

Read Before You Eat

Skills: Health, Language Arts, Math

Objective: Students learn to understand the nutrition label on different foods and be prepared to make healthier food choices.

Background

Food labels tell us what is in the food we are eating. A law passed in 1993 says manufacturers of processed foods have to list all the ingredients used in the food. This is very important for people who have food allergies and for those who have food restrictions for religious reasons, but we should all be aware of what is in the food we eat.

The first ingredient on the list will be the main ingredient. On a jar of jelly, the first ingredient listed may be fructose or sucrose. Those are two kinds of sugar. If they are the first on the list, you know there is more sugar in the jelly than anything else. The next ingredient on the list will probably be some kind of fruit. That means after sugar, there is more fruit than anything else.

Another law says food manufacturers have to show how much of the US Food and Drug Administration's recommended daily allowances (RDA) are in one serving of food. Recommended daily allowances are what nutrition experts say we need to eat every day to be healthy

Language Arts

1. Read and discuss background and the Reading Page included in this lesson. Lead a discussion based on the questions provided with the Reading Page.
2. Provide food packaging for students to handle and examine. Discuss what makes some packages more appealing than others.
2. Bring in an assortment of print advertisements or taped commercials. Discuss the many reasons students would or would not be interested in the products they see advertised. Discuss the eye-catching colors, special offers, the models or actors used, etc. Ask students if they are swayed to buy the product more by the packaging or by what their families or peers like.

Health

1. Divide students into groups of three or four. Give each group several food labels.

P.A.S.S.

GRADE 4

Health/Safety—2.4, 6; 3.1; 4.1,3; 6.2

Reading—3.1ab,2ab,4a

Visual Literacy—1

Math Process—1.2,3,5; 4.4

Math Content—1.1,2b; 3.2ac; 5.1b

GRADE 5

Health/Safety—7.1

Reading—3.1abd,2ab,3bc

Visual Literacy—1

Math Process—1.2,3,5; 4.4

Math Process—3.2b; 5.1a

Materials

Assorted food packaging with nutrition labels

Vocabulary

calcium—a silver-white soft metallic element that is found only in combination with other elements (as in limestone) and is one of the necessary elements making up the bodies of most plants and animals

calorie—the amount of energy required to raise the temperature of one kilogram of water one degree Celsius, used especially to indicate the value of foods in the production of heat and energy

carbohydrate—any of various compounds of carbon, hydrogen, and oxygen (as sugars, starches, or celluloses) most of which are formed by plants and are a major animal food

cholesterol—a waxy substance present in animal cells and tissues, that is important in bodily processes

fat—any of numerous compounds of carbon, hydrogen, and oxygen that make up most of plant and animal fat, and are a major class of energy-rich food

mineral—a solid chemical element or compound that occurs naturally in the form of crystals and results from processes not involving living or once-living matter.

nutrient—a substance that provides nourishment.

nutrition—the processes by which an animal or plant takes in and makes use of food substances

protein—any of numerous substances that consist of chains of amino acids, contain the elements carbon, hydrogen, nitrogen, oxygen, and often sulfur, include many compounds (as enzymes and hormones) essential for life, and are supplied by various foods (as meat, milk, eggs, nuts, and beans)

saturated fat—fat containing the maximum number of hydrogen atoms, usually solid at room temperature and predominant in animal fats.

serving—a helping of food or drink.

sodium—a mineral found in table salt which helps regulate water balance in the body and plays a role in maintaining blood pressure.

trans fat—fat formed when vegetable oils are hardened into margarine or shortening and found in many common fried foods.

unsaturated fat—fats commonly found in vegetable and plant sources, usually liquid at room temperature.

vitamin—natural substances that plants and animals need to grow.

—Students will use these labels to fill out the Food Label Worksheet.

—When all groups are finished, discuss which foods are healthier than others and why.

2. As a homework assignment, have students bring in a variety of printed nutritional information. Besides that found on processed food packaging, students should look for fresh foods that include nutritional labelling and brochures explaining nutritional information in fast food restaurants. Lead a discussion about what students have found.

Math

1. Have students vote for the most appealing packages. Graph the results.
2. Write prices on packages if they are not shown, and have students use the labels to calculate cost per serving.
3. Have students find “number of servings” on the nutrition labels of two or three packages.
—How many packages would be required if everyone in the class were to get one serving.
—Develop sentence problems from the nutrition labels, e.g., “How many servings has Max had if he eats six cookies?” “If Sally eats two cups of cereal every morning, how many days will her box of cereal last?”

