Food Label Analysis

**Directions**

1. Identify a suitable research question that will compare a minimum of three food products. For example, “Which brand of (insert food item here) is healthiest?”
2. Develop a hypothesis.
3. Use the food labels to fill in the chart below. This will provide the data you need for your analysis. If they don’t have a food label, you’ll need to do some research online. Be sure to cite any outside sources used.

**Tips:** *Do NOT choose condiments, candies, beverages, or similar foods with few ingredients, as this may make your analysis somewhat boring and/or irrelevant. Your topic should matter!*

**Research Question:**

**Hypothesis:**

**Data Table:**

 **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Food Product #1 Food Product #2 Food Product #3**

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Product  |  |  |  |
| Manufacture |  |  |  |
| Serving size  |  |  |  |
| Total calories (kcal)  |  |  |  |
| Total fat (g) |  |  |  |
| Saturated fat (g) |  |  |  |
| Cholesterol (mg) |  |  |  |
| Sodium (mg) |  |  |  |
| Total carbohydrate (g) |  |  |  |
| Dietary Fiber (g) |  |  |  |
| Protein (g) |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Circle** the Nutrientsthat are values as ≥10%; these foods are high in nutrition values | CalciumIron Vitamin AVitamin C | CalciumIron Vitamin AVitamin C | CalciumIronVitamin AVitamin C |
| **List any claims** displayed on the labels for example 95% Fat-free, Light, Fortified, sodium |  |  |  |
| First 10 ingredients of Product #1: |
| First 10 ingredients of Product #2: |
| First 10 ingredients of Product #3: |

**☺☺ READ THE FINE PRINT!**

Here are some other terms that may be used to describe the following types of ingredients:

**Sweeteners-** Aspartame (NutraSweet), Brown sugar, Corn syrup, Dextrose, Fructose, Monnitol, Xylitol, Fruit juice, Glucose, Honey, Invert sugar, Date sugar, Lactose, Maltose, Maple sugar, Molasses, Saccharin, Sorbitol, Brown rice syrup, Sucrose (white table sugar).

**Fats-** Cocoa butter, Coconut, Palm or palm kernel oil, Cream, Egg yolk solids, Hardened fat or oil, Vegetable shortening, Hydrogenated vegetable oil, Cottonseed oil, Tallow, Lard.

**Sodium-** Monosodium glutamate (MSG), Baking soda (sodium bicarbonate), Sodium nitrite, Sodium saccharin, Sodium benzoate, Worcestershire sauce, Soy sauce, Seasoned salts.

**THIS COMPLETED WORKSHEET IS DUE ON MONDAY October 21, 2013**

**YOUR ANALYSIS:**

Sample Analysis

[Which cereal is best for you](http://ehsbioblog.blogspot.com/2013/03/which-cereal-is-best-for-you.html)

Frosted Flakes vs. Honey nut Cheerios vs. Honey Bunches of Oats

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Cereal | Total carbs | Total Fat | Total calories | Cholesterol | Sodium | Protein | Dietary Fibers | Saturated Fat |
| Honey Nut Cheerios | 21.7g | 8.9g | 175 | 0mg | 123mg | 5.1g | 2g | 1.6g |
| Frosted Flakes | 42g | 13g | 290 | 0mg | 260mg | 7g | 5g | 3.5g |
| Honey bunches of Oats | 25g | 1.5g | 120 | 0mg | 140mg | 2g | 2g | 0g |

From the table at the top you can see that I picked three different types and brands of cereal. As you can see from the results Honey Bunches of Oats is the best and healthiest cereal for you. It clearly beats of all it's competors. If you look at Total Fat collum you can see that Honey Bunches Of Oats has less fat than the rest of the cereals. If you also look at the Saturated Fat you will see zero grams. This shows that for breakfast the best cereal would be Honey Bunches Of Oats for any person to eat because the nutrition facts show that not only is it good it is also low on fat.

[Kit Kat vs. Snickers vs. Twix](http://ehsbioblog.blogspot.com/2013/03/kit-kat-vs-snickers-vs-twix.html)

Candy Bars

Kit Kats, Sneakers, Twix

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Candy Bar | Total Carbohydrate | Total fat | Protein | Cholesterol | Sodium | Calories | Vitamin A |
| Kit Kat | 27g | 11g | 3g | 5mg | 23mg | 218 | 1% |
| Snickers | 33g | 12g | 4g | 5mg | 120mg | 250 | 0% |
| Twix | 38.2 g | 13.5 g | 2.2 g | 6mg | 112mg | 281 | 0% |

You can see clearly that I picked the three different Candy bars and in the table it tells you the nutrition facts of every candy bar that is placed there. To be honest with you I would pick the Kit Kat because I think it’s healthier, but nothing here is healthy though but the kit kat is better because it has fewer calories than anything here and it at least has 1% vitamin A because no other ones have vitamin A at all. The Kit Kat is the healthiest product here because it shows you a lot less fat or sodium and the other products have worse things for your health. So all if you have a choice to pick between these candies bars pick Kit Kat. The Snicker and Twix are bad for you because

