Count Yourself In!
May 16, 2006

Activity 7: That's Easy for You to Say! — Survey Project

Suggested Level: **Secondary**
Subjects: **Mathematics, Social Studies, Data Management**

Overview

This activity demonstrates to students through hands-on experience many aspects of planning, conducting and reporting a survey.

Students will learn what goes into the production of statistical information, how individual responses on a questionnaire are merged to create summary data, and how the summarized information is used.

This activity could take the form of a full count of the student body. If this is too ambitious, a small survey or an opinion poll of a sample of the student population or specific class may be more appropriate. Use topics of interest to students and teachers.

Since Census Day is May 16, 2006, schedule the completion of this activity or parts of it (data collection) to closely coincide with this date, if possible. If you intend to have the students conduct a survey or census, remember to allow yourself enough lead time. (For number of class periods, see next column.)

Note: See the **Teacher's Guide** for general background on the census and census vocabulary.

Class Time Required

Four class periods before conducting the survey; one or two periods collecting the data; three or four periods after collecting the data. (Times will vary with the complexity of the questionnaire and the size of the group surveyed.)

or

Two or three class periods if the activity is restricted to using the prepared questionnaire (Handout 2) in one or two classes.

Learning Objectives

- Understand the stages of designing, conducting and processing a survey.
- Design, conduct, process and report on a survey of their own.
- Write a report analysing the results of a survey.
- Work as a team to reach mutually agreed decisions and to resolve issues.

Vocabulary

Census, complete count, confidentiality, data, enumeration, privacy, questionnaire, sample, survey, undercount

Materials

- Teacher's Guide
- Handout 1: *That's Easy for You to Say!*
- Handout 2: *Student Survey on Future Plans*

Getting Started

1. Ask your students to write down what they think the population of Canada was in 2001. Give them a moment to do so and then write the figure on the chalkboard. (Answer: In 2001, the population of Canada was 30,007,094.)

2. Ask several of the students to comment on how their estimates compared to the actual figure.

3. Ask students how they think the 2001 population figure for Canada was determined. (Answer: Every five years Statistics Canada conducts a census — a complete count of the country's population.)

4. Ask the class to concentrate again on the 2001 population figure. Ask them to estimate the time it took to produce this figure. Now distribute Handout 1*: That's Easy for You to Say!* for all to read.

Note: The 2001 Census took place on May 15, 2001. The first results — population counts — were made publicly available in March 2002. The remaining information dealing mostly with socio-economic topics was released in stages from July 2002 to May 2003.

Census Activity

1. Discuss the stages of the survey process listed on the handout. You may wish to show a flow chart such as the one below, listing the questions in the handout below each stage.

Define → Design → Collect → Process → Report

2. This is the point at which the class should decide whether they want to plan and conduct their own survey or use the one in Handout 2. If the class decides not to create their own survey, continue with the rest of item 2 and end the lesson. If the class does want to create their own survey, skip to item 3.

   (a) Distribute Handout 2: *Student Survey on Future Plans*

   (b) Before students answer the prepared questionnaire, have them discuss how they will process their answers (electronically or by hand) and what they will want to report. Ask them to consider what summary information they would like to analyse and what their tables will look like.

   Ask students to identify interesting questions that summary data could answer. For example: "Do male and female students in the class have the same career goals?" To answer this question they must be able to cross-tabulate question 2 with question 7. This can be a tedious job if the processing is done by hand. Manual tallying may limit them to looking at the simple frequencies for single questions, such as "Do you plan to get married?" Access to a computer and statistical software will provide greater flexibility.

   (c) Have the students answer the prepared questionnaire. Ask the class to follow through on their processing and reporting strategies for Handout 2.

(d) The class may wish to conduct the same survey with a larger group to learn how the data compare with the whole grade or the whole school. How students process the data, what they report, and how much time they have will dictate the response here.

3. (a) For students conducting their own survey, have them re-examine the full range of questions in Handout 1. Some key questions to consider are:

- How big is the project going to be?
- Who will be surveyed about what?
- How much time will the class invest in conducting, processing and analysing the survey?
- Will the results be shared?

(b) Distribute Handout 2: *Student Survey on Future Plans*

(c) Ask students to consider the merits of the prepared questionnaire by taking note of its concise questions, multiple-choice format, and lack of open-ended questions. The prepared questionnaire may be used as a model for the survey form the class will design.

Teacher Hints

If the students design their own survey, limit the number of questions to about 10.

Avoid fill-in-the-answer (open-ended) type questions in favour of questions where answers may be checked or circled.

Include several "demographic background" items so that students can correlate data and make statements such as "Female students are most likely to say . . . ."

Try to centre the survey on student and school concerns.

Take time to test the questionnaire through role-playing or small sample surveys to ensure that the questions make sense and provide useful answers.

Try to make the survey part of some larger event such as a display, special assembly or open house so students can see that other people are interested in the survey results.

Note: Be sure that the survey has been approved/registered in advance by your school's administration.

Handout 1: *That's Easy for You to Say!*

The population of Canada in 2001 was 30,007,094. That was easy to say wasn't it? In a few breaths you have just stated what took years to produce. Have you ever tried to count 30,007,094 people? It's a big job!

It is difficult to describe how big a job it really is to take a census in Canada. For a few months in 2001, 34,000 temporary employees were added to the Statistics Canada payroll. These people were trained, equipped and supervised so that the portrait of Canada from the 2001 Census would be as accurate as possible.

