



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Learning Goals

By the end of this lesson, students will be able to:

- apply communication skills as they interpret information on nutrition facts tables and ingredient lists
- use a range of critical and creative thinking skills to assist in solving problems and making healthy decisions surrounding personal food choices

Facility

Classroom

Equipment List

Approximately 30 grams of dry breakfast cereal in a clear container

Various food products with ingredient lists and nutritional food tables

 [Teacher Resource 5: Nutrition Label Match](#)

 [Teacher Resource 6: Making Personal Choices Checklist](#)

 [Student Resource 7: Sample Food Package](#)

 [Student Resource 8: Healthy Food Choices Scenario](#)



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices



[Student Resource 9: Decision-Making Model](#)



[Student Resource 10: A Look at Labels](#)

Minds On

Share and clarify the lesson Learning Goals.

Using small-group discussion, students brainstorm the steps they would go through to make a healthy decision. Guide student responses during the brainstorm by circulating through the room to ensure students' understanding. Once brainstorming time is up, record student responses on the board and clarify responses that need further direction. Student responses should highlight the following steps of the decision-making process:

- Identify the problem.
- Identify the alternatives.
- Evaluate the alternatives.
- Make a decision.
- Reflect on the decision.

Working in their small groups, students use the decision-making process to respond to the following prompts.

Teacher prompt: "What might you do if someone is pressuring you to do something you know is unhealthy?" *Student response:* "I can try to avoid situations. If I can't, I can say strongly and clearly that I do not want to participate. I can tell an adult I trust."

Explain to students that unhealthy behaviours don't just include substance abuse as they've been studying, but can also include eating foods or drinking beverages that are not good for them.

Teacher prompt: "Food labels contain a lot of information, including the product name, product claims, an ingredient list and a nutrition facts table, which identifies the nutrients in the product, the number of calories per serving, the serving size and other information, such as the amount of trans fats. How can you use this information to evaluate food choices and make healthy choices?" *Student response:* "I can check the nutrition facts table to see how much fat, sugar and salt are in the product. Foods with less saturated fat, trans fats, salt and sugar are better than those with more. However, growing bodies



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

do need a certain amount of fat for healthy growth. Foods with more nutrients like fibre and vitamins A and C are healthier than those with smaller amounts of these nutrients. I can use this knowledge to help me make healthier food choices at home and to help my family make healthier choices when we go shopping – for example, by choosing 100% fruit juice instead of fruit-flavoured drinks. I can also use similar information about the ingredients in food at restaurants and fast-food places, if it is available.”

Explain to students that throughout the lesson, they will be applying the decision-making process as they examine some of the nutrition facts tables and ingredient lists on food labels in order to make healthy and informed choices about what they choose to consume

A&E - Minds On

Teacher observation with verbal feedback of students’ ability to recall the decision-making process

Action

Using Teacher Resource 5: Nutrition Label Match, cut out the individual cards and distribute one of the 26 cards to each student. Explain to students that someone in the classroom is holding the matching piece to their card.

Teacher prompt: “We are going to examine ingredient lists and nutrition fact tables on some popular food products. Food labels can help consumers choose foods for healthy eating. Food labels provide various types of information and can guide consumers in making decisions about food purchases. Food labels help consumers to compare products, determine the nutritional value, manage special diets and control specific nutrient consumption. In order to examine nutrition labels and lists, we need to understand the vocabulary used on packaging to help us determine what is in the food products that are available to us. You have been given a card with a vocabulary word or a definition often found on nutrition tables and in ingredient lists. Your job is to find your classmate who is holding the matching piece. For example, if I am holding the word ‘ingredients,’ I would be looking for my classmate who had the correct definition of the word ‘ingredients.’ Once you have found your match, pair your cards together on the board so that we can see them. Remember which one is yours in case you need to make any changes later.”

Give students an opportunity to move around the room and problem solve with their classmates. Once the pairings have been made and displayed on the board, in a large-group discussion read through the pairings and discuss. Make any necessary changes.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Distribute Student Resource 7: Sample Food Package. Read through the Student Resource, directing students to focus on the Ingredient List and the Nutrition Facts label.

Teacher prompt: “We see here on the packaging that Superstuff Frosted Wheat Squares has a Nutrition Facts table and an ingredient list. What do you think is the purpose of the table versus the list?” *Student response:* “The ingredient list tells us what is in the food product and the Nutrition Facts table tells us how much of some things are in the product. For example, in Superstuff Frosted Wheat Squares, the ingredient list states that they are made with sugar. On the Nutrition Facts table it says that there are 6.5g of sugar.”

