

Challenge

Surveys and Samples

People often use surveys to collect data. The part of a population that is surveyed is called a **sample**. The different methods of collecting data are called **sampling techniques**.

1. **Decide** Choose a simple question of interest you could ask your classmates. Then predict the most popular response.

Question: _____

Prediction: _____

Write your answers to exercises 2–6 on a separate sheet of paper.

2. A **random sample** is a group that represents the whole population. Put the names of all your classmates in a paper bag. Mix up the names and draw 5 names out of the bag without looking. Record the names and ask these students your question. Record your results.
3. A **convenience sample** is one in which the subjects chosen are easiest to reach or the sampling is done easily. Ask 5 students who sit around you your question. Record your results.
4. A **systematic sample** is one in which one subject is selected at random and the remaining subjects are selected according to a pattern. Use an alphabetical list of your classmates. Pick one student from the first 5 names on the list. Then select every fourth student on the list. Record the names and ask these students your question. Record your results.
5. **Analyze** Compare the survey results for each sampling method. How do they compare to your prediction?
6. **Explore It** Describe the three sampling techniques you used. Which one do you think is the most fair? Why?

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1. **Decide** Choose a simple question of interest you could ask your classmates. Then predict the most popular response. **Answers may vary.**

Question: What is your favorite pet?

Prediction: dog

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