Standard ID	Standard Text	Edgenuity Lesson Name
WA.N.	Number and Quantity	
N-Q.	Quantities	
	Reason quantitatively and use units to solve problems.	
N-Q.1.	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	Box Plots Line of Best Fit
A-CED.	Creating Equations	
	Create equations that describe numbers or relationships.	
A-CED.2.	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Line of Best Fit Regression Models
A-CED.3.	Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.	Regression Models
WA.F.	Functions	
F-IF.	Interpreting Functions	
	Understand the concept of a function and use function notation.	
F-IF.2.	Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	Regression Models
	Interpret functions that arise in applications in terms of the context.	
F-IF.6.	Calculate and interpret the average rate of change of a function (presented symbolically or as a table) over a specified interval. Estimate the rate of change from a graph.	Regression Models

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F-BF.	Building Functions	
	Build a function that models a relationship between two quantities.	
F-BF.1.	Write a function that describes a relationship between two quantities.	
F-BF.1(a)	Determine an explicit expression, a recursive process, or steps for calculation from a context.	Regression Models
F-LE.	Linear and Exponential Models	
	Construct and compare linear and exponential models and solve problems.	
F-LE.2.	Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).	Line of Best Fit
WA.S.	Statistics and Probability	
S-ID.	Interpreting Categorical and Quantitative Data	
	Summarize, represent, and interpret data on a single count or measurement variable	
S-ID.1.	Represent data with plots on the real number line (dot plots, histograms, and box plots).	Box Plots Measures of Center Comparing Data Sets
S-ID.2.	Use statistics appropriate to the shape of the data distribution to compare center (median, mean) and spread (interquartile range, standard deviation) of two or more different data sets.	Box Plots Measures of Center Comparing Data Sets Representing Data Standard Deviation

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S-ID.3.	Interpret differences in shape, center, and spread in the context of the data sets, accounting for possible effects of extreme data points (outliers).	Box Plots Describing Data Measures of Center Comparing Data Sets Representing Data Standard Deviation
S-ID.4.	Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets and tables to estimate areas under the normal curve.	Properties of Probability Distributions Representing Data Introduction to Normal Distributions Applications with Standard Normal Distribution Statistical Inferences Hypothesis Testing
	Summarize, represent, and interpret data on two categorical and quantitative variables	
S-ID.5.	Summarize categorical data for two categories in two-way frequency tables. Interpret relative frequencies in the context of the data (including joint, marginal and conditional relative frequencies). Recognize possible associations and trends in the data.	Two-Way Tables Relative Frequencies and Association
S-ID.6.	Represent data on two quantitative variables on a scatter plot and describe how the variables are related.	
S-ID.6(a)	Fit a function to the data; use functions fitted to data to solve problems in the context of the data. Use given functions or choose a function suggested by the context. Emphasize linear, quadratic, and exponential models.	Line of Best Fit Regression Models
S-ID.6(b)	Informally assess the fit of a model function by plotting and analyzing residuals.	Analyzing Residuals Strength of Correlation
S-ID.6(c)	Fit a linear function for scatter plots that suggest a linear association.	Line of Best Fit Analyzing Residuals Strength of Correlation Regression Models

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	Interpret linear models	
S-ID.7.	Interpret the slope (rate of change) and the intercept (constant term) of a linear fit in the context of the data.	Line of Best Fit Regression Models
S-ID.8.	Compute (using technology) and interpret the correlation coefficient of a linear fit.	Strength of Correlation
S-ID.9.	Distinguish between correlation and causation.	Strength of Correlation
S-IC.	Making Inferences and Justifying Conclusions	
	Understand and evaluate random processes underlying statistical experiments	
S-IC.1.	Understand that statistics is a process for making inferences about population parameters based on a random sample from that population.	Designing a Study Statistical Inferences Hypothesis Testing
S-IC.2.	Decide if a specified model is consistent with results from a given data-generating process, e.g. using simulation. For example, a model says a spinning coin falls heads up with probability 0.5. Would a result of 5 tails in a row cause you to question the model?	Expected Value
	Make inferences and justify conclusions from sample surveys, experiments and observational studies	
S-IC.3.	Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.	Designing a Study
S-IC.4.	Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling.	Designing a Study Statistical Inferences Hypothesis Testing
S-IC.5.	Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.	Theoretical and Experimental Probability Designing a Study Expected Value Binomial Distribution Hypothesis Testing

