

Teachers Count!

Lesson Overview:

The lesson helps students understand how censuses and government surveys help a country predict and plan for future needs by investigating the age of teachers today and how many will reach retirement age within the next decade.

Grade Level:

Grades 6-8; could be modified for both elementary and secondary levels

Time Required:

Two - 60 minutes periods

Curriculum Connection (Province and course):

Applicable to all provincial curricula

Link to Canadian National Geography Standards:**Essential Element #4:** Human Systems

- Types and patterns of economic activity (tertiary)

Geographic Skill #1: Asking Geographic Questions

- Identify geographic issues, define geographic problems and pose geographic questions
- Plan how to answer geographic questions

Geographic Skill #2: Acquiring Geographic Information

- Use a variety of research skills to locate and collect geographic data

Geographic Skill #4: Analyzing Geographic Information

- Use statistics and other quantitative techniques to evaluate geographic information
- Interpret and synthesize information obtained from a variety of sources

Geographic Skill #5: Answering Geographic Information

- Make generalizations and assess their validity

Link to Statistics Canada:

- For more Statistics Canada information regarding teachers and education in Canada, please visit Statistics Canada at: http://142.206.72.67/02/02c/02c_000_e.htm and <http://www.statcan.ca/Daily/English/030918/d030918e.htm>. This links to an article published in The Daily concerning statistics on teachers in Canada.

- For census data on the number of teachers by area and gender select table '11. Canada's workforce: Paid work' under Census at <http://www12.statcan.ca/english/census01/products/standard/themes/index.cfm>. From this list of tables, select **9** - Occupation - 2001 National Occupational Classification for Statistics (720), Class of Worker (6) and Sex (3)
 - For more information regarding the 2006 Census, please visit: http://www22.statcan.ca/ccr_r000_e.htm
 - Census Day is May 16, 2006

Additional Resources, Materials and Equipment Required:

- Student Activity Sheet
- Student calculators
- Copies of *Teacher Census Information Cards* (10 for each student)

Main Objective:

The primary goal of the lesson is to introduce the concept of the Canadian Census and have students understand its importance in planning for the future and predicting future needs. The students will grasp this concept by investigating the teaching profession and predicting the number of teachers needed in their school and Canada in the next ten years.

Learning Outcomes:

By the end of the lesson, students will be able to:

- Understand the importance and relevance of census-taking
- Interpret and synthesize information obtained from a table
- Conduct a survey and process data
- Draw conclusions from a student-led survey

The Lesson:

	Teacher Activity	Student Activity
Introduction	<ul style="list-style-type: none"> ▪ Ask the students the significance of the date May 16, 2006 ▪ Explain the date is that of Canada's next census ▪ Brainstorm what a census is and how this differs from a survey. 	<ul style="list-style-type: none"> ▪ Students participate in teacher-led brainstorming session

Lesson Development	<ul style="list-style-type: none"> ▪ Hand out Student Activity sheet ▪ Read Part A and B with the students ▪ Have the students work through 'Part A: Understanding What You've Learned' and 'Part B: Applying What You've Learned' ▪ Guide and assist students when necessary ▪ Hand out 10 'Teacher Census Information Cards' to each student ▪ Have the students survey teachers ▪ Have students work through questions 8-10 ▪ Guide and assist students when necessary 	<ul style="list-style-type: none"> ▪ Students will work through the instructions and complete questions/activities on the worksheet
Conclusion	<ul style="list-style-type: none"> ▪ Review the answers with students ▪ Compare students answers for questions 8 - 10 	<ul style="list-style-type: none"> ▪ Complete activities and hand in student worksheet.

Lesson Extension:

- Have students create a composite of the average teacher in their school based on their surveys (age, sex, education, years of experience)
- Have the students create a wall-sized graph/table depicting the information collected on the *Teacher Census Information Cards*
- Have the students create a *student* census aimed at learning more about their schoolmates.

Assessment of Student Learning:

- Evaluate the student worksheet
- Evaluate follow-up assignment

Teachers Count - STUDENT WORKSHEET

PART A

What is a census?

A census is a counting of the population of a country and a gathering of related statistics (information) done by a government every so often. In Canada, a census is taken every five years. The next Census of Canada will take place on Tuesday, May 16, 2006 when just over 32.5 million people across the roughly 9.2 million square kilometres of Canadian territory will "count themselves in". A census is a complete count of the population and provides detailed information on the size of the population, age of the population, amount of schooling people have, the types of jobs people have, and socioeconomic characteristics (like how much income and what type of family each household has).

Why do governments take censuses?

The government of Canada takes a census for one basic reason: to plan ahead. Our government must determine the future needs of Canadians. Censuses help governments plan for future housing, schools, roads, transportation and other programs like Medicare, welfare, Old Age Pension and so on. This cannot be done without a regular detailed count of the population.

What kind of information does a census collect?

