, divide $5 by 10 servings to learn that the cost per serving is $0.50.

3. **True** Since more food is sold at eye level than from the lower shelves, retailers place less expensive products on the lower shelves.

4. **True** Store brands are generally the same quality as national brands. An advantage to store brands is that they usually cost less than national brands.

5. **False** As a general rule, larger packages of food are usually the better buy. However, if a large package of food cannot be used up before it spoils, it may be more economical to buy the smaller package.

6. **False** Unit pricing is only helpful when comparing similar products, like different brands of cereal or different size containers of milk.

7. **True** In this example, B is the better buy. The unit price for product B is 3 cents/oz; product A costs 5 cents/oz.

8. **True** To learn the number of teaspoons of sugar in a serving of food or beverage; divide the grams of sugar by 4. There are 4 grams of sugar per teaspoon. In this example there would be 2 teaspoons of sugar per serving (8 grams sugar divided by 4). Since two servings were consumed, there would be a total of 4 teaspoons of the sugar (2 teaspoons X 2 servings).

9. **True** Sugar goes by many names including high fructose corn syrup, honey, any ingredient ending with –ose (lactose) and brown sugar.

10. **False** Retailers place food at the end of the aisle so it's easy to see. It may or may not be on sale.

ANSWER KEY FOR ASSESSMENT THREE EXTRA T/F QUESTIONS:

1. **True** No more than 5-15% of total calories should come from solid fats and added sugars.

2. **False** *MyPlate* is a flexible plan that provides healthy choices for vegetarian and vegan diets.

3. **True** The first two or three ingredients on a food label usually make up most of the product.

4. **False** The Nutrition Facts Label always states the nutritional value in a single serving of the product.

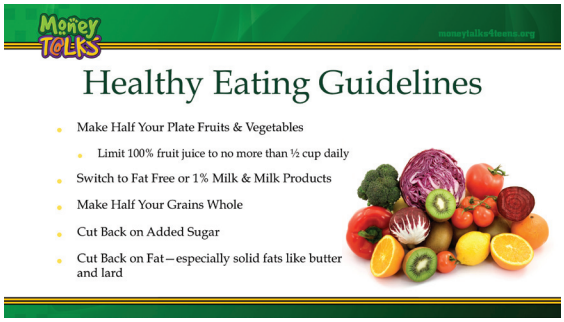
5. **True** Food poisoning occurs when food is mishandled and becomes contaminated with harmful bacteria or viruses.

6. **False** Gel hand sanitizers are not recommended as a substitute for thorough hand washing.

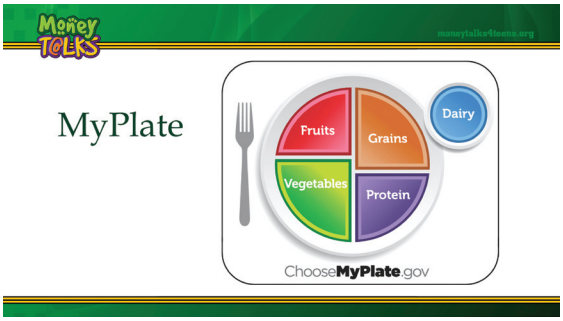
ACTIVITY ONE
MyPlate My Way

Doing the Activity

1. Summarize the *Healthy Food Choices* and *MyPlate* sections of the leader's guide background information on pages 2-11. Using visuals 1A and 1B (in *Lesson Resources* immediately following *Activity* content), highlight the following facts:



Visual 1A



Visual 1B

- What we eat today affects our health now and in the future.
- Both genetics and our food choices contribute to our risk of disease.
- Eating diets high in fat, sugar and calories, while consuming too few fruits, vegetables, and whole grains increases our risk of severe health problems. This

Activity Summary

In this activity, teens will be introduced to MyPlate, use the MyPlate Supertracker to develop a personalized eating plan, develop healthy eating goals, discuss how to overcome barriers to meeting their healthy eating goals, and make a healthy snack.

Learning Objectives

- Examine MyPlate as a suggested model for healthy eating
- Develop a personal eating plan using MyPlate resources
- Develop healthy eating goals
- Discuss how to overcome personal barriers to eating a healthy diet
- Create an easy-to-make healthy snack

Estimated Activity Time

90-150 minutes
(may be split into two or three lessons)

continued next page

Getting Ready Checklist

- ☐ Copy visuals #1A and #1B for display
- ☐ Copy handout #1C for each teen
- ☐ Arrange for computers and internet access
- ☐ Borrow or buy food models or real food in MyPlate recommended measurements
- ☐ Assemble supplies for *Extend the Lesson* activities

Supplies Needed

- ☐ Visuals #1A and #1B
- ☐ Handout #1C
- ☐ *Hunger Attack* teen guide p. 3 (1 per teen)
- ☐ Computers and access to the internet
- ☐ Food models or real food in MyPlate recommended measurements
- ☐ Answer Key for handout #1C: Varies by teens' response

Extend the Lesson

Discussion Wheel Activity

- ☐ A chair for each teen and a clock or stopwatch

Food Preparation Activity

- ☐ Food and supplies based on recipe selected

combination of food, along with a lack of physical activity, contributes to health problems including obesity, Type II diabetes, and heart disease.

- Healthy eating can prevent and reduce the risk of many health problems.
- Healthy eating focuses on eating foods and beverages that help achieve and maintain a healthy body weight, promote overall health, and prevent disease.
- Key recommendations from visual #1A include:
    - Make half your plate fruits and vegetables (See recommendations on page 4 of background information.)
        - Stress that fresh, frozen, canned, and dried fruit are preferred over juice. 100% fruit juice ***should be*** limited to ½ cup daily because it is high in calories and sugar and lacks fiber.
    - Switch to fat free and 1% milk and milk products. (See recommendations on page 5 of background information.)
    - Make at least half your grains whole. (See recommendations on pages 5-6 of background information.)
    - It's also important to cut back on added sugar and high fat foods, especially solid fats.
- *MyPlate* (visual #1B) suggests a healthy eating plan based on the five food groups: grains, vegetables, fruits, dairy, and protein.

2. Show *ChooseMyPlate.gov* website and complete a sample profile online so teens can learn how the website uses age, gender, height, weight, and physical activity to develop a personalized eating plan known as My Plan. *Please note: If the sample profile indicates a weight above the recommended weight for height, there is an option to select "maintain current weight" or "move towards a healthier weight". If "move towards a healthier weight" is selected, the calorie and food quantity recommendations will be adjusted to assist in a gradual and healthy weight loss.*

3. Using the *ChooseMyPlate.gov* website, allow teens time to develop their own My Plan. Their plans will recommend the

types and quantity of food to eat for a healthy diet based on the information they input. *Note: The website is confidential and each person's profile is protected by a username and an individual password.*

4. Since the plans will recommend quantities of food in cups, ounces, etc., teens may wonder what a cup of vegetables or an ounce of ready-to-eat cereal looks like. To help them visualize proper portion sizes, show food models or real foods in appropriate measurements. (Page 10 of the background information outlines recommended food measurements.)

5. Break teens into small groups to discuss how their current eating habits compare to their My Plan recommendations. Have each group share one or two observations with the entire group.

6. Ask teens to develop individual goals for healthy eating based on their plans and using the *My Healthy Eating Goals* handout #1C.

7. Once teens have developed their healthy eating goals, provide them an opportunity to identity roadblocks to achieving their goals. Explain that identifying potential roadblocks is important so they know what challenges they will face as they try to achieve their goals. The *My Healthy Eating Goals* handout offers an opportunity for teens to identify one roadblock for each goal. If time allows, have the teens participate in the *Extend the Lesson Discussion Wheel* (see #10 on the next page) to garner suggestions for overcoming their identified barriers. If time does not allow for the *Discussion Wheel* activity, give teens the opportunity to individually think through how to overcome the roadblocks they identified, then use this information to complete the *My Healthy Eating Goals* handout #1C.

8. Remind teens that snacks can be an important part of a healthy diet. Have teens review the Snack Attack section of the Hunger Attack teen guide, page 3. Ask teens how likely they are to select foods from *MyPlate* for nutritious snacks and how their snack selections will affect their healthy food plans.

List of suggested food models:

1 c – vegetables

2 c – leafy greens

1 c – juice

1 c – fruit

½ c – raisins

1 c – milk

1 c – yogurt

1½ oz. – cheddar cheese

2 oz. – American cheese

1 oz. – meat/poultry

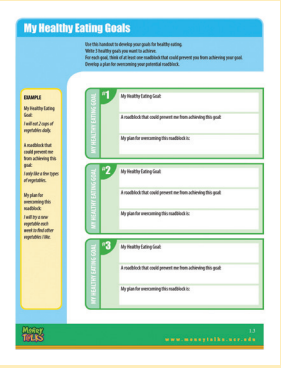
1 egg

1 T – peanut butter

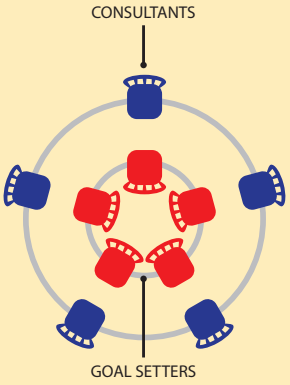
½ oz. – nuts

¼ c – beans, dried peas

2 T – hummus



Handout 1C



9. Summarize the lesson by indicating that we often have many choices regarding the types and quantity of food we eat. Using a tool like *MyPlate* can help us understand what foods and quantities to include in a healthy diet. Setting healthy eating goals can help us choose foods that promote good health now and in the future.

   Extend the Lesson: Select one or both activities based on time and facilities available, and the interest of the teens.

10. When teens have identified healthy eating goals and potential roadblocks, use the *Discussion Wheel* for teens to talk to each other about their goals and potential roadblocks to achieving these goals. The *Discussion Wheel* is an activity that allows teens to receive feedback from several peers about how to overcome the roadblocks they identified.

    The *Discussion Wheel* consists of an inner and outer circle of chairs. Set up the inner circle of chairs and outer circle of chairs. Have the chairs in the two circles face each other. Equal numbers of chairs are needed for the inner and outer circles. Five to six chairs in each circle (10-12 total for both circles) are recommended, but the size of the circle can be modified for the number of teens participating. For a large group, consider making more than one set of chairs. What is most important is that each teen has a chair.

    Once the chairs are arranged, each teen takes a seat. The teens sitting in the inner circle are known as the "goal setters" and the teens sitting in the outer circle are known as the "consultants."

    Explain that the "goal setter" and "consultant" sitting across from each other will be talking to each other in a one-on-one discussion. The "goal setter" starts and has 1 minute to explain to the "consultant" one of their healthy eating goals and the roadblock that might prevent their success. The "consultant" listens and then has 2 minutes to clarify the goal and roadblock and to offer suggestions to the "goal setter" for overcoming the roadblock.

    After 3 minutes, stop the conversation and ask the "consultants" to stand up and move one chair to the left. The

discussion is repeated with the "goal setter" explaining the healthy eating goal and roadblock to the new "consultant" and the new "consultant" gives feedback. Repeat so that each "goal setter" receives feedback from 3-5 consultants.

Now ask the "goal setters" and "consultants" to switch seats. Teens who were originally "goal setters" are now consultants and vice versa. Repeat the process so that each new "goal setter" receives feedback from 3-5 consultants.

After each teen has had a chance to be a "goal setter", ask the teens to consider the information they received from their "consultants" and determine if any of the suggested ideas might be useful to help overcome the identified roadblock. Encourage teens to use the suggestions they feel could work for them to complete the *My Healthy Eating Goals* handout #1C.

11. Make a healthy snack—select one of the following recipes. Each teen makes his/her own snack. Have the teens wash hands before preparing and eating the snack.

Tortilla Wrap

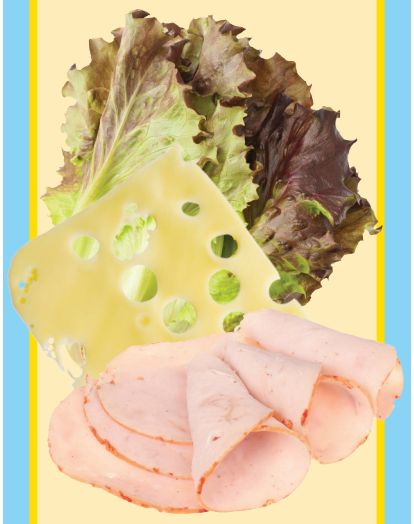
Ingredients for one wrap:

1 small flour tortilla
2 tablespoon – chopped veggies (such as cucumbers, tomato, zucchini, bell peppers, broccoli, etc.)
1 tablespoon – corn (canned or frozen)
1-2 tablespoon – salsa or fat free ranch dressing

Mix chopped veggies, corn, and salsa or ranch dressing together.
Place the veggie mixture on the tortilla.
Roll the tortilla and enjoy.

Supplies

small plates – one per teen
measuring spoons – tablespoon size
bowls for chopped veggies, corn, and salsa/ranch dressing
can opener (if canned corn is used)
napkins – one per teen



Lettuce Roll-Up

Ingredients for one roll-up:

1 ounce sliced turkey
1 slice 2% cheese
1 leaf red lettuce – washed and drained

Lay the lettuce leaf flat on a plate.
Layer turkey and cheese on the lettuce.
Roll the lettuce, turkey, and cheese into a roll. Enjoy.

Supplies

small plates—one per teen
colander to rinse lettuce
3 small tongs for serving lettuce, turkey, and cheese
napkin—one per teen

Banana Roll

Ingredients for one roll:

1/3 – banana
1 tablespoon – orange juice placed in a small bowl
1 tablespoon – crunchy nut cereal in a small bowl

Peel the banana.
Insert a plastic fork in the round end of the banana.
Roll the banana in the orange juice and then roll in the cereal.
Enjoy by eating the banana like a popsicle.

Supplies

small bowls for orange juice and cereal
small knife for cutting bananas
small plastic forks – one per teen
napkin – one per teen

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

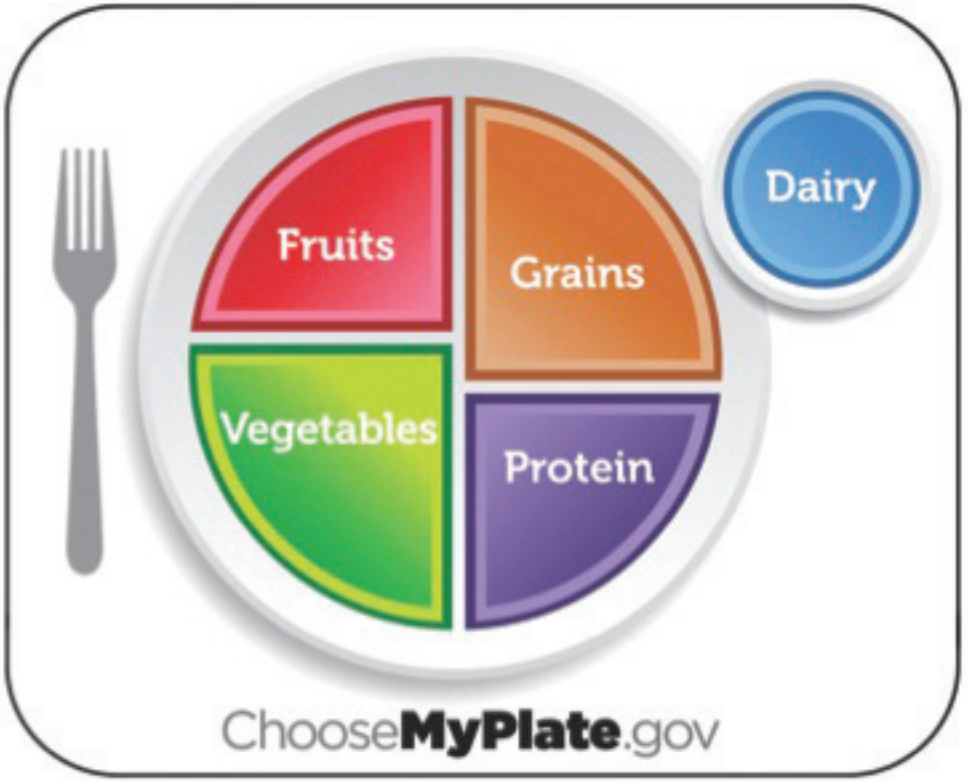
Money TALKS

moneytalks4teens.org

Healthy Eating Guidelines

- Make Half Your Plate Fruits & Vegetables
  - Limit 100% fruit juice to no more than ½ cup per day
- Switch to Fat Free or 1% Milk & Milk Products
- Make Half Your Grains Whole
- Cut Back on Added Sugar
- Cut Back on Fat—especially solid fats like butter and lard

MyPlate


Fruits
Grains
Dairy
Vegetables
Protein
ChooseMyPlate.gov

My Healthy Eating Goals

Use this handout to develop your goals for healthy eating.
Write 3 healthy goals you want to achieve.
For each goal, think of at least one roadblock that could prevent you from achieving your goal.
Develop a plan for overcoming your potential roadblock.

