

AP Statistics

	UNIT	Standards Addressed
Fall: TERM 1	Unit 1A: Exploring One-Variable Data – Categorical and Quantitative Analysis	<ul style="list-style-type: none"> • What is Statistics? • The nature of data: individuals and variables • Analyzing categorical data • Relationships between two categorical variables • Displaying quantitative data: dotplots and stemplots • Making histograms on the NumWorks • Measuring center and variability • Summarizing and comparing distributions with boxplots
	Unit 1B: Exploring One Variable Data – Continuous Distributions	<ul style="list-style-type: none"> • Measuring location in a distribution: percentiles, cumulative relative frequency graphs, and z-scores. • Transforming data: Effects on shape, center, and variability • Density curves and normal distributions
	Unit 2: Exploring Two-Variable Data	<ul style="list-style-type: none"> • Relationships between two quantitative variables: scatterplots • Correlation • Linear Regression, Residuals, Least Squares Regression • Analyzing a Linear Model • What determines the least squares regression line? • Transforming to achieve linearity (powers, roots, and logarithms).
Spring: Term 3	Unit 3: Collecting Data	<ul style="list-style-type: none"> • Introduction to collecting data • Random Sampling and Data Collection • Designing surveys and inference for sampling • Observation vs. Experimentation • Introduction to Experimental Design: Completely randomized design • Introduction to Experimental Design: Randomized Block designs • Inference and Experiments
	Unit 4: Probability, Random Variables, and Probability Distributions	<ul style="list-style-type: none"> • Randomness, probability, and simulation • Estimating probabilities using simulation • Basic probability rules • Independent Events and Unions of Events • Conditional probability, independence, general multiplication rule • Introduction to random variables • Probability distributions: center and variability • Combining random variables • Binomial random variables • Binomial probability distributions: Shape, center, variability
	Unit 5: Sampling Distributions	<ul style="list-style-type: none"> • What is a sampling distribution • Bias and variability • Sampling distributions for differences in sample proportions • Sampling distributions of a sample mean • Central Limit Theorem • Sampling Distributions for Differences in Sample Means

AP Statistics cont.

	UNIT	Standards Addressed
Fall: TERM 2 Spring: Term 4	Unit 6: Inference for Categorical Data: Proportions	<ul style="list-style-type: none"> • Estimating with confidence • Constructing a confidence interval for a population proportion • Justifying a claim based on a confidence interval for a population proportion • Confidence intervals for a difference in proportions • Significance tests: the basics • Identify Type I and Type II errors • Tests about a proportion • Two-sided tests and confidence intervals; Power of a test • Test for a difference in proportions
	Unit 7: Inference for Quantitative Data: Means	<ul style="list-style-type: none"> • Confidence interval for a mean • Confidence intervals for a mean difference • Tests about a mean • Two-sided tests and Cis: Using tests wisely • Tests for a difference in means • Inference about a mean difference: paired data • Inference about proportions and means: Decision tree
	Unit 8: Inference for Categorical Data: Chi Square	<ul style="list-style-type: none"> • Chi-square tests for goodness of fit • Chi-square tests for homogeneity • Chi-square tests for independence
	Unit 9: Inference for Regression: Slope	<ul style="list-style-type: none"> • Estimating the slope of a regression model • Confidence interval for slope • Tests for Slope
	Review for AP Exam	

Major Assignments	Unit Tests
Field Trips	No Field Trips
Instructional Materials	Canvas