

LESSON FOUR: FOOD LABELS

FOCUS:

In 1990 a Federal law was passed requiring almost all foods to print a nutrition label on packages. These labels supply a wealth of information to the consumer. Students will examine the food label in general and focus on the information concerning servings, calories, and calories from fat.

OBJECTIVES:

- ▶ Students will examine food labels.
- ▶ Students will calculate the percent of calories from fat in various foods.

ACTIVITY 4A: FOOD LABELS

Read the student text “Food Labels.” It is suggested that the teacher make a class set of this text. Through an oral question and answer session go over the components of the food label and what each component means. Students will complete the student worksheet “Food Labels.” Each student will need a copy of this worksheet.

ACTIVITY 4B: STATION WORK— DETERMINING CALORIES FROM FOOD LABELS

Arrange the classroom into stations. Two similar food items will be at each station. Perishable foods should be represented with their empty food container. Nutrition labels for fresh produce items should be available at the grocery. Each station needs to be numbered and each food item needs to be lettered A or B at each station. Pair the students. Each pair will begin at a different station. Students will move from station to station at timed intervals. The number of stations will be dependent on class size. For example, a class of twenty-four would need 12 stations. Two to three minutes should be spent at each station. Each student will need a calculator, or two calculators may be placed at each station. A bell or whistle to signal move time will be helpful. At each station the students will record the number of calories per serving and the number of calories from fat per serving. They will then calculate the percent of calories from fat. The foods at each station should be similar except in regards to fat content. The following is a list of suggested stations:

- | | |
|---------------------------------|------------------------------|
| 1. Flour tortilla/Corn tortilla | 2. Tuna in oil/Tuna in water |
| 3. Canned beans/Dry beans | 4. Whole milk/Skim milk |
| 5. Pretzel /Potato chips | 6. Ice cream/Frozen yogurt |

ACTIVITY 4C: SNACK FOODS AND CALORIES

Group the students into groups of four (*or three if necessary*). Each group will be responsible for collecting food labels from a category of snack foods and calculating the percent of calories from fat for each item. They will order the items from least percent of calories from fat to greatest percent of calories from fat. They will then produce a visual display of their data and make a presentation of their findings to the class. Each group should be required to analyze a minimum number of items. Students should try to find as many items as possible with less than 30% of calories from fat. Some incentive for this can be built into the grading policy. Suggested snack categories: chips, chocolate candy bars, non-chocolate candy, cookies, etc.

Materials:

1. Student Text — Food Labels
2. Student Worksheet — Food Labels
3. Foods and/or containers with nutrition labels
4. Calculators
5. Student Data Sheet
6. Bell/Whistle

HOW TO READ THE NEW FOOD LABEL

Serving Size

Is your serving the same size as the one on the label? If you eat double the serving size listed, you need to double the nutrient and calorie values. If you eat one-half the serving size shown here, cut the nutrient and calorie values in half.

Calories

Are you overweight? Cut back a little on calories! Look here to see how a serving of the food adds to your daily total. A 5'4", 138-lb. active woman needs about 2,200 calories each day. A 5'10", 174-lb. active man needs about 2,900. How about you?

Total Carbohydrate

When you cut down on fat, you can eat more carbohydrates. Carbohydrates are in foods like bread, potatoes, fruits and vegetables. Choose these often! They give you more nutrients than sugars like soda pop and candy.

Dietary Fiber

Grandmother called it "roughage," but her advice to eat more is still up-to-date! That goes for both soluble and insoluble kinds of dietary fiber. Fruits, vegetables, whole-grain foods, beans and peas are all good sources and can help reduce the risk of heart disease and cancer.

Protein

Most Americans get more protein than they need. Where there is animal protein, there is also fat and cholesterol. Eat small servings of lean meat, fish and poultry. Use skim or low-fat milk, yogurt and cheese. Try vegetable proteins like beans, grains and cereals.

Vitamins & Minerals

Your goal here is 100% of each for the day. Don't count on one food to do it all. Let a combination of foods add up to a winning score.