Difference Between Three Types of Bread

Which is the healthiest bread, White, Whole Wheat, or Whole Grain?  I believe that Whole Grain is the healthiest of the three choices.  Deciding which read would be healthier is important if you want to eat healthy, since bread is a popular food product in everyday life.  All three choices have many similarities but slight differences.

|  |  |  |  |
| --- | --- | --- | --- |
| Name of Product | Whole Grain | Whole Wheat | White |
| Serving Size | 1 slice | 1 slice | 2 slices |
| Total Calories (kcal) | 100 | 100 | 130 |
| Total Fat (g) | 2g | 1.5g | 2.5 |
| Total Carbohydrates (g) | 20g | 20g | 23g |

The total calories in White Bread were clearly more than the Whole Grain and Whole Wheat.  White Bread was higher in every row shown above, which left the Whole Grain and Wheat to be compared.  The total fat was higher in the Whole Grain by a slight margin of .5g.  Also, not shown in the table, Whole Grain had 115mg of sodium while the Whole Wheat only had 105mg of sodium.  In result, the Whole Wheat would be healthier out of the three choices by slight margins when compared to the Whole Grain and larger margins when compared to the White Bread.

The serving sizes for both the Whole Grain and Whole Wheat was 1 slice, and the White was 2 slices.  The serving sizes on the labels were not realistic.  No one at one time is going to eat only 1 slice of bread, most people use bread to make sandwiches which need 2 slices.  The White Bread food label was realistic, as that one said the serving size was 2 slices which is more realistic then 1 slice per serving.  Both Whole Grain and Wheat had 1 slice each which didn’t alter the values of nutrition, but the White bread had a serving size of 2 slices which altered there nutritional value because there were more slices.  Since the serving size was 1 slice for the Grain and Wheat, it did not make a difference in values and how they compared, but the White had 2 slices which caused that value to be higher and more than the other two because it had more to accommodate for.

**YOUR ANALYSIS**

Use the following guide and rubric to help you compose your analysis. All analyses must be typed and submitted via email to vannieuwenhuizea@lincolnps.org **by the start of class** on the final due date. **Do not compose your analysis in the body of the email – it should be sent as an attachment.** Late submissions will be penalized 10% per day.

**First Paragraph**

* Introduce your research question
* Clearly identify which foods you are comparing
* State your hypothesis and explain your reasoning
* Establish the relevancy of your topic (i.e., does your analysis pass the “So What?” test)

**Additional Paragraph(s)**

* Summarize the key findings from your data table (people reading the blog will not see your chart, so you have to share some of the results – choose the rows you think are the most important for your research question)
* Use your data to evaluate your hypothesis. Was your hypothesis supported? Why or why not?
* Be sure to clearly answer your research question.
* Address at least TWO additional questions from the list below.
1. How realistic are the serving sizes listed on food labels? Is the stated serving size the amount you normally eat?
2. Compare the serving sizes to each other. Does the difference in serving sizes help explain their nutritional values? What affect(s) does the difference in serving sizes of each product have on the nutritional content of the items?
3. Do all the claims on the labels refer to the nutritional content? What other claims are made? Which claim(s) did you find misleading, and why?
4. Did your calculations contradict or support any of the product claims?
5. Are there any ingredients that contradict or support the product claims?
	1. What is the predominant ingredient by weight?
	2. What affect does the order in which the ingredients are listed have on the nutritional content of **your** product, specifically?
6. Explain your data with reference to the Dietary Guidelines for Americans and the USDA MyPlate ([http://www.choosemyplate.gov](http://www.choosemyplate.gov/))– the food pyramid is outdated!



**DUE DATES**

**Research question and data table due on Monday, October 21st, 2013**

**Analysis due via email by the start of class on Friday, October 25th, 2013**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Block\_\_\_\_\_

Food Label Analysis + Blog Post Rubric

Blog on website

|  |  |  |
| --- | --- | --- |
|  | Possible Points | Points Earned |
| Worksheet* Chose 3 appropriate food items with nutritional labels
* All rows completed, including calculations for % calories from fat, etc.
 | 10 |  |
| Blog Post – Introduction* Introduces research question and hypothesis
* Clearly identifies three foods chosen for analysis
* Effectively summarizes nutritional content of food items
 | 5 |  |
| Blog Post – Analysis* Serving size analysis
* Nutritional content analysis
* Product claims analysis
* Offers a valid conclusion based on the data
* Assertions are backed up by evidence
* Was your hypothesis supported or rejected?
 | 10 |  |
| Presentation / Format* Title
* Images
* Uploaded by deadline
* Minimal spelling or grammar issues
 | 5 |  |
| Total Points | 30 |  |