# 13.5 Analyze Surveys and Samples

TEKS 8.13.A


**Before** You found experimental probabilities.

**Now** You will identify populations and sampling methods.

**Why?** So you can analyze surveys of sports fans, as in Ex. 15.

**Key Vocabulary**
- **survey**
- **population**
- **sample**
- **biased sample**
- **biased question**

A **survey** is a study of one or more characteristics of a group. The entire group you want information about is called a **population**. You may find it difficult to survey an entire population. Instead, you can survey a **sample**, which is a part of the population. Five types of samples are listed below.

**KEY CONCEPT** *For Your Notebook*

### Sampling Methods

In a **random sample**, every member of the population has an equal chance of being selected.

In a **stratified random sample**, the population is divided into distinct groups. Members are selected at random from each group.

In a **systematic sample**, a rule is used to select members of the population.

In a **convenience sample**, only members of the population who are easily accessible are selected.

In a **self-selected sample**, members of the population select themselves by volunteering.

## EXAMPLE 1 Classify a sampling method

**EMPLOYEE SAFETY** The owners of a company with several factories conduct a survey to determine whether employees are informed about safety regulations. At each factory, 50 employees are chosen at random to complete the survey. Identify the population and classify the sampling method.

**Solution**

The population is all company employees. Because the population is divided into distinct groups (individual factories), with employees chosen at random from each group, the sample is a stratified random sample.

## ✓ GUIDED PRACTICE for Example 1

1. **WHAT IF?** In Example 1, suppose the owners survey each employee whose last name begins with M. Classify the sampling method.