

Lab Framework

Text: CHORD

Unit number and title: #3 – Measuring in English and Metric Units

Short Description: Trip to Canada Lab, conversions

Timeline: 85 minutes – 1 class period

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Lab Title

We are going to Whistler to ski or snowboard!!

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

- **Lab Objective – Students will be able to:**

1. Use the common measurement units for length, area, volume, capacity, and weight in the English and Metric system.
2. Convert money between two different countries monetary funds.
3. Convert measurement units from one form to another and carry out calculations that involve various measurement units.
4. Read measurements taken with common measuring tools.

- **Statement of pre-requisite skills needed (i.e., vocabulary, measurement techniques, formulas, etc.)**

1. Multiplication, addition, subtraction, division
2. Story problem reading and interpretation

- **Vocabulary**

1. Calculate
2. Celsius
3. Fahrenheit
4. Meter
5. Liter

- **Materials List**

1. Road map for Lower British Columbia
2. Monetary exchange rate for US to Canadian
3. Whistler snow park maps
4. Cotton balls for new snow report
5. Lunch Menu from Whistler Restaurant
6. Fuel cost for BC
7. Ruler

- **State Standards addressed**

Math: A.1.3.B: A.1.1.A
Reading: 1.1.1.2.2
Writing: 1.1.1.2

- **Leadership Skills**

- **Public speaking,**

- **SCAN Skills/Workplace Skills**

1. Resources
 2. Information
 3. Writing
 4. Reading
 5. Arithmetic
- **Set-up information**
 1. There will be 6 stations set up around the classroom:
 - Travel distance with road map
 - Exchange rate
 - Snow park maps
 - A measurement station of new snowfall
 - Menu from Giarbaldi Restaurant – get off website
 - Fuel prices in Lower BC – from internet
 - **Lab organization**(-Grouping/leadership opportunities/cooperative learning expectations; -**Timeline required**)
 1. Students will work in pairs
 2. They will rotate between the six stations at their own pace.
 3. Students will need to complete the data table
 - **Teacher Assessment of student learning** (scoring guide, rubric)
 - Students will need to complete the data table. Scoring is on the sheet.
 - **Summary of learning** (to be finished after student completes lab)
 - discuss real world application of learning from lab
 - discussion of conversions and the reasons behind the differences between the two countries.
 - **Optional activities**
 1. Students could choose to find a ski resort in another country (i.e. Switzerland)
 - **Career Applications**
 1. Conversions of money, measurement and volume.
 2. Travel budgeting for work or estimation for contracted jobs.
 3. Banking
 4. Retail sales

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LAB TITLE: Whistler snowboarding trip

STUDENT INSTRUCTIONS:

- **Statement of problem addressed by lab**
 - What does it cost take drive to Whistler to ski or snowboard for one day.

- **Grouping instructions and roles**
 - You may work in pairs or on your own.

- **Procedures** – steps to follow/instructions
 1. You will have 85 minutes to complete this lab
 2. You will need to stop at the 6 tables to complete the required information on the data table. It is important that you complete the travel distance before going to the fuel table.
 3. After completing the work at each table, total up the cost for the trip.

- **Outcome instructions**
 - A discussion about how this budgeting of a trip can be tied everyday life or at a career.
 - You will be able to conversions from different measurements.
 - Did you find anything difficult?

- **Assessment instructions** (peer-teacher)
 - After completing the data table and turning it in, upon return I will discuss with you your data table.

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Lab Data Collection

Student: _____ Date: _____

Unit: #3 – Measuring in English or Metric Units

Lab Title: Trip to Whistler

Criteria: Write the problem/objective in statement form

Data Collection: Record the collected/given data

<u>Tables</u> (Show all calculations)	
1. <u>Map Table (15 pts)</u>	
A.	How many miles is it from Lynden, WA to Whistler, BC?
B.	Convert the miles to Kilometers?
C.	How many kilometers is it for a round trip drive?
2. <u>Fuel Purchase Table (15 pts)</u>	
a.	How many liters of gas must you purchase to fill up your car? (look at the model available on the table for its tank size)
b.	How much does the fuel cost you? (Price on the table)
c.	How many liters will you use if you car gets 24 miles to the gallon? (look at the model available on the table and its fuel milage)
Total Price:	
3. <u>Exchange rate table (5pts)</u>	
a.	You are bringing with you \$225 in US funds, read the exchange rate on the table and change your cash into Canadian Currency.
Canadian Amount:	
4. <u>Ticket booth table (10 pts)</u>	
a.	What is the cost of a lift ticket for 1 person? Canadian Amount: _____
b.	If you skied from the top of the glacier chair back to down to the village, How many vertical feet did you ski? (read the Whistler ski area map)

5. Menu table (5pts)

- a. You need to purchase lunch at the Giribaldi Restaurant, you will purchase a cheeseburger, and a soda, how much will this cost?

Canadian Amount:

6. Snowfall table (5 pts)

- a. Using the ruler, read the amount of new snowfall that fell over night. Now convert the inches into centimeters.

Amount of new snowfall:

- How much did you spend for your trip to Whistler? (5 pts)

Canadian Amount

- How much money did you bring home in American Money? (5pts)

Amount

Summary Statement:

- **What are 4 things that you learned from this lab?**

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