Nutrition Facts

Serving Size 1/2 cup (114g)
Servings Per Container 4

Amount Per Serving			
Calories	90	Calories from Fat 30	
% Daily Value*			
Total Fat	3g	5%	
Saturated Fat	0g	0%	
Cholesterol	0mg	0%	
Sodium	300mg	13%	
Total Carbohydrate	13g	4%	
Dietary Fiber	3g	12%	
Sugars	3g		
Protein 3g			
Vitamin A	80%	Vitamin C	60%
Calcium	4%	Iron	4%

* 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	300g	375g
Fiber	25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

More nutrients may be listed on some labels.

Total Fat

Aim low. Most people need to cut back on fat! Too much fat may contribute to heart disease and cancer. Try to limit your calories from fat. For a healthy heart, choose foods with a big difference between the total number of calories and the number of calories from fat.

Saturated Fat

A new kind of fat? No — saturated fat is part of the total fat in food. It is listed separately because it's the key player in raising blood cholesterol and your risk of heart disease. Eat less!

Cholesterol

Too much cholesterol — a second cousin to fat — can lead to heart disease. Challenge yourself to eat less than 300 mg each day.

Sodium

You call it "salt," the label calls it "sodium." Either way, it may add up to high blood pressure in some people. So, keep your sodium intake low — 2,400 to 3,000 mg or less each day.*

*The AMA recommends no more than 3,000 mg sodium per day for healthy adults.

Daily Value

Feel like you're drowning in numbers? Let the Daily Value be your guide. Daily Values are listed for people who eat 2,000 or 2,500 calories each day. If you eat more, your personal daily value may be higher than what's listed on the label. If you eat less, your personal daily value may be lower.

For fat, saturated fat, cholesterol and sodium, choose foods with a low % Daily Value. For total carbohydrate, dietary fiber, vitamins and minerals, your daily value goal is to reach 100% of each.

g = grams (About 28 g = 1 ounce)
mg = milligrams (1,000 mg = 1 g)

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UNIT 7

FOOD LABEL

Nutrition Facts			
Serving Size 1/2 cup (114g)			
Servings Per Container 4			
Amount Per Serving			
Calories 90	Calories from Fat 30		
% Daily Value*			
Total Fat 3g	5%		
Saturated Fat 0g	0%		
Cholesterol 0mg	0%		
Sodium 300mg	13%		
Total Carbohydrate 13g	4%		
Dietary Fiber 3g	12%		
Sugars 3g			
Protein 3g			
Vitamin A 80%	Vitamin C 60%		
Calcium 4%	Iron 4%		
* 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		300g	375g
Fiber		25g	30g
Calories per gram:			
Fat	9	Carbohydrate	4
		Protein	4

More nutrients may be listed on some labels.

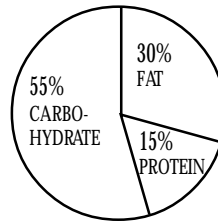
FOOD LABELS: STUDENT TEXT

When you go to a gas station you have a choice of which fuel to choose for your car: regular, super unleaded, or premium. When you go the grocery, restaurant, or cafeteria you have a choice of which fuel to choose for your body. Different fuels (*foods*) contain different amounts of energy (*calories*). There are also different kinds of energy. The three main types of food energy are carbohydrates, proteins, and fats. Carbohydrates and proteins have 4 calories per gram and fat has 9 calories per gram. On the average Americans eat a diet which is too high in fat. *The Dietary Guidelines* suggest that 55% of a person's calories should come from carbohydrates, 15% from protein, and 30% or less from fat.

Carbohydrates — 4 calories per gram

Protein — 4 calories per gram

Fat — 9 calories per gram



Does all of this sound confusing? Well, under a Federal law passed in 1990 almost all packaged foods must have nutrition labels. The information on these labels can help you make healthful food choices. Let's take a look.