Learn More

1. http://kidshealth.org/kid/stay_healthy/food/labels.html

Reading Page

Nutrition Facts

Your body needs the right combination of nutrients to work properly and grow. The Nutrition Facts box found on food labels gives you information about nutrients found in packaged food. The Nutrition Facts food label is printed on the outside of packaged food. Fresh food that doesn't come prepackaged sometimes has nutrition facts, too.

Most nutrients are measured in grams or milligrams. Percentages on the label show how much the food provides of the total amount needed in a day. These numbers are based on eating 2,000 calories in a day, the amount most school-age kids need. A calorie is a unit of energy, a way of expressing how much energy you would get by eating a certain food.

Serving Size

The nutrition label always lists a serving size. This is the amount of food—1/2 cup of cereal, two cookies, five pretzels—on which the nutrition information is based. The nutrition label tells you how many nutrients are in the amount of food listed as the serving size. Serving sizes also helps you understand how much you are eating. For example, if you eat a sandwich with two slices of bread, you are actually getting two servings of bread, since one slice of bread is considered one serving.

Servings per Container or Package

The label also tells you how many servings are contained in that package of food. If there are 15 servings in a box of cookies, and each serving is two cookies, then you have enough for all 30 students in your class to have one cookie each.

Nutrition Facts

Serving Size 2 crackers (14 g)
Servings Per Container About 21

Amount Per Serving

Calories 60 Calories from Fat 15

% Daily Value*

Total Fat 1.5g **2%**

Saturated Fat 0g **0%**

Trans Fat 0g

Cholesterol 0mg **0%**

Sodium 70mg **3%**

Total Carbohydrate 10g **3%**

Dietary Fiber Less than 1g **3%**

Sugars 0g

Protein 2g

Vitamin A 0% • Vitamin C 0%

Calcium 0% • Iron 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
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2400mg	2400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories and Calories From Fat

The number of calories in a single serving of the food is listed on the left of the label. This number tells you the amount of energy in the food. People pay attention to calories because if you eat more calories than your body uses, you might gain weight.

Another important part of the label is the number of calories that come from fat. This is important because most nutrition experts recommend limiting the amount of fat in your diet. The calories in a food can come from fat, protein, or carbohydrate.

Percent Daily Value

Percentages on food labels are based on recommended daily allowances (RDA). This is the amount of something a person should get each day. For example, there is a recommended daily allowance for fat, so the food label might say that one serving of this food meets 10% of the daily value.

Some percent daily values are based on the amount of calories and energy a person needs. These include carbohydrates, proteins, and fat. Other percent daily values (sodium, potassium, vitamins, and minerals) stay the same no matter how many calories a person eats.

Total Fat

The total fat is the number of fat grams contained in one serving of the food. Fat is an important nutrient that your body uses for growth and development, but you don't want to eat too much. The different kinds of fat, such as saturated, unsaturated and trans fat, may be listed separately on the label.

Cholesterol and Sodium

These numbers tell you how much cholesterol and sodium (salt) are in a single serving of the food. They are included on the label because some people need to limit cholesterol or salt in their diets. Cholesterol and sodium are usually measured in milligrams.

Total Carbohydrate

This number tells you how many carbohydrate grams are in one serving of food. Carbohydrates are your body's primary source of energy. This total is broken down into grams of sugar and grams of dietary fiber.

Protein

Your body needs protein to build and repair essential parts of the body, such as muscles, blood, and organs. Protein is often measured in grams.

Vitamin A and Vitamin C

Vitamins are given as a percent daily value. If a food provides 20% of the RDA for vitamin A, that one serving of food gives you one fifth of the vitamin A needed for the day.

Vitamin A is important to eyesight. Eggs, milk,

apricots, nectarines, cantaloupe, carrots, sweet potatoes and spinach are good sources of Vitamin A.

Vitamin C helps heal wounds and keeps body tissue in good shape. This vitamin also helps your body resist infection. Foods rich in vitamin C are citrus fruits, like oranges, strawberries, tomatoes, broccoli, cabbage and peppers.

Calcium and Iron

Calcium and iron, also given as a percent daily value, are important minerals. Calcium helps build strong bones and strong, healthy teeth. Foods rich in calcium include dairy products, canned salmon and sardines with bones, leafy green vegetables, such as broccoli and calcium-fortified foods such as orange juice, cereals and crackers.

Calories per Gram

These numbers show how many calories are in one gram of fat, carbohydrate, and protein. This information is the same for every food and is printed on the food label for reference.

Source:

http://kidshealth.org/kid/stay_healthy/food/labels.html

Discussion Questions

How are most nutrients measured?

