Task
Explore the Statistics Canada Web Site

Statistics Canada collects many kinds of statistics from and about Canadians. The information is organized and displayed on the Statistics Canada Web site, *www.statcan.ca*.

Part A: Questionnaires and Surveys

Before you gather primary data with a survey, you need to check that your questions are properly worded so they are not misinterpreted by the respondents. Review the ten criteria for designing an effective questionnaire on page 152 of your textbook.
Go to *http://www.statcan.ca/english/edu/power/ch2/exercises/que-exercises.htm* and complete the Questionnaire Exercise.

Part B: Census at School

Census at School is part of the Statistics Canada Web site. Here you can find collections of data from students across Canada and other countries. For this exercise, you will use some statistics collected from Canadian students.

- Go to *http://www19.statcan.ca/r000_e.htm*
- Click on **Data and Results** in the left margin
- Scroll down and select **random data selector**.
- Click on the link given.
- Scroll down and select **Choose data**.
- Select **Canada**.
- From the **Select a Phase** menu, select **Phase 3 (05/06)** **Next>**.

Leonardo da Vinci stated that a person's arm span is equal to his or her height.

1. Download two samples of 100 records of data, one for females and one for males. Each sample will be downloaded as a Microsoft® *Excel* file.

- Highlight the columns for **Armspan** and **Height**. Under the **Edit** menu, select **Copy**.
- Open *Fathom*™ and drag a **collection** onto the desktop, right click on it and choose **paste cases.**
- Drag a **table** onto the desktop.
- Drag a **graph** onto the desktop, and drag your attributes onto the graph.

2. Identify the independent and dependent variables for each set of data. Justify your answer.

3. a) Use *Fathom*™ to determine the equation of the line of best fit for each set of data. Record the equation and the value of r^2.
b) Describe the direction of the slope of each line.
c) Describe the strength of each relationship.
d) Describe any outliers. Determine whether they should be deleted from the set of data.

4. Does the data support Leonardo da Vinci's claim? Explain.