A study that does not attempt to influence the results.

Entire group of individuals that we want to study

***Can be a very LARGE group or a small group

A piece of the population. This is used to draw conclusions about the population.

A survey that attempts to include the entire population

**Main Ideas/Questions**

Calculating Percent of a Total

**Notes**

**Example 1:**
A study done at Wheeler High School with 50 students being surveyed about their favorite fast food found out that 20% liked Wendy’s, 30% liked Chick-fil-A, and 50% liked Zaxby’s.

How many students liked Wendy’s?

\[
\frac{20}{100} = 0.2 \times 50 = 10 \text{ students}
\]

How many students liked Zaxby’s?

\[
\frac{50}{100} = 0.5 \times 50 = 25 \text{ students}
\]

Was this sample a good representation of the population? Why or why not?

population: Wheeler students (2300)

sample: 50 students

*No sample is too small

**Example 2:**
A house has a total of 1527 square feet. The largest bedroom in the house is 12’ x 17’. What percent of the house is this bedroom?

\[
\text{Size of bedroom} = 12 \times 17 = 204 \text{ sq. ft}
\]

\[
\text{\%} = \frac{\#}{\text{total}} = \frac{204}{1527} = 0.13 \times 100 = 13\%
\]

**Vocabulary**

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Observational Study</td>
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</table>
| Population | Entire group of individuals that we want to study

***Can be a very LARGE group or a small group |
| Sample | A piece of the population. This is used to draw conclusions about the population. |
| Census | A survey that attempts to include the entire population |
(From the textbook) Example 1.4 - Public Opinion Polls
A website surveyed U.S. citizens in 2016 to see which candidate they were voting for in the election. They were able to interview 1270 people by phone.

**What is the population and the sample?**

**population**: US citizens

**sample**: 1270 people

**Example:**
Given the population, determine an appropriate sample.

A. Mr. Gillihan wants to know the average test grade for Unit 1 in the Statistical Reasoning classes.

**Population**: Statistics classes

**Sample(s)**: and block (Brat's), 1st block

B. A safety inspector conducts air quality tests in the hallways of Wheeler High School.

**Population**: hallways @ Wheeler

**Sample(s)**: freshman, math, magnet

**Summary**
Summarize the lesson in your own words (this is to help you review later)