**Cereal Nutrition Facts Investigation**

Scientists have learned over the years that what you eat can affect your health. A balanced diet is based on the scientific principles that healthful foods and appropriate nutrients must be consumed each day. Proteins, carbohydrates, vitamins, minerals, and fiber are essential elements of a nutritious diet.

- Proteins make the cells, while carbohydrates provide energy.
- Vitamins regulate chemical processes in which the body converts food into energy and tissues.
- Minerals such as calcium are essential for building strong bones and teeth.
- Fiber helps keep the digestive system functioning smoothly.

Food packages are required by law to have Nutrition Facts labels. In this activity, you will analyze some breakfast cereal Nutrition Facts labels.

**Reading a Nutrition Facts Label**

1. The first piece of information on the Nutrition Facts label is serving size. This is very important, because all of the nutrition content information is based on this serving size.
   a. Measure out **one serving** of the cereal and pour it into a small bowl. Is this the amount that you would usually eat? __________
   b. If not, approximately how many **servings** would you eat? ______________________________
   c. Put the cereal back in the box for the next group to use. Many students are doing this lab and touching it, so do NOT eat any!

2. Calories measure how much energy you get from the food you eat. One calorie is the amount of energy needed to raise the temperature of 1 gram of water 1 degree Celsius. One Calorie, or kcal, is equal to 1,000 calories: the amount of energy required to raise 1 kilogram of water (about 2.2 pounds) 1 degree Celsius. Nutrition is measured in Calories.
   a. Find the **number of Calories** in one serving of the cereal and record it in **Table 1**.

3. A high-fiber diet tends to make a meal feel larger and linger longer, so you stay full for a greater amount of time. A high-fiber diet also tends to be less "energy dense," which means it has fewer calories for the same volume of food.
   a. Find the **fiber content** in your cereal and record it in **Table 1**.
   b. Write whether the cereal has a high fiber content (5 or more grams), a medium fiber content (2.5-4.9 grams), or a low fiber content (less than 2.5 grams). __________________________

4. Scientists suggest that there are some nutrients that you should limit such as fat, cholesterol, and sodium.
   a. In **Table 1**, list the amount of these nutrients.
   b. Write what, if any, nutrients you should limit are high in your cereal. ________________________________

5. What health problems are related to high intakes of fat, cholesterol, and sodium?

________________________________________________________________

________________________________________________________________
6. Carbohydrates and protein are nutrients that most Americans eat plenty of, but some may want to limit sugars. List these nutrients in Table 1.
   a. Do you think this cereal has a lot of sugar, a moderate amount of sugar, or a small amount of sugar? _____________________________________________________

7. Vitamin A, calcium, vitamin C, and iron are all nutrients that we should be sure to get enough of in our diet. List these nutrients in Table 1.
   a. Why are these important?
   __________________________________________________________________________
   __________________________________________________________________________

8. The % daily value numbers provide a quick, helpful guideline for you to follow when you are trying to limit or eat more of certain nutrients. The percentages are based on an average daily intake of 2000 Calories. Look at your cereal label. Are there any % daily value numbers that one would expect to be either higher or lower? Why or why not?
   __________________________________________________________________________
   __________________________________________________________________________

9. On the Cereal Nutrition Table, complete the data table that will allow you to organize the following information about each of 4 different breakfast cereals:

<table>
<thead>
<tr>
<th>cereal name</th>
<th>total carbohydrate (g)</th>
<th>dietary fiber (g)</th>
<th>sugars (g), protein (g)</th>
<th>vitamin A (%)</th>
<th>calcium (%)</th>
<th>vitamin C (%)</th>
<th>iron (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>serving size</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>total Calories</td>
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<td></td>
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<tr>
<td>Calories from fat</td>
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<tr>
<td>total fat (g)</td>
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<td>saturated fat (g)</td>
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<td>cholesterol (mg)</td>
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<tr>
<td>sodium (mg)</td>
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</tr>
</tbody>
</table>

10. Record the nutrition data from your cereal box, and then trade with other groups until you have recorded data from each box of cereal. Use the data you collected to answer the questions.

**Applying your knowledge**
11. Determine which cereal is the healthiest. Explain how you arrived at your answer, and refer to specific data from your comparison table.
   __________________________________________________________________________
   __________________________________________________________________________

12. Determine which cereal is the least healthy, and use data to justify your choice.
   __________________________________________________________________________
   __________________________________________________________________________

13. Compare your choices with others in your group. Did everyone agree? If not, why?
   __________________________________________________________________________
   __________________________________________________________________________

14. Why are Nutrition Facts labels so important that the government requires them?
   __________________________________________________________________________
   __________________________________________________________________________
# Cereal Nutrition Table 1

<table>
<thead>
<tr>
<th>Cereal name &amp; serving size</th>
<th>total Calories</th>
<th>Calories from fat</th>
<th>total fat (g)</th>
<th>saturated fat (g)</th>
<th>dietary fiber (g)</th>
<th>cholesterol (mg)</th>
<th>sodium (mg)</th>
<th>total carbo (g)</th>
<th>sugars (g)</th>
<th>protein (g)</th>
<th>vitamin A (%)</th>
<th>calcium (%)</th>
<th>vitamin C (%)</th>
<th>Iron (%)</th>
</tr>
</thead>
</table>