Target Audience:

Upper Elementary School Children Middle School/Jr. High School Children High School Teenagers Pregnant Teenagers Adults

Topic Areas:

Reading Food Labels
Eating Less Fat
Salt...Where Does It Hide?
Improving My Weight
Low Fat &Filling...Pastas, Breads, & Cereals
How To Eat More Fruits and Vegetables

Objectives:

- Read labels to identify the number of calories in a single serving
- Read labels to identify the number of fat grams in a single serving
- Read labels to choose foods lower in fat, saturated fat, cholesterol, sodium, and sugar
- Read labels to choose foods higher in fiber, vitamin A, vitamin C, calcium, and iron
- Read nutrition facts labels to learn amounts of fat and calories in a serving of food
- Read labels to determine the ingredients in the product
- Read labels to select products lower in salt
- Read labels to learn how fruit of vegetable products will assist in meeting the daily dietary intake allowance for fiber, vitamins A and C and calcium
- Read labels to select products lowest in fat
- Read labels to choose grain products that are high in iron, fiber, folate, and protein

Lesson Creators:

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Purpose:

The purpose of this lesson is to have participants understand the nutrition facts label so that they are able to make more informed food choices.

What the Nutrition Educator Needs to Know So That Participants' Questions Can Be Answered:

Food labels provide a number of kinds of product information. The Nutrition Facts Label gives information about calories, fat, sodium, vitamins, and other nutrients. Another part of the label contains the ingredients. Also, you will find the name and address of the company that makes the food

The ingredients are listed in descending order, by amount. That is to say, the food that is in the product in the greatest amount is listed first, followed by the food that is the second most, down to the food that is found in the smallest portions in the food, which is listed last.

The Nutrition Facts label is confusing to most people. This lesson gives an easy way to use the label to quickly use the label to compare the health value of different foods.

In this lesson the participants will color a Nutrition Facts label using red and green crayons or markers. This will provide them with a new way to examine the quality of products that they may eat or drink. The part of the label that they will color in red represents nutrients that should be consumed in smaller amounts. It means they should slow down, just like they do when they see a traffic light turn red in New Jersey. (Just seeing if you're still awake at the wheel!) They will color some of the label in green. These portions of the label represent nutrients that they should be eaten n larger amounts. Green means "speed up" or "go!" When shopping in the grocery store shoppers should buy items that are highest in the "greens," lowest in the "reds," and educated trades in "green" and "red" nutrients.

Serving Size

This is not colored green or red, but participants should be alerted to serving sizes on all foods examined.

Total Fat (Red)

Eating high amounts of fat has been linked to heart disease, diabetes, and cancer. The food label gives the amount of fat in grams. Participants may question you about how many grams of fat they should eat each day. You will want to let them know that most Americans eat too much fat and that this lesson will give them an easy way to help them lower their fat intake. Next you can give them a general idea of the range of fat grams that is recommended for men and women. Children under age 2 should not have their fat intake restricted.

	Active Men (2600-2800 calories)	Most Men & Active Women	Most Women & Older Adults
All Fat	87-93 grams	66-73 grams	54-60 grams
Saturated Fat	Less than 31 grams	Less than 24 grams	Less than 18 gram

Saturated Fat Grams (Red)

Eating high amounts of saturated fats has been linked to heart disease, diabetes, and cancer. Saturated fats should be colored in red. People should try to eat less than 100% Daily Value or DV for the whole day. Saturated fats are found in meats, other animal products like dairy products and tropical oils.

Cholesterol (Red)

Dietary cholesterol is found only in foods that come from animals. For example, meats, lard, cheese, butter, and fish contain cholesterol. Plants and oils (like canola, com, and peanut) do not contain cholesterol: But eating fats or oils can increase the risk of your body making too much cholesterol. In other words, eating fat, especially saturated fats, will raise your cholesterol levels. People are encouraged to eat less than 300 mg of cholesterol per day. The amount of cholesterol that is in labeled foods is listed on the label. The amount of total cholesterol that is in your blood should be less than 200.