Explain to students that the purpose of the ingredient list is to list ingredients by weight from most to least, help to identify sources of the nutrients, and act as a source of information for people with allergies or people who want to avoid certain ingredients. Explain to students that the purpose of the government-regulated nutrition facts label is to communicate calories and 13 core nutrients: fat, saturated fat, trans fat, cholesterol, sodium, carbohydrates, fibre, sugars, protein, vitamin A, vitamin C, calcium and iron in a standardized manner. Communicate that the exceptions to these rules are fresh fruit and vegetables, raw meat, fish, seafood and poultry, alcoholic beverages, foods sold at craft shows, farmers’ markets, etc., foods prepared and packaged at the store, and products with insignificant amounts of the 13 core nutrients like coffee, tea and spices.

Teacher prompt: “If ingredients on a product’s ingredient list are listed in order of weight from most to least, which ingredient does Superstuff Frosted Wheat Squares have the most of?” *Student response:* “Since whole wheat is listed first on the ingredient list, I know that this cereal has a higher measurement of whole wheat compared to folic acid, which comes last on the ingredient list.”

Using the vocabulary from the previous activity, introduce the concept of Percent Daily Value.

Teacher prompt: “At the top of the label underneath the title Nutrition Facts, you will see ‘per 30 g.’ This means that the numbers listed in this particular label have been calculated for a serving size of 30 grams. I have here a sample of 30 grams of a breakfast cereal. I would like you to pay particular attention to the right side of the label where the % Daily Value heading is located. The % Daily Value is based on how much nutrient a serving of this food contains compared to the recommended daily amount. For example, on this label you will see that fat is listed at 5% Daily Value. This means that 5% of your recommended daily fat intake can be consumed by eating 30 grams of Superstuff Frosted Wheat Squares. The higher the % Daily Value means that the food item contains a higher recommended daily amount of that nutrient. It is important to remember that the serving size listed on the Nutrition Facts table is not a recommended serving. It may be different from a Food Guide Serving.”

Distribute several containers of processed food.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Distribute Student Resource 9: Decision-Making Model, Student Resource 8: Healthy Food Choices Scenario and three food product packages with ingredient lists and nutritional food labels. In small groups, students read the scenario together and work through the decision-making model provided, using the nutrition fact labels and ingredient lists in Student Resource 8: Healthy Food Choices Scenario to make healthy choices. Remind them of the resource they created on the board with the relevant vocabulary.

A&E - Action

Teacher observation with verbal feedback of students' ability to use creative and critical thinking skills as they interpret nutritional information and use it to work through the decision-making model using Teacher Resource 6: Making Personal Choices Checklist

Consolidation

Distribute Student Resource 10: A Look at Labels. Have students work independently to complete the compare-and-contrast activity about two types of yogurt.

A&E - Consolidation

Teacher observation with verbal feedback of students' ability to interpret and explain how to use nutritional information to make healthier choices

Ideas for Extension

Complete a class tally of the results from Student Resource 9: Decision-Making Model. Calculate how many students felt Ronnie should consume food products 1, 2 and 3. Using a large-group discussion, have students justify their reasoning for their choices.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Next Steps

Students will continue to utilize the decision-making model as they apply it to situations involving personal safety and injury prevention.

Notes to Teacher

Healthy eating is something that can be reinforced every day during the school year, and you are a key role model in the delivery of this message. You should attempt to ensure that the healthy eating messages being delivered in class are being reinforced in what the rest of the school is promoting toward healthy eating. See information on the Ministry of Education's School Food and Beverage Policy provided below.

Copies of *Eating Well with Canada's Food Guide*, including the Resource for Educators, may be downloaded for free at <http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/order-commander/index-eng.php#1>, or order individual copies for your class by calling TTY: 1-800-926-9105, or by contacting your local public health unit/department.

Eating Well with Canada's Food Guide - First Nations, Inuit and Métis is also available for free order and download at <http://www.hc-sc.gc.ca/fn-an/food-guide-aliment/fnim-pnim/index-eng.php>, or by contacting your local public health unit/department. *Canada's Food Guide* is available in 10 different languages. Consider providing ELL/ESL students with copies in their first language.

Ministry of Education's School Food and Beverage Policy

The School Food and Beverage Policy (Policy/Program Memorandum No. 150) requires that all food and beverages offered for sale in Ontario's publicly funded elementary and secondary schools for school purposes comply with the requirements set out in the policy, including the nutrition standards, by September 1, 2011.