Once all the census forms were collected, information from the questionnaires had to be scanned and the long task of analysing, interpreting and publishing the data could begin.

A good way to understand the many aspects of planning, conducting and reporting a census is to take one yourself. If you want to conduct a census or a survey in your school, take a look at the checklist of questions that must be answered before you can get it off the ground. Once you've answered these questions, it will be easy to walk up to someone and say, "Hi! I have a few questions to ask you."

Defining the Task

- Do you have permission to conduct a survey? _____
- How much time do you have for the whole project? (days, class periods) _____
- Will this be a class project or something larger? _____
- Will this be a census covering the entire school or a survey of a portion of the school population?

  _____
- Will you collect data or is this an opinion poll? _____
- When and how will you collect the data? _____
- What are the major topics to be researched and why?
  (for example, youth issues, school issues) _____

Designing the Questionnaire

- What type of questions will be used?
  (for example, multiple choice, fill-in-the-blank) _____
- How many topics do you want to include? _____
- How many questions? (If two topics, how many questions per topic?) _____
- How many possible answers will there be for each question? _____
- Are the questions concise and easy to understand? _____

- Do you want to include background questions like name, age, sex, grade, where the person lives?

  _____

- Will the questions provide the data you are seeking?_____
- How are the questions arranged on your form? _____
- How will your forms be printed?
  (Could the school newspaper/office print them?)_____

Collecting the Data

- Who will answer the questions? _____
- Is this a personal interview or is it a self-completed survey? _____
- How will you deal with the privacy of the respondents if you ask for their names? _____

  _____

- How will you get everyone to respond? _____
- Do you need publicity? _____
- What will you do if someone is away or does not answer? _____
- How will you make sure that everyone is counted only once?_____
- How will you know that all the forms were returned? _____

Processing the Data

- How will you check the returned questionnaires for completeness? _____

  _____

- How will you summarize the data? (For example, will you use tables, graphs, charts?)_____

  _____

- Is the questionnaire designed to make this easy? _____
- Are you using a computer or manually tallying? _____

- How does the use of one or the other affect the amount of time you need or how much you can ask?

  _____

- How will you check to make sure there are no errors in the processing? _____

  _____

- If processing is done on a computer, how will you construct the database? _____

  _____

- If it is done by hand, how will you record the data (on a form, on the chalkboard, something else)?

  _____

Reporting the Data

- How will you report the data?_____
- What tables do you want to make? _____
- Do you want to include graphics, like a bar or pie chart? _____
- Would percentages help communicate the data better? _____
- Do you want to write a report about the findings? _____

Handout 2: *Student Survey on Future Plans*

Directions: For each question, mark the circle next to one choice. Your answers will be completely confidential; only summary data will be reported.

Thank you for taking the time to complete this survey. Getting your answers and those from others is important in producing accurate data.

1. How old are you?

O	Less than 12	O	16
O	12	O	17
O	13	O	18
O	14	O	19
O	15	O	Older than 19

2. What is your sex?

O	Male	O	Female

3. What languages do you speak well enough to have a conversation?

O	English only	O	French and other(s) _____
O	French only	O	English and other(s) _____
O	Other(s) _____	O	English, French and other(s) _____
O	English and French		

4. How many hours did you spend last week on PAID work?

O	None	O	10 to 19 hours
O	under 5 hours	O	over 19 hours
O	5 to 9 hours		

5. How many hours did you spend last week doing UNPAID work (including homework, housework, babysitting, and caring for seniors)?

O	None	O	10 to 19 hours
O	under 5 hours	O	over 19 hours
O	5 to 9 hours		

6. After high school, which of the following do you plan to do?

- O Attend a trade school
- O Attend a college or university
- O Join the police
- O Get a full-time job
- O Travel
- O None of these

7. Rank the top 3 occupations you would MOST like to pursue after school?

O	Truck driver	O	Salesperson
O	Teacher	O	Administrative Assistant
O	Nurse	O	Social worker
O	Farmer	O	Tradesperson — Carpenter, Mechanic, Electrician
O	Web designer	O	Childcare Worker/Babysitter/Nanny
O	Doctor	O	Firefighter/Police Officer
O	Fisherperson	O	Computer Analyst/Programmer
O	Stockbroker	O	Artist/Cultural Worker
O	Lawyer	O	Civil Servant
O	Engineer	O	Forest Ranger
O	Businessperson	O	Hairdresser, Esthetician
O	Chef	O	Homemaker/Caregiver of children, seniors (unpaid)
O	Writer	O	Other

8. Rank the top 3 occupations you would LEAST like to pursue after school?

O	Truck driver	O	Salesperson
O	Teacher	O	Administrative Assistant
O	Nurse	O	Social worker
O	Farmer	O	Tradesperson — Carpenter, Mechanic, Electrician
O	Web designer	O	Childcare Worker/Babysitter/Nanny
O	Doctor	O	Firefighter/Police Officer
O	Fisherperson	O	Computer Analyst/Programmer
O	Stockbroker	O	Artist/Cultural Worker
O	Lawyer	O	Civil Servant
O	Engineer	O	Forest Ranger
O	Businessperson	O	Hairdresser, Esthetician
O	Chef	O	Homemaker/Caregiver of children, seniors (unpaid)
O	Writer	O	Other

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