Sodium (Red)

Sodium is found naturally in many foods. However, most of the salt that people eat is added to prepared foods, like: canned and dried soups; pickled foods; cured meats like bacon, hot dogs, and lunch meats; salty snack foods; gravies; catsup; and, olives. Also, people add salt to their foods when they cook and at the table. Some people can increase their blood pressure from eating too much salt. Because of this the American Heart Association recommends eating less than 2300 mg of salt per day.

Dietary Fiber (Green)

Recent studies have shown that fiber can lower the risk of diabetes and certain types of cancer. But almost all Americans eat too little fiber. Fiber is highest in fruits and vegetables and whole grain products. For example, foods like: beans, lentils, peas, fruits, raisins, broccoli, oatmeal, grits, brown rice, and whole wheat bread are high in fiber. The bread must say whole wheat, not just wheat, if you want it to be high in fiber. People should eat at least 35 grams of fiber each day.

Sugars (Red)

Some type of sugar is found in most foods. Foods that contain large amounts of sugar and not many other nutrients are said to be full of "empty calories." This means that you get a lot of calories with little other nutrition. Sugar has not been proven to cause hyperactivity, but it does contribute to overweight and cavities/dental caries. Some foods like fruits are good food choices when they are eaten in the correct amounts, even though they contain sugar.

Protein (Maybe Red, Maybe Green)

It is important to get enough protein each day, but many people get more than they need. Since protein is high in meats and dairy products, extra protein can also mean extra calories and fat, depending on which of these foods you eat. Beans also have a lot of protein and are low in. fat and calories. Strict vegetarians do not always get enough protein. Strict vegetarians do not eat meat and some also do not eat dairy products or eggs. People who do not eat enough food each day, or who eat mostly empty calories may also not get enough protein. These people should color protein green. If someone eats a lot of meat, eggs, and dairy products they may get too much protein each day. It should be red for them. The bottom line is, if you eat according to MyPyramid and get about 100% of your Daily Value or DV for protein each day, you'll be doing great!

Vitamin A (Green)

Vitamin A is important for people's night vision and their immune system. It is also an antioxidant. People should eat one food that is high in vitamin A each day. Some foods high in vitamin A are: carrots, pumpkin, orange squash, and sweet potatoes. Most orange or dark green vegetables are high in vitamin A. So are meats like liver. Some people are afraid that too much vitamin A could make them sick. This is true. But the only way they will get too much vitamin A is usually if they are taking too much in a vitamin pill. One daily multi-vitamin and a normal diet will not make them sick, but they should not take vitamin A pills unless they are told to do so by their doctor.

Vitamin C (Green)

Vitamin C may help reduce risk for cancer and heart disease. It is needed to build collagen in our bodies. There some in studies say that vitamin C helps to reduce the time you have a cold but this has not been confirmed in other studies. The body needs

vitamin C because it is a good antioxidant. There is no harm (or very little, non-permanent harm) in getting additional vitamin C.① Smokers especially should double the Recommended Daily Allowance (RDA) or at least get more than the RDA of Vitamin C. Good sources of Vitamin C are oranges, grapefruits, lemons, strawberries, broccoli, green peppers, tomatoes, cantaloupe and papaya.

Calcium (Green)

Some women in the United States, as they age, can break their bones more easily because they have osteoporosis. Calcium plays a large role in building and maintaining bone mass throughout life. The greatest increase in bone mass is during adolescence when kids go through their growth spurt. The more calcium young people consume, the denser their bones will be. Exercise helps the body store calcium in the bones. After they reach their late twenties they will never be able to build up bone in this way again. After people stop growing they need to eat enough calcium so that their bodies will not need to borrow what from their bones. The bones weaken when calcium is removed to be used for other things in the body. People should try to eat 100% DV for calcium each day to make sure that their bones are not being robbed of calcium. Foods that are high in calcium are: milk, dairy products, calcium fortified orange juice, sardines, and canned salmon with the bones in it, leafy greens, broccoli, beans and lentils.