EXAMPLE

My Healthy Eating Goal:

I will eat 2 cups of vegetables daily.

A roadblock that could prevent me from achieving this goal:

I only like a few types of vegetables.

My plan for overcoming this roadblock:

I will try a new vegetable each week to find other vegetables I like.

MY HEALTHY EATING GOAL #1

My Healthy Eating Goal:

A roadblock that could prevent me from achieving this goal:

My plan for overcoming this roadblock is:

MY HEALTHY EATING GOAL #2

My Healthy Eating Goal:

A roadblock that could prevent me from achieving this goal:

My plan for overcoming this roadblock is:

MY HEALTHY EATING GOAL #3

My Healthy Eating Goal:

A roadblock that could prevent me from achieving this goal:

My plan for overcoming this roadblock is:

ACTIVITY TWO

Label Lingo—Ingredient Labels

Doing the Activity

1. Summarize the "Reading & Understanding Food Labels" section of the leader's guide background information on pages 11-12. Include the following facts:
   - Ingredient labels list the ingredients in a food.
   - Ingredient labels are always printed on the outside of a food package.
   - Food ingredients are listed according to weight. The ingredient that weighs the most is listed first. The ingredient that weighs the least is listed last.
   - If the ingredient label is very long, the first two or three ingredients usually make up most of the product.
2. Distribute copies of handouts #2A and #2B to each teen.
3. Explain that ingredient labels are required on food products. Have the teens review the ingredient labels listed on handout #2A. Ask the teens if they have used ingredient labels in the past, and if so, how have they used them.
4. Explain that ingredient labels can be used to:
   A. Determine the ingredients in a food product.
   B. Identify foods to avoid for allergies, religious, health, or personal reasons.
5. Using the sample ingredient labels on handout #2A, have the teens answer questions listed on handout #2B. (Answer key to handout #2B is in the sidebar of this page.)

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Activity Summary
In this activity, teens will learn how to read a food ingredient label.

Learning Objectives

- Read and compare food ingredient labels

Estimated Activity Time:
20–30 minutes

Getting Ready Checklist

☐ Copy handouts #2A and #2B for each teen

Supplies Needed

☐ Handout #2A

☐ Handout #2B

Answer Key for Handout #2B

1. Milk Chocolate, Peanuts, and Corn Syrup
2. Cold Cereal
3. Beef Stew
4. Vegetarian Chili
5. Granola Bar
6. Granola Bar & Cold Cereal

Label Lingo

Ingredient Labels

Use the ingredient labels below to answer the questions on handout 2B.

Ingredient labels let you know what is in a food product. Ingredients are listed in order by weight. This information can be very important for people with food allergies.

Granola Bar

INGREDIENTS: Milk Chocolate (made from sugar, cocoa butter, chocolate, lactose, skim milk, milkfat, soy lecithin, artificial flavor), peanuts, corn syrup, sugar, skim milk, butter, milkfat, partially hydrogenated soybean oil, salt, egg white, and brown sugar.

Beef Stew

INGREDIENTS: Water, beef, potatoes, carrots, enriched wheat flour (niacin, iron, thiamine mononitrate, riboflavin, folic acid), tomato paste, salt, corn flour, flavorings, caramel color, sugar, paprika, spice, and citric acid.

Vegetarian Chili

INGREDIENTS: Pink beans, water, tomatoes, tomato puree (water, tomato paste) onions, corn, carrots, celery, spinach, zucchini, spices, salt, modified food starch, dehydrated potatoes, onion powder, soybean oil, and garlic powder.

Cold Cereal

INGREDIENTS: Corn, whole wheat, sugar, rolled oats, brown sugar, partially hydrogenated vegetable oil (sunflower and/or canola oil) rice flour, rice, wheat flour, malted barley, flour, salt, corn syrup, whey (from milk), honey, cinnamon, artificial flavor, caramel color, and natural flavor. Vitamins and Minerals: reduced iron, niacinamide, vitamin B6, vitamin A palmitate, riboflavin, thiamin mononitrate, zinc oxide, folic acid, vitamin B12, vitamin D.

Label Lingo

Ingredient Labeling Questions

Looking at the ingredient labels on handout 2A, answer the questions below.

EXAMPLE

Which product has water as its main ingredient?

Beef Stew

1. What are the three main ingredients in the granola bar?

2. Which product contains whole wheat?

3. Which product has more potatoes than carrots?

4. Which product(s) have no animal products?

5. If you were allergic to peanuts, which product would you avoid?

6. Which products contain four or more different types of sugar?

University of California
Agriculture and Natural Resources

ACTIVITY THREE
Nutrition Facts Label

Doing the Activity

1. Summarize the "Reading & Understanding Food Labels" section of the leader's guide background information on pages 11-12. Include the following facts:
   - Nutrition Facts labels can be used to select healthy foods.
   - The information in a Nutrition Facts label is for a single serving of the food.
   - The nutrition information provided includes the serving size and the amount of several nutrients and food components including fat, cholesterol, sodium, carbohydrates, fiber, sugar, and protein.
   - This label also includes the % Daily Value (% DV) for vitamins A and C, calcium, and iron.
   - % Daily Value shows how a food fits into the overall diet. A % Daily Value of 5% or less means the food provides a small amount of the nutrient. A % Daily Value of 20% or more means a food provides a large amount of the nutrient.
2. Distribute handouts #3A, #3B, #3C, #3D and #3E to each teen.
3. Using handout #3A, explain that the Nutrition Facts label is used to learn about the nutritional value of food. All foods must have this label. If the package is too small to include the Nutrition Facts label, the label must indicate how to obtain a copy of this information. Usually information is available from the manufacturer of the product.
4. Review the major components of the Nutrition Facts label:
   - Serving size—regulated by the Food and Drug Administration (FDA)

Activity Summary
In this activity, teens will learn how to read a Nutrition Facts label.

Learning Objectives
- Read and compare Nutrition Facts labels
- Determine the number of servings of cereal normally eaten at one time
- Calculate the cost of a serving of cereal
- Discuss how wise food shopping can save money

Estimated Activity Time:
40-50 minutes

Getting Ready Checklist
- ☐ Copy handouts #3A, #3B, #3C, #3D and #3E for each teen
- ☐ Assemble Supplies: box of ready-to-eat cereal, 3–4 different sized bowls, measuring cups
- ☐ Optional Activity—copy handout #3C

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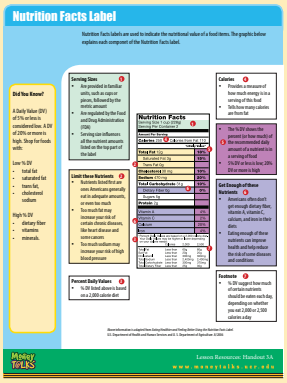


Handout 3A

Supplies Needed

- ☐ Handouts #3A-E
- ☐ Full box of cereal
- ☐ Price for box of cereal
- ☐ 3-4 different sized bowls (the smallest one should hold about 1 cup of cereal)
- ☐ Measuring cups

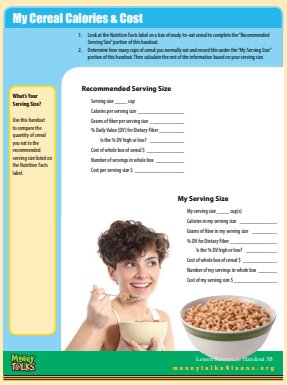
Extend the Lesson

High Sugar Cereal Activity

- ☐ Handout #3C

Nutrition Facts Label Activity

- ☐ Handout #3D
- ☐ Handout #3E
- ☐ Full box of high sugar cold cereal



Handout 3B

- Servings per container
- % Daily Value—shows how a serving size fits into current recommendations for a healthy diet. % Daily Value is provided for the following:

Calories	Sodium
Calories from Fat	Major Vitamins & Minerals
Total Fat	Total Carbohydrates
Saturated Fat	Dietary Fiber
Trans Fat	Sugar
Cholesterol	Protein

5. Continuing to use handout #3A, explain that a Daily Value (DV) of 5% or less is low. A 20% DV or more is high. For some food components, teens should aim for a low % DV—such as total fat, saturated fat, trans fat, cholesterol and sodium. For other food components, teens should select foods with a high % DV—such as dietary fiber, vitamins, and minerals.

6. Serving sizes listed on Nutrition Facts labels are regulated by the Food and Drug Administration. However, individuals may actually eat more or less than the stated serving size. For example, this is commonly true for cereal.

   Using the box of ready-to-eat cereal (unsweetened toasted oat cereal is a good one to use) and 3–4 different sized bowls, have the teens pour cereal in the bowl that represents the amount of cereal they eat at one time. The smallest bowl should hold about a cup; the recommended serving size for most ready to eat cereals. Using handout #3B have teens compare the quantity of cereal they eat to the recommended serving size listed on the Nutrition Facts label by asking teens to measure the number of servings of cereal they eat at one time. Next have them calculate the number of calories this amount of cereal represents. Also have them calculate the amount of dietary fiber and % Daily Value of dietary fiber. (Note: If time is limited have a volunteer measure out their usual serving of cereal and complete handout #3B as a class. Teens can determine their serving size as homework and complete handout #3B for themselves.)

   Provide teens with the cost of the box of cereal used in this

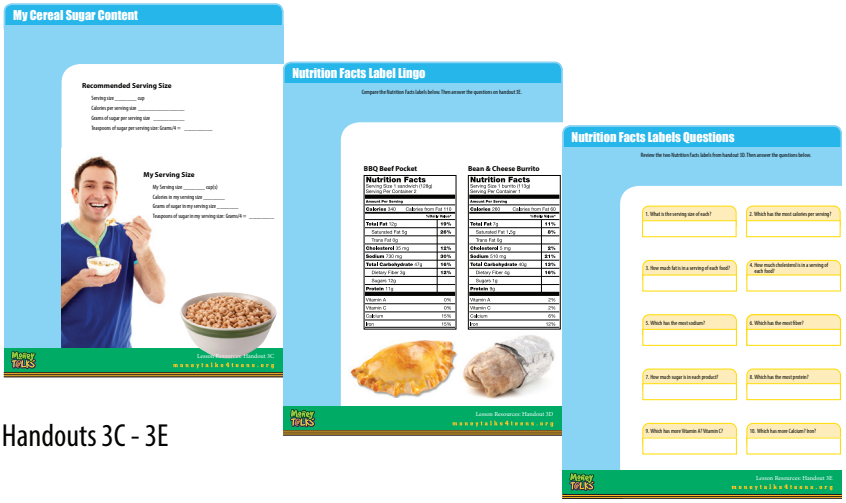
activity and relate serving sizes to costs by asking teens to calculate the cost per serving of cereal. First use the serving size as listed on the package to determine cost per serving, then ask teens to calculate the cost for "their" serving sizes.

Encourage the teens to share their findings with two or three other teens and explain how their serving size of cereal affects calories, fiber, and cost.

Have the teens discuss their reactions to the recommended serving sizes and the amount of cereal they normally consider a serving. What does this mean for their overall nutrition intake for the day? (Might be eating more grains than they thought; might be eating more calories; for high sugar cereals they might be consuming more sugar; etc.)

7. *Extend the Lesson* — Using Handout #3C, repeat the activity using a high sugar cereal (more than 9 grams of sugar per serving). Have the teens calculate the number of teaspoons of sugar in the recommended serving size and the number of teaspoons of sugar in "their" serving size.

8. *Extend the Lesson* — Have the teens answer the questions listed on Handout #3E using the Nutrition Facts label on Handout #3D. Have the teens discuss and summarize the nutritional information of each product. (Answer key for handout #3E is in the sidebar on this page.)



Handouts 3C - 3E

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Answer Key for Handout #3B

Answers will vary according to the chosen cereal

Answer Key for Handout #3C

Answers will vary according to the chosen cereal

Answer Key for Handout #3E

1. BBQ Beef Pocket - 1 sandwich (128g) Bean & Cheese Burrito - 1 burrito (113g)
2. BBQ Beef Pocket has the most – 340 calories
3. BBQ Beef Pocket has 12g of total fat and Bean & Cheese Burrito has 7g of total fat per serving
4. BBQ Beef Pocket has 35mg of cholesterol and a Bean & Cheese Burrito has 5mg
5. BBQ Beef Pocket - 730mg sodium
6. Bean & Cheese Burrito– 4g fiber
7. BBQ Beef Pocket has 12g of sugar and a Bean & Cheese Burrito has 1g
8. BBQ Beef Pocket – 11g protein
9. Bean & Cheese Burrito – 2% of Vitamin A and 2% of Vitamin C
10. BBQ Beef Pocket –15% of Calcium and 15% of Iron

Nutrition Facts Label

Nutrition Facts labels are used to indicate the nutritional value of a food items. The graphic below explains each componet of the Nutrition Facts label.

Did You Know?
A Daily Value (DV) of 5% or less is considered low. A DV of 20% or more is high. Shop for foods with:

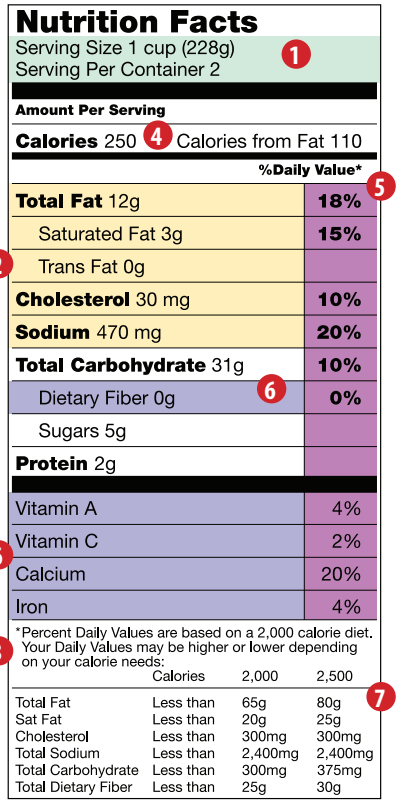
Low % DV
- total fat
- saturated fat
- trans fat,
- cholesterol
- sodium

High % DV
- dietary fiber
- vitamins
- minerals

Serving Sizes 1
- Are provided in familiar units, such as cups or pieces, followed by the metric amount
- Are regulated by the Food and Drug Administration (FDA)
- Serving size influences all the nutrient amounts listed on the top part of the label

Limit these Nutrients 2
- Nutrients listed first are ones Americans generally eat in adequate amounts, or even too much
- Too much fat may increase your risk of certain chronic diseases, like heart disease and some cancers
- Too much sodium may increase your risk of high blood pressure

Percent Daily Values 3
- % DV listed above is based on a 2,000 calorie diet



Nutrition Facts
Serving Size 1 cup (228g) 1
Serving Per Container 2

Amount Per Serving
Calories 250 4 Calories from Fat 110

	%Daily Value* 5
Total Fat 12g	**18%**
Saturated Fat 3g	**15%**
2 Trans Fat 0g	
Cholesterol 30 mg	**10%**
Sodium 470 mg	**20%**
Total Carbohydrate 31g	**10%**
Dietary Fiber 0g 6	**0%**
Sugars 5g	
Protein 2g	
Vitamin A	4%
6 Vitamin C	2%
Calcium	20%
Iron	4%

3 *Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Total Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate	Less than	300mg	375mg
Total Dietary Fiber	Less than	25g	30g

7

Calories 4
- Provides a measure of how much energy is in a serving of this food
- Tells how many calories are from fat

- The % DV shows the percent (or how much) of 5 the recommended daily amount of a nutrient is in a serving of food
- 5% DV or less is low; 20% DV or more is high

Get Enough of these Nutrients 6
- Americans often don't get enough dietary fiber, vitamin A, vitamin C, calcium, and iron in their diets
- Eating enough of these nutrients can improve health and help reduce the risk of some diseases and conditions

Footnote 7
- % DV suggest how much of certain nutrients should be eaten each day, depending on whether you eat 2,000 or 2,500 calories a day

Above information is adapted from *Eating Healthier and Feeling Better Using the Nutrition Facts Label.* U.S. Department of Health and Human Services and U. S. Department of Agriculture. 8/2006

My Cereal Calories & Cost

1. Look at the Nutrition Facts label on a box of ready-to-eat cereal to complete the "Recommended Serving Size" portion of this handout.
2. Determine how many cups of cereal you normally eat and record this under the "My Serving Size" portion of this handout. Then calculate the rest of the information based on your serving size.

