11.2 Collecting Data

Explore Using Survey Data to Make Predictions

The following notes provide guidelines to help you adapt the Explore Using Survey Data to Make Predictions section from *MathLinks 9*.

- Discuss and post the meaning of *population*, *sample*, *inaccurate*, *predictions*, *convenience sample*, *random sample*, *stratified sample*, *systematic sample*, and *voluntary response*.
- You may wish to do this exercise as a teacher-led activity.

Examples

Working Example 1:

- Work through this example as a class, discussing what each question means and possible answers to consider.
- Brainstorm examples of populations, and discuss how and why you would study a smaller group to predict the features of the entire population.
- Some students will be able to make convincing and acceptable arguments about whether to survey the entire population or a sample in a particular situation. Allow varying answers, as long as students can support their answer mathematically.
- Remind students that while the Canadian census surveys as much of the population as possible, gathering data by sampling is still extremely useful.

Working Example 2:

- Encourage students to discuss and assess types of samples. Ensure students are able to support their answers.

Communicate the Ideas, Practise, and Apply

- Weaker readers may benefit from working through the questions with a partner who is a strong reader.
- Provide students who need additional practice with **BLM 11–3 Section 11.2 Extra Practice**.

Math Link

- Read through the exercise and explain what students are to do.
- Provide access to magazines or the Internet to help students research their topic. Circulate and encourage students as needed throughout this assignment.

Common Errors

- Students may get confused with the term *population*.

R$_x$ Clarify that there are many different kinds of populations. For example, the population of Canada and the population of left-handed people in Canada are two different populations. Each population can be sampled. Have students draw a Venn diagram showing populations within populations to help them grasp the concept.