

# FIGURING OUT FOOD LABELS

**LEVEL:** 9-12

**SUBJECTS:** Consumer Education, Language Arts, Nutrition Education, Science, Mathematics

**VOCABULARY:**

Nutrition labeling, processed, food additives, fortified, enriched

**LEARNING GOAL:**

Students shall develop their abilities to apply core concepts and principles from science, mathematics, social studies, arts and humanities, practical living studies and vocational studies to what they will encounter in life.

**MATERIALS**

Student worksheets, food labels and food advertisements.

**BACKGROUND**

In 1990, Congress passed the Nutrition Education and Labeling Act which now must be implemented by the Food and Drug Administration (FDA). FDA Commissioner, Dr. David Kessler, says that the goal of FDA is to “silence the din of partial truths in the American supermarket.” New labels will become mandatory in May, 1994. Nearly all processed foods must meet the new labeling standards. Meat and meat products, regulated by USDA, must feature similar labels.

The new labels will be based on a newly established standard serving size based on a 2,000 calorie per day diet. Per serving, labels must list: (1) total calories, (2) calories derived from fat, (3) total fat – grams, (4) saturated fat – grams, (5) cholesterol – milligrams, (6) total carbohydrates – grams, (7) complex carbohydrates – grams, (8) sugars – grams, (9) dietary fiber – grams, (10) protein – grams, (11) sodium – milligrams, (12) vitamins A and C, calcium and iron – Reference Daily Intake (RDI). RDI’s represent an average of the 1989 RDA recommendations and considers age distribution of U.S. population.

In addition to the measurable nutrients described above, retailers are restricted in packaging claims which they will be permitted to make including:

**OBJECTIVE**

The student will:

- identify various sources of nutritional information and evaluate accuracy of messages.
- understand and identify misrepresentations in current food labeling.
- evaluate specific consumer products for truth in labeling.
- understand contributions of food additives.
- interpret food labels and make consumer decisions based on this information.

**CONCEPTUAL AREA**

Decisions – responsible human decisions are necessary to maintain food and natural resources.

Images and attitudes – people’s images, attitudes and behaviors create the issues and trends affecting agriculture and the environment.

- “**Light**” – containing one-third fewer calories than a comparable product.
- “**Low Fat**” – three grams or less fat per serving.
- “**Fat Free**” – must have less than half (.5) a gram of fat per serving and no added fat or oil.
- “**Reduced Fat**” – must contain 50% or less fat per serving than a comparable food and the comparison must be described on the label.
- “**Low in Saturated Fat**” – containing one gram or less of saturated fat per serving and not more than 15% of its calories are from saturated fat.
- “**Cholesterol Free**” – food must contain less than two milligrams of cholesterol per serving.
- “**Fresh**” – raw food that hasn’t been processed, frozen or preserved.

In addition to nutrient information contained on food labels, manufacturers are also required to list all ingredients added to a food product. This listing is made in descending order of quantity. Many consumers are concerned about food additives, but most doctors and registered dietitians concur that they are safe unless there is an allergy, sensitivity or intolerance to a particular ingredient. Food additives are added to foods for the following reasons:

1. **Appeal** – Coloring agents, natural and synthetic flavors, flavor enhancers and sweeteners.
2. **Nutritional Value** – Many foods, such as bread and milk, are fortified with vitamins and minerals that otherwise might be lacking in your diet, example iodine in salt. Foods also may be enriched to replace vitamins and minerals that were lost in processing.
3. **Processing** – Stabilizers, thickeners and emulsifiers give body and texture to foods.
4. **Freshness** – Preservatives retard spoilage, retain natural color and freshness, and keeps oils and fats from turning rancid.

