CHARTING YOUR CALORIES

September 2015 7th Grade Math Project

Our bodies burn the calories obtained from food for energy. Since our bodies bodies store extra calories as fat, calorie counting often becomes a major activity for people trying to lose or gain weight. in your class, for example, you might have a dancer trying to lose a few pounds, a football player trying to gain and a wrestler concerned about maintaining his weight so that he be compete in a particular weight category. For many people, becoming aware of their caloric intake is an important part of understanding the body's overall nutritional needs.

The calories our bodies obtain from food are either stored as fat or burned for energy. The more physically active a person is, the more calories he or she will use. You can expect to use far more calories running a marathon than if you watched a marathon on TV while stretched out on the couch.

This project will give you the chance to trace the calories you consume and the relationship those calories have with your physical activity.

GOAL:

Working individually, you will maintain a record of your caloric content of foods you eat for a day. You will also record your physical activities throughout the day for a seven-day period and finding your average caloric expenditures for the week. You will then summarize your results by answering a few questions.

Finished Product:

When you are finished, you will have completed the following items:

1. A Daily Calorie Chart (intake for one day)
2. A Daily Activity Chart (expenditures for 7 days)
3. Summary paragraphs (typed or written)

DUE WEDNESDAY, SEPTEMBER 30

If you use an app to complete this project, please include that information in your summary.

Name Project Due Date

STUDENT GUIDE 3.1

Charting Your Calories

Situation/Problem

Many people pay close attention to the number of calories they consume each day. Some may be concerned with losing or gaining weight, while others simply wish to keep track of what they eat. For this project, you will record the number of calories you consume over a one-week period (seven days). At the end of the period, you will find your average caloric consumption, and write a brief summary of your findings.

Possible Strategies

1. Use a chart to record the calories you eat each day.
2. Be as accurate as possible in your record keeping. Although in some cases you may need to estimate calories, the more exact you are, the more your final totals will reflect your actual caloric intake.

Special Considerations

- Record the number of calories contained in each food you eat at every meal.
- If possible, record the calories at the end of the meal. If you wait too long afterward, you might forget. If you cannot keep a chart with you at meals, use a small notepad.
- Record the calories of all snacks.
- Water has no caloric content; virtually all other beverages do.
- Check the labels on packages, cans, or bottles for the number of calories a food or drink contains. This number usually appears as the number of calories "per serving." Be careful here, because most packages contain several servings. Multiply the calories by the number of servings you actually eat.
- Be sure to include the extras, such as butter, salad dressings, and mayonnaise. Adding butter to a slice of toast, for example, increases the total number of calories.

Charting Your Calories *(Cont'd.)*

- If you eat at a restaurant, politely ask the server if he or she can tell you the number of calories in the food you have ordered. Some restaurants have such information and gladly provide it to their patrons. If not, simply record the foods you eat, and consult a reference book or online source later to estimate the caloric values.
- After recording the calories you consumed each day, find your average daily caloric intake over the seven-day period.
- Compare your average to the following U.S. government recommended average calorie intake amounts. The amounts are shown in ranges. The more active a person is, the more calories he or she requires each day.

  Females, ages 9–13, 1,600–2,200 calories per day
  Females, ages 14–18, 1,800–2,400 calories per day
  Males, ages 9–13, 1,800–2,600 calories per day
  Males, ages 14–18, 2,200–3,200 calories per day
- For your summary report, share your findings and thoughts. Remember to use an opening, a body with supporting details, and a closing.

To Be Submitted

1. Chart of caloric intake
2. Summary report

Notes

Name _____

WORKSHEET 3.2

A Daily Calorie Chart

Day Number _____ Date _____

	Type of Food	# of Servings ×	# of calories per serving =	
Breakfast				
	Total breakfast calories =			
Lunch				
	Total lunch calories =			
Dinner				
	Total dinner calories =			
Snacks				
	Total snack calories =			
	Total for Day =			

Name _____ Project Due Date _____

STUDENT GUIDE 4.1

How Many Calories Do You Burn Each Day?

Situation/Problem

Physical activity burns calories. But do you know how many calories you burn each day? This project will help you find out. You will keep track of your activities for seven days. Based on the time you spend in each activity, you will calculate the total number of calories you used for the activity. You will then find the total number of calories you expended each day.

Possible Strategies

1. Use a chart to record the activities you perform each day.
2. Be as accurate as you can in recording activities and times.

Special Considerations

- Record every activity you do from the time you wake up in the morning to the time you go to sleep. Also be sure to record your sleep time.