What's Your Serving Size?
Use this handout to compare the quantity of cereal you eat to the recommended serving size listed on the Nutrition Facts label.

Recommended Serving Size

Serving size _____ cup

Calories per serving size _____

Grams of fiber per serving size _____

% Daily Value (DV) for Dietary Fiber _____

Is the % DV high or low? _____

Cost of whole box of cereal $ _____

Number of servings in whole box _____

Cost per serving size $ _____

My Serving Size

My serving size _____ cup(s)

Calories in my serving size _____

Grams of fiber in my serving size _____

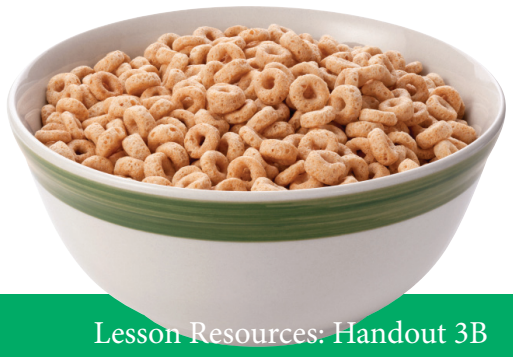
% DV for Dietary Fiber _____

Is the % DV high or low? _____

Cost of whole box of cereal $ _____

Number of my servings in whole box _____

Cost of my serving size $_____



My Cereal Sugar Content

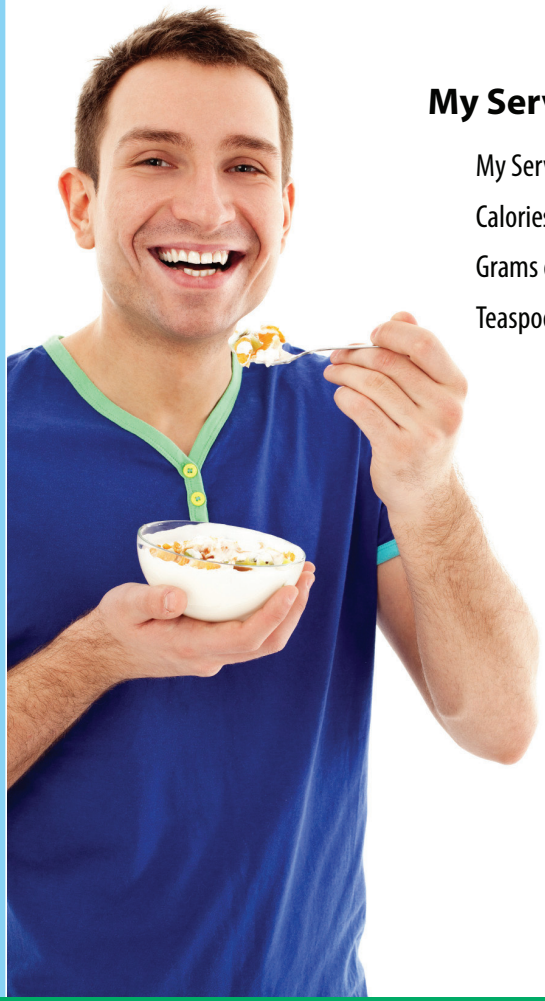
Recommended Serving Size

Serving size _____ cup

Calories per serving size _____

Grams of sugar per serving size _____

Teaspoons of sugar per serving size: Grams/4 = _____



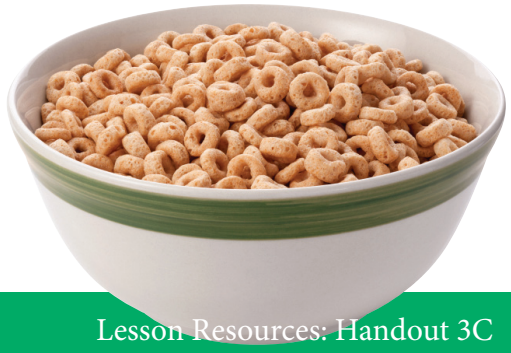
My Serving Size

My Serving size _____ cup(s)

Calories in my serving size _____

Grams of sugar in my serving size _____

Teaspoons of sugar in my serving size: Grams/4 = _____



Nutrition Facts Label Lingo

Compare the Nutrition Facts labels below. Then answer the questions on handout 3E.

BBQ Beef Pocket

Nutrition Facts
Serving Size 1 sandwich (128g)
Serving Per Container 2

Amount Per Serving	
Calories 340	Calories from Fat 110
	%Daily Value*
Total Fat 12g	**19%**
Saturated Fat 5g	**26%**
Trans Fat 0g	
Cholesterol 35 mg	**12%**
Sodium 730 mg	**30%**
Total Carbohydrate 47g	**16%**
Dietary Fiber 3g	**12%**
Sugars 12g	
Protein 11g	
Vitamin A	0%
Vitamin C	0%
Calcium	15%
Iron	15%

Bean & Cheese Burrito

Nutrition Facts
Serving Size 1 burrito (113g)
Serving Per Container 1

Amount Per Serving	
Calories 260	Calories from Fat 60
	%Daily Value*
Total Fat 7g	**11%**
Saturated Fat 1.5g	**8%**
Trans Fat 0g	
Cholesterol 5 mg	**2%**
Sodium 510 mg	**21%**
Total Carbohydrate 40g	**13%**
Dietary Fiber 4g	**16%**
Sugars 1g	
Protein 9g	
Vitamin A	2%
Vitamin C	2%
Calcium	6%
Iron	12%

Nutrition Facts Labels Questions

Review the two Nutrition Facts labels from handout 3D. Then answer the questions below.

1. What is the serving size of each?

2. Which has the most calories per serving?

3. How much total fat is in a serving of each food?

4. How much cholesterol is in a serving of each food?

5. Which has the most sodium?

6. Which has the most fiber?

7. How much sugar is in each product?

8. Which has the most protein?

9. Which has more Vitamin A? Vitamin C?

10. Which has more Calcium? Iron?

ACTIVITY FOUR
Sugar Savvy

Doing the Activity

1. Summarize the "added sugar" information from "Cut back on foods high in solid fat and added sugar" and "Added sugar" sections of the leader's guide background information on pages 6-8. Include the following facts:

   - Most people consume too much added sugar.
   - Added sugars are known as "empty calories"—calories that have no nutritional value other than calories.
   - Sugar can be added during manufacturing of a product—sugar-sweetened beverages, such as sodas, have added sugar.
   - Sugar can also be added when preparing foods at home—such as adding sugar to cereal.
   - Most teens consume an average of 34 teaspoons of added sugar per day.
   - It is recommended that females consume 6 or less teaspoons of added sugar per day. For males, the recommendation is 9 teaspoons or less per day.
   - Decrease added sugar by drinking fewer sugar-sweetened beverages, like soda, sports drinks, energy drinks, teas, lemonades, etc. Instead, drink water, unsweetened tea, and fat free or 1% milk/calcium-fortified milk substitutes.
   - Be healthy—eat fewer empty calories and have fewer health risks.

2. Ask teens to bring in an empty can, bottle, or cup of a favorite cold or hot beverage made with sugar.

   A. The can, bottle, or cup should be a size that represents what they consider to be an individual serving.

Activity Summary

In this activity, teens will use ingredient labels and Nutrition Facts labels to determine the types and amounts of sugar in popular beverages, learn the many forms of sugar that are used in food and beverages, and calculate how much sugar is in their favorite beverages. Teens can use this information to learn if they are getting good nutrition for their food dollar. Optionally, teens will learn about the health concerns of consuming energy drinks.

Learning Objectives

- Read and compare food ingredients and Nutrition Facts labels
- Calculate the number of teaspoons of sugar in sweetened beverages
- Calculate the cost per serving of a sweetened beverage
- Make better decisions about consuming fewer sugary drinks

continued next page

- Discuss the health concerns related to the consumption of energy drinks

Estimated Activity Time

45-60 minutes

Getting Ready Checklist

- ☐ Copy visuals #4A and 4B for display
- ☐ Copy handouts #4C and #4D for each teen
- ☐ Assemble supplies

Supplies Needed

- ☐ Visuals #4A
- ☐ Visuals #4B
- ☐ Handout #4C
- ☐ Handout #4D
- ☐ Extra empty cans or bottles of sugar sweetened beverages with Nutrition Facts labels, ingredient labels, and price for each
- ☐ Sugar
- ☐ Measuring spoons
- ☐ Clear plastic re-sealable sandwich bags (1 per teen)
- ☐ Marking pens

continued next page

B. The Nutrition Facts and ingredient labels need to be on each container or the teens need to bring the information on a printed brochure or downloaded from the internet.
C. Ask teens to also know the cost of the beverage.
D. ***Recommendation: As a back up, the teacher should have on hand a few cans or bottles of sugar sweetened beverages with the nutrition and ingredient labels and the price for each.***

3. Using the ingredient label, ask the teens to identify the different types of sugar in their beverage.

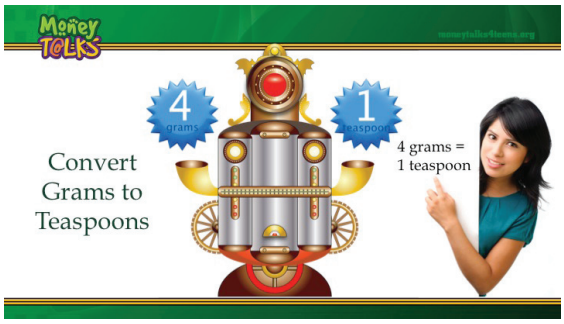
4. Display visual #4A. Now that the teens have identified the sugar in their beverages, share with them the fact that many different forms of sugar are used in food. Common names for sugars in food include:

- Honey
- Sugar
- Brown Sugar
- Raw Sugar
- Powdered Sugar
- Invert Sugar
- Molasses
- Malto-dextrin
- Corn Sweeteners
- Natural Sweeteners
- High Fructose Corn Syrup
- Corn Syrup
- Maple Syrup
- Cane Syrup
- Cane Juice Sugar
- Evaporated Rice Syrup
- Barley Malt Syrup
- Any ingredient with a name ending in "-ose" (fructose, glucose, sucrose, lactose, dextrose)

Visual 4A

Using this new information, ask the teens once again to identify the types of sugar in their beverages. Have teens share their reaction to the different types of sugars in their beverages.

5. Display visual #4B. Using the Nutrition Facts label, have the teens identify the serving size and the number of servings in the bottles or cans they brought. Next, have the teens identify how many grams of sugar are in a serving of the beverage and in the entire bottle or can.



Visual 4B

6. Have the teens convert the grams of sugar to teaspoons of sugar using handout #4C. There are approximately 4 grams of sugar in a teaspoon. To determine teaspoons of sugar, divide the grams of sugar by 4.

7. Have the teens measure into a clear plastic re-sealable bag, the teaspoons of sugar in one serving of their favorite beverage.

8. Have teens complete handout #4D. Ask them to write:

   - the type of beverage,
   - the number of teaspoons of sugar in one serving,
   - the number of servings in the entire bottle, can, or cup they brought,
   - the teaspoons of sugar in the entire bottle, can, or cup,
   - the cost for one serving of the beverage, and
   - the cost for the entire bottle, can, or cup.

   Line up the beverages by the most sugar to the least sugar. Display the bags of sugar next to the beverages. Display the handout #4D next to the corresponding beverages.

9. Encourage teens to discuss their preferences for the different

Extend the Lesson

Journal Activity

- ☐ Paper for journaling
- ☐ Pencils or pens

Energy Drinks Activity

- ☐ *Buzz in a Bottle - The Dangers of Caffeine-Spiked Energy Drinks* DVD

Handout 4C

Handout 4D

beverages and their reactions to the amount of sugar in each product. Ask: "How many servings do you drink of your beverage in a day?" and "How much sugar are you consuming?" Also discuss options for consuming less sugar from beverages. *(Suggestions for reducing sugar in beverages: mix with sparkling water or tap water, drink smaller quantities, drink unsweetened tea, drink water instead of sweetened beverages, etc.).*

10. Encourage teens to discuss the cost of their beverages. Ask: "Does the amount of sugar affect the cost of the beverage?" "If you drank this beverage every day, how much would it cost you for a week? For a month?" "How much would it cost you to drink a healthier beverage—like water?" "If you didn't drink your favorite beverage, what else could you do with that money?"

11. *Extend the Lesson*—Have teens journal on the following possible topics:

    - Should soda be banned from high school events?
    - If you typically buy a drink from a vending machine daily, what would you do with the money you saved if you brought a drink from home instead?

12. *Extend the Lesson*—Energy Drinks
    Review Energy Drinks—a potentially dangerous buzz information on pages 7-8 of this leader's guide. Include the following points:

    - Energy drinks are popular with teens.
    - They are promoted as providing energy and alertness.
    - Many energy drinks have as much or more caffeine as coffee, tea and sodas.
    - Too much caffeine can cause problems such as restlessness, irritability, nausea, diarrhea, headaches, muscle twitching, body shaking, and sleeplessness.
    - More serious and life-threatening symptoms attributed to too much caffeine consumption include trouble breathing, rapid and irregular heartbeat, seizures, hallucinations, confusion, and occasionally, death.
    - Like other sugar-sweetened beverages, energy drinks

sweetened with sugar will contribute to extra calories, but few or no nutrients to the diet.
- Of concern is that when energy drinks are combined with alcohol, the risk of death from alcohol poisoning increases.
- Because of the dangers, health experts recommend that teens do not consume energy drinks.

13. Lead a group discussion with teens regarding why teens drink energy drinks and what problems they, or people they know, have experienced from these drinks.

14. Encourage teens to estimate how many energy drinks they drink per week and how much they spend each week on buying energy drinks.

15. Show the 17-minute DVD— "*Buzz in a Bottle—The Dangers of Caffeine-Spiked Energy Drinks.*" (Alternatives: a 3-minute YouTube mini video of the DVD is available at: http://www.hrmvideo.com/catalog/buzz-in-a-bottle-the-dangers-of-caffeine-spiked-energy-drinks. A 4-minute closed caption mini video of the DVD is available at: http://www.youtube.com/watch?v=qEsCuRZqrTE).

16. Have the teens indicate what new information they learned from the DVD and how they will change their consumption of energy drinks with this new information. Summarize that eliminating the consumption of energy drinks is a healthy choice they can make for their personal well-being, and possibly, their financial well-being.

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Money TALKS

moneytalks4teens.org

Sugar Savvy

Sugar Goes By Many Names

- Honey
- Sugar
- Brown Sugar
- Raw Sugar
- Powdered Sugar
- Invert Sugar
- Corn Sweeteners
- Natural Sweetener
- Molasses

- Malto-dextrin
- High Fructose Corn Syrup
- Corn Syrup
- Maple Syrup
- Cane Syrup
- Cane Juice Sugar
- Evaporated Rice Syrup
- Barley Malt Syrup

Any ingredient name ending in "-ose" (such as dextrose, lactose, glucose, fructose, sucrose)

Lesson Resources:
Visual 4B

Sugar Savvy

Using the empty container from a favorite beverage made with sugar (or a printed copy of the Nutrition Facts information), convert the grams of sugar contained in a serving of the beverage into teaspoons of sugar. Then do the same for the entire bottle/can.