## **PROCEDURE**

1. Ask students to describe some influences over food choice selections which they currently make. Typical responses may be: low calories, “natural,” low fat, healthy.
2. Next, have students identify common sources of nutritional information: television/radio news and talk shows, newspapers and tabloids, news magazines, women’s magazines, sports magazines. Display some typical examples. Ask – Does the information come from a credible source? Is the message unbiased? Based on human research? Are advertisers using a celebrity to promote the product?
3. Now, explain that the most reliable sources of nutritional information can be found on the label of a food product – especially with the changes being regulated by 1994. Have students complete the “Games Food Packagers Play” worksheet to identify some existing problems in the food labeling system. They will need to read the actual food labels to answer the questions. Discuss student responses and use this opportunity to

list and describe the new requirements. Will food processors be allowed to make the same nutritional claims on packages of these foods after May, 1994?

4. Conclude the label study by having students select two similar foods, example: two “diet” TV dinners or two cereals. Use the label information to complete the “Compare and Choose – The More You Read – The More You Know” worksheet. Discuss food additives and why they are added to foods using background information. In the ingredient listings of their two food selections, have students identify the additives and their purposes. Have students share their findings with the class.

### **RESOURCES**

“Light Snack Foods,” Health Harvest, Michigan Farm Bureau; “Are You Confused About Nutrition Labels?,” Carol Workman, R.D., Cow Country News, March 1992; “Bush Administration Resolves Dispute Over Food Labels,” American Farm Bureau News, December 7, 1992; AFBF Consumer Nutri-Scans, November 1990, July, December 1991.

### **EVALUATION**

Students can identify nutrition messages in the media and assess their credibility. They can examine a food package and apply basic nutrition knowledge to identify inaccuracies in nutritional claims. Students compare and contrast information and make consumer selections based on knowledge.



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# Games Food Packagers Play

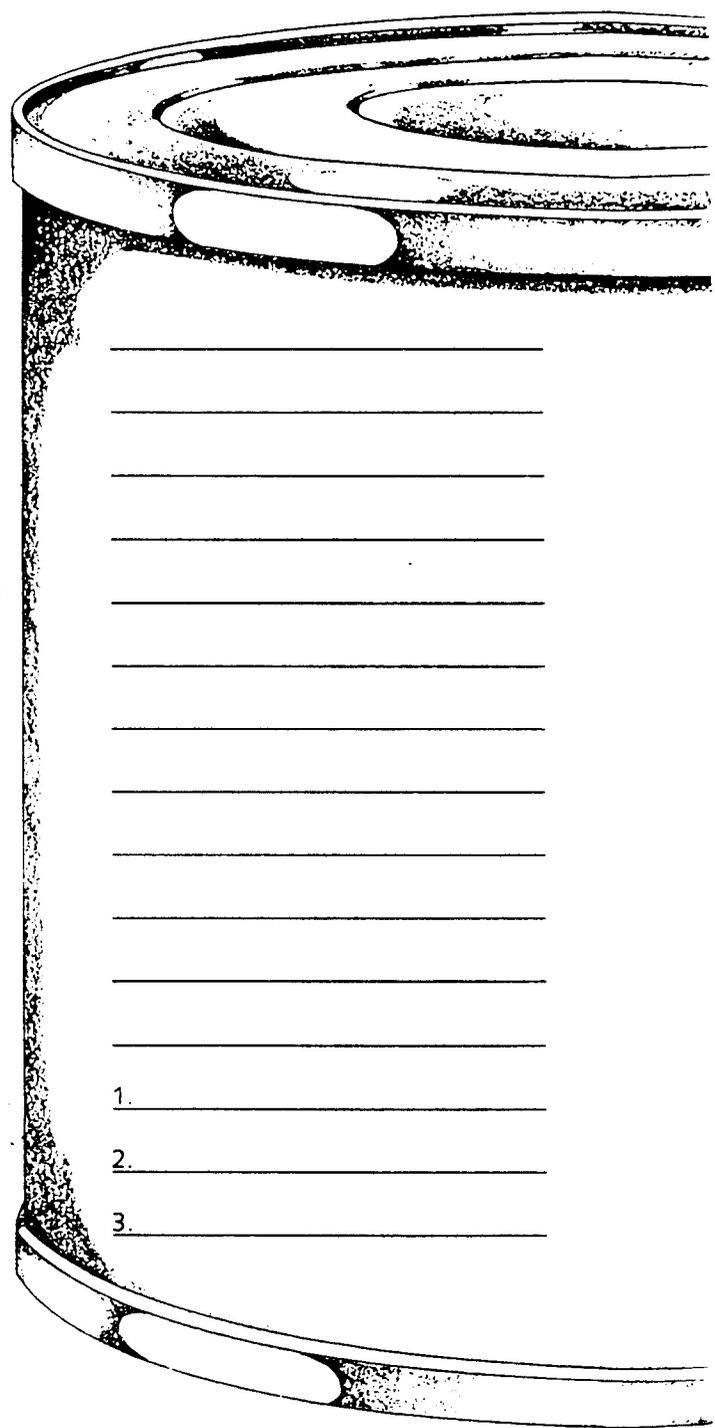
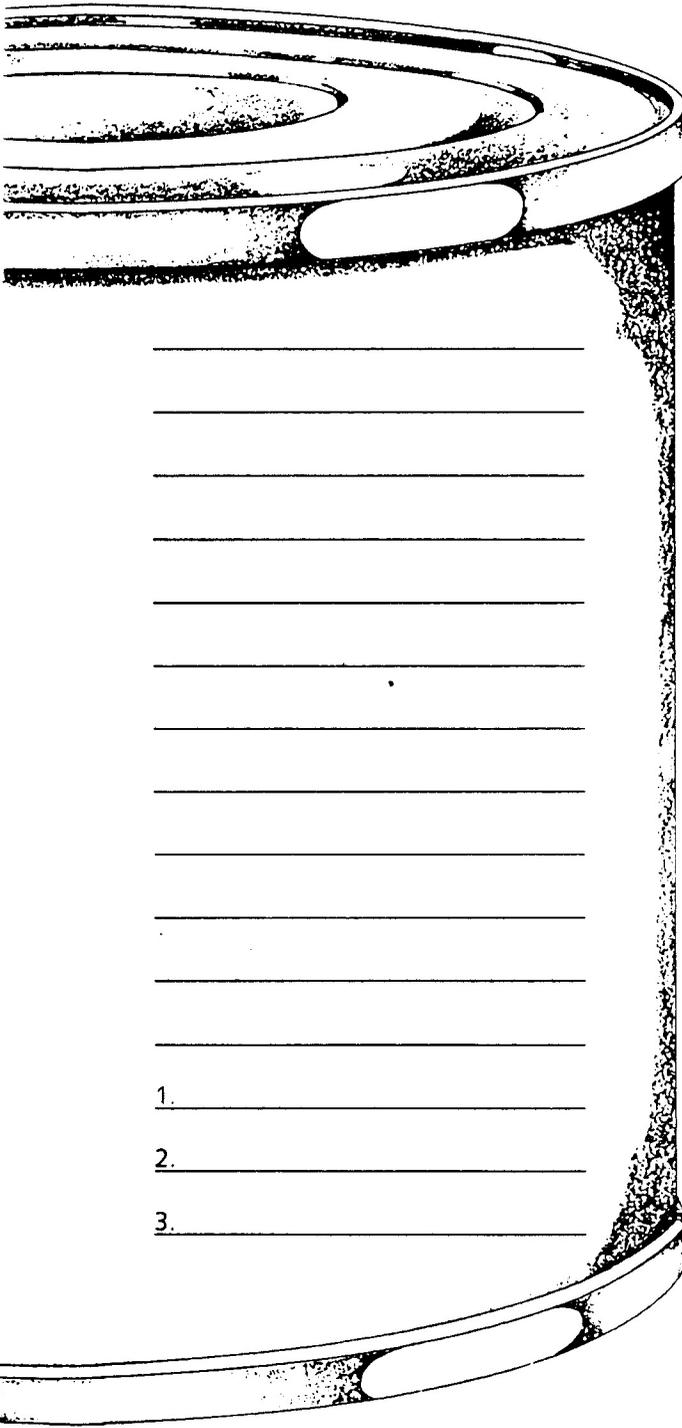
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**Directions:** Listed below are some food product claims made by various packages. Read the labels to uncover the inaccuracies. What are they?

