



Label Reading

4th – 5th Grade Lesson

Goal: Introduce the food label as a tool in choosing healthy meals and snacks

Objectives:

1. Students will be able to distinguish between serving size and portion size.
2. Students will be able to locate the ingredient list on a food label and determine which ingredient is most prevalent in the food.
3. Given a food label, students will be able to identify serving size, calories, and the value of another nutrient that the food supplies.

Materials Needed

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| <input type="checkbox"/> Can of food without label | <input type="checkbox"/> Hidden Ingredients Student Handout |
| <input type="checkbox"/> “Eat It” or “Leave It” posters of food packages | <input type="checkbox"/> Senorita Sugar, Sat, and Trans puppets/posters |
| <input type="checkbox"/> Nutrition Facts posters of Pop-Tarts and Oatmeal | <input type="checkbox"/> Materials for supplemental activities |
| <input type="checkbox"/> Duck Ingredient List poster | <input type="checkbox"/> Taste Test supplies (if tasting) |
| <input type="checkbox"/> Student handouts | <input type="checkbox"/> Parent handout |

Lesson	
Talking Points	Materials/Activities/Notes
Review <ul style="list-style-type: none"> Remember this year we are talking about nutrients, remember our nutrient superhero family? What are nutrients? <i>Chemicals that our bodies need to live and grow.</i> Can our body make them? <i>No, we get them from the food we eat.</i> This year, together, we are learning what foods are good sources of each nutrient. Today, we are going to learn how to be nutrition detectives. Your job as a nutrition detective is to determine if the food is a healthy or not so healthy choice. Will it help your body be healthy if you eat it? What nutrients does it give your body? There is a tool we use to investigate what each food gives to our body— The Food Label. Today in class we are going to learn how to use this tool because we will use it for all the other lessons this year. 	
Mind Grabber Show the class a can of food without a label and ask if they know what is in it. Explain that a can (or any packaged food) needs to have a label so we know what is in it. Show a similar can with a label.	
OR “Spot the Block” Rap (adapted from FDA’s spottheblock.com):	Have unlabeled and labeled cans.

Spot the block, the food labels provide
 Nutrition facts of what's inside
 Before you eat your food or quench your thirst
 You gotta Spot the Block and get your food facts first

Healthy living starts with what you put inside of you
 If that's what you decide to do
 This song will help guide you through

It's easy, just read the labels
 Of snacks you pack and food on the table
 It doesn't matter if it's in a bag, can, or box
 The info is inside the block

At the top you will spot the serving size
 It tells you how many servings of the food is inside
 How many nutrients and calories per package?
 It just takes a little practice; Hey isn't that what math is?

Let's see: 2 servings in a package, 200 calories per serving, that's 400 calories!!

Think about all the stuff we eat and drink
 Choose foods high in iron, fiber, and protein
 Cut back on sugars and fats
 It's all inside the block where it says nutrition facts.

Spot the block, the food labels provide
 Nutrition facts of what's inside
 You don't need permission or supervision for healthy living
 Just watch your nutrition!

Discussion

Introduction

- Raise your hand if you go to the grocery store with your family.
- Keep your hands up if you pick out the food you want to eat. What makes you buy a food? Is it the color of the food, the taste, or looking at the package?
- Take a look at some of these packages. They look healthy, right? Ask:
 - What on this package makes you think the food is healthy?
 - What do the food manufacturers want that packaging to do?
- We are going to learn that just because something says it's healthy doesn't always mean the food is good for our bodies.
- Think of the food package as a commercial for the food.
- Now, we are going to learn how to be detectives to see if a food is healthy or a not so healthy choice. The best clue is actually on the box itself, all the information you need can be found on the nutrition facts panel, also called the food label.

Show "Eat It or Leave It" posters. Make sure to point out the nutrition claims on the package.