EXAMPLE

My favorite beverage has 64 grams of sugar.

64 grams / 4 = 16 teaspoons of sugar

Grams of Sugar/4 = Teaspoons of sugar

Favorite Drink

Using the emply container from a favorite beverage made with sugar (or a printed copy of the Nutrition Facts information), fill in the table below.

Type of beverage	
# of teaspoons of sugar in one serving	
# of servings in the entire bottle or can	
# of teaspoons of sugar in the entire bottle or can	
Cost of one serving of the beverage	
Cost of the entire bottle or can	

ACTIVITY FIVE
Fat Facts

Doing the Activity

1. Summarize the "Switch to fat free or 1% milk and milk products" section of the leader's guide background information on page 5. Include the following facts:

   - For most people, diets with less fat are considered healthy.
   - Switching to fat free and 1% milk and milk products can reduce fat in the diet.
   - Choosing lower fat options of all foods will reduce fat in the diet.

2. Divide the class into groups of four. Distribute handouts #5A through #5E.

3. Explain that some food products state they are "reduced fat," "low fat," or "fat free." By definition:

   - Reduced fat foods have at least ¼ less fat than the regular version of the product.
   - Low fat foods must have 3 grams or less fat per serving.
   - Fat free foods have less than 0.5 grams of fat per serving.

   Foods can be fat free and low fat naturally, like most fruits and vegetables. Others are made to be reduced fat, low fat, or fat free by simply removing some of the fat from the food, like milk and cheese. Other products are manufactured with little or no fat, and may or may not have other ingredients added to improve taste and texture.

4. Have the teens compare the Nutrition Facts labels listed on handouts #5A–#5E. Ask the groups of teens to answer the questions listed on handout #5F using the labels of fat free, low fat, reduced fat, and regular foods listed on handouts

Activity Summary

In this activity, teens will use Nutrition Facts labels to determine the fat and calorie values of fat free, low fat, reduced fat, and regular foods.

Learning Objectives

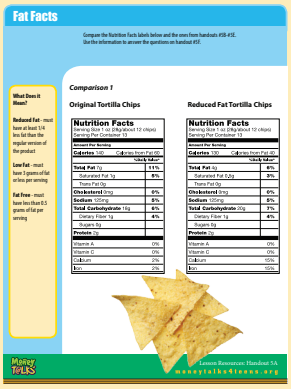
- Read and compare Nutrition Facts labels

Estimated Activity Time

30-60 minutes

Getting Ready Checklist

- ☐ Copy visual #5G to display
- ☐ Copy handouts #5A through #5E and #5F for each teen
- ☐ Assemble supplies for *Extend the Lesson* activity


Fat Facts

Handout 5A

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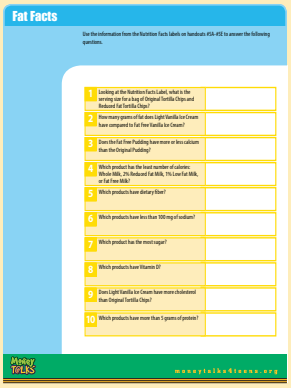
Supplies Needed

- ☐ Visual #5G
- ☐ Handouts #5A–#5E
- ☐ Handout #5F



Handout 5F

Extend the Lesson

Food Tasting Activity

- ☐ Unopened food packages of fat free, low fat, reduced fat and regular foods
- ☐ Cups, spoons, napkins, etc. for food tasting;

Fat in Foods Activity

- ☐ Visuals #5H, #5I, and #5J
- ☐ 1 pound fat model to show students (optional)
- ☐ Muscle model to show students (optional)

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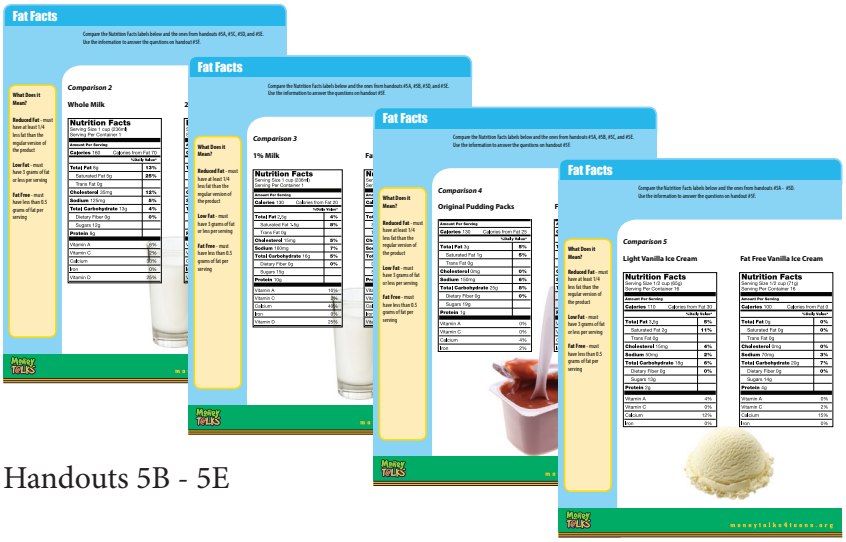
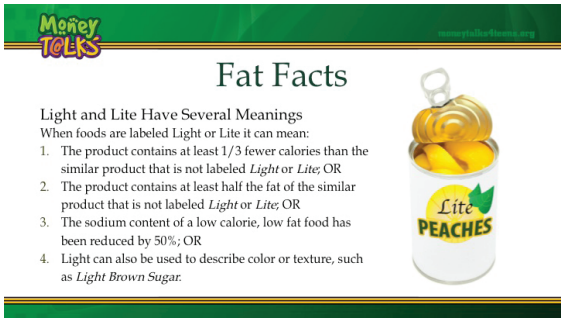
#5A–#5E. Once the teens have answered all of the questions, go over the answers as a group. (Answer key for handout #5F is in the sidebar on the next page.)



Handouts 5B - 5E

5. If time permits, display visual #5G and ask the teens the following questions:
   - What is the difference in fat and calories between a "light" and regular food? *(A light food has ⅓ fewer calories or at least ½ the fat of a regular food.)*
   - How can a fat free or low fat product have just as many calories as a similar product that is not lower in fat? *(Other ingredients that contain calories, such as sugar, are added to lower fat products.)*
   - What do "Light" and "Lite" food labels mean in regard to sodium? *(The sodium has been reduced by 50%.)*



Visual 5G

6. *Extend the Lesson*—Bring in unopened food packages of regular, reduced fat, low fat, and fat free foods and compare the Nutrition Facts labels to one another. (Food ideas include: crackers, cheese, yogurt, milk, calcium-fortified milk substitutes, etc.) Ask teens to compare the different foods and their labels. Allow teens to taste the different foods. Encourage teens to discuss their preferences of the foods sampled and why they like or do not like different foods.

7. *Extend the Lesson*—Using visuals #5H, 5I, and 5J show examples of the amount of fat in common foods and a healthier alternative. Ask them what health benefits they would receive from eating lower fat foods. Also, ask if the health benefits are compelling enough for them to change to lower fat foods—why or why not?

Answer Key
Handout #5F

1. 1 ounce or 28g or 12 chips
2. Light Vanilla Ice Cream—3.5g fat, Fat Free Vanilla Ice Cream—0g fat
3. Fat Free has more calcium, 6% compared to 4% for the original
4. Fat Free Milk—90 calories
5. Original Tortilla Chips and Reduced Fat Tortilla Chips—1g fiber
6. Light Vanilla Ice Cream-50mg and Fat Free Ice Cream—70mg sodium
7. Original Pudding—19g sugar
8. Whole Milk, 2% Reduced Fat Milk, 1% Low Fat Milk, and Fat Free Milk
9. Yes, Light Vanilla Ice Cream—15mg and Original Tortilla Chips—0mg cholesterol
10. Whole Milk, 2% Reduced Fat Milk, 1% Low Fat Milk, and Fat Free Milk

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Fat Facts

Compare the Nutrition Facts labels below and the ones from handouts #5B-#5E. Use the information to answer the questions on handout #5F.

What Does it Mean?

Reduced Fat - must have at least 1/4 less fat than the regular version of the product

Low Fat - must have 3 grams of fat or less per serving

Fat Free - must have less than 0.5 grams of fat per serving

Comparison 1

Original Tortilla Chips

Nutrition Facts
Serving Size 1 oz (28g/about 12 chips)
Serving Per Container 13

Amount Per Serving	
Calories 140	Calories from Fat 60
	%Daily Value*
Total Fat 7g	**11%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 125mg	**5%**
Total Carbohydrate 18g	**6%**
Dietary Fiber 1g	**4%**
Sugars 0g	
Protein 2g	
Vitamin A	0%
Vitamin C	0%
Calcium	2%
Iron	2%

Reduced Fat Tortilla Chips

Nutrition Facts
Serving Size 1 oz (28g/about 12 chips)
Serving Per Container 13

Amount Per Serving	
Calories 130	Calories from Fat 40
	%Daily Value*
Total Fat 4g	**6%**
Saturated Fat 0.5g	**3%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 125mg	**5%**
Total Carbohydrate 20g	**7%**
Dietary Fiber 1g	**4%**
Sugars 0g	
Protein 2g	
Vitamin A	0%
Vitamin C	0%
Calcium	15%
Iron	15%

Fat Facts

Compare the Nutrition Facts labels below and the ones from handouts #5A, #5C, #5D, and #5E. Use the information to answer the questions on handout #5F.

What Does it Mean?

Reduced Fat - must have at least 1/4 less fat than the regular version of the product

Low Fat - must have 3 grams of fat or less per serving

Fat Free - must have less than 0.5 grams of fat per serving

Comparison 2

Whole Milk

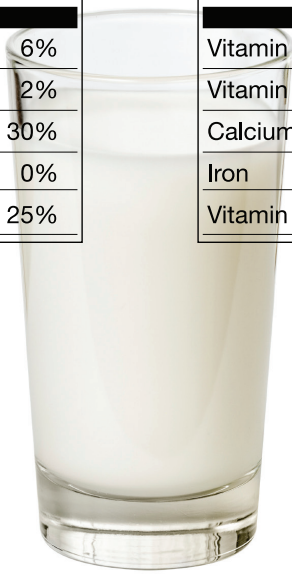
Nutrition Facts
Serving Size 1 cup (236ml)
Serving Per Container 1

Amount Per Serving	
Calories 160	Calories from Fat 70
	%Daily Value*
Total Fat 8g	**13%**
Saturated Fat 5g	**25%**
Trans Fat 0g	
Cholesterol 35mg	**12%**
Sodium 125mg	**5%**
Total Carbohydrate 13g	**4%**
Dietary Fiber 0g	**0%**
Sugars 12g	
Protein 8g	
Vitamin A	6%
Vitamin C	2%
Calcium	30%
Iron	0%
Vitamin D	25%

2% Reduced Fat Milk

Nutrition Facts
Serving Size 1 cup (236ml)
Serving Per Container 1

Amount Per Serving	
Calories 140	Calories from Fat 45
	%Daily Value*
Total Fat 5g	**8%**
Saturated Fat 3g	**15%**
Trans Fat 0g	
Cholesterol 20mg	**7%**
Sodium 140mg	**6%**
Total Carbohydrate 14g	**5%**
Dietary Fiber 0g	**0%**
Sugars 13g	
Protein 10g	
Vitamin A	10%
Vitamin C	2%
Calcium	35%
Iron	0%
Vitamin D	25%



Fat Facts

Compare the Nutrition Facts labels below and the ones from handouts #5A, #5B, #5D, and #5E. Use the information to answer the questions on handout #5F.

What Does it Mean?

Reduced Fat - must have at least 1/4 less fat than the regular version of the product

Low Fat - must have 3 grams of fat or less per serving

Fat Free - must have less than 0.5 grams of fat per serving

Comparison 3

1% Milk

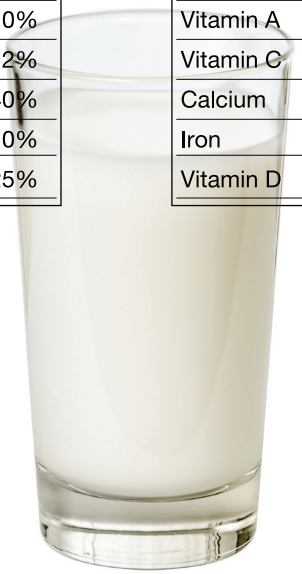
Nutrition Facts
Serving Size 1 cup (236ml)
Serving Per Container 1

Amount Per Serving	
Calories 130	Calories from Fat 20
	%Daily Value*
Total Fat 2.5g	**4%**
Saturated Fat 1.5g	**8%**
Trans Fat 0g	
Cholesterol 15mg	**5%**
Sodium 160mg	**7%**
Total Carbohydrate 16g	**5%**
Dietary Fiber 0g	**0%**
Sugars 15g	
Protein 10g	
Vitamin A	10%
Vitamin C	2%
Calcium	40%
Iron	0%
Vitamin D	25%

Fat Free Milk

Nutrition Facts
Serving Size 1 cup (236ml)
Serving Per Container 1

Amount Per Serving	
Calories 90	Calories from Fat 0
	%Daily Value*
Total Fat 0.5g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 5mg	**1%**
Sodium 130mg	**5%**
Total Carbohydrate 13g	**4%**
Dietary Fiber 0g	**0%**
Sugars 12g	
Protein 9g	
Vitamin A	10%
Vitamin C	2%
Calcium	30%
Iron	0%
Vitamin D	25%



Fat Facts

Compare the Nutrition Facts labels below and the ones from handouts #5A, #5B, #5C, and #5E. Use the information to answer the questions on handout #5F.

What Does it Mean?

Reduced Fat - must have at least 1/4 less fat than the regular version of the product

Low Fat - must have 3 grams of fat or less per serving

Fat Free - must have less than 0.5 grams of fat per serving

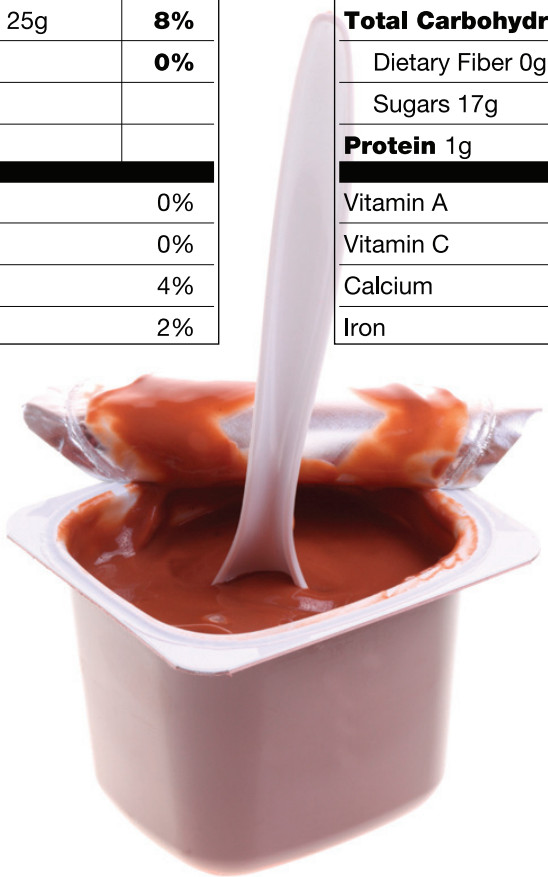
Comparison 4

Original Pudding Packs

Amount Per Serving	
Calories 130	Calories from Fat 25
	%Daily Value*
Total Fat 3g	**5%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 150mg	**6%**
Total Carbohydrate 25g	**8%**
Dietary Fiber 0g	**0%**
Sugars 19g	
Protein 1g	
Vitamin A	0%
Vitamin C	0%
Calcium	4%
Iron	2%

Fat Free Pudding Packs

Amount Per Serving	
Calories 100	Calories from Fat 0
	%Daily Value*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 230mg	**10%**
Total Carbohydrate 23g	**8%**
Dietary Fiber 0g	**0%**
Sugars 17g	
Protein 1g	
Vitamin A	2%
Vitamin C	0%
Calcium	6%
Iron	2%



Fat Facts

Compare the Nutrition Facts labels below and the ones from handouts #5A - #5D.
Use the information to answer the questions on handout #5F.

