

# Chapter "P" WHAT IS *Statistics?*

THE SCIENCE (AND ART) OF LEARNING FROM DATA.

## Chapter Objectives

- Give a definition of "statistics" and describe what statistics helps you do.
- Explain why anecdotal evidence is not considered valid statistical data.
- Identify the three main statistical designs for producing data.
- Explain the difference between individuals and variables.
- Differentiate between categorical and quantitative data.
- Describe what is meant by an Exploratory Data Analysis.
- Describe the four key questions you should ask about a data set.
- Explain how probability helps us decide if an observation can be attributed to chance.
- Explain how sample values are used to make inferences about a population.

*This chapter presents an overview of the course, highlighting the four themes of statistics: data production, data analysis, probability, and inference. You are not expected to leave this chapter with a command of statistics, but rather with a sense of what we'll be studying this year.*

## PRELIMINARY CHAPTER

- Introduction
- Data Production: Where Do You Get Good Data?
- Data Analysis: Making Sense of Data
- Probability: What are the Chances?
- Inference: Drawing Conclusions from the Data.
- Statistical Thinking and You.

### Necessary Statistical Supplies

- Graphing Calculator: TI83+ or TI84+ recommended
- Textbook: YMS3e
- Binder: For handouts, notes, etc.
- Notebook: For notes, practice problems, etc.
- Writing Utensil: Pen or Pencil
- Positive Attitude and a Strong Work Ethic - *I EXPECT you to be an active learner! You can't learn statistics by watching me!*

MON	TUE	WED	THU	FRI
<b>3</b>	<b>4</b>	<b>5 Chapter P</b>	<b>6 Chapter P</b>	<b>7 Chapter P</b>
<b>Labor Day No School</b>	<b>First Day of School</b> • Intros-Syllabus • Case Study - What is Statistics?	• What is Statistics?	• Data Analysis • Multiple Representations	• Statistical Thinking
<b>10 Chapter P</b>	<b>11 Chapter I</b>	<b>12</b>	<b>13</b>	<b>14</b>
<b>Quiz Case Study</b>	• Begin Chapter I			