

## Essential Questions

**Why?**

1. How do we effectively collect data?
2. How do we effectively analyze data from a survey or experiment?
3. How do we recognize bias and sampling error?

## Enduring Understanding

The student will design and/or conduct an investigation that uses statistical methods to analyze data and communicate results.

## MCPS Indicators and Standards

**What?**

1. Explore various methods of data collection.
2. Select and use an appropriate method of data collection for a given study.
3. Recognize sources of bias and sampling error in a study.
4. Design and conduct a study.
5. Design and conduct an experiment.
6. Recognize the impact of experimental factors on the results of a study.
7. Given a real life example of a statistical study or experiment.
  - a. Analyze, evaluate, and discuss the statistical design and methodology as to the appropriateness for the given problem setting.
  - b. Suggest possible modifications of the study or areas for further study.

