

# Prove That Stat!

## Activity Summary

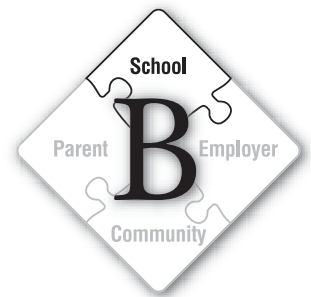
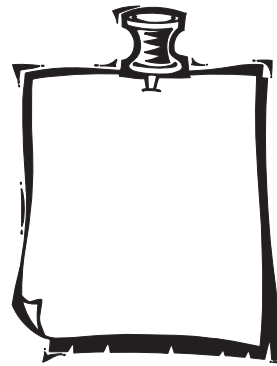
- In this activity, students will:
- ♦ Apply their numeracy and estimation skills to prove a fact
  - ♦ Demonstrate their knowledge of mathematical language
  - ♦ Collect and/or formulate points/ideas to validate a statement
  - ♦ Support their ideas in a written assignment

## Prior Knowledge

- **Essential Skills**
- Basic numeracy and problem solving skills
- Communicating with mathematical language
- Argumentative writing

## Teaching Planning Notes

- Review assignment including prior knowledge required and assessment and evaluation tools
- Suggest some resources for finding ideas (e.g. internet, library, parents, etc.)
- Provide bulletin board space for students to create a bulletin board comparing the use of **Essential Skills** at school and at a job. The headings can be created ahead of time or assign that task to selected students. In addition, this could be left in the room for discussion throughout the school year; and the students could be encouraged to add more examples as they think of them.
- Provide coloured paper, scissors and a stapler for the bulletin board
- Conduct a class discussion after the assignment is complete



### FOCUS ON LEARNING

**Essential Skills:**

**Reading Text**

Research

**Writing**

Written Assignment

**Numeracy**

Numerical Estimation

Data Analysis

Calculation

**Thinking Skills**

Non-mathematical

Information

**Working With Others**

Research

**Computer Use**

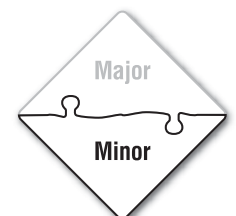
Research

## Assessment of Student Achievement

Task	Tool / Type
Listing points/proof	Brrr! That's Cold Planning Chart (Formative)
Written Piece	Brrr! That's Cold Written Assignment Rubric (Summative)

## Activities and Assessment Materials

- Activity Assignment Sheet
- Planning Chart
- Written Assignment Rubric





# Brrr! That's Cold!

Next to Russia, the coldest country in the world is Canada! Over an entire year, Canada's average temperature is  $-5.6^{\circ}\text{C}$  (taken from "The Day Niagara Falls Ran Dry: Canadian Weather Facts and Trivia" by David Phillips; Pg. 123). How can this be explained using mathematical knowledge, non-mathematical knowledge and **Essential Skills**?

Although many people might find it difficult to believe that Canada's average annual temperature is so low, you will be responsible for making some sense out of this statistic. You will be writing an explanation that validates this statement by using mathematical and non-mathematical knowledge. Use the planning chart provided to help you get started. As you make your points, be sure to identify which **Essential Skills** you used to help prove this statement.



## What will you do with your points?

When you feel that you have enough points, put your ideas into a convincing written piece. Be prepared to read your responses aloud.

## What will you do with the Essential Skills?

On a coloured piece of paper, write down each **Essential Skill** you identified is used at school and its example. Cut each one out in a balloon/cloud shape. (You will have a balloon for every point listed in your chart).

Do the same for examples at a job (write down the **Essential Skill**, the example and cut it out).

\* You may wish to be creative and add a little picture or diagram to your balloon/cloud!

Attach your balloons to the class bulletin board in the appropriate location. Be prepared to discuss your ideas.

# Brrr! That's Cold! Planning Chart

POINT/PROOF	MATHEMATICAL EVIDENCE OR NON-MATHEMATICAL EVIDENCE	Essential Skill(s) USED	ANOTHER USE OF THE Essential Skill(s) AT SCHOOL	ANOTHER USE OF THE Essential Skill(s) AT A JOB (PAID OR VOLUNTEER)
1.				
2.				
3.				
4.				

Add more rows to the chart, as needed.

# *Brrr! That's Cold!*

## *Written Assignment Rubric*

CATEGORIES/ CRITERIA	LEVEL 1 (50-59%)	LEVEL 2 (60-69%)	LEVEL 3 (70-79%)	LEVEL 4 (80-100%)
<b>Thinking</b> Accurately uses estimation to justify or assess the reasonableness of calculations	Limited Effectiveness	Some Effectiveness	Considerable Effectiveness	High Degree of Effectiveness
Accurately interprets and evaluates the mathematical issue	Limited Effectiveness	Some Effectiveness	Considerable Effectiveness	High Degree of Effectiveness
<b>Communication</b> Effectively uses mathematical language to explain the process used and the conclusions reached in proving the statistic.	Limited Effectiveness	Some Effectiveness	Considerable Effectiveness	High Degree of Effectiveness

**Note:** A student whose achievement is below Level 1 (50%) has not met the expectations for this assignment.

