Statistics Year-At-A-Glance

Term 1	Term 2	Term 3	Term 4
Exploring and Understanding Data • W's (who, what, when, where, why, how) • Context • Categorical Data • Quantitative Data • Summarizing Categorical Data • Distributions • Measures of Spread • Z-Scores • 68-95-99.7 **BOY**	**Exploring and Understanding Data (cont.)** • Normal Curve **Exploring Relationships Between Data** • Two Variable Data • Regression Lines and Models • Associations • Outliers • Residuals • Straightening the Curve • Predicted Value **Gathering Data** • Sampling Methods • Randomness • Observational Studies • Well-designed experimental design • Statistical Significance **Semester Exam**	**Gathering Data (cont.)** • Observational Studies • Well-designed experimental design • Statistical Significance **Randomness & Probability** • Rules, Tables, and Diagrams • Multiplication Rules • Permutations and Combinations • Probability Models • Law of Large Numbers • Conditional Probability • Variance & Standard Deviation • Expected Value • Success / Fail Condition • Bernoulli Trials • Independence Assumption	**From the Data at Hand to the World at Large** • Confidence Intervals – Proportion & Means • Standard Error • Margin of Error • Critical Values • Testing Hypotheses • Inferences about a Mean • Comparing Proportions or Means • Comparing Counts • Exponential, Logarithmic, Square Root, and Cubic Functions • P-Value • Type 1 / Type 2 Error • T-test and Z-test • Degrees of freedom • Goodness of fit • Chi-Square **EOY** **Semester Exam**