Reading Nutrient Labels

The Nutrition Facts Label helps you determine the amount of calories and nutrients in one serving of food. One food Calorie (1 kcal or 1,000 calories) is the amount energy available from food after it has been digested that will raise the temperature of one kilogram of water one degree Celsius.

- Total fat includes:
  - saturated fats + ________ fats + ____________________ fats
  - each gram of fat contains approximately 9 Calories of energy

- Total carbohydrate includes:
  - Fiber + ______________________ + Polysaccharides
  - Fiber is ________________, which is a polysaccharide that cannot be broken down during digestion
  - __________ represent mono and disaccharides
  - each gram of carbohydrate represents approximately 4 Calories of energy

- Proteins
  - Proteins are polypeptides made of chains of ______________
  - each gram of protein represents approximately 4 Calories of energy

1. Using the information for chicken nuggets above fill out the chart below.

<table>
<thead>
<tr>
<th>Food</th>
<th>Total Calories</th>
<th>Fat energy x 9</th>
<th>Carb energy x 4</th>
<th>Protein energy x 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nuggets</td>
<td></td>
<td>_____ g x 9 = _____ Cal.</td>
<td>_____ g x 4 = _____ Cal.</td>
<td>_____ g x 4 = _____ Cal.</td>
</tr>
</tbody>
</table>

2. Now that you have figured out the amount of Calories for fats, carbs and proteins, determine the percentage of each macromolecule in a serving size of five chicken nuggets. Show your work.

% Fats = ________
% Carbs = ________
% Proteins = ________

3. Using your data construct a graph representing the percentage of each macromolecule (think; what graph would best represent this data?).
4. What do you think are two reasons why we need to eat? (What does eating provide for us?)

**Breakfast of champions, right?!**

Below are the nutrient labels for the foods tested during the macromolecule lab. Identify the organic molecules present based off the information in the nutrition label.

<table>
<thead>
<tr>
<th>Food</th>
<th>Protein</th>
<th>Lipids</th>
<th>Starch</th>
<th>Glucose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scrambled Egg</td>
<td>______</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Bacon</td>
<td>______</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Apple Jelly</td>
<td>______</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Butter</td>
<td>______</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>Bacon Grease</td>
<td>______</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>White Bread</td>
<td>______</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>
How does the nutrient label match up with your test results in lab? Were there any tests that you had a negative result when it should have been positive or vice versa? What could have caused that?

**Macromolecules and Daily Nutrition**

If you've ever looked at a nutrition label you probably noticed an estimate, usually 2,000, of how many calories you should be getting each day. These numbers may not be right for you because caloric needs vary with age, activity level, and other factors, such as gender. Total calories aside, do you know how much of your calories should come from major nutrients (macromolecules) such as fat, protein, and carbohydrates?

Visit the following website and calculate your total daily caloric intake:

2) after filling out your personal profile, scroll down and click on “calculate”

1. Approximately how many calories should you be consuming every day if you are trying to maintain your current body weight?

2. Of your total daily calories, how many of those calories should come from
   a. Fat _____ calories = ________%
   b. Protein _____ calories = ________%
   c. Carbohydrates _____ calories = ________%

3. Return to the calculation page. Fill in all your actual information, but add 30 years to your age. What happens to the number of calories you should consume? Why do you think this happens?

4. Return to the calculation page. Fill in all your actual information, but change your gender. What happens to the number of calories you should consume? Why do you think this happens?

5. Return to the calculation page. Fill in all of your actual information, but raise your activity level (if possible). What happens to the number of calories you should consume? Why do you think this happens?

6. Return to the calculation page. Fill in all of your actual information, but lower your activity level (if possible). What happens to the number of calories you should consume? Why do you think this happens?
Visit the website [https://fastfoodnutrition.org/fast-food-restaurants](https://fastfoodnutrition.org/fast-food-restaurants). Click on the name of your favorite restaurant and then find and click on the items from the menu that you would consume in a typical meal. *Don't forget to include your drink and any extras, such as ketchup on your sandwich or dessert.* Write the names each item you choose from the menu. Find and record the total calories from each item and then find the grand total number of calories for your entire meal.

**Item 1:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 2:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 3:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 4:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 5:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 6:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 7:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Item 8:**
- Total Calories _____
- Total Calories from Fat _____
- Sat. Fat _____

**Grand Total Calories = _____**  
**Total Calories from Fat = _____**  
**Total Calories from Sat. Fat =_____**

**Percentage of Calories from Fat (total calories from fat/grand total) = __________**

1. Using the grand total Calories from your favorite meal, what percentage does this meal represent from your suggested daily Calories?

2. Knowing this information, do you plan on adjusting your order next time you visit this restaurant? Why or why not?