What Does it Mean?

Reduced Fat - must have at least 1/4 less fat than the regular version of the product

Low Fat - must have 3 grams of fat or less per serving

Fat Free - must have less than 0.5 grams of fat per serving

Comparison 5

Light Vanilla Ice Cream

Nutrition Facts
Serving Size 1/2 cup (65g)
Serving Per Container 16

Amount Per Serving	
Calories 110	Calories from Fat 30
	%Daily Value*
Total Fat 3.5g	**5%**
Saturated Fat 2g	**11%**
Trans Fat 0g	
Cholesterol 15mg	**4%**
Sodium 50mg	**2%**
Total Carbohydrate 18g	**6%**
Dietary Fiber 0g	**0%**
Sugars 13g	
Protein 2g	
Vitamin A	4%
Vitamin C	0%
Calcium	12%
Iron	0%

Fat Free Vanilla Ice Cream

Nutrition Facts
Serving Size 1/2 cup (71g)
Serving Per Container 16

Amount Per Serving	
Calories 100	Calories from Fat 0
	%Daily Value*
Total Fat 0g	**0%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 70mg	**3%**
Total Carbohydrate 20g	**7%**
Dietary Fiber 0g	**0%**
Sugars 14g	
Protein 4g	
Vitamin A	0%
Vitamin C	2%
Calcium	15%
Iron	0%

Fat Facts

Use the information from the Nutrition Facts labels on handouts #5A-#5E to answer the following questions.

1	Looking at the Nutrition Facts Label, what is the serving size for a bag of Original Tortilla Chips and Reduced Fat Tortilla Chips?	
2	How many grams of fat does Light Vanilla Ice Cream have compared to Fat Free Vanilla Ice Cream?	
3	Does the Fat Free Pudding have more or less calcium than the Original Pudding?	
4	Which product has the least number of calories: Whole Milk, 2% Reduced Fat Milk, 1% Low Fat Milk, or Fat Free Milk?	
5	Which products have dietary fiber?	
6	Which products have less than 100 mg of sodium?	
7	Which product has the most sugar?	
8	Which products have Vitamin D?	
9	Does Light Vanilla Ice Cream have more cholesterol than Original Tortilla Chips?	
10	Which products have more than 5 grams of protein?	

Money TALKS

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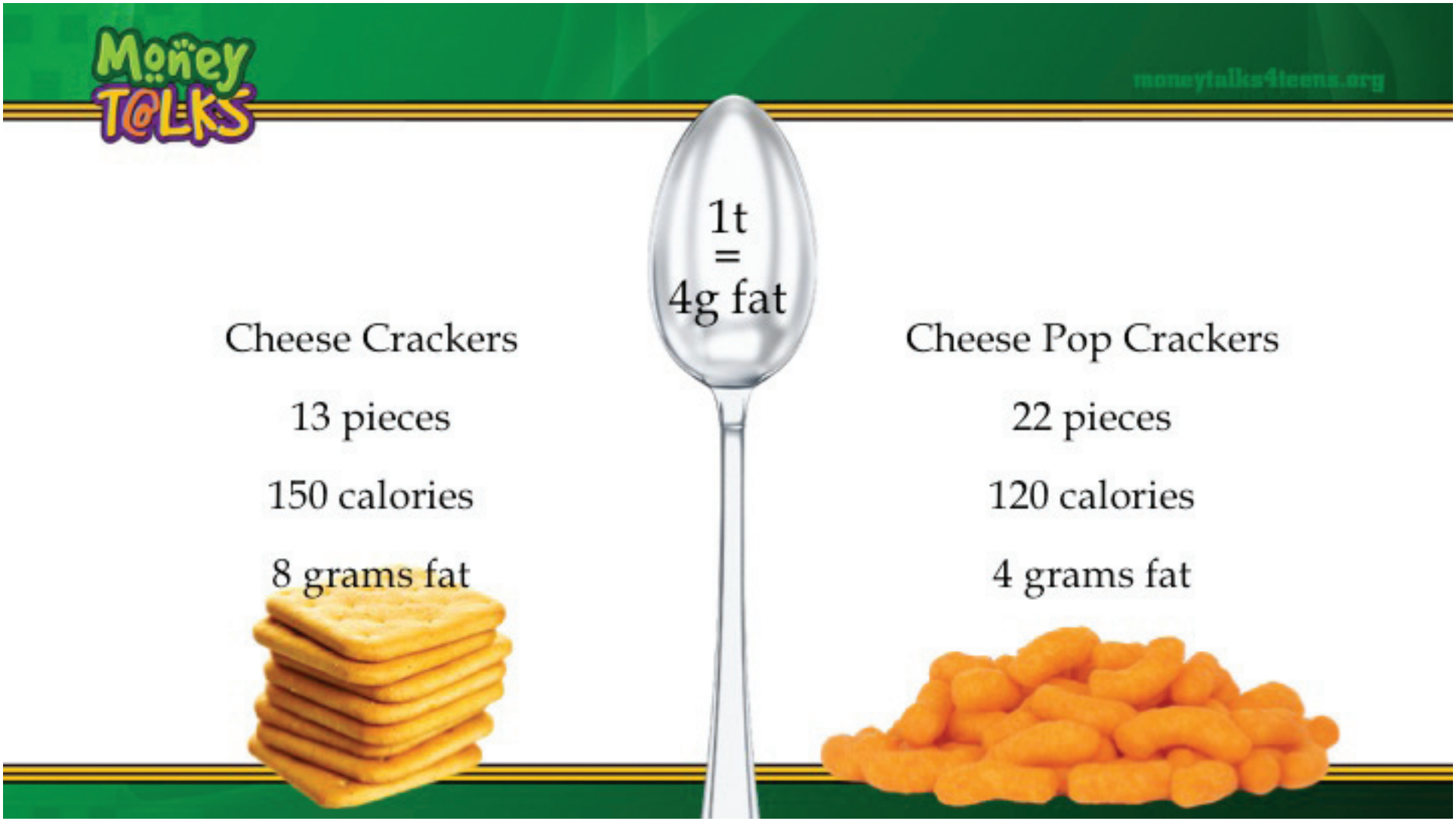
Fat Facts

Light and Lite Have Several Meanings

When foods are labeled Light or Lite it can mean:

1. The product contains at least 1/3 fewer calories than the similar product that is not labeled *Light* or *Lite*; OR
2. The product contains at least half the fat of the similar product that is not labeled *Light* or *Lite*; OR
3. The sodium content of a low calorie, low fat food has been reduced by 50%; OR
4. Light can also be used to describe color or texture, such as *Light Brown Sugar*.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1t
=
4g fat
Cheese Crackers
13 pieces
150 calories
8 grams fat
Cheese Pop Crackers
22 pieces
120 calories
4 grams fat

Money TALKS

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Ranch Dressing

Regular		Fat Free
2 Tablespoons		2 Tablespoons
146 calories		34 calories
15 grams fat		0.5 grams fat

Money TALKS

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Chicken Sandwich

Ingredient	Calories	Fat grams
Fried chicken breast	670	33

Sandwich bun
1 Tablespoon mayonnaise
2 strips bacon
Lettuce
Tomato

Grilled chicken breast	320	4

Sandwich bun
1 Tablespoon catsup or other fat-free sauce
Lettuce
Tomato

ACTIVITY SIX
Targets to Aim For

Doing the Activity

1. Summarize the "Healthy Food Choices" section of the leader's guide background information on pages 2-3. Include the following facts:

   - For most people, healthy eating includes eating less fat and sodium and eating more fiber and calcium.
   - Examples of easy ways to reduce fat in the diet include choosing lean meats and consuming lower fat dairy products.
   - Eating high fat foods – like chips, fries, candy, donuts, and cake – less often can also reduce fat intake.
   - Eating fruits, vegetables, and whole grain foods will increase fiber intake.
   - Dairy products, calcium-fortified dairy product substitutes (i.e., soy, rice, almond, and flax milk), and calcium-fortified orange juice are excellent sources of calcium.

2. Collect nutritional information from 2–3 fast food restaurants in the community, or use the fast food nutritional information that can be printed from http://southernfood.about.com/library/weekly/aa081402a.htm

3. Divide teens into small groups of 2–4 people.

4. Using the fast food nutritional information and working in their small groups, ask half of the groups to select foods for a favorite breakfast meal. The other half will select foods for a favorite lunch or dinner meal. Each group should use a single restaurant to construct their meal.

Activity Summary

In this activity, teens learn how much fat, sodium, calories, fiber, and calcium are in their favorite fast foods. They will determine how these quantities compare to their recommended daily intakes.

Learning Objectives

- Read and compare restaurant nutritional information
- Learn how to select meals that are nutritious

Estimated Activity Time

45–60 minutes

Getting Ready Checklist

- ☐ Copy handouts #6A and #6B according to number of teens
- ☐ Obtain nutritional analysis information from 2–3 fast food restaurants and copy one set of brochures for each teen
- ☐ Assemble supplies for *Extend the Lesson* activity

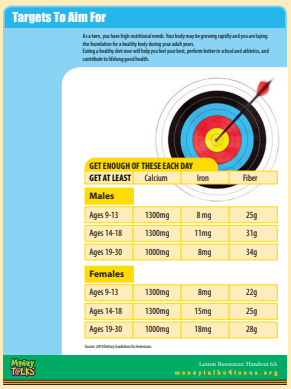
continued next page

Supplies Needed

- ☐ Handout #6A
- ☐ Handout #6B
- ☐ Nutritional information from 2–3 local fast food restaurants

Extend the Lesson

- ☐ Measuring spoons
- ☐ Shortening
- ☐ Plastic re-sealable sandwich bags
- ☐ Permanent Markers
- ☐ Paper towels
- ☐ Computer with internet access to obtain fast food nutritional information (optional)



Handout 6A

Handout 6B

5. Using their selected meal and the fast food nutritional information, have each group calculate the quantities for the following: total fat, sodium, fiber, calcium, and calories.

6. Distribute handouts #6A and #6B to the teens. Have the groups compare their meal selection to the recommended daily intake for total fat, sodium, fiber, calcium, and calories. *(Most likely the meals created will be high in fat, sodium, and calories, and low in fiber and calcium.)*

7. Using the fast food nutritional information again, ask the groups to create a second meal that will be lower in fat, sodium, and calories, and higher in fiber and calcium.

8. Ask each group to share their two meals with the entire group, discussing the major changes they made from the first to the second meal.

9. Have the entire class discuss strategies for selecting healthier choices when they eat out.

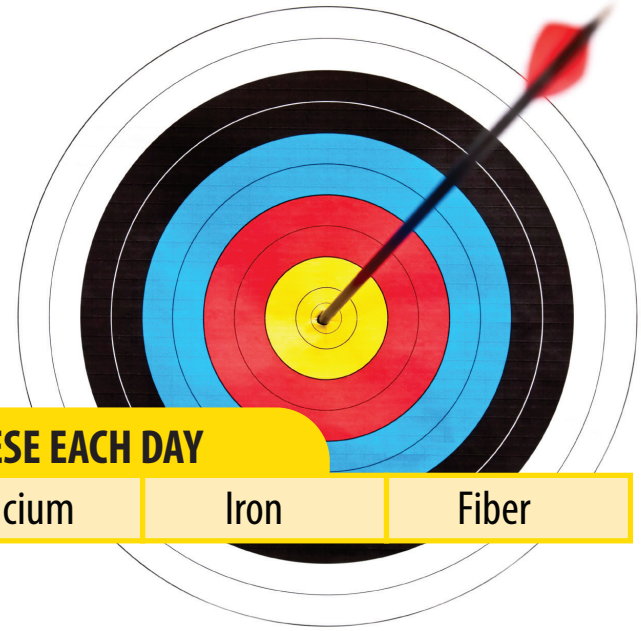
10. *Extend the Lesson*—Convert fat grams to teaspoons of fat. Four grams of fat equal one teaspoon of fat. Divide the total amount of fat by 4 to determine the number of teaspoons of fat.

    For the two meals they created, have each small group measure out the teaspoons of fat (shortening) into two re-sealable plastic bags and write the amount on the bag. Encourage the small groups to show how much fat is in each of their meals when they share their meals with the entire group.

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Targets To Aim For

As a teen, you have high nutritional needs. Your body may be growing rapidly and you are laying the foundation for a healthy body during your adult years.
Eating a healthy diet now will help you feel your best, perform better in school and athletics, and contribute to lifelong good health.



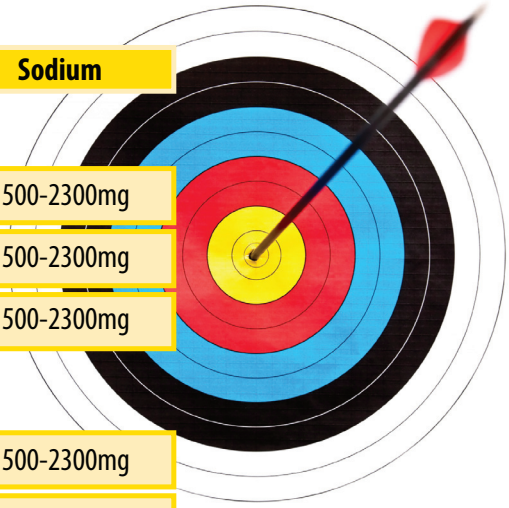
GET ENOUGH OF THESE EACH DAY

GET AT LEAST	Calcium	Iron	Fiber
Males			
Ages 9-13	1300mg	8 mg	25g
Ages 14-18	1300mg	11mg	31g
Ages 19-30	1000mg	8mg	34g
Females			
Ages 9-13	1300mg	8mg	22g
Ages 14-18	1300mg	15mg	25g
Ages 19-30	1000mg	18mg	28g

Source: 2010 Dietary Guidelines for Americans

Targets To Aim For

Youth 9-18 years of age should get no more than 25-35% of calories from fat; for 19-30 year olds, no more than 20-35% of calories from fat.



LIMIT DAILY	Fat	Sodium
Males		
Ages 9-13	50-86g	1500-2300mg
Ages 14-18	67-109g	1500-2300mg
Ages 19-30	58-109	1500-2300mg
Females		
Ages 9-13	44-78g	1500-2300mg
Ages 14-18	56-78g	1500-2300mg
Ages 19-30	44-86g	1500-2300mg

AIM FOR DAILY	Calories*	Protein
Males		
Ages 9-13	1800-2200	34g
Ages 14-18	2400-2800	52g
Ages 19-30	2600-2800	56g
Females		
Ages 913	1600-2000	34g
Ages 14-18	2000	46g
Ages 19-30	2000-2200	46g

*Calories are based on a moderate level of activity—adjust up or down for more or less physical activity.

Source: 2010 Dietary Guidelines for Americans

ACTIVITY SEVEN
The Clean Scene

Doing the Activity

1. Begin the activity by viewing the following video: *Food Safety Music - You'd Better Wash Your Hands – Animation* http://www.youtube.com/watch?v=AtlcS77LaB0

2. Summarize the "Food Safety" sections of the leader's guide background information on pages13-15 Include the following facts:

   - Keeping food safe is as important as eating healthy foods.
   - When someone becomes sick from eating food that has been mishandled, the illness is often described as food poisoning.
   - Food poisoning is caused when harmful bacteria and/or viruses contaminate our food.
   - Food poisoning is common. One in 6 people living in the U.S. will experience food poisoning this year. (Consider having the teens count off from 1 to 6 and have all the 1's stand up to show how many teens in the class are likely to experience food poisoning during the next year).
   - Food poisoning symptoms can be mild—such as an upset stomach and fever. Or more harsh such as vomiting and diarrhea.

Visual 7A

Activity Summary

In this activity teens will be introduced to the concept of clean as an important step in preventing food poisoning. Teens will also demonstrate effective techniques for hand washing; cleaning food preparation areas and utensils; and rinsing produce. With the produce they rinse, teens will make a fruit salad and/or vegetable tray to sample.

