3.1 Introduction to Data Collection Part 2: Populations & Samples

Suppose we want to find out what percent of young drivers in the United States text while driving. To answer the question, we will survey 16 to 20 year-olds who live in the United States and drive.

Ideally, we would ask them all (take a **census**). But contacting every driver in this age group wouldn't be practical. It would take too much time and cost too much money.

Instead, we put the question to a **sample** chosen to represent the entire **population** of young drivers.

The **population** in a statistical study is the entire group of individuals we want information about.

A **census** collects data from every individual in the population.

A **sample** is a subset of individuals in the population from which we collect data.

Example: Identify the population and sample in each of the following settings.

1.) The student government at a high school surveys 100 students at the school to get their opinions about a change to the bell schedule.

Population: The entire highschool

Sample: 100 students

2.) The quality-control manager at a bottling company selects 10 cans from the production line every hour to see if the volume of soda is within acceptable limits.

Population: All soda cans made

Sample: 10 cans selected