# Chapter 1: Exploring Data AP Statistics

**Outline Ms. Haralampopoulos**

*Essential Questions:*

1. What does a statistician do when confronted with a set of data?
2. What happens to numerical measures when data changes?

*Knowledge: You should be able to define, illustrate, or calculate the following:*

* Individuals
* Variable
* Categorical/Quantitative
* Distribution
* Frequency Table
* Relative Frequency Table
* Roundoff error
* Marginal distribution
* Two-way Table
* Conditional Distribution
* Association
* Shape
* Outliers
* Center
* Spread
* Symmetric
* Skewed right/left
* Mode
* Mean *x*
* Five number summary:

 Minimum, Q1, Median, Q3, Maximum

* Interquartile Range (IQR)
* Standard Deviation *s*
* Variance
* Resistant Measures

*Skills: You should be able to construct, interpret, and compare the following:*

* Construct, interpret, and compare:
	+ Bar graph
	+ Pie Chart
	+ Dotplot
* Find patterns in data
* Identify deviations from the pattern
* Stemplot
* Histogram
* Boxplot
* Describe distributions using SOCS: (Shape, Outliers, Center, Spread)
* Decide when to use mean/standard deviation or median/IQR
* Explain why some measures are more resistant than others
* Describe what happens to *s* as spread increases or decreases
* Explain what *s* = 0 show
* Calculate and display the marginal distribution and conditional distribution of a categorical variable in a two-way table
* Describe the association between two categorical variables

Monday Tuesday Wednesday Thursday Friday

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| 2 *Labor Day* | 3*First Day of School*Introductions/Getting to Know you |  4 Class Expectations & Syllabus | 5 *Can you smell Parkinson’s? Activity*Image result for clip art smiley face | 6Introduction: Data Analysis - Making Sense of DataH.W.: Introduction W.S |
| 9Analyzing Categorical Variables (1.1)H.W.: Section 1.1 W.S.  | 10Displaying Quantitative Data (1.2)H.W.: Guided Notes Examples (3 Problems) | 11Stem & Leaf Plots (1.2)H.W.: Who’s Taller Example | 12Histograms (1.2)H.W.: W.S. 1.2 Displaying Quantitative Data with Graphs | 13Choosing Measures of Center and Spread (1.3)Five-Number Summary & Boxplots (1.3)**\*\*Gas Station Assignment – Due Wednesday!!!**  |
| 16Measuring Center and Spread, Five-Number Summary, & Box Plots (1.3)H.W. Section 1.3 H.W. | 17Choosing Measures of Center and Spread (1.3) | 18Review Chapter 1Ch. 1 FRAPPY | 19**Test 1: Chapter 1 Exploring Data** | 20 |