The nutrition standards apply to all food and beverages sold in all venues (e.g., cafeterias, vending machines, tuck shops/canteens), through all programs (e.g., catered lunch programs) and at all events (e.g., bake sales, sports events). For more information, visit the Ministry of Education's website: <http://www.edu.gov.on.ca/eng/healthyschools/policy.html>

An Act to Protect Anaphylactic Pupils: Sabrina's Law



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Anaphylaxis is a serious allergic reaction that can be life-threatening; it requires avoidance strategies and immediate response in the event of an emergency.

An Act to Protect Anaphylactic Pupils: Sabrina's Law came into force on January 1, 2006, and is the first legislation of its kind anywhere in the world. This law ensures all school boards have policies or procedures in place to address anaphylaxis in schools, which includes providing instruction to staff and guidance on the administration of medication. Sabrina's Law can be found at: <http://www.edu.gov.on.ca/eng/healthyschools/anaphylaxis.html>

Eating Well with Canada's Food Guide

In 2007, *Canada's Food Guide to Healthy Eating* was redesigned and renamed *Eating Well with Canada's Food Guide*. This revision was intended to reflect the updated nutrient recommendations (Dietary Reference Intakes) and to help make the Guide easier to understand and use. *Canada's Food Guide* describes the amount and types of food considered to be part of a healthy eating pattern. This type of pattern helps individuals meet their nutrient needs, reduce their risk of chronic disease and achieve overall health and vitality. When teaching *Canada's Food Guide*, use the rainbow design to help communicate that the different sizes of the arcs represent the proportion of each food group in a healthy eating pattern.

Canada's Food Guide recommends enjoying a variety of foods from each of the four food groups: Vegetables and Fruit, Grain Products, Milk and Alternatives and Meat and Alternatives.

(Copied with permission from *Discover Healthy Eating! A Teacher's Resource for Grades 1 - 8*, 1998 (revised 2009), Public Health Professionals in Ontario.)

Four Food Group Key Messages

Vegetables and Fruit

Eat at least one dark green and one orange vegetable each day.

- Dark green vegetables are important sources of folate. Examples include broccoli, spinach, romaine lettuce, green beans, brussel sprouts and bok choy.
- Orange vegetables are rich in carotenoids such as beta-carotene, which the body converts to vitamin A. These include carrots, squash and sweet potatoes. Some orange-coloured fruit such as apricots, cantaloupe, mango and papaya are also important sources of carotenoids. You can eat them in place of an orange vegetable.

Choose vegetables and fruit prepared with little or no added fat, sugar or salt.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Most vegetables and fruit are naturally low in fat. Examples of higher fat choices include French fries, onion rings, salads with large amounts of dressing and fruit served with cream. Choose fresh fruit, unsweetened frozen fruit or fruit packed in water or juice. Look at the Nutrition Facts table on the package to find the amount of fat and salt (sodium) in prepared and packaged vegetables. Use fresh or dried herbs, spices, flavoured vinegars or lemon juice instead of salt to enhance the flavour of vegetables.

Have vegetables and fruit more often than juice.

Vegetables and fruit contain fibre while their juices contain little to none. Fibre can help you feel full and satisfied. Youth should be encouraged to try a variety of vegetables and fruit.

Grain Products

Make at least half of your grain products whole grain each day.

Whole grains and whole grain foods are composed of all three layers of the grain seed or kernel:

- The bran (outer layer) provides all of the fibre as well as B vitamins; minerals such as magnesium, iron and zinc; phytochemicals; and some protein.
- The endosperm (middle layer) accounts for the majority of the weight of the grain and is composed mostly of carbohydrate and protein.
- The germ (inner layer) provides B vitamins, unsaturated fats, vitamin E, minerals and phytochemicals.

Examples of whole grains include brown rice, bulgur, pot barley, quinoa, whole oats or oatmeal, whole grain wheat and whole rye. You can find out if a product is made with whole grain by reading the ingredient list on the food label. Whole grain foods will have the words “whole” or “whole grain” followed by the name of the grain as one of the first ingredients.

Choose grain products that are lower in fat, sugar or salt.

Baked goods such as cakes, croissants, doughnuts, pastries, pies and most cookies and muffins will add extra calories, fat, sugar and/ or salt (sodium) to the diet and should be limited. These foods are typically low in fibre and are not usually made with whole grains.

Use the ingredient list and Nutrition Facts table on food labels to compare products and make informed choices.

Choose products that have as little trans fat and saturated fats as possible. Avoid products that have “partially hydrogenated” and “vegetable oil shortening” in the ingredient list.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Milk and Alternatives

Drink skim, 1% or 2% milk each day.

