

Fast and High Fat

Pillar: Healthy Eating

Division: III

Grade Levels: 7-8

Core Curriculum Connections: Mathematics and Language Arts

I. Rationale:

Consumption of excessive calories and fats is a major contributor to childhood obesity and a host of other related health issues. Fast food is often rich in calories and fat and regular consumption can significantly contribute to high calorie diets in children. Eating fast food on a regular basis may prevent children from obtaining the nutrients they need to achieve and maintain their health and a healthy body weight. A diet lacking in essential nutrients has many adverse effects on children, especially as they grow. Research shows that our children and youth do not choose healthy foods often enough and do not meet recommended levels of physical activity. Therefore, greater emphasis on good nutrition, avoidance of fast food, and increased physical activity must be reinforced as the cornerstones of a healthy childhood. In math class, students will complete a nutrient analysis of fast food menu items to determine their calorie and fat content and depict this information on graphs. Then, in Language Arts, students will compare and compile healthier options to create alternate menus for fast food venues.

II. Activity Objectives:

The students will:

- analyze fast food restaurant menus to determine calorie and fat content.
- develop graphs depicting nutrient analysis of fast food meals.
- design and print alternate menus with healthier options that are lower in fat.

III. Curriculum Outcomes: Mathematics and Language Arts

Mathematics

Grade 7

NUMBER

General Outcome

Develop number sense.

Specific Outcome

3. Solve problems involving percents from 1% to 100%. [C, CN, PS, R, T] [ICT: P2–3.4]

STATISTICS AND PROBABILITY

(Data Analysis)

General Outcome

Collect, display and analyze data to solve problems.

3. Construct, label and interpret circle graphs to solve problems. [C, CN, PS, R, T, V]
[ICT: P2–3.3]

Grade 8

Specific Outcome

1. Critique ways in which data is presented in circle graphs, line graphs, bar graphs and pictographs.
[C, R, T, V] [ICT: C7–3.1, C7–3.2, F4–3.3]

IV. Materials:

- graph paper
- colored pencils
- computer with Internet access, calculator, overhead, printer
- Excel or other comparable spreadsheet program
- [Canada's Food Guide](#)

Menus from the following fast food establishments:

- [McDonald's](#)
- [Wendy's](#)
- [Burger King](#)
- [Taco Bell](#)
- [KFC](#)
- [Dairy Queen](#)
- [Arby's](#)
- [Tim Horton's](#)
- [Extreme Pita](#)
- [Subway](#)
- [Edo Japan](#)

V. Procedure:

Tip: *The week before this lesson, ask students to bring in nutritional brochures from area fast food restaurants or print off menus from the sites listed above.

1. With the students, brainstorm fast food restaurants and list them on the board or overhead.
2. Discuss whether the food selection at each restaurant offers healthy food choices, based on the recommended guidelines in *Eating Well with Canada's Food Guide*, by asking questions such as:
 - a. Are there a variety of foods offered?
 - b. Are some of the menu items low in fat?
 - c. Are vegetables, fruits, and whole grain products available?
3. Divide the class into small groups and assign each group a fast food restaurant. Distribute a nutrition brochure from that restaurant or direct the groups to use one of the web sites referenced in this lesson to analyze foods.
4. First, each group will analyze a meal (including a drink) and decide what items to purchase in order to obtain the meal lowest in fat. A reasonable goal is no more than 30% of calories from fat per **day**

and, for the purpose of this lesson, students should aim for no more than 30% of calories from fat per meal. (Show the students the calculations for determining the percentage of calories from fat of each food item using an overhead calculator/student calculators. NOTE: To convert grams of fat to calories, multiply by 9 calories/gram). For more information regarding fat, please see:

- [Heart and Stroke Foundation](#)

5. Each group will present the meal that they selected, explaining the total calories and percentage of calories that are derived from fat for each food item as well as for the entire meal.
6. Each group will graph the information presented in Step 5 using spreadsheet applications or graph paper and colored pencils. Grade 7 students must know how to represent data and information using a circle graph.
7. If meals contained more than 30% of calories from fat, ask the students to use the local fast food restaurant menus to plan a meal that has less than 30 % of total calories from fat.

VI. Extensions and Variations:

- Various types of graphs could be used to represent the data. If doing this lesson with Grade 8 students, assign a different type of graph for each group to do, so that the graphs can be compared and analysed.

VII. Assessment Ideas:

- Students accurately calculate the percentage of calories from fat.
- Students correctly identify meals lower in fat from fast food restaurants.
- Design a rubric to assess whether students explain all information in their menus.