

**Building Blocks**  
**Healthy Eating, Physical Activity, and Oral Health**  
**A Lesson Plan Module for Teachers**  
**Junior Kindergarten – Grade 6**

**Healthy Eating**  
**Grade 5**  
**Lesson 5**

**Lesson 5 – Nutrition Label Match Game**

**Curriculum Expectations:**

Students will identify critical content information on food labels (e.g., ingredients, calories, additives, fat content).

**Objectives:**

Students will learn more about nutrients and food labels.

**Suggested Outline**

Section 1: Introduce Today’s Lesson

Section 2: Discussion/Background Information

Section 3: Classroom Activity

Section 4: Conclusion

**Section 1: Introduce Today’s Lesson**

Today we will learn more about nutrients and food labels by playing a “Nutrition Label Match Game”.

**Section 2: Discussion/Background Information**

**Calories and the Major Food Nutrients**

Meeting children's energy needs for growth, development and activity is a priority for healthy eating. There are approximately 50 known nutrients that the body needs to be healthy. Nutrients are things in foods that provide energy, facilitate growth, and help the body function properly. The foods eaten are made up of many different nutrients, which are divided into six classes: carbohydrate, fat, protein, vitamins, minerals, and water. Carbohydrate, fat, and protein are the nutrients that provide energy for the body. Energy from food is measured as kilocalories, also known as Calories, or as kilojoules, the metric term. Vitamins, minerals and water perform specific functions and also help the body use the energy nutrients.

**Calories**

A Calorie is a measure of how much energy the nutrients can supply the body. The body uses the food eaten as fuel, burning it to produce energy. The body needs energy to function during times of rest, heavy exercise, and the activities in between. Some nutrients have more Calories than others do. There are four Calories in each gram of carbohydrate and each gram of protein. There are nine Calories in each gram of fat. Vitamins, minerals and water do not provide Calories. Alcohol has seven Calories per gram.



## **Carbohydrates**

There are three basic types of carbohydrates - complex carbohydrates (i.e., starch), fibre, and simple carbohydrates (i.e., sugar). They are all found in plant foods. Health Canada's *Nutrition Recommendations for Canadians* suggests that the Canadian diet provide 55% of energy (total Calories) from carbohydrates.

Eating patterns that are high in complex carbohydrate and fibre are associated with a lower incidence of heart disease and certain types of cancer. Some common sources of carbohydrates are grains (wheat, oats, millet and rice), legumes (peas, beans, lentils), vegetables, fruit and grain-based foods (bread, cereal, pasta). *Canada's Food Guide to Healthy Eating* encourages people to eat more fibre-rich foods such as whole grain products, vegetables, fruit, and dried peas, beans and lentils.

Eating patterns high in dietary fibre are associated with a lower incidence of heart disease and some types of cancer. Most people need to eat more fibre to help their digestive system operate smoothly. In most cases, fibre does not provide energy because the body cannot digest it. Instead, it helps people stay healthy simply by passing through the body.

## **Fat**

Fat is the body's major form of energy storage and is needed for many body functions. The body obtains fat by making it and also through dietary sources. There are different types of dietary fat and it is found in both plant and animal foods. The types of fat found in plant and animal foods are different and have different effects on the body. Fat from animal foods has been shown to increase risk for some illnesses like heart disease, while fat from plant foods has been shown to do the reverse. However, the bottom line in reducing one's risk to some illnesses, is to maintain an overall lower fat diet, especially lower animal-based fat.

Health Canada's *Nutrition Recommendations for Canadians* suggests that the Canadian diet include no more than 30% of energy (total Calories) from fat. It is important to note that this is a recommendation for adults. During the pre-school and childhood years, nutritious food choices should not be eliminated or restricted because of fat content. During early adolescence, energy needed for growth should be emphasized first, followed by a gradual lowering of fat intake. Once linear growth has stopped, the fat intake currently recommended for adults is appropriate.

## **Protein**

Aside from water, proteins are the most abundant substances in the human body. Proteins are found in every body cell and are essential for many body functions. Proteins are made up of amino acids that the body uses to develop bone, muscle, skin, and blood. Despite popular beliefs regarding proteins, such as "more protein means bigger muscles", excess protein is used as energy. If this energy is in excess of the body's needs, it will be stored as fat.