What is a calorie?

How many calories should school-age children eat in a day?

Why is serving size important?

What can happen if you eat more calories than you use in regular body metabolism and physical activity?

Why are cholesterol and sodium listed on labels?

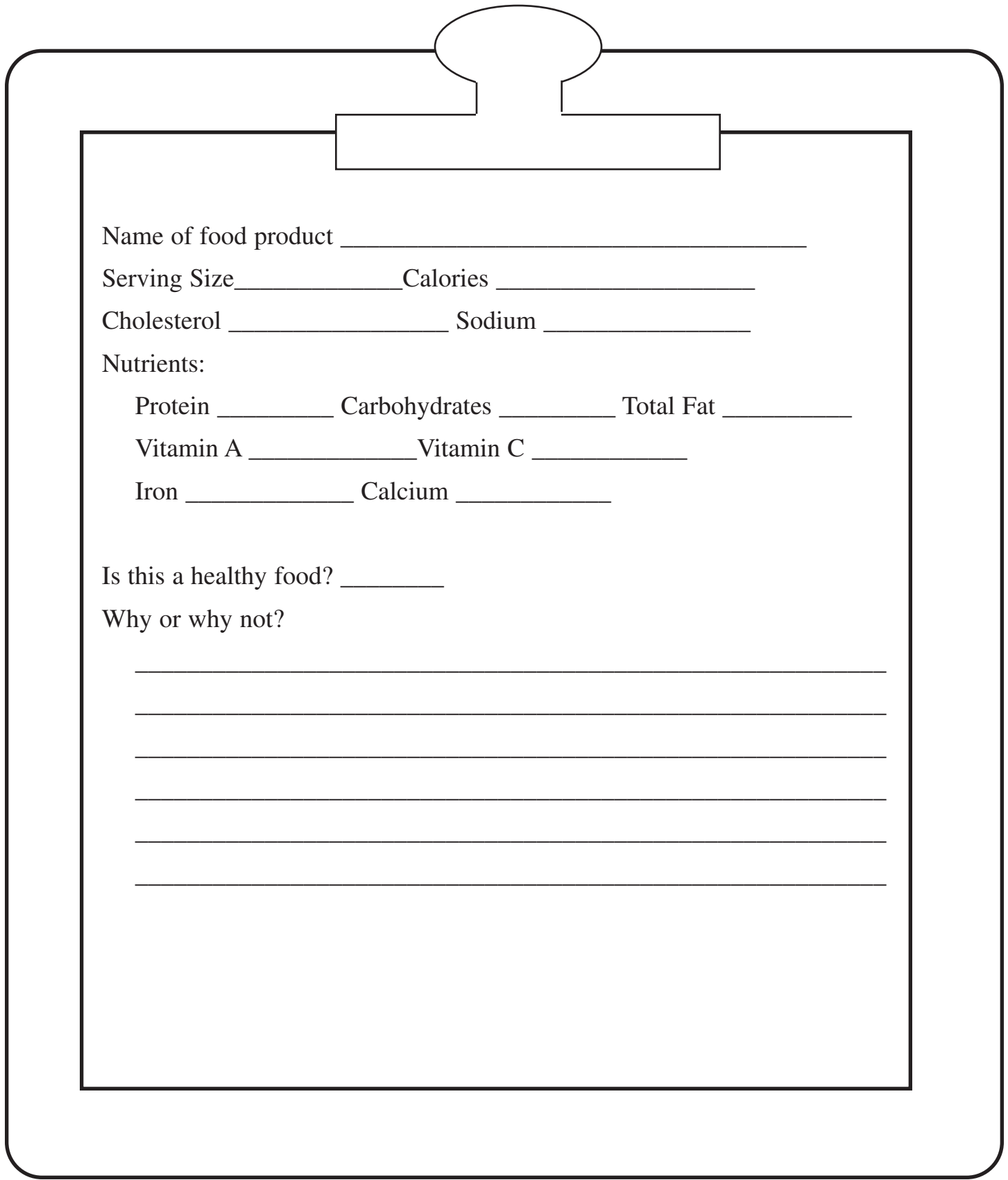
What two essential vitamins are shown on labels?

What does RDA stand for?

Name _____

Food Label Worksheet

Complete the survey form, using the information from the package provided.



Name of food product _____

Serving Size _____ Calories _____

Cholesterol _____ Sodium _____

Nutrients:

Protein _____ Carbohydrates _____ Total Fat _____

Vitamin A _____ Vitamin C _____

Iron _____ Calcium _____

Is this a healthy food? _____

Why or why not?
