



It's All in a Label

Middle School Food and Agricultural Literacy Curriculum

Precepts

- B. Relationships
- B4. Eliminate barriers in building relationships

National Standards

- FPP.03.01.06.b. Explain the required components of a food label
- NL-ENG.K-12.12 – Applying Language Skills
- NS.5-8.6 – Science in Personal and Social Perspectives

Student Learning Objectives

- As a result of this **unit** the student will...
- Critique food labels and claims.
- As a result of this **lesson**, the student will ...
- Interpret a food label.

Content Outline

Objective 1. Interpret a food label

- A. A food label is comprised of four parts
 1. **Serving size**
 2. **Calories**
 3. **Nutrients**
 4. Footnotes
- B. **Serving Size**
 1. Details the number of servings in the package.
 2. **Serving size** standardizes food portions and allows consumers to compare foods through similar units of measure.
 3. The size of servings in the packaging influences the number of **calories** in the food. Pay close attention to **serving size** because you may accidentally consume too many **calories** by consuming multiple servings.

Time

Instruction time for this lesson: 45 minutes.

Resources

USDA National Agricultural Library. (2010). Food labeling: General information and resources. Retrieved February 5, 2010, from USDA National Agricultural Library, Food and Nutrition Information Center. Web site: <http://www.fda.gov/Food/LabelingNutrition/ConsumerInformation/ucm078889.htm>

Tools, Equipment, and Supplies

- Notebook paper
- Writing utensils
- Scissors –one set for teacher
- Tape
- MS.FS.4.1.AS.A – Copy and cut up as many sheets needed to speed the activity.
- MS.FS.4.1.AS.B – one per student
- MS.FS.4.1.AS.C – one per student
- MS.FS.4.1.AS.D – one per teacher
- MS.FS.4.1.AS.ESS.A – one per student

Key Terms

The following terms are presented in this lesson and appear in **bold italics**:

Serving Size

Calories

Nutrients

Percentage Daily Value

C. **Calories** (and **Calories** from fat)

1. A measure of energy in each serving of the packaged food.
2. **Calories** from fat are added to detail how many of the total **calories** are derived from fat.
3. Many Americans consume too many **calories** and this portion of the label helps consumers manage their caloric intake.
4. General Calorie Guide: 40 **Calories** is low, 100 **Calories** is moderate, 400+ **Calories** is high.

D. **Nutrients**

1. This section details the quantity of specific **nutrients** offered by each serving of food.
2. **Nutrients** include: Total Fat (Saturated and Trans Fat), Cholesterol, Sodium, Total Carbohydrate, Dietary Fiber, Sugar, Protein, Vitamins A and C, Calcium and Iron.



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3. The FDA breaks the **nutrients** into two groups to assist consumers in healthy choices.

- a) **Nutrients** to be limited: Fat (Saturated and Trans Fat), Cholesterol, and Sodium. Americans consume enough or too much of these.
- b) **Nutrients** to get enough of: Dietary Fiber, Vitamin A, Vitamin C, Calcium, and Iron. Most Americans don't get enough of these.

E. Footnotes

- 1. This is a required statement that tells the consumer that the **percentage daily values** (%DV) are based upon a 2,000-calorie diet.
- 2. The **Percentage Daily Values** (%DV), which is at the top and right side of the food label, tells the consumer what percentage the food accounts for the total dietary amount required for each day.
 - a) 5% or less is low; greater than 20% is high.

Interest Approach

Pull out a piece of paper and something to write with.

Wait for students to grab items.

When I count to THREE, provide a detailed list of all the food that you have eaten in the last 24 hours. Be sure to provide the number of items you ate as well. When finished, place your pen or pencil on the table. Take two minutes to complete this task. What questions are there?

Pause for student questions.

One, two, THREE!

Monitor student progress and keep students accountable to providing a numerical measurement for the quantity ate. Count down time to aid in wrapping up student work.

Great work, everyone! Wow. We have eaten a lot of food in the last 24 hours. Take a good look at the food on our lists. How many **calories** would you guess are represented on your list? *Pause for student reflection.*

By a show of hands, how many think you are exactly correct in your guess?

Pause for student answers.

It is fairly safe to assume that none of us are exactly right. What would have made this activity easier

Pause for student answers.

A food label for each item would be the first thing we would need before taking another shot at estimating the number of **calories**.

The nutritional requirements of our bodies and the **nutrients** contained in the foods we eat don't always align! For a healthy lifestyle it is important to understand the nutrient levels in the foods we eat. So, today we will learn how to read a food label. Be ready to be self-directed and move around the room to collect information.