Everyone should drink two cups of low-fat milk each day to obtain adequate vitamin D. Drinking low-fat milk is an effective way to consume protein, calcium, magnesium, riboflavin, vitamin A, vitamin B12, vitamin D and zinc while minimizing the amount of saturated fat and calories. Fortified soy beverages can be used as an alternative to milk. Rice, potato and almond beverages may be fortified, however, these types of beverages do not contain the level of protein found in milk and fortified soy beverages. Look for the word “fortified” on the label of soy beverages, as only these contain added vitamins and minerals to make them a nutritionally adequate alternative. It’s important to shake the container since added calcium may stick to the package lining.

Select lower-fat milk alternatives.

Lower-fat yogurts are those with 2% milk fat (M.F.) or less. Lower-fat cheeses have 20% M.F. or less. Selecting these lower-fat products helps to reduce saturated fat intake.

Meat and Alternatives

Have meat alternatives such as beans, lentils and tofu often.

Beans, lentils and tofu are sources of protein, fibre and folate. Eating more of these meat alternatives helps to minimize the amount of saturated fat in the diet.

Eat at least two Food Guide Servings of fish each week.

Fish is a great source of protein. It is low in saturated fat, with some types containing the omega-3 fatty acids. People are encouraged to eat at least two Food Guide Servings (150 grams) of fish each week to help reduce the risk of cardiovascular disease. Choose fish such as char, herring, mackerel, rainbow trout, salmon and sardines as these are good sources of omega-3 fats.

Fish should be cooked using lower-fat preparation methods, such as baking or broiling. Deep-fried fish or fast-food fish sandwiches do not offer the same cardiovascular benefits.

Certain types of fish contain high levels of methylmercury, a strong toxin that concentrates in the muscle tissue of fish and shellfish. Higher methylmercury levels are typically found in large predatory fish, such as white (albacore) tuna, shark, king mackerel and swordfish; which accumulate methylmercury over their life span. Choose fish that are low in methylmercury. In terms of canned tuna, youth should be offered canned “light” tuna.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Select lean meat and alternatives prepared with little or no fat.

Canada's Food Guide emphasizes lean cuts of meat and skinless poultry to minimize the amount of saturated fat in the diet. Lean meat, poultry and fish become higher-fat choices once they are fried, deep-fried or served with higher-fat sauces. *Canada's Food Guide* recommends baking, broiling, poaching or roasting meats and allowing the fat to drain off.

(Copied with permission from *Discover Healthy Eating! A Teacher's Resource for Grades 1 - 8*, 1998 (revised 2009), Public Health Professionals in Ontario.)

Reading Food Labels

Food labels can help consumers choose foods for healthy eating. Food labels provide various types of information and can guide consumers in making decisions about food purchases. Food labels help consumers to do the following:

- compare products more easily
- determine the nutritional value of foods
- better manage special diets
- increase or decrease intake of a specific nutrient.

In Canada, nutrition labelling refers to the standardized presentation of the nutrient content of a food. Government regulations outline what type of information is mandatory on labels as well as how this information must be presented. Most pre-packaged foods have nutrition information in three places:

- Ingredient List
- Nutrition Facts table
- Nutrition Claims

The Ingredient List

- Lists ingredients by weight, from most to least. For example, a cereal package that lists sugar as the first ingredient contains more sugar than any other ingredient.
- Helps to identify sources of the nutrients.
- Is a source of information for people with allergies or people who want to avoid certain ingredients.

The Nutrition Facts Table

- Includes information on calories and 13 core nutrients: fat, saturated fat, trans fat, cholesterol, sodium, carbohydrates, fibre, sugars, protein, vitamin A, vitamin C, calcium and iron.
- Exemptions include fresh fruit and vegetables; raw meat, fish, seafood and poultry; alcoholic beverages; foods sold at craft shows, farmers' markets, etc.; foods prepared and packaged at the store; and products with insignificant amounts of the 13 core nutrients like coffee, tea and spices.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

- Has a consistent look and content, is easy to read and locate, and nutrients are always listed in the same order.
 - All nutrient information is based on a serving size – a specific amount of food that is measured in household units, such as a cup of milk or a slice of bread – followed by the metric measurement (g, ml).

Important Note:

The serving size listed on the Nutrition Facts table is not a recommended serving. It may be different from the Food Guide Serving. The key is to compare the amount stated on the Nutrition Facts table to the amount you actually eat. The bowl you use at breakfast might hold anywhere from a ½ cup to a 2 ½ cups of cereal. Having 2 ½ cups of a particular cereal may be five times the amount specified in the Nutrition Facts table. You would have to multiply the amount of calories and cereal nutrients by five.