FOOD LABELS

STUDENT WORKSHEET

Remember that an important recommendation, especially for Americans, is to keep the percent of calories from fat less than or equal to 30%.
To find the percent of calories from fat:

Example:

Nutrition Facts	
Serving Size 1 cup (252g)	
Servings Per Container about 2	
Amount Per Serving	
Calories 220	Calories from Fat 30

- 1) Divide the calories from fat by the total number of calories. $\frac{1 \text{ calories from fat}}{\text{total calories}} = \frac{30}{220} = 0.1363636$
- 2) Multiply by 100 to change the decimal into a percent. $0.1363636 \times 100 = 13.63636$
 $0.1363636 = 13.63636\%$
- 3) Round to the nearest whole percent $13.63636\% = 14\%$

REFRIED BEANS

Nutrition Facts	
Serving Size 1/2 cup (128g)	
Servings Per Container about 3.5	
Amount Per Serving	
Calories 120	Calories from Fat 20
% Daily Value*	
Total Fat 2g	3%
Saturated Fat 0.5g	3%
Cholesterol 0mg	0%
Sodium 560mg	23%
Total Carbohydrate 23g	8%
Dietary Fiber 6g	24%
Sugars 1g	
Protein 7g	

1. How much is one serving of beans? _____
2. How many calories are in one serving of beans? _____
3. How many calories from fat are in one serving of beans? _____
4. Find the percent of calories from fat in these beans. _____
5. How many calories are in one cup of beans? _____

PEANUT BUTTER SANDWICH CRACKERS

Nutrition Facts	Amount/Serving	% DV*	Amount/Serving	% DV*
	Serving Size 1 package (38g)	Total Fat 9g	14%	Total Carbohydrate 22g
Servings Per Container 8	Saturated Fat 2g	10%	Dietary Fiber less than 1g	3%
Calories 190	Cholesterol less than 5mg	1%	Sugars 4g	
Calories from Fat 80	Sodium 420mg	18%	Protein 6g	
	Vitamin A 0% • Vitamin C 0%		Calcium 0% • Iron 4%	

6. What is the serving size of the peanut butter sandwich crackers? _____
7. How many calories are in one serving of crackers? _____
8. How many calories from fat are in one serving of crackers? _____
9. Find the percent of calories from fat in the crackers. _____
10. If there are six crackers per package, how many calories in one cracker? _____

FOOD LABELS ANSWER KEY

1. 1/2 cup or 128 grams
2. 120 calories/serving
3. 20 calories from fat
4. 16.6=17% calories from fat
5. 240 calories
6. 1 package or 38 grams
7. 190 calories/serving
8. 80 calories from fat
9. 42.1=42% calories from fat
10. 31.6 or 32 calories per cracker

ACTIVITY B STUDENT DATA SHEET

% indicates percent of calories from fat.

Station #1		Station #2	
Item A _____	Item B _____	Item A _____	Item B _____
Cal. from fat _____	Cal. from fat _____	Cal. from fat _____	Cal. from fat _____
Calories _____	Calories _____	Calories _____	Calories _____
% _____	% _____	% _____	% _____

Station #3		Station #4	
Item A _____	Item B _____	Item A _____	Item B _____
Cal. from fat _____	Cal. from fat _____	Cal. from fat _____	Cal. from fat _____
Calories _____	Calories _____	Calories _____	Calories _____
% _____	% _____	% _____	% _____

Station #5		Station #6	
Item A _____	Item B _____	Item A _____	Item B _____
Cal. from fat _____	Cal. from fat _____	Cal. from fat _____	Cal. from fat _____
Calories _____	Calories _____	Calories _____	Calories _____
% _____	% _____	% _____	% _____

Station #7		Station #8	
Item A _____	Item B _____	Item A _____	Item B _____
Cal. from fat _____	Cal. from fat _____	Cal. from fat _____	Cal. from fat _____
Calories _____	Calories _____	Calories _____	Calories _____
% _____	% _____	% _____	% _____

Station #9		Station #10	
Item A _____	Item B _____	Item A _____	Item B _____
Cal. from fat _____	Cal. from fat _____	Cal. from fat _____	Cal. from fat _____
Calories _____	Calories _____	Calories _____	Calories _____
% _____	% _____	% _____	% _____

Station #11		Station #12	
Item A _____	Item B _____	Item A _____	Item B _____
Cal. from fat _____	Cal. from fat _____	Cal. from fat _____	Cal. from fat _____
Calories _____	Calories _____	Calories _____	Calories _____
% _____	% _____	% _____	% _____