Learning Objectives

- Teens will identify hand washing as an effective way to reduce the incidences of food poisoning
- Teens will demonstrate effective hand washing
- Teens will clean food preparation areas, utensils, and produce

Estimated Activity Time

90 minutes—can be divided into two 45-minute lessons.

continued next page

Getting Ready Checklist

- ☐ Copy visuals #7A-#7D for display
- ☐ Assemble supplies for hand washing activity
- ☐ If running water isn't available for hand washing, set up a Portable Hand washing Station (handout #7E)
- ☐ Assemble supplies for food preparation activity-- Dish cloths (cloth or disposable),
- ☐ AV equipment for streaming online videos

Supplies Needed

- ☐ Visuals #7A-#7C

Handwashing

- ☐ Visual #7D
- ☐ Fluorescent hand washing liquid
- ☐ Ultraviolet light
- ☐ Fingernail brush
- ☐ Liquid hand soap (non-antibacterial)
- ☐ Paper towels
- ☐ Trash can
- ☐ Running water
- ☐ Visual #7E and corresponding supplies (if running water isn't available)

continued next page

- In severe cases, people can be hospitalized for dehydration, meningitis, paralysis, and kidney failure. In very severe cases, people die.
- Fortunately, most food poisoning is preventable.
- Important steps to keeping food safe include washing hands, food preparation areas, and utensils. Also rinse all fruits and vegetables before eating.

Visual 7B

3. Ask teens to consider what their hands have touched today—such as petting animals, taking out trash, tying shoes, wiping a running nose, using the bathroom, etc. Indicate that a common cause of food poisoning is the microorganisms on our hands. Washing hands is an essential step teens can take to reduce the risk of getting food poisoning. It's important to know how to wash hands thoroughly, otherwise, whatever is on our hands can end up on our food.

Visual 7C

4. Introduce the hand washing activity. This activity will show the effectiveness of 4 different hand washing techniques.

- Ask for 4 volunteers to assist with the demonstrations.
- Put a dime size drop of the fluorescent hand washing liquid in the palm of each teen volunteer and have them rub the liquid onto to their hands as if they were putting

on hand lotion. Encourage them to thoroughly rub the liquid on their hands, wrists and forearms. Explain that the liquid represents bacteria—but is not really bacteria.

- Give each volunteer one of the following hand washing assignments: (if possible, have teens wash hands so other teens can observe the techniques)
  - Technique 1: Wash hands with warm soapy water for 20 seconds and use a nailbrush. Dry with a paper towel.
  - Technique 2: Wash hands with warm soapy water for 20 seconds and dry with a paper towel.
  - Technique 3: Rinse hands with water and dry with a paper towel.
  - Technique 4: Wipe hands with a paper towel.
- When the teens have completed the hand washing assignment, explain that the group will look at the effectiveness of each hand washing technique by using a fluorescent light. To do this, make the room as dark as possible.
  - Starting with the volunteer who only wiped hands on a paper towel, shine the fluorescent light on the hands. Shine the light on the palms, fingers, nails, wrist, back of hands, and forearms. The areas where this technique would have missed removing bacteria glow under the light. Ask teens how effective this hand washing technique is.
  - Continue evaluating the effectiveness of the different hand washing techniques by looking at the hands of the other three volunteers. Have the group react to each hand washing technique. Point out that good hand washing takes at least 20 seconds.
  - Conclude this discussion by displaying visual #7D, while demonstrating correct hand washing procedures. (See visual on next page.)

Note to Leader: *If facilities or time do not allow for the entire hand washing activity, consider just demonstrating how to wash hands properly using the hand washing steps listed visual #7D, of this leader's guide.*

Food Preparation

- ☐ Dish cloths (cloth or disposable)
- ☐ Dish soap
- ☐ Vegetable brushes
- ☐ Fruits and/or vegetables
- ☐ Serving bowl/platter
- ☐ Potato peelers
- ☐ Knives for cutting produce
- ☐ Cutting boards
- ☐ Colanders
- ☐ Serving spoons
- ☐ Small paper plates
- ☐ Plastic forks
- ☐ Fat free ranch dressing (optional)

Visual 7D

5. In preparation for the next activity, invite all teens to wash their hands using the proper technique.

6. Provide a variety of fruits and/or vegetables (such as apples, oranges, melons, berries, carrots, celery, zucchini, jicama, cucumbers, etc.). Explain that all fresh produce should be rinsed before eating, even if it is peeled before consumption. Demonstrate how to rinse and scrub produce using a vegetable brush. For soft produce such as berries or lettuce, demonstrate how to rinse under cold running water. *Note that soap should never be used on food as it can leave a residue that can make people sick—such as diarrhea.*

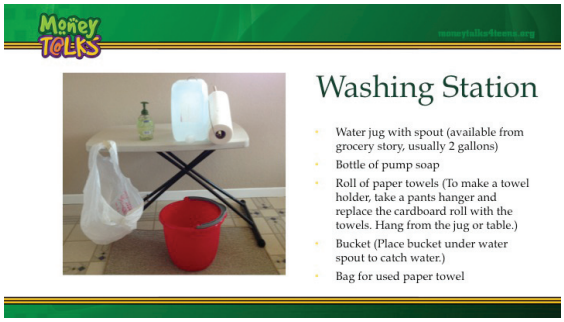
7. Divide the teens and produce into small groups. Indicate that the small groups will be rinsing their produce, but first they need to clean the food preparation area. Demonstrate how to clean the area where they will be cleaning their produce. Using warm, soapy water, clean the counter/table, cutting board, vegetable peeler, and knives. Then rinse the food area and utensils with clean water.

8. Ask each group to clean their preparation areas. Next ask them to rinse and scrub their produce.

9. Once the produce is cleaned, let teens know that they can prepare it for a group snack. Invite teens to cut up the produce so it can be eaten. Some produce may need to be peeled after it's washed and before it's cut up. The groups can combine their washed and cut produce to make a fruit salad or a veggie platter. Fat free ranch dressing may be served as a dip for the vegetables.

10. As an entire group, sample the produce. While tasting, ask teens to reflect on how they can ensure their hands are washed and their fruits and vegetables are rinsed before eating. Inquire if any teens work in food service, childcare, or other jobs where hand washing and cleaning are required. Ask teens to share what the cleaning requirements are for their jobs and what training they received. Also inquire as to why they think the cleaning requirements are included in their jobs.

11. Complete the lesson by asking teens to throw away trash and once again clean the food preparation areas and utensils with warm soapy water, then rinse with clean water.



Visual 7E

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Lesson Resources:
Visual 7A

Money TALKS

moneytalks4teens.org

Keep It Clean!

- Hands
- Utensils
- Surfaces
- Fruits & Vegetables

Money TALKS

moneytalks4teens.org

Wash Your Hands!

Hand washing is the most effective way to stop food poisoning


Money TALKS
moneytalks4teens.org
Know how to wash hands…
Wet hands with warm water
Apply liquid soap
Rub hands for 20 seconds
Rub between fingers; around nails
Rub forearms; then rinse
Use single use towel to dry
Use towel to turn off faucet
Discard towel

Money TALKS

moneytalks4teens.org

Washing Station

- Water jug with spout (available from grocery story, usually 2 gallons)
- Bottle of pump soap
- Roll of paper towels (To make a towel holder, take a pants hanger and replace the cardboard roll with the towels. Hang from the jug or table.)
- Bucket (Place bucket under water spout to catch water.)
- Bag for used paper towel

ACTIVITY EIGHT

You've Grown!

Doing the Activity

1. Review the food safety information on pages 13-15 of this leader's guide. Highlight the following information:

   - Bacteria that cause food poisoning can grow quickly in the Danger Zone (between 40°F and 140°F). Display visual #8A—Bacteria Like Warm Temperatures and indicate the Danger Zone.

Visual 8A

   - Susceptible foods left in the temperature Danger Zone can become unsafe in just 2 hours.
   - Susceptible foods include animal products—such as beef, poultry, seafood, eggs, and dairy products. Cut fruits and vegetables and cooked legumes (dried beans, peas and lentils) are also considered susceptible foods.
   - To keep food safe, do not leave susceptible foods at room temperature for more than 2 hours. When room temperatures are above 90°F, refrigerate food within 1 hour.
   - Refrigerate perishable foods as soon as possible.
   - For lunches, potlucks, and picnics, always transport cold perishable foods in an insulated container with ice packs.

Activity Summary

In this activity, teens will examine how quickly harmful bacteria can grow on perishable foods left in the Danger Zone (between 40°F and 140°F) and discuss how to keep susceptible foods safe.

Learning Objectives

- Teens will explain how food-poisoning bacteria grow quickly at room temperatures
- Teens will discuss how keeping perishable foods out of the Danger Zone can prevent food poisoning

Estimated Activity Time

2 1/4 hours. This activity can be combined with other activities, such as The Clean Scene. It can also be divided into shorter time periods and continued from one lesson to the next.

Getting Ready Checklist

- ☐ Copy visual #8A to be displayed
- ☐ Assemble supplies

continued next page

- ☐ Make Bacteria Bags—instructions in sidebar of page 3

Supplies Needed

- ☐ Food model of a meat product
- ☐ Plate to hold food model
- ☐ 7 snack-sized re-sealable plastic bags
- ☐ Cake decorating sprinkles (dinosaurs, stars, dots etc. work better than the smaller designs or glitter)
- ☐ Measuring spoons
- ☐ Marker
- ☐ Stopwatch
- ☐ Visual #8A

continued next page

Transport hot foods in separate insulated containers without ice. Never combine cold and hot foods in the same insulated container.

- Any susceptible food left in the Danger Zone for 2 or more hours should be thrown away. When room temperatures are above 90°F, throw away susceptible food after 1 hour.

2. Introduce the Bacteria Multiplication activity.

   - Explain that the meat food model is an example of a perishable food.
   - The cake decorating sprinkles represent food poisoning bacteria that can grow rapidly at room temperature.
   - Indicate that this activity will demonstrate how quickly bacteria can grow in the right situation.
   - Appoint a teen as the timekeeper. This person will keep time in 20-minute increments. Explain that the significance of the 20-minute increment is that bacteria can double every 20 minutes.
   - Ask another teen to start the demonstration by placing the meat food model on the plate and putting the "bacteria" from Bacteria Bag #1 on top of the meat. Instruct the timekeeper to start the stopwatch for 20 minutes.
   - After 20 minutes (when the stopwatch goes off) ask a third teen to empty the contents of Bacteria Bag #2 on top of the meat. The timekeeper resets the stopwatch for 20 minutes. Explain that in the last 20 minutes the bacteria multiplied and doubled in number as the meat was left at room temperature.
   - Continue adding Bacteria Bags to the meat and resetting the stopwatch at 20-minute increments. As each bag is added remind teens that the bacteria doubled again.
   - When the last Bacteria Bag is added to the meat, explain that the 10 bacteria that were originally added to the meat multiplied to nearly 1,300 bacteria. If the food was left at room temperature for 4 hours, the bacteria would multiply to more than 20,000.

3. Ask the teens their reactions to how fast the bacteria grew and what they will do differently in the future to keep their food safe.

4. Indicate that the demonstration illustrated the importance of controlling the conditions that allow bacteria to grow (time, temperature, and susceptible foods). Summarize the activity by indicating that most food poisoning is preventable and that everyone is responsible for keeping food safe.

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Bacteria Bags Instructions

In this activity, the cake decorating sprinkles represent bacteria. Make the Bacteria Bags by numbering the re-sealable snack bags 1 through 7 and adding the following number of sprinkles into the bags:

#1 10 sprinkles- zero minutes

#2 10 sprinkles - 20 minutes

#3 20 sprinkles - 40 minutes

#4 40 sprinkles - 1 hour

#5 80 sprinkles - 1 hour 20 minutes

#6 160 sprinkles - 1 hour 40 minutes

#7 320 sprinkles - 2 hours

Write the number of sprinkles on each package.

Easy measurement tip making Bacteria Bags using cake decorating sprinkles:

10 sprinkles = ⅛ teaspoon

20 sprinkles = ¼ teaspoon

40 sprinkles = ½ teaspoon

80 sprinkles = 1 teaspoon

160 sprinkles = 2 teaspoons

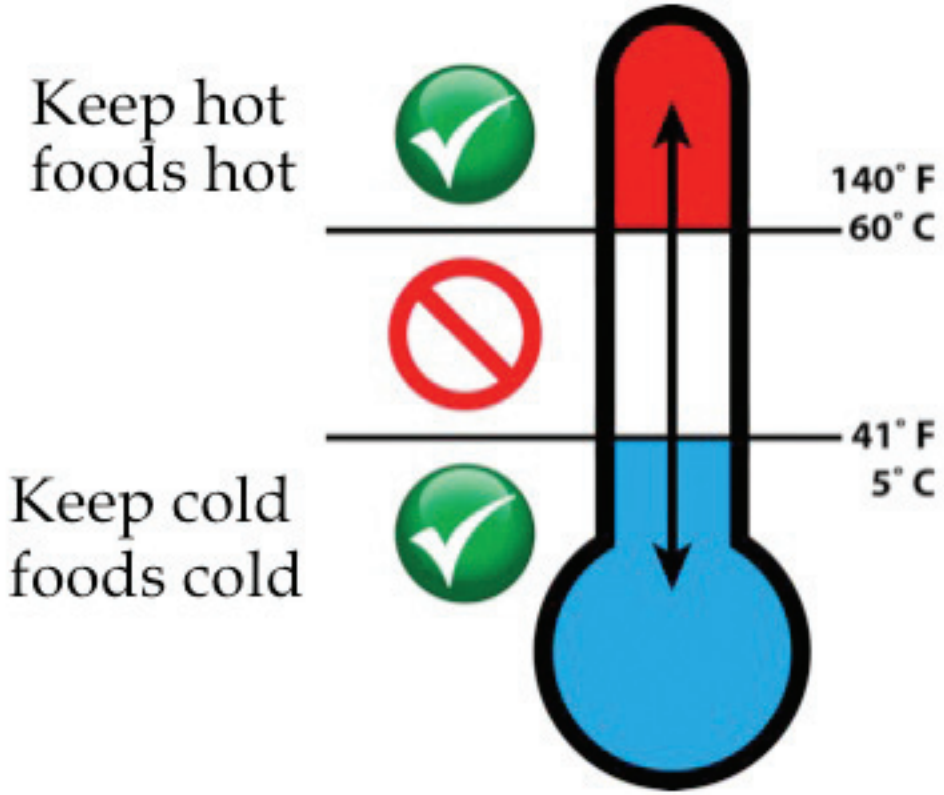
320 sprinkles = 4 teaspoons

640 sprinkles = 8 teaspoons

Money TALKS

moneytalks4teens.org

Bacteria Like Warm Temperatures!

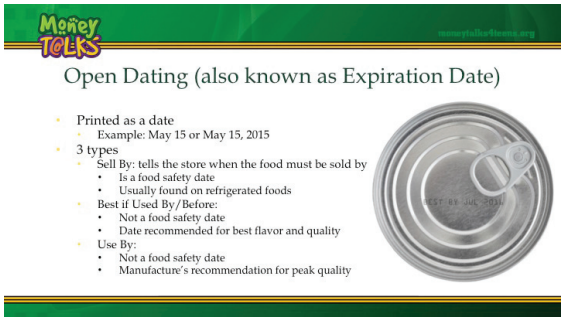


ACTIVITY NINE
Dating Advice

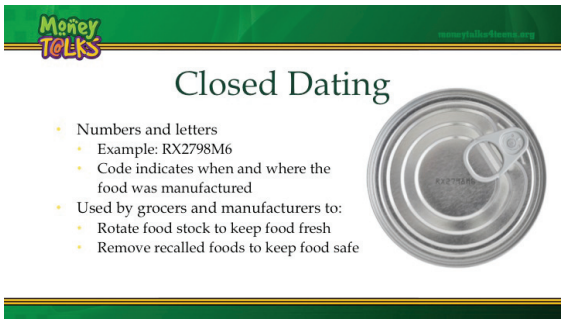
Doing the Activity

1. Review the food dating information on pages 15-17 of this leader's guide. Highlight the following information and display visuals #9A and #9B:

   - Food dating is used to help manufacturers, grocers, and consumers know when foods should be used for best quality and/or safety.
   - Food dating laws vary from state to state.
   - Federal laws classify food dates as Open Dating or Closed Dating.