It may not be easy to get enough calcium especially when people can not eat dairy products. In this case people might want to take a supplement, calcium fortified antacid or eat calcium fortified food or drink like orange juice or fortified cereal. Some calcium supplements, like calcium carbonate is better absorbed when you have acid foods. Other calcium supplements like calcium citrate are easy for your body to absorb. If you eat a meal containing calcium or take supplements with a meal, the extra acid in your stomach will be enough to help the calcium absorb. It is a good idea to take calcium supplements with calcium carbonate and calcium antacids with an acidic drink, such as orange juice, if you do not take them with a meal. ②

Iron (Green)

Iron is needed by the body to keep the blood cells strong. Many people in the United States are anemic due to lack of iron. They feel tired and do not seem able to function as well as they should. Children may not be able to focus well at school and will have difficulty learning. If the color of the tongue or the inner flesh around the eyes is pale, see a doctor to determine if an iron deficiency is causing it. Foods high in iron are meats, beans, peas, lentils, nuts, dark green leafy vegetables, and enriched grain products.

Folic Acid (Green for women who may get pregnant)

Folic acid is also called folate. It is not listed on all packaged products, but it is listed on most cereals and grain products. It is very important for women who may get

pregnant to get enough folic acid or folate so that their baby will not be born with a serious problem called a neural tube defect. The neural tube forms very early during pregnancy. It is the beginning of spinal cord development. By the time most women find out they are pregnant it is already too late for them to improve their folate status in time to help their baby. That's why any woman who <u>may</u> get pregnant must make sure that she gets enough folate. ③

Calories and Carbohydrates

The remaining areas of the food label, calories and carbohydrates are not colored because, like protein, people's needs vary. Some people who are overweight need fewer calories, some who are underweight need more calories, and those who do not need to gain or lose weight probably don't need to think about this much. If you are working with a class that wants to improve their weight, have them code calories as is appropriate. They will want to make sure that they look at how many calories are in each serving of food.

References:

- 1. Duyff, Roberta Larson; "Vitamins, Minerals, and Phytonutrients," Chapter 6, Complete Food and Nutrition Guide, 4th edition; Houghton Mifflin Harcourt, Boston, New York 2012; page 137-138
- 2. Duyff, Roberta Larson; "Supplements: Use and Abuse," Chapter 23, Complete Food and Nutrition Guide, 4th edition; Houghton Mifflin Harcourt, Boston, New York 2012; page 635.
- 3. U.S. Department of Agriculture; "Chapter 4: Foods and Nutrients to Increase." Dietary Guidelines for Americans, 2010. Washington, D.C.: G.P.O., 2010. Pages 41-42.

For Additional Reading:

- 1. "Eating Healthier and Feeling Better Using the Nutrition Facts Label". Choose MyPlate, US Department of Agriculture, 2006. http://www.choosemyplate.gov/downloads/nutritionfactslabel.pdf
- 2. "Understanding the Food Label". Colorado State University Extension, 2010. http://www.ext.colostate.edu/pubs/foodnut/09365.html

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Shopping □	Budgeting □	Safety & Sanitation □

Time the Activities are Expected to Take:

Activity 1: 10-15 minutes Activity 2: 30-35 minutes Activity 3: 15 minutes

Next Week's Goals: 5 minutes

Materials Needed:

Depending on your specific objectives you should bring along packages of different products. Packages should still contain the product for at least one food category if you plan to do activity #3. Bring along any of the following for a general objective of reading labels and more specific products for the following objectives:

- cans of soup (for: decreasing salt or general label reading)
- boxes of cereal (for: decreasing calories, decreasing fat)
- packages of sweet snacks (for: decreasing sugar, decreasing calories)
- packages of salty snacks (for: decreasing salt, decreasing fat, decreasing calories)
- dairy products (for: getting more calcium, decreasing fat, decreasing calories)
- packaged fruit and vegetable products (for: comparing canned and frozen to fresh and getting more vitamin A, vitamin C, and fiber)
- packages from whole and non-whole grain products to show how whole grain foods have more fiber than others, and to choose grain products that are high in iron, fiber, and protein
- beverages (for: consume milk or juice over soft drinks)

Copies of the Pocket Food Label, not colored – one per participant and an already colored one for you

Red and green crayons or markers for each participant

Chalkboard and chalk (or) flip chart and markers (or) overhead you can write on Serving containers: whatever is needed to serve the food in activity #3 (e.g., plates, cups, spoons, napkins)

If choosing soup or another food that needs to be cooked, an electric skillet, hot plate, or way to heat the food and don't forget the can opener

Lesson Plan:

