

# New Food Products

Grade

5

Topic: Waste  
Grade: 5  
Duration: 3 x 45 minutes

*Students will work in small groups to create a new food product that will demonstrate a variety of principles including efficient packaging. In order to determine the best product, students will conduct a survey to determine what product would sell the best in their school community.*

## Curriculum Expectations

- 5s3: Demonstrate understanding of factors that contribute to good health
- 5s13: Compile data gathered through investigation in order to record and present results, using tally charts, tables, and labelled graphs produced by hand or with a computer
- 5s15: Describe the types of nutrients in foods and their function in maintaining a healthy body
- 5s16: Identify a balanced diet as one containing carbohydrates, proteins, fats, minerals, vitamins, fibre, and water, and design a diet that contains all of these
- 5s18: Interpret nutritional information to make healthy food choices
- 5s21: Describe the relationship between eating habits, weight, height, and metabolism
- 5e1: Communicate ideas and information for a variety of purposes (e.g., to present and support a viewpoint) and to specific audiences
- 5e2: Use writing for various purposes and in a range of contexts, including school work
- 5e6: Produce media texts using writing and materials from other media (e.g., an advertisement for radio)
- 5e21: Accurately use graphs and captions
- 5e49: Contribute and work constructively in groups
- 5e52: Analyse media works
- 5e66: Create a variety of media works
- 5m107: Use computer applications to record the results of data collected
- 5m109: Interpret displays of data and present the information using mathematical terms
- 5m113: Design surveys, collect data, and record the results on given spreadsheets or tally charts
- 5m114: Display data on graphs (e.g., line graphs, bar graphs, pictographs, and circle graphs) by hand and by using computer applications
- 5m115: Analyse how data were collected and discuss the reasonableness of the results
- 5m119: Construct labelled graphs both by hand and by using computer applications
- 5m120: Evaluate data presented on tables, charts, and graphs and use the information in discussion
- 5p1: Analyse information that has an impact on healthy eating practices
- 5p5: Explain the purpose and function of calories and the major food nutrients
- 5p6: Identify critical content information on food labels
- 5a26: Produce two- and three-dimensional works of art that communicate a range of ideas (thoughts, feelings, experiences) for specific purposes and to specific audiences

## Background Information

A healthy lifestyle is something everyone should have. Eating the proper foods is a major part of this. All foods contain nutrients. The human body needs nutrients to stay healthy. A food may have more than one nutrient but it will not have all of them. In order to get all the nutrients required, a balanced diet is needed. A diet is made up of the food and drink that a person consumes. The amount of nutrients needed increases as a person gets older. Young people need more fat and protein than an adult. If we take too much of certain things in our diet, such as sugar and fat, problems can occur.

Fat is a form of stored energy. If you have a diet with lots of fat in it but you do not lead an active life, the fat is stored in your body. It makes the body heavier. When you move, the heart has to work harder to pump the blood to the muscles.

Sugar is a form of stored energy as well. If it is not used up, the body turns the sugar to fat. When you eat food containing lots of sugar, some of the sugar stays on your teeth and is eaten by special bacteria living there. This destroys the surface of the teeth.

The nutrient value of food is now found on labels for food in Canada. On this list, it will show the amount of the nutrients and the % of the daily-recommended value of that nutrient.

### ***Accountability***

Students will understand that healthy living is important and that they have control over making wise decisions.

### ***Teacher Notes***

1. Use this scenario approach:

A new environmentally friendly company is going to be opening in your community soon. They will be developing new food products aimed at the school-age market. They want to create a healthy food that can be taken to school easily. They also want to make sure that they do not add any extra packaging to the product. You have been asked to help them devise and market this new product.

2. Students will work in small groups to create a new food product and examine their own food choices and selections. Get them to make a list of their favourite foods.
3. Categorize these foods into several groups. Discuss healthy food choices and look at their choices and determine if they are making healthy choices. Use the Canada Food Guide for this activity. Examine the nutrient value of foods. Create a spreadsheet to track these nutrient values. As students record their food selections, they can enter these data into the spreadsheet on a regular basis.
4. Look at the packaging of these products and see if that has any influence on their selection. Get them to look at fast food chains and examine the promotional activities they use to encourage people to buy these products. Do these products use excessive packaging?
5. Students will then look at packages of healthy foods and examine the nutrient panels to see what is present in these foods. Ask each student to bring in the packaging for one product that contains nutrient values. Have enough products or labels that would allow students to create a healthy meal. Break into the small groups and have them study these products.
6. Use the labels to determine the total values of the different nutrients that they would consume in this meal. Keep a record of this.
7. Continue this activity at home and record their nutrient intake over a period of time. Use the spreadsheet file to track this information.
8. At the same time, have them keep track of the packaging for these foods.

9. Create a market survey to determine what product would sell the best in the school community. They will want to find out what kinds of food are the most popular for school lunch.
10. In the groups, create a new product that is nutritious and suitable for a school lunch program. Create a suitable name that would encourage parents and children to buy it.
11. Design packaging for this product – this packaging must take waste management and conservation into account. Look at large containers that can be refilled, recycled materials for packaging, etc.
12. Create a marketing campaign that will sell these products, including the cost for the product. Use a spreadsheet to assist in tracking these costs.
13. Display the products in the school lunchroom to help promote a healthy lifestyle and a cleaner environment.

Sample Spreadsheet Headings – additional nutrients and vitamins can be added to extend the data collection. Use formulae to make daily and weekly totals and have students compare their values to the desired values for their age group

Food Item	Serving size	Cal.	Protein	Carb.	Fat	Calcium	Iron	Sodium	Potassium	Vit. A	Riboflavin
TOTAL											

### ***Home Extension***

Check at home for the nutrient values of the foods that are eaten the most. Look at how foods are packaged and encourage parents to buy large containers, products that can be refilled, etc.

### ***Lesson Comments***

This activity can be tied to the Litterless Lunch Program Activity.