Visual 9A



Visual 9B

Activity Summary

In this lesson, teens will be introduced to food dating and the difference between open and closed dating. They will identify the Sell By date as a tool for determining when perishable food is considered safe to eat. Teens will examine food packages to locate and classify food dates.

Learning Objectives

- Teens will distinguish the differences between open dating and closed dating
- Teens will identify Sell By dates as a tool to determine if perishable food is safe to eat
- Teens will identify Best if Used By and Use By dates as indicators of food quality and not food safety

Estimated Activity Time

60 minutes (can be divided into two 30-minute lessons)

continued next page

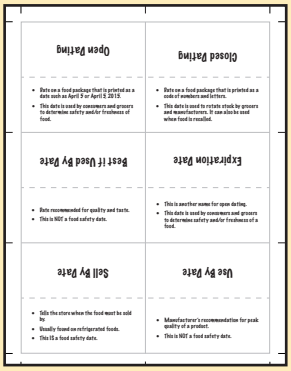
Getting Ready Checklist

- ☐ Copy visuals #9A and #9B to be displayed
- ☐ Copy handout #9C for each group of teens
- ☐ Select music and assemble equipment to play music
- ☐ Assemble food packages with dating labels

Supplies Needed

- ☐ Visuals #9A and #9B
- ☐ Handout #9C
- ☐ Handout #9D
- ☐ Variety of food packages with dating labels, i.e., see #7 on next page (3 per small group)
- ☐ Music (select a song the teens know and enjoy)

Answer key for handout #9D: Varies depending on types of food packages



Handout 9C

- Open Dating uses a calendar date and helps consumers and grocers to know when a product should be sold or used by. (visual #9A)
- Open Dating is commonly referred to as Expiration Dates. (visual #9B)
- Some foods have dates with a phrase indicating what the date indicates. Others simply have a date.
- If a phrase is used, it will be one of the following:
  - Sell By is the date that the store must sell the food item by. This is used on perishable foods and is a good date for consumers to use in selecting fresh and safe food.
  - Best if Used By or Best if Used Before indicates when food will have the best flavor or quality. It is not a purchase or food safety date.
  - Use By is the last day the manufacturer recommends using a product for peak quality. It is not a safety date and the food will likely be safe after this date.
- Open Dating will be either a:
  - Month and day (e.g., May 15) for perishable food, or
  - Month, day and year (e.g., May 15, 2015) for frozen and non-perishable food.
- Closed Dating uses a code of letters and numbers. It is not designed for consumer use, but rather is used by grocers and manufacturers to rotate stock to keep foods fresh. This date is also used when food needs to be recalled for food safety reasons.
- Some food manufacturers use both open and closed dates on food products.

2. Using handout #9C, *Food Dating Terms*, cut the terms apart along the solid lines. Each individual piece will have a term and definition. Give each teen one of the terms and definitions. Instruct the teens to fold their paper along the dotted line so the wording faces out. This will result in the food dating term being on one side of the folded paper and the definition on the other side. Since there are a total of 6 terms, it is possible that some teens will have the same terms.

3. Explain that they will be sharing the term and definition on their papers with other teens in the room. Give teens a couple minutes to become familiar with the term and definition on their papers.

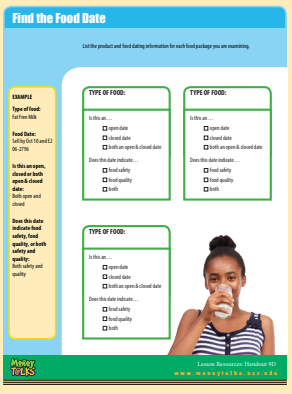
4. Explain that this activity is called Food Safety Terms and that it is done to music. When the music is playing, they mingle around. When the music stops, teens pair up with the person closest to them. Each pair of teens shares their terms and definitions between themselves. For example, one teen might have the term Open Dating. The teen shows the term to the second teen, states something like "I want to tell you about Open Dating", and then explains what it means. After 5-10 seconds, the second teen shares his/her term with the first teen. When the music begins again, the entire group mingles.

5. Begin the music and encourage teens to mingle. After about 20 seconds, stop the music and have two teens pair up. Encourage the teens to share their terms and definitions with each other. It's their choice which person goes first in each pair. After 10-20 seconds, begin the music again. Stop the music in another 20 seconds and have the new pairs share their terms and definitions. Repeat until each teen has 4-6 chances to share a term and hear a term from others, or as time allows.

6. When the activity ends, have 2-3 pairs (4-6 teens) team up for the next part of this activity.

7. Distribute 3 food packages or pictures of food packages with dates (such as milk, bread products, and salad mix) to each group. Try to give each group at least 3 different types of dates (an open, closed, and a combination of an open/closed date). Give the groups a few minutes to find the dates on each package. Remind them that some food packages have both open and closed dates. (Since some food dates can be hard to find, this is helpful for teens to know how to look for the dates.)

8. Ask each group to identify the types of dating used on the food packages. Using the Find the Food Date handout #9D, ask the teens to list the type of food products they are examining. They should also list the food dates on their



Handout 9D

handouts. Next, have them classify the foods as an open, closed, or both open/closed date. For each date, have them classify the date as a food safety date, food quality date, or both. (Since this information can be confusing, consider keeping visual #9A—Open Dating displayed for teens to review.)

9. After the teens have completed examining their food packages, engage them in a discussion about the dates on the packages:

   - How difficult was it to find the date?
   - Was the date easy to read?
   - Why would some manufacturers make it difficult to find or read the date?
   - Why do some foods have both open and closed dates?
   - How will you use this food dating information in the future?

10. Close the lesson by reminding teens that open or expiration food dating is a useful tool to determine safety or freshness of foods. Using food dates can help them buy foods that are both safe and fresh.

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Open Dating (also known as Expiration Date)

- Printed as a date
  - Example: May 15 or May 15, 2015
- 3 types
  - Sell By: tells the store when the food must be sold by
    - Is a food safety date
    - Usually found on refrigerated foods
  - Best if Used By/Before:
    - Not a food safety date
    - Date recommended for best flavor and quality
  - Use By:
    - Not a food safety date
    - Manufacture's recommendation for peak quality

Closed Dating

- Numbers and letters
  - Example: RX2798M6
  - Code indicates when and where the food was manufactured
- Used by grocers and manufacturers to:
  - Rotate food stock to keep food fresh
  - Remove recalled foods to keep food safe

Open Dating

- Date on a food package that is printed as a date such as April 5 or April 5, 2015.
- This date is used by consumers and grocers to determine safety and/or freshness of food.

Closed Dating

- Date on a food package that is printed as a code of numbers and letters.
- This date is used to rotate stock by grocers and manufacturers. It can also be used when food is recalled.

Best if Used By Date

- Date recommended for quality and taste.
- This is NOT a food safety date.

Expiration Date

- This is another name for open dating.
- This date is used by consumers and grocers to determine safety and/or freshness of a food.

Sell By Date

- Tells the store when the food must be sold by.
- Usually found on refrigerated foods.
- This IS a food safety date.

Use By Date

- Manufacturer's recommendation for peak quality of a product.
- This is NOT a food safety date.

Find the Food Date

List the product and food dating information for each food package you are examining.

EXAMPLE

Type of food:
Fat Free Milk

Food Date:
Sell by Oct 10 and E2 06-2796

Is this an open, closed or both open & closed date:
Both open and closed

Does this date indicate food safety, food quality, or both safety and quality:
Both safety and quality

TYPE OF FOOD:

Is this an…

- ☐ open date
- ☐ closed date
- ☐ both an open & closed date

Does this date indicate…

- ☐ food safety
- ☐ food quality
- ☐ both

TYPE OF FOOD:

Is this an…

- ☐ open date
- ☐ closed date
- ☐ both an open & closed date

Does this date indicate…

- ☐ food safety
- ☐ food quality
- ☐ both

TYPE OF FOOD:

Is this an…

- ☐ open date
- ☐ closed date
- ☐ both an open & closed date

Does this date indicate…

- ☐ food safety
- ☐ food quality
- ☐ both

ACTIVITY TEN
Quick Facts–Unit Pricing

Doing the Activity

1. Summarize the "Food Buying" sections of the leader's guide background information on pages 18-20. Highlight the following facts:

   - Unit pricing is an easy method to determine the best buy when there are several similar products to compare.
   - It is particularly useful when comparing pricing for different sizes of the same product, for instance a gallon (128 oz) of milk versus a ½ gallon (64 oz) of milk.
   - Unit price is not useful in comparing pricing for two different types of food, such as oranges versus bread.
   - Most large grocery stores calculate the unit price and list it near the price of the product.

2. Using visual #10A, show a sample of and explain unit pricing. Ask teens how unit pricing could be helpful in finding the best buys for food. Also discuss when unit pricing is not useful in determining the best buy, such as:

Visual 10A

   - comparing two dissimilar products—e.g., apples and oranges.
   - when stores are not consistent in the unit measure that

Activity Summary

In this activity, teens learn about unit pricing, including what unit pricing is, how unit pricing can help someone determine the best food buy, how to use unit pricing, and when unit pricing is not useful in determining the best buy.

Learning Objectives

- Identify unit pricing as a tool to help determine the best food buys in the grocery store
- Discuss how comparison shopping can save money

Estimated Activity Time

30–45 minutes

Getting Ready Checklist

- ☐ Copy visuals #10A and #10B to display
- ☐ Copy handouts #10C and #10D for each teen
- ☐ Computer with online capabilities (optional)

continued next page

Supplies Needed

- ☐ Visual #10A
- ☐ Visual #10B
- ☐ Handout #10C
- ☐ Handout #10D
- ☐ *Hunger Attack* teen guide pages 7-8 (or copies of Food Cost Quiz (1 per teen)
- ☐ Computer with online capabilities (optional)

Related Money Talks Online Game:

- ☐ Food Cost Quiz
- ☐ Meal of No Meal Game

Answer Key for Handout #10C

1. 37¢ per ounce (cheese)
2. $1.33 per pound (apples)
3. 31¢ per ounce (crackers)
4. .009¢ per count (napkin)

Answer Key for Handout #10D

1. A- $1.42 per ounce (jerky)
2. A- 24.3¢ per ounce (cheese crackers)
3. B– 3.9¢ per ounce (orange juice)
4. A– 9.1¢ per ounce (bagels)
5. A– 28.9¢ per ounce (frozen pizza)
6. C– 8.3¢ per ounce (spaghetti sauce)

is used for comparison—e.g., ounces are used for one product, but pounds are used for a similar product.

3. Display visual #10B. Have the teens discuss how unit pricing is calculated. Even though most stores provide unit pricing, knowing how the unit price is determined will help teens understand how to use this food buying aid. Split the group into pairs and have them practice calculating unit pricing using handout #10C. (Answer Key for handout #10C is in the sidebar on this page.)

Visual 10B

4. Using handout #10D, ask the groups to determine which food item in each pair is the best buy. (Answer Key for handout #10D is in the sidebar on this page.)
5. Have the teens review page 7 of the *Hunger Attack* teen guide and complete the *Food Cost Quiz* to learn more ways to save money at the grocery store. The answers to the quiz are on page 8 of the teen guide.
6. If internet access is available, the quiz can be completed online at moneytalks4teens.org by selecting "Games" in the center of the page. Scroll down to find the *Food Cost Quiz*.
7. *Extend the Lesson*—If internet access is available, allow time for teens to play the *Meal or No Meal Game* found at moneytalksforteens.org. Click on games and scroll down to find the game. This game allows teens to select a healthy meal on a budget.

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Money TALKS

moneytalks4teens.org

Unit Pricing

Many grocery stores calculate the unit price. You can find it listed on the shelf label that shows the product price.

Money TALKS

moneytalks4teens.org

Unit Pricing

Divide the total cost of the item (in this case 2.99) by the unit measure (in this case 16 ounces).

The answer: 18.7¢.

Quick Facts—Unit Pricing

Calculate the unit price for the four items below. See the example in the sidebar for assistance.

EXAMPLE

Unit price is calculated by dividing the cost of an item by the unit measure (i.e., ounces, pounds, count). For example, in the unit price label above, the 16 oz box of crackers is selling for $2.99 or 18.7 cents per ounce.

($2.99 divided by 16 = 18.7 cents)

Try it out!

To determine Unit Pricing divide the total cost of the item by the unit measure (ounce, pound, slice, etc.).

Cost/Unit Measure = Unit Price

1	8 ounces of cheese cost $2.99. What is the cost per ounce?	
2	3 pounds of apples cost $3.99. What is the cost per pound?	
3	A 14-ounce box of crackers costs $4.29. What is the cost per ounce?	
4	500 napkins cost $4.50. What is the cost per napkin?	

Quick Facts—Unit Pricing

For items 1 - 5 below, compare the unit price label in column A to the label in column B. Circle the one in each pair that is the best buy. For item 6, compare the three unit price labels and circle the least expensive sauce.

	A		B	
1	**Jerky** 4 oz	$5.69	**Jerky** 4 oz	$5.99
	Unit Price	$1.42 /oz	**Unit Price**	$1.71 /oz
2	**Cheese Crackers** 16 oz	$3.89	**Cheese Crackers** 8.5 oz	$3.19
	Unit Price	24.3¢ /oz	**Unit Price**	37.5¢ /oz
3	**Orange Juice** 16 oz	$0.99	**Orange Juice** ½ gal (64 oz)	$2.50
	Unit Price	6.2¢ /oz	**Unit Price**	3.9¢ /oz
4	**Bagels** 22 oz	$2.00	**Bagels** 22 oz	$3.19
	Unit Price	9.1¢ /oz	**Unit Price**	14.5¢ /oz
5	**Frozen Pizza** 12.75 oz	$3.69	**Frozen Pizza** 12.91 oz	$3.99
	Unit Price	28.9¢ /oz	**Unit Price**	30.9¢ /oz

6	A	**Spaghetti Sauce** 14 oz	$1.55
		Unit Price	11.1¢ /oz
	B	**Spaghetti Sauce** 26 oz	$2.95
		Unit Price	11.3¢ /oz
	C	**Spaghetti Sauce** 26 oz	$2.15
		Unit Price	8.3¢ /oz

Which sauce would you buy?

ACTIVITY ELEVEN
Smooth Calculations

Doing the Activity

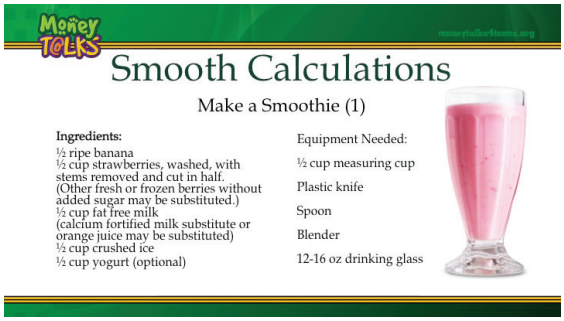
1. Summarize the "Eating Out" section of the leader's guide background information on page 18. Highlight the following facts:
   - Eating out can be expensive.
   - There are many ways to save money when eating out.
   - As an alternative to eating out, make a meal or snack at home to save money.

2. Ask teens the price of smoothies at local restaurants *(they usually run between $4–$5 for a 12 oz smoothie).*

   Give each teen a copy of handout #11A. As a group, calculate the cost of making a homemade Strawberry-Banana smoothie. (Answer Key for handout #11A is in the sidebar on the next page.)

   Display visuals #11B and #11C. Have the group make smoothies. Begin by having teens thoroughly wash hands.

3. While enjoying the smoothies, ask the group to compare how much money could be saved by making a homemade smoothie instead of purchasing a restaurant smoothie. Compare how much money could be saved if 3 people made smoothies together rather than purchasing 3 restaurant smoothies. Discuss what other factors affect whether or not


Money TALKS

Smooth Calculations

Make a Smoothie (1)

Ingredients:

½ ripe banana
½ cup strawberries, washed, with stems removed and cut in half. (Other fresh or frozen berries without added sugar may be substituted.)
½ cup fat free milk (calcium fortified milk substitute or orange juice may be substituted)
½ cup crushed ice
½ cup yogurt (optional)

Equipment Needed:

½ cup measuring cup
Plastic knife
Spoon
Blender
12-16 oz drinking glass

Visual 11B

Activity Summary

In this activity, teens learn to calculate the cost of making a smoothie at home, compare the cost of a homemade smoothie to a purchased smoothie, and prepare and enjoy a homemade smoothie.