Activity 1: "Coloring the Food Label" (15 minutes)

- 1. Pass out a black and white version of the food label to each person.
- 2. Pass out the red and green crayons or markers.
- 3. Explain to the participants that they should color in the lines of the Nutrition Facts label as you go through each line of the food label. Tell them that some lines will be red and others will be green. Tell them that red means they should eat lower amounts of the nutrient and green means they should eat more. If the nutrient has a Daily Value or DV, they would want to eat more than 100% each day if it was green and less than 100% per day if it was red. Show them a copy of your completed label.
- 4. Nutrient by nutrient, go down the food nutrition facts label starting with "Total Fat." Ask the participants to pass your copy around. When someone receives it they should read the next nutrient and say whether it is red or green. The nutrition educator should ask the class, "Why are we coloring this red (or green)?" and then ask them if they know a food that is high in this nutrient.

For example:

- the first person with the label should say: *Total Fat, Red*
- the educator should say: Why are we coloring this red? (and) What foods are high in total fat?
- 5. Continue until all the lines you want to color have been colored in either green or red.
- 6. When the label is colored, tell participants that when they are shopping they can keep this label in their wallets and/or purses and use it to look for foods that have less of the red and more of the green.

Activity 2: "Applying the Food Label Game" (30 minutes)

This activity is a game. Make sure that you have enough foods for each individual to have one of each food type you will play with. You can repeat this game with as

many different types of food as serves your purposes or for as long as you have time to play.

- 1. Announce that you are going to play a game.
- 2. In front of the class on the board, flip chart, or overhead make this table:

Food	Votes	Points

Line up the food items for the first set of foods that you plan to play with. Write the names of the foods on the board in the food column. Go down the list of foods on the board and have participants vote for the food that they think is the most nutritious. Record the votes in the chart. Ask them why they think the food choices with the most votes are the most nutritious.

- 3. Have the participants come up to the table and take one of the foods back to their seats. Have them decide if they will be calling "calories" a red item or not.
- 4. Now on the board under the column labeled "Points," record the points for each food. To figure out how many points each food gets:
 - First look at the green colored nutrient categories on the labels. The first one should be fiber. Go around the room and have everyone read out loud how much fiber is in the food they are holding. Whichever food has the most fiber gets the point. Repeat this activity for each green labeled nutrient.
 - Next, go through all the red nutrients. The first one is total fat. Again, have everyone read the value on his or her label. Whichever product has the lowest value per serving wins the point.
 - If there is a particular nutrient that you are most interested in having the class pay attention to, you can make it worth 2 points instead of one to emphasize its importance to them.
- 5. Declare the food with the most points in the category the winner. Discuss the reasons why this food won. Ask participants if they would favor eating a different food in this category than they would have before they played the game. Compare the food that won with the one that got the most votes. Were they the same? Why or why not.
- 6. Repeat the game with as many food categories as you want to play with.

7. Ask participants if they are surprised by what they learned. Tell them that they can play this game at home with their children or family using different food items. Ask them if they intend to view the Nutrition Facts label at the grocery store before buying their food. Ask them what foods they may be more careful about buying.

Activity 3: "Pulling It All Together (Optional)" (15 minutes)

- 1. Ask a volunteer or two to help you prepare and serve a portion of the winning food for all.
- 2. While the participants are tasting the winning food you can discuss:
 - the need for trade-offs since there is no perfect food
 - when calories would be "green" instead of "red" (for example, children, elders, sick people, people who don't weigh or eat much)

Next Week's Goals (5 minutes)

- 1. Ask the participants to name one thing that they learned in today's class that they will use. Make sure that each learning objective is mentioned, and if not, be sure to re-state that objective. Ask them to choose a related goal to work on during the week. Let them know that they will be sharing their personal experiences during the next class.
- 2. Invite comments, suggestions, or questions.
- 3. Thank the participants for coming and tell them what the class will be about in the next lesson.

For the Teacher: "What Makes this Lesson Behaviorally Focused?"