How Many Calories Do You Burn Each Day? *(Cont'd.)*

- Along with each activity, record the length of time you were involved with it. Convert times to decimal equivalents based on 1 hour. For example, a half-hour would be 0.5, and 15 minutes would be 0.25.
- Try to record activities as you do them. If this is impossible, at the end of the day, review all the things you did and write them down on your chart. It is important to record each activity.
- Use Data Sheet 4.2 to find values for caloric expenditures. For activities not on this sheet, consult reference books or online sources. Even then, you may need to estimate some activities.
- If you must estimate the calories used during some activities, select similar activities, and base your estimations on them.
- To use the formula on Data Sheet 4.2, you will need to know your weight. If you are not sure and do not have access to a scale, use an estimate.
- Use a calculator to find the total number of calories used during specific activities.
- Total all the calories spent on all the activities for each day.
- Analyze your results and consider the following questions:

  Are you more active during the week or on weekends?

  What activities do you expend the most calories on? The least?

  Do you think your average caloric expenditure will be about the same throughout the year, or do you think it will vary? Explain your answer.

  Did your results surprise you in any way? Explain.
- Write a report summarizing your findings. Be sure to write clearly, use an opening, a body with supporting details, and a conclusion.

To Be Submitted

1. Chart of physical activities and caloric expenditure
2. Summary report

Name _____

DATA SHEET 4.2

Caloric Expenditure and Physical Activities

Below are various activities and estimates of the amount of calories you would burn each hour for each pound you weigh while taking part in an activity. You can find an estimate of your caloric expenditure by using this formula:

Your weight × calories per hour per pound × time = Total calories

Suppose you weigh 120 pounds and mow the lawn for an hour and a half. You would multiply 120 × 2.7 × 1.5, which equals 486 calories. By mowing the lawn for an hour and a half, you would have used 486 calories, roughly equal to that hamburger and French fries you gulped down for dinner.

In the following list, the number following the activity is the calories per hour per pound you would burn during the activity.

Badminton—2.7
Baseball—2.9
Basketball—4.5
Boxing—4.5
Canoeing (leisurely)—1.2
Card playing—0.7
Chopping wood (ax)—2.3
Cleaning (house)—1.6
Cooking—1.3
Cycling—2.5
Dancing (ballroom)—1.6
Dancing (current hits)—2.8
Eating—0.8
Fishing—1.7
Football—4.4
Gardening—2.1
Golf (walking)—2.3
Gymnastics—3.7
Hiking—3.6
Horseback riding—2.7
Ironing—0.9
Jogging (distance)—4.2
Judo (vigorous) 4.3
Jumping rope—3.8
Keyboarding—0.8
Lying at ease—0.6
Mowing the lawn—2.7
Marching (rapid)—3.9
Playing drums—1.8
Playing flute—1.0
Playing piano—1.1
Playing trumpet—0.9
Playing violin—1.3
Racquetball—4.0
Raking leaves—2.3
Rowing machine—3.1
Shoveling snow—3.9
Sitting—0.6
Skating—2.8
Skiing (cross-country)—3.7
Skiing (downhill)—2.5
Sleeping—0.4
Soccer—3.7
Swimming—3.8
Tennis—2.5
Walking—2.2
Weight training—1.9
Writing—0.8

Name _____

WORKSHEET 4.3

A Daily Activity Chart

Day Number _____ Date _____

Starting Time	Ending Time	Length of time	Activity	Cal. per hr. per lb.	Weight	Total Calories
					Total Calories for Day	

NAME: POINTS EARNED:

	15 points	10 points	5 points	0 points
Daily Calorie Chart	Chart is filled out completely with date and all items eaten for the day and math is worked out correctly	Chart is missing the date and some foods eaten during that day or the math is not worked out correctly	Chart is confusing with missing data or math not being complete	Chart is missing
Daily Activity Chart	Chart is filled out completely with dates and all activities recorded and math is worked out correctly	Chart is missing dates and some activities or the math is not worked out correctly	Chart is confusing with missing data or math not being complete	Chart is missing
Calorie Intake Summary	Summary is written in complete sentences and gives insight to what the student learned	Summary is not in complete sentences or doesn't give full insight to student learning	Summary seems to be written as a rough draft and is confusing	Summary is missing
Calorie Expenditure Summary	Summary is written in complete sentences and answers all the questions on page 70	Summary is not in complete sentences or does not answer all the questions on page 70	Summary seems to be written as a rough draft and is confusing	Summary is missing

Comments:

If you use an app to complete this project, please include that information in your summary.