Honor Biology Food Label Project:

Nutrients are substances found in food that are needed for good health. Your body can't make nutrients, so they must be supplied by food. During digestion, food is broken down into nutrients, which are absorbed into your bloodstream and carried to every cell in your body. More than 40 nutrients in food are classified into six groups: carbohydrates, fats, proteins, vitamins, minerals and water. Each nutrient has a specific function and they all work together for your good health.

In order to plan a healthy diet, we must know how to read a food label. Food labels show us the different nutrient found in a type of food. This project will incorporate your basic nutritional requirements and your actual nutritional dietary habits to determine how close you are to the typical student at Warren High School.

Part 1: Research
You will have to determine your needs based on the Daily Nutritional Needs(DNN) and your EER (estimated energy requirements).
Links
EER: http://www.indiacurry.com/ncalculators/energycalculator.htm
DNN: http://straighthealth.com/pages/tools/dricalc.html
DNN: http://www.scientificpsychic.com/fitness/macronutrients.html
DNN: http://nutritiondata.self.com/tools/calories-burned
DNN: http://fnic.nal.usda.gov/fnic/interactiveDRI/

Fill in the blanks below:
□ Age: _____ y
□ Height: _____ inches
□ Weight: _____ pounds
□ Gender: _____
□ Activity level: _____
1. Calculate your estimated energy requirement (EER) per day (kcal/day). Use the EER equation and physical activity factor provided from the web.
EER per day (kcal/day)_____

2. Calculate your daily protein requirement (g/day)
Protein per day (g/day)_____ Protein per day (Kcal/day)_____

3. What is your daily carbohydrate requirement (g/day)
Carbohydrate per day (g/day)_____ Carbohydrate per day (Kcal/day)_____
4. What are your daily fat requirement (g/day)
Fat per day (g/day)_____ Fat per day (Kcal/day)_____

5. What is your daily fiber intake? Daily fiber (g)_____

6. What is the daily cholesterol intake? Daily cholesterol (mg) intake:_____

7. 1% of your total calories should come from saturated fat. What is your daily saturated fat?
Sat. Fat per day (g/day)_____ Sat. Fat per day (Kcal/day)_____

8. What is your daily sodium intake? Daily sodium (mg)_____
9. What is the daily Vitamin A intake? Daily Vitamin A (ųg) intake:_____
10. What is the daily Vitamin C intake? Daily Vitamin C (mg) intake:_____
11. What is the daily Calcium intake? Daily calcium (mg) intake:_____

12. What is the daily Iron intake? Daily Iron (mg) intake:_____

Part 2: Collect, research and organize your nutritional/food eaten.   Determine the nutritional values and fill in the table.
   1. Pick 5 days or 10 meals you will eat over the week, they must include a weekend.
   2. Determine the nutritional values for each food item.
   3. Resources for finding nutritional values of food.
      a. http://www.chowbaby.com/fastfood/fast_food_calories.asp
      b. http://nutritiondata.self.com/
      c. http://www.nal.usda.gov/fnic/foodcomp/search/
      d. http://www.calorieking.com/foods/
   4. Create a data table to determine the total nutritional values.

Item	Total energy	Total protein	Total carbs.	Total fat	Total Sat Fat	Total iron	Total Vit. A	Total Vit.C	Total Ca	Total Sodium	Total Fiber
Sum All items											

   5. Answer the following questions.
      a. Compare your EER to the total energy.
      b. Compare the Totals of the food items to your DNN.
      c. Which ones did you meet and exceed, and which ones did you fall short?
      d. What did you learn from completing this project?

Part 3: Comparisons and analysis:
   1. Compare your data to the class. Determine how close you are to the average student at Warren. Review the data analysis hand-out as a resource.
   2. Do you think the 2000 Calorie data found on food labels is an accurate representation of a typical teenager? What would you suggest would be a better way to help the modern consumer understand the concept of energy and diet?
Part 4: Your Nutrition Facts
   1. Create a food label for 1/3 of your daily requirements.
   2. Use the template below.

Extra Credit:
Design a food bar that would give you a full days Energy requirement:
      1. What would the mass of the bar?
      2. Make a food label
      3. List the ingredients

Nutrition Facts

Serving Size
Servings per Container

Amount Per Serving

Calories	Calories from Fat

% Daily Value*

Total Fat

Saturated Fat

Trans Fat

Cholesterol

Sodium

Total Carbohydrate

Dietary Fiber

Sugars

Protein

Vitamin A	•	Vitamin C
Calcium	•	Iron

*Percent Daily Values are based on a 2,000-calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories:	2,000	Me
Total Fat	Less than	65g	
Sat Fat	Less than	20g	
Cholesterol	Less than	300mg	
Sodium	Less than	2,400mg	
Total Carbohydrate		300g	
Fiber		25g	
Protein		**75g**	

Calories per gram:

Fat 9   •   Carbohydrate 4   •   Protein 4