Percent Daily Value

Contains the % Daily Value (DV) of most nutrients listed. Percent Daily Value is based on how much of a specific nutrient a serving of food contains relative to the recommended daily amount. For example, 20% DV of calcium means that the food item contains 20% of the recommended daily amount of dietary calcium. The % Daily Value indicates at a glance if there is a lot or a little of a nutrient in the specific amount of food. It is helpful for comparing foods because it puts all nutrients on the same scale (0% - 100% DV). For example, a food that has a % Daily Value of 5% or less for fat, sodium or cholesterol would be low in these nutrients. A food that has a % Daily Value of 15% or more for calcium, vitamin A or fibre would be high in these nutrients.

Nutrition Claims

- Nutrition Claims are optional; some manufacturers may choose to use them.
- Nutrition Claims provide a quick way to identify foods with a specific nutritional feature.
- There are two types of Nutrition Claims: Nutrient Content Claims and Diet-Related Health Claims.
- Nutrient Content Claims describe the amount of a nutrient in a food (i.e., “reduced fat,” “cholesterol free,” or “a high source of fibre”).

Diet-Related Health Claims highlight a relationship between diet and a disease condition, and are supported by sound scientific evidence. There are five Diet-Related Health Claims allowed: a. a diet low in sodium and high in potassium, and the reduction of risk of hypertension (high blood pressure) b. a diet adequate in calcium and vitamin D, and the reduction of risk of osteoporosis c. a diet low in saturated fat and trans fat, and the reduction of risk of heart disease d. a diet rich in vegetables and fruits, and the reduction of risk of some types of cancer e. minimal fermentable carbohydrates in gum, hard candy or breath-freshening products, and the reduction of risk of dental caries.

- All Diet-Related Health Claims have to be supported by information provided under the Nutrition Facts.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

- Government regulations specify the wording of a claim as well as the criteria a food must meet to qualify for a claim.

Other Information on Food Packages

Name of food, brand name, net quantity of product, manufacturer's name and address, durable life date and storage instructions (e.g., best-before date or date code), point-of-purchase symbols (some manufacturers put symbols on their products using their own standards to rate the nutritional value of the product). It is important to be aware that these standards are not government-regulated.

Food Guide Servings

A Food Guide Serving is simply a reference amount. Food Guide Servings help you understand how much food is recommended every day from each of the four food groups. In some cases, a Food Guide Serving may be close to the amount you eat, such as an apple. In other cases, such as rice or pasta, you may serve yourself more than one Food Guide Serving at a meal. It is also important to note that the serving size on a nutrition label is not always equivalent to a Food Guide Serving or to the amount you normally eat.

Canada's Food Guide recommends a different number of Food Guide Servings for different age and sex groups. The amount of food children will eat also depends on their appetite, their activity level and how fast they are growing. Although a child's energy needs tend to increase through puberty, this increase is not steady and varies according to his or her own growth pattern. As a general rule, if children eat according to their appetites and meet, at a minimum, the recommended number of Food Guide Servings for all four food groups, they will get the nutrition they need.

Healthy Eating

Classifying Foods as "Everyday" and "Sometimes" Foods

Children tend to classify foods as "good" or "bad." This classification will not help children develop a positive approach toward eating. Healthy eating is the total sum of all food choices made over time. It is the overall pattern of foods eaten, and not any one food or meal determines if an eating pattern is healthy. To help children learn to follow a healthy eating pattern, it is more effective to classify foods as "everyday" and "sometimes" foods. Foods that are nutrient dense can be considered "everyday" foods. Foods from the four food groups, such as vegetables, fruit, milk, cheese, yogurt, whole grains, fish and legumes are examples of "everyday" foods that we should choose for meals and snacks. *Canada's Food Guide* describes the foods and beverages that do not fit into any of the food groups as "less healthy choices" and these can be considered as "sometimes" foods. These foods are low in nutrients and high in calories, fat, sugar and/or salt. See examples listed under the "Less Healthy Choices" section. "Sometimes" foods should be limited, but can be enjoyed occasionally. What matters most is what people eat on a regular basis.



Nutrition Labels and Ingredient Lists

Grade 5 | Making Healthy Choices

Factors Affecting Food Choices

Individual preferences, allergies, culture, family and traditions (specifically parental role modelling), family meals and family income, peers, media messages, health conditions.

Additional Resources

Canada's Food Guide: <http://www.healthcanada.gc.ca/foodguide>

Dietitians of Canada: <http://www.dietitians.ca>

EatRight Ontario: <http://www.eatrightontario.ca>

Health Canada and the Canadian Food Inspection Agency have created a series of pamphlets with information on each of the nine priority food allergens. These can be found at <http://www.hc-sc.gc.ca/fn-an/securit/allerg/fa-aa/index-eng.php>