Summary of Content and Teaching Strategies

Objective 1. Interpret a food label.

Use the Go-Get-It e-Moment® to have students move around the room to complete the activity sheet. Cut up and paste copies of **MS.FS.4.1.TM.A** around the room – feel free to have multiples of each sheet for larger classes and to decrease time needed to complete the activity. Distribute a copy of **MS.FS.4.1.AS.A** to each student. Students will travel to each nutrient/label component and fill in the meaning for each portion of the label. Monitor student progress as they work on their activity sheet. Count down remaining time to make sure that students are on track.

When you receive this activity sheet, quickly and quietly travel to each of the information sheets around the room and record information for each section of the sheet. The activity sheet has blanks for each component of a food label, and the sheets of paper around the room contain the information to be placed in each blank. Pay close attention to what we are recording; we will use it for real food labels. When finished, return to your seat and quietly wait for further directions. Ten minutes will be allotted for this activity. Who will repeat the directions to the class?

Wait for a volunteer to repeat the directions.



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Distribute **MS.FS.4.1.AS.A**. Increase or decrease time as needed.

Nicely done, everyone! Now that we know the basic components of a food label, let's have a look at a few of them. Upon receiving this next activity sheet, read it carefully before beginning. The sheet contains four food labels and poses questions that challenge us to evaluate the labels. Feel free to refer back to the information recorded from the first sheet. Please turn sheets face down upon completion. This individual activity should take no more than five minutes to complete. What questions are there about this task?

Clarify if needed and distribute the sheets.

Distribute **MS.FS.4.1.AS.B**. Allow extra time if needed. As students finish, individually ask them to create a list of foods they eat on a regular basis that they have no idea of what the **serving size** is. This should be done on the back of **MS.FS.4.1.AS.B**.

Excellent! It looks as if everyone is wrapping up their questions. When I say SHARE, turn to someone near you and compare your answers. If you have different answers, consult with me or a different group for clarification. Take two minutes to do this. What should be done if your answers don't match? *Wait for student responses.* Here we go – SHARE!

Monitor all groups and ensure that everyone is truly checking their work. Hold students accountable for consulting you or other groups for correct answers. Offer additional time if needed.

Review/Summary

What a great class we had today! The food label is so important because it tells us the detailed nutritional information of the foods we eat. Tomorrow we will be diving into the label a little

further, so check out those foods you eat regularly and do not know the **serving size**. Also, don't forget to eat your breakfast tomorrow, and as you do so read the food label! Have a great day!

Application

Extended classroom Activity:

Take an extra day to look at ingredients and allergy warnings on food labels to discuss allergens in food. Also note the special care that individuals with such food allergies must take to read the food label on all products consumed.

FFA Activity:

Interpret and compare the various food items offered in your chapter's concession stand and make promotions on healthy eating options. If the chapter does not have a concession stand, any event with food consumption can be substituted.

SAE Activity:

Search for nutrition-based careers in food science and create a podcast, brochure, blog, or journal entry about the career.

Evaluation

MS.FS.4.1.ASSESS.A

Answers to Evaluation

1. B
2. A
3. C
4. A
5. 200 calories



Directions: Make as many copies of this sheet as needed. Cut along each section line and place the sections around the classroom.

• **Serving Size**

- Details the number of servings in the package.
- Serving size standardizes food portions and allows consumers to compare foods through similar units of measure.
- The size of servings in the packaging influences the number of calories in the food. Pay close attention to serving size because you may accidentally consume too many calories by consuming multiple servings.

• **Calories (and Calories from fat)**

- A measure of energy in each serving of the packaged food.
- Calories from fat are added to detail how many of the total calories are derived from fat.
- Many Americans consume too many calories and this portion of the label helps consumers manage their caloric intake.
- General Calorie Guide: 40 Calories is low, 100 Calories is moderate, 400+ Calories is high.

• **Nutrients**

- This section details the quantity of specific nutrients offered by each serving of food.
- Nutrients include: Total Fat (Saturated and Trans Fat), Cholesterol, Sodium, Total Carbohydrate, Dietary Fiber, Sugar, Protein, Vitamins A and C, Calcium, and Iron.
- The FDA breaks the nutrients into two groups to assist consumers in healthy choices.
 - § Nutrients to be limited: Fat (Saturated and Trans Fat), Cholesterol and Sodium. Americans consume enough or too much of these.
 - § Nutrients to get enough of: Dietary Fiber, Vitamin A, Vitamin C, Calcium, and Iron. Most Americans don't get enough of these.



It's All in a Label – Nutrition Label Interpretation

Directions: Study food labels A, B, C and D below. Use the information in each label to answer the questions at the bottom of the page.

