SBI 3C **Food and Activity Journal Activity**

SUMMATIVE – Inquiry & Communication

Introduction:

A recent National Population Health Survey by the Canadian Fitness and Lifestyle Research Institute provided statistics that showed as many as 58% of Canada youth aged 12-19 were not physically active in three months before the survey. Girls were more inactive (62%) than boys (52%).

In this activity you are to keep a journal of your daily food intake over a period of three days, noting portion size, food group and time of day which you ate the food (breakfast, lunch, dinner or snacks). Also keep detailed track of the activities that you do for those 3 days and the amount of time doing them (all should total 24 hours for each day). Note that you can interview another person to get journal results based on your interest (e.g. a childs diet/activities for daycare purposes, an elderly persons diet/activities for senior care purposes, an athlete, a pet, a diabetic, a vegetarian or vegan).

In Part 1 you will calculate the amount of energy (in kcal = Calories) *you use* in an average weekday *and* the amount of food energy (in kcal = Calories) *you intake* to make a comparison. In Part 2 you will analyze the % carbohydrate, % protein and % lipid (based on Calories) in your diet over this time and compare the data to accepted value ranges.

Part 1: Procedure:

1. Calculate your body weight in both pounds and kilograms (kg = weight in pounds / 2.2)

2. Using your journal information on foods consumed, calculate for each day the total Calories consumed. Use this website http://www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/nutrition/nvscf-vnqau_e.pdf (copy into browser) or http://www.brianmac.co.uk/food.htm, to total the energy of the food you ate based on portion size (in kilojcalories = Calories) for each day. Note that you may have to use a substitute food if you can not find the exact one you consumed. Your teacher may be able to help you pick an appropriate substitute.

3. Either select a typical day or take your total over 3 days and divide by 3 to come up with a daily number (in kilocalories or Calories) for ENERGY INPUT.

4. Using your journal information on activities, calculate for each day the total Calories consumed. Use the website www.brianmac.co.uk/energyexp.htm (copy into browser) to find activities that would match yours. Note that you may have to substitute a similar activity for the one you are doing. Your teacher may be able to help guide you with this. This information should be added to your basic energy requirements that you can calculate using the website www.brianmac.co.uk/nutrit.htm. The total energy used for activities would be you basic energy and your extra energy requirements added together.

5. Either select a typical day or take your total over 3 days and divide by 3 to come up with a daily number (in kilocalories or Calories) for ENERGY OUTPUT.

6. Compare your total Calories intake to your total Calorie used. Are they within 10%?

Part 2: Procedure:

7. Using your journal information for a typical day or a calculated average day determine the % carbohydrates, % lipids and % protein for your day. Use the website Mwww.brianmac.co.uk/nutrit.htm. You will need to change the number of hours of activity until it matches your total Calories for the day. This gives you grams of carbohydrate/protein/lipid for your diet.

8. Multiply the carbohydrate and protein grams by 4 and the lipid grams by 9 to convert them to Calories. Then calculate the % Calories for each type.

9. Compare the percentages that you found from your data to the table given to see if you are in the range expected.

10. Compare Energy Input to Energy Output by writing a few paragraphs (2 or 3 – no more than a page) to determine whether you are meeting your energy demands, or over/under consuming foods. Comment on whether you are meeting the percent macromolecule distribution that is ideal for your situation.

Evaluation Rubric:

CATEGORY	I/R	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Communication amd Inquiry		- poor use of grammar and sentence structure - many spelling errors are evident - limited communication of energy values - paragraphs lack proper structure, with no opening and concluding sentences - evidence of a limited effort to show analytical/thoughtful ideas in food summary, with incomplete sentences apparent - communicates information and ideas with limited clarity and precision	- improper grammar and word use evident - spelling errors are evident - some communication of energy values shown - paragraphs have some structure, with an opening and concluding sentence - evidence of some effort to show analytical ideas in food summary in full and complete sentences - communicates information and ideas with moderate clarity and precision	- good grammar and sentence structure is used with few spelling errors - considerable communication of energy values shown - paragraphs have proper structure, with an appropriate opening and concluding sentence - considerable effort shown in analytical/ thoughtful ideas food summary in full and complete sentences - communicates information and ideas with considerable clarity and precision	- excellent grammar and sentence structure is used with little or no spelling errors - a high degree of communication shown for energy values - paragraphs have proper structure, with an intriguing/ insightful opening and concluding sentence - evidence of an excellent effort to show analytical/ thoughtful ideas in food summary in full and complete sentences - communicates information and ideas with a high degree of clarity and precision