Food Label Basics

- What do labels do?
 - They tell us the name of the food that is inside.
 - They give us a list of the ingredients that the food is made from.
 - The nutrition facts section tells us information about what nutrients are in the food.
- Today, we are going to be looking at two food labels from different foods to help us decide which food is the healthier choice for breakfast.
- We are going to talk about 3 clues on this label that you can spot to be a good nutrition detective:
 - Check out the serving size
 - Consider the calories
 - Choose nutrients wisely
- 1. Check out the Serving Size: (Green section)**
 - Serving size – Located at the top of the label, this is the amount of food that all the rest of the information on the label is about.
 - Anybody know the difference between a serving size and a portion size? (You can have a volunteer or two come up and pour the amount of cereal/ snack they would eat or serve themselves to demonstrate this concept.)
 - A portion size is how much of that food you would eat or serve yourself. Example: the serving size of pizza is one slice but you might serve yourself and eat two slices at dinner.
 - Let's look at this label for oatmeal. Can anyone tell me the serving size? *One packet is a serving of oatmeal.* Does anyone usually eat more than 1 package?
 - Does anyone like PopTarts? How many PopTarts come in a package? Can anyone guess the serving size? *One PopTart is a serving (point to line with serving size).* Most of us will be tempted to eat 2 PopTarts since 2 come in a package – but 2 PopTarts are actually 2 servings! This means I would need to multiply all the numbers on the label by 2.
 - If you eat twice as much as the serving size you need to multiply all the values below the line by two to find out how much of each nutrient you just put into your body.
 - Servings per container- this tells how many servings are in the bag. If you eat exactly the serving size listed, this is how many servings you will get from the food package. Or, how many people you could serve following that serving size. My oatmeal label says there are 10 servings in the box so I could serve 10 of you 1 bowl of oatmeal. My PopTart label here says there are 8 servings in the box so I could serve 8 of you 1 PopTart.
 - Watch out and be a good nutrition detective. A lot of food companies will make their food servings small so it looks like the food is healthier than it really is. Make sure you always look at how many servings are in a bag, box or can of food BEFORE you look at the rest of the numbers. Depending on how much of the food you eat, you may have to double or

Display the Nutrition Facts poster for PopTarts and Instant Oatmeal that has colored paper taped over each section. Take the paper off as you discuss the section. Use them throughout this section.

Optional: Have a volunteer or two come up to your cart and pour the amount of cereal s/he would normally eat. Emphasize that portion size can change from person to person (or even for the same person) but serving size doesn't change.

Display the oatmeal label, then the pop-tart label.

triple the numbers on the label.

2. Consider the Calories:

- What is a Calorie? A calorie is just a unit of measure. We measure energy by calories. Just like we measure height by inches or weight by pounds. Inches and pounds are just the unit of measure you use. The calorie is the unit of measure we use for energy in food.
- Different foods contain different amounts of calories. Calories are neither good nor bad; they are just a measurement. We will talk a lot more about calories in another lesson.
 - Let's go back to the PopTarts, if I ate one PopTart, how many calories would I be eating? *That's right, 210 calories per serving, which is one PopTart.*
 - What about 2 PopTarts? *That's right; we would have to multiply the calories. Two servings of PopTarts would be 420 calories, which is a lot!*
 - How many calories are in a serving of oatmeal? *160 calories, which is a lot less than a PopTart.*

3. Choose Nutrients Wisely:

- The next section contains our nutrients. Does anyone remember our nutrient superheroes?
- Notice that fat (Fat Cat) is listed first, followed by carbohydrate (Captain Carbohydrate), and then protein (Power Protein). At the bottom, you will find Vitamins and Minerals (remember Vita Man and Mighty Mineral?)
- There are some nutrients you want to get more of and some nutrients you want to get less of:
 - Pick foods lower in saturated and trans fat, they are heartbreakers (we will talk more about them later). Eat foods that have less salt (sodium).
 - You want to pick foods that have more fiber, vitamin A&C, iron and calcium.
 - There are over 30 vitamins and minerals that we need every day but only 4 are usually listed on the Nutrition Fact Label—Vitamin C, Vitamin A, Calcium and Iron. It was decided to list these 4 on the fact label because Americans tend to not get enough of them.
- Of our two breakfast foods, which food has:
 - the least amount of fat? *Oatmeal*
 - more sugar? *PopTarts*
 - more Iron? *Oatmeal*

4. Ingredients List:

- It is located below the outlined nutrient section of the food label.
- The ingredient list tells you what's in the food that you are eating.
- Reading the ingredient list is one of the best ways to tell you if a food is healthy. A lot of us skip over reading this list because it can be really long with a lot of words that we don't know.
- Ingredients are listed on the label in order by weight. The ingredient that is found in the greatest amount in the food is listed first. This means that the first two or three ingredients are the ones that matter the most because there are a lot of these ingredients in the food. Ingredients at the bottom (or end) of the list may appear in only very tiny amounts.