Nutrition Facts			
Serving Size 1/2 of recipe 57g (57g)			
Servings Per Container 12			
Amount Per Serving			
Calories 223		Calories from Fat 99	
		% Daily Value*	
Total Fat 11g		17%	
Saturated Fat 7g		34%	
Trans Fat 0g			
Cholesterol 78mg		26%	
Sodium 148mg		6%	
Total Carbohydrate 27g		9%	
Dietary Fiber 1g		2%	
Sugars 13g			
Protein 4g			
Vitamin A		7% •	Vitamin C 0%
Calcium		6% •	Iron 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
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate	Less than	300g	375g
Fiber	Less than	25g	30g
Calories per gram:			
Fat 9	Carbohydrate 4	•	Protein 4
©www.NutritionData.com			

A.

Nutrition Facts

Serving Size 1 oz.. (28g/About 21 pieces)

Servings Per Container About 2

Amount Per Serving	
Calories 170	Calories from Fat 110

% Daily value*	
Total Fat 11g	17%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 250mg	10%
Total Carbohydrate 14g	5%
Dietary Fiber less than 1g	2%
Sugars 0g	
Protein 2g	

Vitamin A 2%	•	Vitamin C 0%
Calcium 0%	•	Iron 4%
Vitamin E 6%	•	Thiamin 4%
Riboflavin 2%	•	Niacin 4%
Vitamin B₆ 2%	•	Phosphorus 2%

*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
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:

Fat 9	Carbohydrate 4	• Protein 4
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B.

Nutrition Facts			
Serving Size 1 cup, chopped 36g (36g)			
Amount Per Serving			
Calories 11		Calories from Fat 1	
% Daily Value*			
Total Fat 1g		0%	
Saturated Fat 0g		0%	
Trans Fat 0g			
Cholesterol 0mg		0%	
Sodium 30mg		0%	
Total Carbohydrate 22g		1%	
Dietary Fiber 2g		5%	
Sugars 0g			
Protein 2g			
Vitamin A 48%		Vitamin C 21%	
Calcium 5%		Iron 0%	
*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
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate	300g	375g	
Dietary Fiber		25g	30g
Calories per gram:			
Fat 9 • Carbohydrate 4 • Protein 4			

C.

Nutrition Facts			
Serving Size 3 oz. (85g)			
Servings Per Container 1			
Amount Per Serving			
Calories 180		Calories from Fat 90	
		% Daily Value*	
Total Fat	10g		15%
Saturated Fat		40g	20%
Trans Fat		0.5g	
Cholesterol	70mg		23%
Sodium	60mg		3%
Total Carbohydrate	0g		0%
Dietary Fiber		0g	0%
Sugars		0g	
Protein 22g			
Vitamin A 0%		Vitamin C 0%	
Calcium 2%		Iron 15%	
*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
Saturated Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
Fat 9 • Carbohydrate 4 • Protein 4			

D.

Questions	Letter
1. Which of the foods above has the most servings per package?	
2. Which of the foods above has the largest amount of cholesterol?	
3. Which of the foods above is highest in protein?	
4. Which of the foods above has the most calories per serving?	
5. Which of the foods above has the most calories from fat?	
6. Which of the foods above has the most carbohydrates?	
7. Which of the foods above has the least sodium?	
8. Which of the foods above has the highest %DV of iron?	
9. Which of the foods above is the least fattening?	
10. Which of the foods above is the least healthy to consume?	



Answers:

Questions	Letter
1. Which of the foods above has the most servings per package?	A
2. Which of the foods above has the largest amount of cholesterol?	A
3. Which of the foods above is highest in protein?	D
4. Which of the foods above has the most calories per serving?	A
5. Which of the foods above has the most calories from fat?	B
6. Which of the foods above has the most carbohydrates?	A
7. Which of the foods above has the least sodium?	C
8. Which of the foods above has the highest %DV of iron?	D
9. Which of the foods above is the least fattening?	C
10. Which of the foods above is the least healthy to consume?	A



It's All in a Label – Assessment

Name: _____

Directions: Circle the letter next to the correct answer.

1. **Most Americans get plenty of dietary fiber.**

- a. True
- b. False

2. **Trans Fats are a component of Total Fat.**

- a. True
- b. False

3. **Sugar is an example of a _____.**

- a. Calorie
- b. Fat
- c. Carbohydrate

4. **Calories are a source of _____.**

- a. Energy
- b. Fat
- c. Strength

5. **If you consume a 4-oz. candy bar with 50 calories per each 1-oz. serving, how many calories are you consuming?**