Appendix: Percentage Carbs/Lipids/Protein in the Diet

1. General Person

1800- 2000 Calories
Carbs- 45- 65% Fat- 20-35% Protein- 10-35%

2. High Performance Athlete

Endurance/ Aerobic- Calories Average 3000
The daily caloric requirement for an endurance athlete depends on weight and on the intensity of training. Caloric intake on low intensity days should be 16 to 20 calories per lb. of body weight per day; on moderate intensity days 20 to 28 calories per lb.; on high intensity days 25 to 29 calories per lb

Carbs- 50- 55%, 15-20% Protein, 30% Fat

Strength/ Resistance Calories Average 2,880 and 3,200 (160 lbs person)
If you are seeking to gain muscle mass, you need to take in more calories than you burn in a day. Aim to consume a number of calories equal about 18 to 20 times your body weight --- in pounds --- daily.

Carbs- 30-40%, 40- 50%- lean protein, 10- 20% Fat

Flexibility

1800- 2000 Calories Carbs- 45- 65% Fat- 20-35% Protein- 10-35%

Low Intensity

Carlories- 3000- 65%- carbs, 20-25%- fat, 20-25 %

3. Elderly 50+

1600- 2200 Calories Carbs- 45- 56% 20- 35% Fat (with very limited saturated fat) 10- 35% Protein

4. Children

Age Calories
1-3- 1,165- 1230
4-6- 11545- 1715
7-10- 1740- 1970
11-14- 1845- 2220
15-18- 2110- 2755
Carbs- 45- 65% Fat- 20-35% Protein- 10-35%

5. Pets

Carlories Average- 10LBs- 300 20lbs- 500 50 lbs- 1200

Protein- 22-34% Fat 5-8% Carbs- 48- 63%

6. Weight Loss

Here is a breakdown of how losing weight can be made easy:

1 pound of fat is equal to 3500 calories. If you look at that number too long it might make your head spin. “3500 for 1 pound of fat, WOW.” But if you break down what you burn and what you intake on a daily basis it makes losing weight seem a whole lot easier.

On average women should be in-taking anywhere from 1800-2000* calories a day. For men the average jumps to about 2000-2500* calories a day. The problem is that most people over eat which can boost their caloric intake upwards of 1000 calories a day. That means that by simply cutting your daily caloric intake by 500-1000 calories a day by eating healthier, smaller portions, you could actually lose 1-2 pounds per week.

(500 x 7 = 3500 calories = 1 lb of fat) (1000 x 7 = 7000 calories = 2 lbs of fat)

We have not even added in exercise yet!

Now let’s see what happens when we add a daily routine of moderate to intense exercise. So if we eat 500 less calories a day we will be able to lose 1 pound a week. What if we add in a daily workout that also burns 500 calories? That means we would be minus 1000 calories a day and be able to lose 2 pounds a week (1000 x 7 = 7000 = 2lbs of fat). That is just simple math, which is why calorie counting works so well.

Carbs- 45- 65% Fat- 20-35% Protein- 10-35%

7. Vegetarian Diet

1800- 2000 Calories
Carbs- 45- 65% Fat- 20-35% Protein- 10-35%

You might think you require lots of extra protein as an endurance athlete, but actually your body's main fuel during endurance sports is carbohydrates, notes ultra-runner Matt Frazier, author of the NoMeatAthlete.com article, "The Vegetarian Athlete Diet." A balanced vegetarian diet is an excellent source of complex carbohydrates and nutrients. The key is to eat a wide variety of vegetables, whole grains and legumes. Also choose nuts and seeds for additional energy-boosting fats and muscle-building protein.

Vegan

1800- 2000 Calories
Carbs- 45- 65% Fat- 20-35% Protein- 10-35%

Why go Vegan?

All around us today, the natural world is under attack. Pollution, deforestation, and systematic cruelty to animals. These forces are rapidly destroying the planet upon which we live. But how can one person make any difference?

The answer is as close as your dinner plate. Thousands of people across the country are standing up for animals and the environment by adopting a vegan lifestyle. Vegans take personal responsibility for making the world a better place by giving up meat, dairy products, and other animal derived items.

That simple choice has powerful consequences. Veganism saves animals from the horrors of the slaughterhouse, reduces pollution from factory farms, and preserves soybeans and grain for the millions of malnourished people in our hungry world.

8. Diabetic

1800- 2000 Calories
Carbs- 45-65% Fat-25-30% Protein-11%-18%.

Less emphasis on fatty animal protein and more on lean types of protein such as egg whites, white meat chicken and turkey, and soy products help to keep cholesterol levels down.