Optional: you can use mini nutrient superheroes and double-sided tape to put the superheroes onto the food label near where they are located.

Show duck ingredients poster.

- Another thing to remember is that shorter is better. Often, the longer an ingredient list is, the less healthy that food is for you.
 - Which breakfast food has the shorter ingredient list? *Oatmeal*
- How do we know if it is a healthy choice? Remember our definitions for Green light foods? They are good for us—we can eat them every day. They are foods that come from one of the 5 food groups and are low in FAT and SUGAR and SALT.
- Since we have a team of nutrient superheroes, there has to be villains for them to fight against, right? Well, today you are going to meet 4 villains: Señorita Sugar, Sat, and Trans. These villains do not help your body stay healthy – in fact, eating too much of them can cause issues like cavities in our teeth, high blood pressure and heart problems.
- Since we are detectives, I want to give you another clue. These villains like to hide under different names, like a disguise.
 - Watch out for Señorita Sugar! She likes to hide out as sugar, honey, and high fructose corn syrup.
 - Can anyone find Señorita Sugar in PopTarts? *Brown sugar, molasses, corn syrup, dextrose, high fructose corn syrup*
 - Is Señorita Sugar found in oatmeal? *Yes, second ingredient is sugar.*
 - Why avoid sugar? Too much can cause cavities and make us gain weight too fast.
 - Watch out for Sat and Trans... they are two “bad relatives” of Fat Cat. Remember Fat Cat is a nutrient superhero that we need to eat, but he has some relatives that can be bad for our hearts.
 - Look out especially for the word partially hydrogenated. When you see the words partially hydrogenated on a label you know you have found Trans!
 - What is the third ingredient in PopTarts? *Soybean and Palm Oil*
 - Is Sat or Trans found in oatmeal? *No*
 - Sneaky Salt can be a villain when we eat too much of it. Look for the nutrient “Sodium”, which is a part of salt. Too much can cause blood pressure to get too high, which can lead to heart disease and stroke.
- The last clue I want you to notice are these numbers on the right side of the label. These are called percent daily values.
 - You don’t have to remember the name – just look at the number. Big numbers mean the food contains a lot of that nutrient and small numbers mean the food contains a little of that nutrient. In other words, the bigger the number, the more nutrient the food contains.
 - For some things you want the %DV to be low, like for fat and salt. And for other things you want the %DV to be high, like for fiber, vitamins and minerals.
 - Here’s a little rule to make using %DV easier:
 - Foods with at least 20%DV are considered excellent sources of that nutrient.
 - Foods with 5% or less DV are considered poor sources of that nutrient.

Have students refer to Hidden Ingredients handout.

Show popsicle stick puppet of Señorita Sugar). Also place mini Señorita Sugar on the appropriate part(s) of the label.

Show popsicle stick puppet of Sat and Trans. Also place mini Sat and Trans figures on the appropriate part of the label.

Show popsicle stick puppet of Sneaky Salt. Also place a mini Sneaky Salt on the appropriate part of the label.

- Since you all have been great nutrition detectives, who can raise their hand to solve the mystery of the healthiest breakfast food?
 - Oatmeal – less calories, less sugar, less fat, more protein, more fiber, shorter ingredient list

Optional: Use Nutrition Label Math Facts game, which utilizes PopTart and Oatmeal nutrition facts posters to solve the mystery.

Wrap-Up

- Ask students why foods have food labels (they tell us what the food is, what is in the food and what nutrients the food provides).
- Ask students to name several clues you find on the food label in order to see if the food is a healthy or not so healthy choice. (calories, serving size, ingredient list, nutrients)

Challenge

- Be a Nutrition Detective! Challenge students to use nutrition labels to make healthier choices this week. Look at the ingredient list, serving size, and calories. Be ready to tell me a healthy food you found and an unhealthy food you found using the label.

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Taste Test Ideas

- No taste test if teaching K-3 Food Safety Lesson, otherwise same taste test as corresponding K-3 lesson.

Small Group Activities (10-15 minute activities)

1. Nutrition Label: Math Facts Jeopardy

Suggested Game Directions: Divide the class into 2 teams. Use a coin or other method to determine which team goes first. Ask each team to choose a points category (100, 200, 300, 400). Next, pick a question from that category (teacher's choice). If the team correctly answers the question, they will receive the corresponding points. The team with the most accumulated points wins the game!

Use Nutrition Label Math Facts Game cards for this Jeopardy game.

Nutrition Label: Math Facts (100 points)

1. If I ate 2 PopTarts, how much total fat would I be eating? *14 grams*
2. How many grams of dietary fiber are in one serving of oatmeal? *3*

Nutrition Label: Math Facts (200 points)

1. Which breakfast food gives your body more vitamin A per serving?
Oatmeal
2. How many times can you find hidden sugar in PopTarts? *5 – brown sugar, molasses, corn syrup, dextrose, high fructose corn syrup*

Nutrition Label: Math Facts (300 points)

1. One serving of PopTarts contain how many more grams of sugar than one serving of oatmeal? *6*
2. How many ingredients are listed in one serving of oatmeal? *10*

Nutrition Label: Math Facts (400 points)

1. How many calories are in 2 servings of oatmeal? 320
2. How many PopTarts would I have to eat in order to get the same amount of protein found in one serving of oatmeal? 2

2. Portion Distortion Quiz

Ask students to guess how many calories are in fries, soda, and cookie that you would order today versus 20 years ago.

See Portion Distortion sheets.

Additional Activities

1. Poem: Tin Can Tizzy (May need to explain what a cannery is before using the poem.)
By Earth ToJim, James Olsson

A mishap at the canners saw the process go all wrong,
with cans and labels out of sync, it went on all month long!
Baked Beans were labeled "applesauce", the Peas were labeled "Spam"
and if you opened "Sauerkraut" you found a candied yam!

Fruit cocktail went as "Bacon Bits" and corn was "Refried beans",
the tin cans meant for salsa ran on Mushroom Soup machines!
The folks expecting tuna got some corned beef hash instead,
the substance in the chicken tins was viscous blobs of red.

The phones began to tell the tale of systems on the blink,
assembly lines were halted giving bosses time to think
they settled on a remedy suggested off-the-cuff
now everything is shipping fine, it's simply labeled: "STUFF"!

2. Energizer: Active Label Reading

Practice identifying the healthier and less healthy ingredients in a food. When a healthy ingredient is called out, students should either jump up and down or jog in place (these can include whole wheat, whole oats, whole rye, carrots, apples, skim milk, black beans, etc.). When a less healthy ingredient is called out, students should squat down (these can include sugar, corn syrup, hydrogenated oil, and salt).

3. Energizer: Guess the serving size

Place three "servings per container" posters around the room (1 serving, 2 servings, and 3 servings). Show the students labels of favorite foods. Have the students guess how many servings are in the package or container by standing under the corresponding sign. Then tell the students the correct number of servings per container (as listed on the nutrition label). Make sure you emphasize the need to multiply all the other numbers on the label by the number of servings if they ate the whole package.

4. Percent Daily Value Activity (better for advanced 4th grades/5th grades):
 - Snack Mix:
 - 1 cup Quaker Oat Squares
 - 1 cup Cheerios
 - 1 cup Shredded wheat
 - ½ cup Chocolate Chips
 - ½ cup Raisins
 - Put small serving (about 1/3 cup) in a snack bags making sure that at least one of each item is represented.
 - Using the Worksheet “What is the Percent Daily Value” help the students determine what percent of what they need is provided by their snack bag. What happens if they were to eat two bags of the same mix?
 - NOTE: Students will probably need calculators for this activity.
5. Ride the Food Label Game with a Talking Food Label (great with smartboards):

<http://www.nourishinteractive.com/kids/healthy-games/7-ride-the-food-label-game-nutrient-information>

Student Handouts

- Read It Before You Eat It AND Hidden Ingredients Handout
- Nutrition Detective Cereal Label Activity
- Snack Machine Snacks Handout
- What’s the Percent Daily Value
- Nutrition Label Word Search
- Learn to Read Food Labels

Parent Handouts

- Today in Nutrition Class...Food Labels (English and Spanish)
- Help Kids Avoid Portion Distortion (English and Spanish)
- What’s in the Nutrition Label (English and Spanish)
- Nutrition Facts Information (English and Spanish)
- Spot the Block Parent Tips (English only)

Lesson Roadmap

- Mindgrabber
- Nutrition Label Discussion
 - Which breakfast is the healthiest choice? activity
- Distribute student and parent handouts



Public Health

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