You read above that a census collects many different types of information, including the types of jobs people have. Let us focus on one type of job: teaching. Here is what the government knows about the occupation of teaching based on earlier censuses:

PART B

Teachers

In the year 1999-2000, teachers formed the largest professional group in Canada. Let's look at some statistics gathered concerning teachers in Canada:

- 276,000 teachers taught at the elementary and secondary schools,
- Elementary and secondary teachers are mostly women. 65% of full-time teachers who teach between kindergarten and Grade 12 are women.
- Teachers as a group are older than the overall work force. In 1999, 32% of elementary and secondary schoolteachers were aged 50 to 59, compared with only 21% of the overall labour force.
- 34% of teachers were aged 50 or over.

Source: Statistics Canada, Canada e-Book

So, the average teacher in Canada is a woman and she is over 50 years old. Does this describe your teacher? Do you think there will be many jobs for teachers by the time you finish high school?

PART C

As you have learned, a census and a survey collect information. Often the information that is collected is organized into a table like the one below. This table from the [Elementary/Secondary Education Staff Survey](#) shows the number of elementary and secondary teachers in Canada as well as the provinces and territories in the years 1993-1994 and 1997-1998. How many teachers were working in your province in 1997-1998?

Full-time teachers by level, by provinces and territories

***Elementary and secondary schools only*

	1993-1994	1997-1998
Canada	295, 359	296, 901
Newfoundland and Labrador	7, 676	6, 627
Prince Edward Island	1, 370	1, 364
Nova Scotia	9, 893	9, 008
New Brunswick	8, 002	7, 363
Quebec	64, 405	68, 258
Ontario	119, 939	117, 160
Manitoba	12, 782	12, 156
Saskatchewan	10, 943	11, 062
Alberta	26, 945	29, 161
British Columbia	31, 630	33, 032
Yukon	420	424
Northwest Territories	1, 294	1, 269

Source: Statistics Canada, Catalogue no. 81-229-XIB.

Last modified: 2004-09-01.

Collected through the [Elementary/Secondary Education Staff Survey](#) conducted by Statistics Canada until 1998.

Occupation	Total	Male	Female
E13 Secondary and elementary school teachers and educational counsellors	<u>412,950</u>	<u>118,195</u>	<u>294,755</u>
E131 Secondary school teachers	160,020	72,590	87,435
E132 Elementary school and kindergarten teachers	238,935	41,335	197,600

Source: 2001 Census, Occupation table 9, under '11: Canada's Workforce: Paid Work', at <http://www12.statcan.ca/english/census01/products/standard/themes/index.cfm>

Student Activity:

Answer the following questions.

A. Understanding What You've Learned

Refer to Part B.

1. Describe the average teacher in Canada.
2. Describe your teacher. (Male or female? Age? - Your teacher is going to have to be honest about his/her age! ☺)
3. Is your teacher the average Canadian teacher based on information collected through Canada's census?

B. Applying What You've Learned

Refer to the table in Part C.

4. How many teachers were in *your province/territory* in the year 1993-1994? _____
In the year 1997-1998? _____ Was there an increase or decrease in teachers between these years? _____
5. What provinces/territories had an **increase** in the number of teachers between 1993-1994 and 1997-1998 (hint: there are four)?
6. Did the number of teachers in Canada increase or decrease between 1993-1994 and 1997-1998?
7. In your opinion, what causes the number of teachers in an area to increase or decrease?

C. Synthesizing What You've Learned

Now it's your turn to be the "census-taker"! Your task is to survey (to ask questions in order to collect information) the teachers in your school. You will pass out the following "Teacher Census Information" card (you will need to have your teacher photocopy them for you) to at least **10 teachers** in your school. Once they have filled out the information, you will collect the cards and process the information! Remember, be polite and respectful!

TEACHER CENSUS INFORMATION CARD	
Hello. My name is _____ (your name) and I am currently learning about the 2006 Canadian Census in my Social Studies class. I am respectfully asking that you complete the questionnaire so that I may collect and process information about the teachers of this school.	

Name: _____	
Male/Female: _____	Age: _____
Level of Education: (circle) B.A. B.A (Hon.) B.Ed. M.A. Ph. D.	
Number of years teaching: _____	
Thanks for letting me count you in! ☺	

8. Of the 10 teachers that your surveyed:

- How many were men?
- How many were women?
- How many were age 24 – 35?
- How many were age 36 – 50?
- How many were over age 50?

9. Of the 10 teachers that you surveyed:

- What was the average years they have been teaching? (To calculate the average, total all the years each teacher has taught and then divide by ten. E.g.:
 $3 \text{ years} + 2 + 16 + 5 + 18 + 1 + 12 + 9 + 11 + 8 = 85 \div 10 = 8.5$)

10. Using the information you collected, and predicting the future based on your results, in ten years, how many new teachers will need to be hired to replace those who leave as a result of retirement? Base your answer on the 10 teachers you surveyed. (Hint: which teachers will be old enough to retire within the next ten years?)