Learning Objectives

- Compare the costs of homemade and restaurant smoothies
- Discuss how wise food shopping can save money

Estimated Activity Time

30–45 minutes


Smooth Calculations

How much does it cost to make a smoothie at home? Do the math and find out.

EXPLANATION

The ingredients list on the right shows the average price of the items needed to make a smoothie at home. Use these prices to determine the cost per serving to make one smoothie.

	Food Costs
Whole Banana	$0.24
Strawberries (2 cups)	$2.20
Fat Free Milk (½ gal)	$1.20
Ice	no cost
Vanilla Yogurt (32 oz)	$2.79

Recipe: Strawberry-Banana Smoothie — Costs per Serving

1/2	½ ripe banana	
1/2	½ cup strawberries	
1/2	½ cup fat free milk or calcium-fortified milk substitute	
1/2	½ cup crushed ice	
1/2	Total for 12 ounces	
1/2	½ cup vanilla yogurt (optional)	
1/2	Total	

Did You Know?
½ cup = 4 fl oz
There are:
4 cups in 32 fl oz (1 quart)
8 cups in 64 fl oz (1/2 gallon)

* Can be made with orange juice instead of milk

Money TALKS — Lesson Resources: Handout 11A — moneytalks4teens.org

Handout 11A

continued next page

Getting Ready Checklist

- ☐ Copy handout #11A for each teen
- ☐ Copy visuals #11B and #11C to display
- ☐ Buy food ingredients
- ☐ Wash and stem strawberries
- ☐ Assemble supplies

Supplies Needed Per Teen

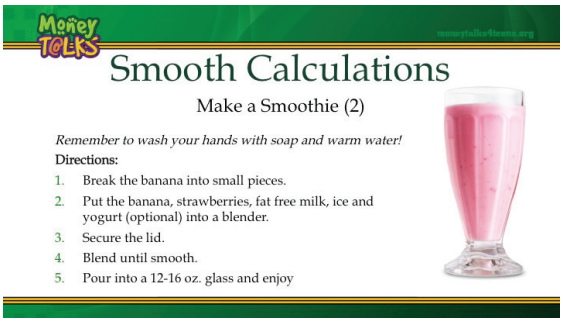
- ☐ Handout #11A
- ☐ ½ ripe banana
- ☐ ½ cup strawberries
- ☐ ½ cup fat free milk or calcium-fortified milk substitute
- ☐ ½ cup ice
- ☐ ½ cup of fat free or low fat vanilla yogurt (optional)
- ☐ 12-16 oz drinking cup

Supplies to Share

- ☐ Visuals #11B and #11C
- ☐ Blender
- ☐ ½ cup measuring cups
- ☐ Plastic knives for cutting fruit
- ☐ Spoons
- ☐ Paper towels
- ☐ Soap and water for washing hands

Answer Key for Handout #11A

1. 12¢—Banana
2. 55¢—Strawberries
3. 20¢—Fat free milk
4. 0¢—Ice
5. 87¢—Total
6. 35¢— Fat free or low fat yogurt
7. $1.22—Total



Visual 11C

a homemade smoothie is more economical than purchasing a restaurant smoothie, i.e., will all purchased ingredients be used and not wasted?

Discuss what other benefits and disadvantages there are to homemade smoothies versus restaurant smoothies. Issues will include personal feelings and social interactions, as well as issues regarding taste, ingredients, having a blender, permission from parents, storage of leftover ingredients, clean up, etc.

4. *Extend the Lesson Survey/Graphing*—Instruct teens to take a survey among their friends and family, asking participants in the survey the following questions:
   - How many cups of coffee do you drink at home in a week and approximately how much are you spending on each cup of coffee?
   - How many cups of coffee do you purchase each week and how much are you spending on each cup of coffee?

   Ask the teens to share the results of the survey in a class discussion and/or graphing format. Encourage teens to be creative in comparing participant's responses or group responses. Consider using Excel and creating pie charts or present findings using PowerPoint.

   Using the results, have the teens determine the average cost for a cup of coffee at home and the average cost for coffee purchased out. If teens cannot determine the average cost of a cup of coffee at home, use $.50 per cup (includes costs for coffee beans, water, sugar, cream, and filters).

The assessment tools provided with each leader's guide are intended for the leaders to use at their discretion. Depending on the group of teens, the leaders may want to use the assessments as additional activities, homework, or as a means to determine a formal grade for completing the unit.

Smooth Calculations

How much does it cost to make a smoothie at home? Do the math and find out.

	Food Costs
Whole Banana	$0.24
Strawberries (2 cups)	$2.20
Fat Free Milk (½ gal)	$3.20
Ice	no cost
Vanilla Yogurt (32 oz)	$2.79

Did You Know?
½ cup = 4 fl oz
There are:
4 cups in 32 fl oz (1 quart)
8 cups in 64 fl oz (1/2 gallon

	Recipe: Strawberry-Banana Smoothie	Costs per Serving
1	½ ripe banana	
2	½ cup strawberries	
3	½ cup fat free milk or calcium-fortified milk substitute	
4	½ cup crushed ice	
5	**Total for 12 ounces**	
6	½ cup vanilla yogurt (optional)	
7	**Total**	

* Can be made with orange juice instead of milk

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Smooth Calculations

Make a Smoothie (1)

Ingredients:

½ ripe banana
½ cup strawberries, washed, with stems removed and cut in half.
(Other fresh or frozen berries without added sugar may be substituted.)
½ cup fat free milk
(calcium fortified milk substitute or orange juice may be substituted)
½ cup crushed ice
½ cup yogurt (optional)

Equipment Needed:

½ cup measuring cup

Plastic knife

Spoon

Blender

12-16 oz drinking glass

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Smooth Calculations

Make a Smoothie (2)

Remember to wash your hands with soap and warm water!

Directions:

1. Break the banana into small pieces.
2. Put the banana, strawberries, fat free milk, ice and yogurt (optional) into a blender.
3. Secure the lid.
4. Blend until smooth.
5. Pour into a 12-16 oz. glass and enjoy

Activity TWELVE
Food Tic-Tac-Toe

Doing the Activity

1. Draw a tic-tac-toe board on the whiteboard or on a large piece of paper. Number the squares 1 through 9. The leader divides the teens into two groups and flips a coin to determine which group goes first.

2. The first team selects a number from the tic-tac-toe board. The leader asks the corresponding question from one of the following three games and the team that selected the number answers the question. If the question was answered correctly, place an X in the box corresponding to the selected number. If the team misses the answer, place an O in the box.

3. The second team picks a number and the leader asks the corresponding question. If the team answers correctly, place an O in the box corresponding to the selected number. If the team misses the answer, place an X in the box. Continue until one team has three marks in a row, column or diagonal.

Leader Note: There are 3 versions of the Tic Tac Toe game. Choose the version that best fits the lessons taught, combine questions from multiple versions to develop a game that matches the lessons taught, and/or use multiple versions to play the game more than once.

Activity Summary

In this activity, teens will review nutrition, food safety, and food buying practices they learned from other activities in this leader's guide.

Learning Objectives

- Name food components that can be compared using the Nutrition Facts label
- Calculate unit pricing
- Determine how much sugar is in an item
- Identify ways to cut food costs
- Identify ways to keep food safe
- Define food dating terms

Estimated Activity Time

20–45 minutes

1	2	3
4	5	6
7	8	9

Getting Ready Checklist

- ☐ Copy visual #12A-#12B to be displayed
- ☐ Assemble supplies

Supplies Needed

- ☐ Visuals #12A-#12B
- ☐ Whiteboard or a large piece of paper
- ☐ Coin to flip
- ☐ Markers

Food Shopping Tic Tac Toe

Game 1

Questions and Answers

1Q. On the ingredients label, in what order are the food ingredients listed?
1A. The foods are listed in order of weight. The ingredient that is in the largest proportion by weight is listed first; the ingredient in the smallest proportion by weight is listed last.

2Q. Name three food components that can be compared using a Nutrition Facts label.
2A. Fat, carbohydrates, protein, sugar, cholesterol, sodium, fiber, vitamin A, vitamin C, iron, calcium, calories, or calories from fat

3Q. If a cereal has 8 grams of sugar per serving and you eat 2 servings, how many teaspoons of sugar are you eating?
3A. 4 teaspoons: 16 grams of sugar in two servings. 16 divided by 4 equals 4 teaspoons of sugar. There are 4 grams of sugar per teaspoon.

4Q. What are the temperatures for the food safety Danger Zone?
4A. 40°F to 140°F.

5Q. What is the single most important thing you can do to keep food safe?
5A. Wash hands before preparing and eating food.

6Q. What is an expiration date?
6A. Another name for Open Dating, the expiration date helps consumers determine the safety and freshness of foods.

7Q. Using the ingredient label, identify how many different types of sugar are in this product. Display visual #12A when the teens pick question Q7.

Visual 12A

7A. There are five sugar ingredients noted in bold on the following list:

Enriched wheat flour (wheat flour, niacin, reduced iron, thiamin mononitrate, riboflavin and folic acid), ***sugar***, graham flour, partially hydrogenated vegetable oil shortening (contains one or more of the following: soybean oil, cottonseed oil), brown sugar, high fructose corn syrup, honey, sodium bicarbonate, salt, molasses, soy lecithin, and vanillin (an artificial flavor).

8Q. For the frozen soft pretzel label, identify the unit price for this food. Display visual #12B when the teens pick question Q8.

Visual 12B

8A. 23¢ per ounce

9Q. Name one healthy snack from each of the 5 food groups.

9A.
- Grains—bagel, rice cake, pasta, whole-wheat crackers, low-sugar cereal, tortilla, baked tortilla chips, English muffin, graham crackers, etc.
- Vegetable—any vegetable
- Fruit—any fruit
- Dairy—low fat or fat free milk, yogurt, cheese and calcium-fortified dairy substitutes
- Protein—tuna, beans, nuts, peanut butter, eggs, jerky, sunflower seeds, etc.

Food Shopping Tic Tac Toe

Game 2

Questions and Answers

1Q. What is the name of the USDA website that helps you plan a healthy diet?
1A. MyPlate or ChooseMyPlate.com

2Q. True or False—If a food has a 20% Daily Value (% DV) for calcium, this means the food is good source of calcium
2A. True—a 20% DV or higher for calcium indicates a food is a good source of calcium.

3Q. By law, where must the ingredients be listed on a food package?
3A. Ingredient labels must always be listed on the outside of the package.

4Q. Calculate the unit price per ounce for a 10 oz bottle of juice that sells for $1.00.
4A. 10 cents/oz—Divide the price by the quantity; $1.00 divided by 10 oz equals 10 cents/oz.

5Q. If a food package is too small for a Nutrition Facts label, how can you obtain the Nutrition Facts information?
5A. Information for obtaining the Nutrition Facts information is printed on the food label. Usually you must call or write the manufacturer for the information.

6Q. How do store brand and national brand food items compare in quality and price?
6A. Generally, store brands and national brands are of equal quality, but the store brands usually cost less.

7Q. What type of food dating uses a code of numbers and letters instead of a date?
7A. Closed Dating

8Q. List 3 ways to save money when eating out.
8A. Any 3 of the following: share a meal with someone else, drink water instead of paying for a beverage, take advantage of early bird specials, use restaurant coupons, participate in loyal customer clubs, bring food to the park or a friend's

home, avoid vending machine foods, select less expensive restaurants, or any other appropriate answer.

9Q. What two types of milk have the lowest fat content?
9A. Fat Free and 1% milk

Food Shopping Tic Tac Toe

Game 3

Questions and Answers

1Q. Fill-in the Blank: Because of high calories and low fiber, it is recommended that we drink no more than _____ of 100% fruit juice in a day?
1A. ½ cup

2Q. Name three symptoms of food poisoning.
2A. Any 3 of the following: Nausea, headaches, fever, stomach cramps, diarrhea, vomiting, kidney failure, dehydration, blurred vision, arthritis, meningitis, paralysis, nerve and brain damage, death.

3Q. To be effective, you must wash your hands for how long?
3A. At least 20 seconds

4Q. Name two reasons why closed dating is used on food packages.
4A. To help rotate stock and to pull foods in the event of a recall.

5Q. Fill In the Blank: In as few as ____ minutes, bacteria can double in number.
5A. 20 minutes

6Q. Name three ways to save money when grocery shopping.
6A. Any three of the following: Shop alone, don't shop when hungry, shop when the store is not crowded, use unit pricing, use coupons wisely, make and use a shopping list, buy food on sale, buy fruits and vegetables in season, buy in bulk, compare prices, buy store brands instead of national brands, enroll in grocery store club coupons, or any other appropriate answer.

7Q. Why is added sugar in the diet a concern?
7A. Added sugar provides calories but no other nutrients.

8Q. List 3 ways to include more fruits and vegetables in your diet.
8A. Correct answers will include any way that will increase produce consumption, including, but not limited to: add

fruit to cereal, include vegetables in sandwiches, burritos, wraps, etc., eat fruits and vegetables for snacks, eat fruit for dessert, choose a salad as a main dish, eat main dishes made with fruits and vegetables such as stir-fry, add vegetables to rice and pasta, make a fruit smoothie or parfait for breakfast or snacks, make a breakfast beverage with fruit, vegetables, and fat free milk, or any other appropriate answer.

9Q. Fill-in the Blank: Make at least _____ of your grains whole
9A. Half

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Ingredients Label

INGREDIENTS:
Enriched wheat flour (wheat flour, niacin, reduced iron, thiamin mononitrate, riboflavin and folic acid), sugar, graham flour, partially hydrogenated vegetable oil shortening (contains one or more of the following: soybean oil, cottonseed oil), brown sugar, high fructose corn syrup, honey, sodium bicarbonate, salt, molasses, soy lecithin, and vanillin (an artificial flavor).

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Pricing Label

Calculate the unit price for the Frozen Soft Pretzels

Hunger Attack Teacher Feedback

In an effort to accurately evaluate the impact of our programs and to better serve the needs of teens' and their leaders, we ask you to complete this feedback form.

Hunger Attack! Feed Your Appetite—Protect Your Wallet

This curriculum developed by a UC Cooperative Extension Workgroup is designed to teach teens important information about nutrition, food safety, and saving money on food.

Today's Date	
Your Name	School/Agency Name
Telephone Number	Email Address

I taught the following Hunger Attack Activities with my teens:

- ☐ 1. MyPlate My Way
- ☐ 2. Label Lingo – Ingredient Labels
- ☐ 3. Nutrition Facts Label
- ☐ 4. Sugar Savvy
- ☐ 5. Fat Facts
- ☐ 6. Targets to Aim For
- ☐ 7. The Clean Scene
- ☐ 8. You've Grown!
- ☐ 9. Dating Advice
- ☐ 10. Quick Facts – Unit Pricing
- ☐ 11. Smooth Calculations
- ☐ 12. Food Tic-Tac-Toe

What part(s) of Hunger Attack did you find most effective with your teens?

What part(s) of Hunger Attack did you find least effective with your teens?

Would you implement the Hunger Attack program again?
_____ Yes _____ No

Other comments?

University of California
Agriculture and Natural Resources

Studies show that teens with healthy eating habits tend to do better academically. What can you do to help? Incorporate nutrition education into your classroom using the ***Hunger Attack! Feed Your Appetite—Protect Your Wallet*** curriculum. The materials are available at no cost to schools with more than 50% of students receiving free/reduced school meals.

Hunger Attack!

Feed Your Appetite—Protect Your Wallet

This curriculum, developed by a Workgroup of the UC Cooperative Extension, is designed to teach teens important information about nutrition, food safety, and saving money on food.

Students learn, through hands-on activities, to:

- use MyPlate as a model for healthy eating
- create east-to-make healthy snacks
- read & compare food labels
- determine how much sugar is contained in their favorite beverages
- learn how to select nutritious meals when eating out
- learn ways to reduce incidences of food poisoning
- learn to comparison shop & save money on food

Hunger Attack is part of the Money Talks for Teens program. To learn about other topics in the series, visit

moneytalks4teens.org.

If you are interested in bringing this curriculum to your school or for more information, please contact: