

LESSON OUTLINE

Lesson #2: **Fuel Up With Whole Foods, Close to Their Source**

Lesson Objective

Students learn to identify whole foods that are close to their original source and are minimally processed.

Classroom Lesson Outline

1. Introduction 8 minutes

- a. Review of proteins, fats and carbohydrates
- b. What does a higher quality gasoline do for a car

2. Key concepts learned 8 minutes

- a. Identify whole food, close to its original source (high quality) and processed food (low quality)
- b. Characteristics of high-quality foods are
 - i. Whole, closest to their original source
 - ii. Minimally processed
 - iii. Fewer added ingredients

3. Class activity 8 minutes

- a. Identify sources of foods
- b. Identify foods that are minimally processed
- c. Compare and contrast food labels to make an informed, higher-quality choice.

4. Optional Food Sample 6 minutes



Recommended Reading

The Whole Foods Diet, by Elaine Magee, MPH, RD WebMD

California Nutrition Competencies

1. Know and apply the Food Guide Pyramid, recommended daily number of servings, serving sizes, and nutrient types and functions.
2. Understand and practice making healthy food choices including planning and preparing snacks and meals, assessing personal needs, and applying strategies to reach personal nutrition goals

SCRIPT

Lesson #2:

Fuel Up with Whole Foods, Close to Their Source



Docent note: The following is a review of the PFC lesson the 3rd graders received. For the 4th and 5th graders who received the review game this will simply be a review of the basics of PFCs.

In our first lesson, we learned that our body is a lot like a car.

We learned that a car needs only the type of fuel it was designed to use, either regular, unleaded or diesel. And we learned that our bodies are designed to use a combination of three different types of fuel.

Question: Who remembers the three fuel types our bodies need?

Answer: Proteins, fats and carbohydrates.

We also broke proteins and carbohydrates into smaller categories.

Question: Can someone name the different categories of proteins?

Answer: Dairy proteins, animal and vegetable proteins.

Question: Who can name a protein food that comes from an animal?

Answer: Meat, chicken, pork, eggs...

Question: Who can name a vegetable protein?

Answer: Beans, nuts, seeds, soy, peas, lentils

Let's review some carbohydrate foods. We also broke carbohydrates into two groups.

Question: Who remembers the two different groups of carbohydrates?

Answer: Grain carbohydrates such as bread or brown rice and the other is fruit and vegetable carbohydrates.

Question: Who can name a fruit carbohydrate that you ate today?

Answer: Accept any type of fruit.

Question: Did anyone eat a vegetable carbohydrate last night at dinner?

Answer: Accept any type of vegetable.

Lastly, we learned that not all fats are harmful for our bodies. We learned that some fats are beneficial, meaning they help our bodies stay healthy.

Question: Who can name a beneficial fat or a food that contains beneficial fat?

Answer: Avocado, nuts, seeds, olive oil, butter, peanut butter, some fish.

For our lesson today, let's take another look at the similarities between cars and our bodies. Raise your hand if you have seen ads for or heard of the different "qualities" of gasoline.

Question: What **words** do they use to describe their higher "quality" fuels?

Answer: Supreme, premium

Question: Do you think fuel companies want you to believe that your car will run better if you use their "higher quality" fuels?


Answer: Yes, because your car will run smoothly, perform better and cleaner, and get better gas mileage.

When we select something to eat, we have the choice of different **qualities** of food. The quality of the foods (proteins, fats and carbohydrates) we choose to put in our body affects how well we perform, whether it's in school, at play or in sports.

Choosing higher-quality P, F, C's helps you **feel and perform at your best.**

Let's talk about how to identify high-quality foods.

The main thing to remember about higher quality foods is that they are whole foods, closest to their source and minimally processed.


 *Docent note: Write the following, bolded sentence on white board – Higher Quality = whole foods, closest to their source, and minimally processed.*

"Whole" and "Close to the source" means the food looks like it did when it came from nature. For example, an apple with the skin is a whole food.

"Minimally processed" means a food is changed from its original source but it is only changed a little bit. Usually when something is processed, it has parts removed or many added ingredients. For example, applesauce with no added sugars is a good example of a food that has been minimally processed because only the skin is removed.

 *PROP Docent note: hold up prop milk container.*

Milk is an example of a whole food.

 *Docent note: In reality, only whole raw milk is completely unchanged and unprocessed. The milk we are used to seeing is de-fatted (low fat/non fat/skim/ 1-2%) and pasteurized, meaning it is highly heated to eliminate any bacteria. This is too much information to go into with the kids. For our purposes, we are considering this milk an unprocessed/unchanged food.*

Question: Where did milk come from originally?

Answer: A cow. This milk looks like it did when it was milked from a cow.

Milk can be changed, or “processed” to make many other foods.

Question: What are some other foods that can be made from milk?

Answer: Butter, cream, whipped cream, yogurt, ice cream, cheese

Yogurt is an example of a food that is made from milk. Milk goes through a process called culturing to make it into yogurt. It still looks like milk but the process it goes through makes it a little thicker and changes the taste.



PROF Docent note: Hold up the prop of the high-quality plain yogurt. Hand the prop to a student and ask them to read the ingredients.

Question: How many ingredients are listed on the package of this plain yogurt?

Answer: There are only three ingredients and the first one is milk.

This is a very short list of ingredients. Pectin is a form of fiber that is used to thicken the yogurt. This form of fiber is natural, not man made.

This plain yogurt is close to its source, minimally processed, meaning not much has changed and it has fewer ingredients. It lives up to our definition of higher quality.