About 15% of a person's diet should come from protein, and most Canadians easily meet or surpass this intake. Some common sources of dietary protein are meats, nuts, milk products (milk, cheese, yogourt), grains (wheat, oats, millet and rice), legumes (peas, beans, lentils), eggs, and tofu.

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## **Vitamins**

Vitamins do not provide energy but do help the body grow and stay healthy. Fruits, vegetables and enriched grain products are good sources of many vitamins. Vitamin A is an example of a vitamin that helps keep our skin healthy and helps us to see at night. Carrots, spinach and broccoli are excellent sources of Vitamin A. Other examples of vitamins our bodies need are vitamins C, D, E, K, the B vitamins (e.g., folic acid).

## **Minerals**

Minerals help build bones and teeth and help muscles work the way they should. Calcium is an example of a mineral that helps build bones and teeth. Milk products are an excellent source of calcium. Other examples of minerals our bodies need that we get from food are potassium, sodium, iron, zinc, phosphorus, magnesium, and copper.

## **Water**

About 50-60% of our total body weight is water. A person can survive only a few days without water. Water has many functions including carrying nutrients and oxygen to cells, maintaining body temperature, and assisting in digestion and respiration. Under normal circumstances, the body loses about 0.5 L per day through perspiration. During exercise in hot weather, a person can lose as much as 11 L in a single day. It is important to teach students about the importance of drinking enough water (about 1-1.5 L per day) and not becoming dehydrated. Listening to one's thirst trigger is not always enough. Ensure that children have easy access to water and encourage them to drink frequently.

## **Reading Food Labels**

Food labels provide various types of information about food products and can be useful in helping consumers make decisions about food purchases. Government regulations outline what type of information is mandatory on labels as well as how this information must be presented. In Canada, nutrition labeling refers to the standardized presentation of the nutrient content of a food. Food labels contain information to help choose foods for healthy eating.

On a food label, there are three different places to look for nutrition information – under Nutrition Information, in a Nutrition Claim, or in the Ingredient List. Nutrition Information includes the categories *serving size* and *nutrients per serving*. It is not always found on food labels since it is optional. Other information about nutrition can be found in the Ingredient List and in Nutrition Claims. For more information, see the *Additional Resources* section at the end of the *Background Information*.

In Canada, it is not mandatory for a food company to put a Nutrition Information panel on its product. There are new regulations being developed that may change that. If a company would like to put a Nutrition Information panel on its product, it must include the following information in a specific order about the product:

• Serving Size • Carbohydrate • Energy • Sodium • Protein • Percentage Recommended Daily Intake • Fat • Nutrient Claim

The Ingredient List indicates the amount of food in a product in descending order based on weight. Therefore, the first ingredient on the list is found in the largest quantity, the second ingredient in the next largest amount, and so on. For example, a cereal package

that lists sugar as the first ingredient contains more sugar than any other ingredient.

Other information found on food packages includes:

- Name of food
- Manufacturer's name and address
- Brand name
- Net quantity of product
- Durable life date and storage instructions (e.g., best before date or date code)
- English and French

Nutrient claims, such as Light, Low in Saturated Fat, Low in Unsaturated Fat, Cholesterol Free, or A High Source of Fibre, may appear on the front panel of a food package. When these types of claims are made, the food manufacturer must back up its claim with information somewhere else on the label. For example, if a claim of Low Fat is made, a complete fat profile must be listed in the Nutrition Information panel.

### **Section 3: Classroom Activity**

Make enough copies of the *Nutrition Label Match Game* master sheets to supply small teams (four to six students) with one copy each. Cut each sheet along the lines so that each term and definition is on a separate piece of paper. Divide the class into small teams, each team sitting around a table or a group of desks together. Place one set of mixed up terms and definitions in the centre of each team. Instruct the students to match each term with the correct definition as quickly as possible. The first team that completes the matching will read out their matching choices. If they have a wrong match, another team has the opportunity to state the correct answer and continue with the answers.

### **Section 4: Conclusion**

Today we learned more about nutrients and food labels by playing a “Nutrition Label Match Game”.