1. Diet Coke - Just one calorie? \_\_\_\_\_  
\_\_\_\_\_
2. Post Fruity Pebbles - Where is the fruit? \_\_\_\_\_  
\_\_\_\_\_
3. Oceanspray Cranberry Juice Cocktail - How much juice is in a juice drink? How much sugar water? \_\_\_\_\_  
\_\_\_\_\_
4. Sizzlean Beef Breakfast Strips - 50% leaner than bacon, but what about the amount of fat? \_\_\_\_\_  
\_\_\_\_\_
5. Pringles Original Potato Chips - Cholesterol free, but what do they contain which elevates cholesterol levels? \_\_\_\_\_  
\_\_\_\_\_
6. Louis Rich Turkey Bologna - 82% fat free, 18% fat. How many grams of fat are in each 1 ounce slice? \_\_\_\_\_
7. Stouffer's Lean Cuisine "Never More than a Gram of Sodium" - What unit is used to measure sodium content? \_\_\_\_\_
8. Honey Nut Cheerios - Does this product contain more honey and nuts than it does sugar and salt? \_\_\_\_\_
9. Budget Gourmet Light and Healthy Salisbury Steak, labeled "low fat" - What percentage of its total calories are derived from fat? \_\_\_\_\_
10. Mrs. Smith's Natural Juice Apple Pie - What is "natural" in this product? \_\_\_\_\_  
\_\_\_\_\_

*Compare and Choose  
The More You Read —  
The More You Know*

Labels can help you make wise food choices. You can learn a lot by reading the nutrition information panel and the ingredient listing. Select two similar foods. Fill in the blanks below. Then answer the questions.



Brand  
Serving Size  
Calories  
Protein  
Carbohydrate  
Fat  
Sodium  
Fiber  
% Vitamin A  
% Vitamin C  
% Calcium  
% Iron  
Ingredients:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

Which product would you choose? \_\_\_\_\_

Why? \_\_\_\_\_

# KEY

## Games Food Packagers Play

Directions: Listed below are some food product claims made by various packages. Read the labels to uncover the inaccuracies. What are they?

1. Diet Coke - Just one calorie? only if you drink half a can
2. Post Fruity Pebbles - Where is the fruit? no real fruit - just fruit flavors
3. Oceanspray Cranberry Juice Cocktail - How much juice is in a juice drink? How much sugar water? one-third juice, two-thirds sugar water
4. Sizzlean Beef Breakfast Strips - 50% leaner than bacon, but what about the amount of fat? extra added protein makes this product 50% leaner than bacon, has the same amount of fat
5. Pringles Original Potato Chips - Cholesterol free, but what do they contain which elevates cholesterol levels? Saturated
6. Louis Rich Turkey Bologna - 82% fat free, 18% fat. How many grams of fat are in each 1 ounce slice? 5 grams 75% - not 18% - of calories come from fat
7. Stouffer's Lean Cuisine "Never More than a Gram of Sodium" - What unit is used to measure sodium content? sodium is measured in milligrams
8. Honey Nut Cheerios - Does this product contain more honey and nuts than it does sugar and salt? more sugar and salt
9. Budget Gourmet Light and Healthy Salisbury Steak, labeled "low fat" - What percentage of its total calories are derived from fat? 45%
10. Mrs. Smith's Natural Juice Apple Pie - What is "natural" in this product? the apple juice used in filling