Docent note: Pectin is a form of fiber that is used to thicken the yogurt. This form of fiber is natural, not man made. “Cultures” are used to make the yogurt. We are not looking at these because we are comparing this yogurt to another yogurt, and both have these cultures. We are only comparing the other added ingredients.



PROF Docent note: Hold up the prop of the low-quality flavored yogurt. Hand the prop to a student and ask them to read the ingredients.

Please tell the class how many ingredients are listed on the package of this yogurt.

This yogurt has fifteen different ingredients. I see many added ingredients, including added sugars, artificial sweetener and artificial colors.

This flavored yogurt has artificial colors so it no longer looks like its source (milk), it has many added ingredients. This yogurt is not living up to our definition of higher quality.

Question: Why do you think so many ingredients were added to this yogurt when we know you only need three ingredients to make yogurt?

Answer: To make it sweeter, make it look colorful, make it thicker, and make it last longer; plain yogurt has a sour taste so lots of sugar makes it sweeter and more attractive to kids.



Docent note: Discuss ways you can sweeten plain yogurt so you don't get so much added sugars: honey, fruit, on top of cereal, added to a smoothie.

This is a cereal bar with yogurt.



PROP *Docent note: Hold up the prop of the box of granola/yogurt bars.*

Question: Who wants to guess how many ingredients are in this bar?

Answer: This has over thirty ingredients!

Question: Raise your hand if you think this is minimally processed?

Question: Raise your hand if you think this is highly processed?

This is a highly-processed food and has a long list of ingredients. The yogurt in this bar is very far from its source, milk.

Question: Who can think of another food that might have a long list of ingredients and that has been changed a lot from its original source?

Answer: Any type of packaged snack food is appropriate. Try to establish the “source” of the food. Some examples might be Pringles (source = potato); cheese puffs (source = cheese); apple-flavored cereal (implies there are apples)

You can learn whether or not a food is high quality just by reading the list of ingredients. If it has a long list of ingredients, including many ingredients you can't pronounce, it is usually a lower quality food.

So the characteristics of high-quality foods are:

Whole foods, close to their original source, minimally processed, with fewer ingredients.

LET'S REPEAT THAT TOGETHER:

High quality foods are:

Whole foods, close to their original source, minimally processed, with fewer ingredients.

Let's do an activity.

Look at your handout. On your handout are pairs of foods. There is a picture of the food, in the box below the picture is a description of the food and under that is the list of ingredients.

Working with your seat partner, read the ingredient list for each pair of foods. Decide what the “source” of the food is.

Let's work on the first example together. The first two foods compared are the different yogurts.

Take a minute and silently read the ingredients for each yogurt.

Question: Someone tell me the source of yogurt.

Answer: Milk

Question: You know from what you just learned in this lesson that a food with fewer ingredients is usually closer to its source. Can someone tell me which of these foods is closer to the source, milk?

Answer: The plain yogurt.

Turn to the next two foods on the back of this page. Read the ingredients to yourself then work with your seat partner to answer the two questions on each page. Continue until you finish with all three pairs of foods.



Docent note: as students complete the activity walk around and offer assistance.

After allotted time, review answers with students. Starting with macaroni pasta and cheese, call on pairs so they can offer their answers.

Sources of each food:

1. Macaroni pasta and cheese: **wheat** (source of pasta noodles) and **milk** (source of cheese)
Noodles and cheese are also acceptable Two main points: First, the FlavorWorld brand macaroni and cheese has many added ingredients. Second, the cheese sauce in the FlavorWorld macaroni is highly processed.
The cheese used in the Homegrown brand is a real cheese and is much closer to its source, milk.
2. Fruit juice: **juice from fruit**, such as **apple**. Main point: There are several ingredients before the juice concentrates in the Tastee brand. Since ingredients are listed from greatest to least, there is more water and sugar than actual juice in this drink.
The Farmer brand Apple Juice is closer to its source, apples.
3. Crackers: **wheat**. Main point: The Wheat Bites do not have “whole” wheat in their ingredients. They are made from “enriched” flour and this means their crackers are made with highly-processed wheat which makes it farther from the source. There is also a long list of other added ingredients.
The Sungrown brand crackers are closer to their source, whole wheat.



Food Sample: optional – for those using a smoothie as a food sample. If you are not using food in this lesson, please skip to the paragraph after the discussion that begins with “So remember...”

For your snack sample today we are going to make a fruit smoothie with foods that are all whole and close to the original source, including plain, whole yogurt.

Optional if you have time: call up students to add ingredients to the smoothie. They can quickly wash their hands prior to handling the food or use food service gloves.

Our smoothie ingredients:

- Frozen strawberries
- Banana
- Plain yogurt
- 100% fruit juice with no added sugars



Docent note: Blend ingredients, pour and serve to students.

Discussion if there is time:

- *Engage students in discussion about the taste of the smoothie: is it sweeter than a store bought smoothie?*
- *Do smoothies need sorbet or ice cream to taste good?*
- *What is a reasonable size of a smoothie? 8-12 ounces, which is about the size of 1 measuring cup.*
- *Are store-bought smoothies too large?*

So remember to read the ingredients for the foods you eat. If you want to find higher quality foods they usually have fewer ingredients, are closest to the source and are minimally processed.

How many of you see this Grill Me flyer that comes home after each GrowingGreat lesson?



PROP Docent note: hold up your copy of the Grill Me

A smoothie recipe is on your Grill Me flyer. Please share the Grill Me flyer with your parents. There are three questions your parents can ask you or you can ask them to see how much they know about what you learned today.

That's our GrowingGreat lesson for today. Thank you and I look forward to our next lesson.