- At the end of Activity 1, participants have a filled in card to keep for reference when food shopping. They can read labels of foods that they buy and use at home to see if they are getting enough of the green colored categories on their cards.
- In Activity 2, participants were asked if they would be willing to try foods that scored higher in game points than their usual favorite food items in that particular category. They can choose foods that would supply them more nutrition by reading the labels. It teaches participants how to use their reference card in everyday life.
- Activity 3 has participants taste the product that had the most nutrition in the game. By tasting the product, they can realize that they might like foods that are healthy but they do not normally eat.
- In Next Week's Goals, the participants are invited to name one thing that they learned during the class that they will use. Through this activity and by reviewing the objectives again, the participants are reminded of the many topics discussed during the lesson. They will choose the behaviors that they will want to work on during the coming week.



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Nutrition Facts

Serving Size cup (g) Servings Per Container

Servings Per Container				
Amount Per Serving				
Calories	С	alorie	es From Fat	
			% Dail	y Value*
Total Fat	g			%
Saturate	d Fat	g		%
Trans F	at	g		%
Cholesterol	mg			%
Sodium	mg			%
Total Carbo	hydrat	е	g	%
Dietary F	iber	g		%
Sugars		g		
Protein	g			
Vitamin A	%		Vitamin C	%
Calcium	%		Iron	%

GREEN - Choose food items which are highest in:

*Percent Daily Values are based on a 2,000 calories diet.

- Fiber
 - Calcium
 - Vitamin A
- Iron
- Vitamin C

RED!!! - Choose food items which are the lowest in:

- Total Fat
- Sodium
- Cholesterol
- Sugars
- Saturated Fat
- Trans Fat

Higher in **green** and lower in **red** leads to a **HEALTHIER DIET!!**



Nutrition Facts

Serving Size cup (g) Servings Per Container

Corvingor	or Corne				
Amount Per Serving					
Calories	Calories From Fat				
			% Dail	y Value*	
Total Fat	g			%	
Saturate	ed Fat	g		%	
Trans F	at	g		%	
Cholestero	l mg			%	
Sodium	mg			%	
Total Carbohydrate g %				%	
Dietary Fiber g %			%		
Sugars		g			
Protein	g				
Vitamin A	%		Vitamin C	%	
Calcium	%		Iron	%	

*Percent Daily Values are based on a 2,000 calories diet.

Nutrition Facts

Serving Size cup (g) Servings Per Container

Amount Per Serving					
Calories	Calories From Fat				
			% Dail	y Value*	
Total Fat	g			%	
Saturated	Fat	g		%	
Trans Fat	t	g		%	
Cholesterol	mg			%	
Sodium	mg			%	
Total Carboh	Total Carbohydrate g %				
Dietary Fiber g %			%		
Sugars		g			
Protein	g				
Vitamin A	%		Vitamin C	%	
Calcium	%		Iron	%	
*Percent Daily Values are based on a 2,000 calories diet.					

NUTRITION FACTS LABEL



SERVING SIZE

This part of the label tells you the serving size and how many servings are in the package.

There may be more than one serving in a package. The info on the label is for one serving only. If you eat more than one serving you are eating more calories and fat.

AMOUNT OF CALORIES – This part of the label shows how many calories there are in a serving, and how many calories in the serving are from fat.

EAT LESS OF THESE NUTRIENTS

- total fat
- saturated fat
- trans fat
- cholesterol
- sodium

If you eat too much of these, you can raise your risk of heart disease, high blood pressure, some cancers and gain too much weight, which can lead to diabetes.

GET ENOUGH OF THESE NUTRIENTS

- fiber
- vitamin A
- vitamin C
- calcium
- iron.

We do not always get enough of these things. They help you stay healthy and lower the risk of some diseases.

PERCENT OR % DAILY VALUE

- fat
- sodium
- fiber
- vitamins
- minerals

This tells you if one serving of food adds a little or a lot to your total diet each day. Use this quick guide to percent daily value, 5% daily value or less is low and 20 % daily value or more is high.

Note: Daily values are based on a 2,000 calorie diet. We do not all need to eat 2000 calories each day. Some of us need less and some of us need more. The daily value % on the label might not be right for you if you eat less or more than 2,000 calories a day. To find out the number of calories that are right for you, look at the Daily Food Plan you got in class or go to:

http://www.choosemyplate.gov/myplate/index.aspx

Adapted from: ""What's On the Label? http://www.cfsan.fda.gov/~dms/fflable.html

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