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S-IC.6.	Evaluate reports based on data.	Binomial Distribution Applications with Standard Normal Distribution
S-CP.	Conditional Probability and the Rules of Probability	
	Understand independence and conditional probability and use them to interpret data	
S-CP.1.	Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (''or,'' ''and,'' ''not'').	Sets and Venn Diagrams Finding Outcomes Theoretical and Experimental Probability Conditional Probability Probability and Two-Way Tables
S-CP.2.	Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	Independent and Mutually Exclusive Events Probability of Independent Events Conditional Probability Probability and Two-Way Tables Binomial Distribution
S-CP.3.	Understand the conditional probability of A given B as P(A and B)/P(B), and interpret independence of A and B as saying that the conditional probability of A given B is the same as the probability of A, and the conditional probability of B given A is the same as the probability of B.	Conditional Probability Probability and Two-Way Tables
S-CP.4.	Construct and interpret two-way frequency tables of data when two categories are associated with each object being classified. Use the two-way table as a sample space to decide if events are independent and to approximate conditional probabilities. For example, collect data from a random sample of students in your school on their favorite subject among math, science, and English. Estimate the probability that a randomly selected student from your school will favor science given that the student is in tenth grade. Do the same for other subjects and compare the results.	Independent and Mutually Exclusive Events Conditional Probability Probability and Two-Way Tables Binomial Distribution
S-CP.5.	Recognize and explain the concepts of conditional probability and independence in everyday language and everyday situations. For example, compare the chance of having lung cancer if you are a smoker with the chance of being a smoker if you have lung cancer.	Conditional Probability Probability and Two-Way Tables

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	Use the rules of probability to compute probabilities of compound events in a uniform probability model	
S-CP.6.	Find the conditional probability of A given B as the fraction of B's outcomes that also belong to A and interpret the answer in terms of the model.	Conditional Probability Probability and Two-Way Tables
S-CP.7.	Apply the Addition Rule, P(A or B) = P(A) + P(B) - P(A and B), and interpret the answer in terms of the model.	Independent and Mutually Exclusive Events
S-CP.8.	(+) Apply the general Multiplication Rule in a uniform probability model, P(A and B) = P(A)P(B|A) = P(B)P(A|B), and interpret the answer in terms of the model.	Independent and Mutually Exclusive Events Conditional Probability Probability and Two-Way Tables Probability with Combinations and Permutations Binomial Distribution
S-CP.9.	(+) Use permutations and combinations to compute probabilities of compound events and solve problems.	Independent and Mutually Exclusive Events Conditional Probability Probability and Two-Way Tables Probability with Combinations and Permutations Binomial Distribution
S-MD.	Using Probability to Make Decisions	
	Calculate expected values and use them to solve problems	
S-MD.1.	(+) Define a random variable for a quantity of interest by assigning a numerical value to each event in a sample space; graph the corresponding probability distribution using the same graphical displays as for data distributions.	Properties of Probability Distributions Expected Value Applications with Standard Normal Distribution
S-MD.2.	(+) Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.	Properties of Probability Distributions Expected Value Applications with Standard Normal Distribution

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S-MD.3.	(+) Develop a probability distribution for a random variable defined for a sample space in which theoretical probabilities can be calculated; find the expected value. For example, find the theoretical probability distribution for the number of correct answers obtained by guessing on all five questions of multiple-choice test where each question has four choices, and find the expected grade under various grading schemes.	Properties of Probability Distributions Expected Value Applications with Standard Normal Distribution
S-MD.4.	(+) Develop a probability distribution for a random variable defined for a sample space in which probabilities are assigned empirically; find the expected value. For example, find a current data distribution on the number of TV sets per household in the United States and calculate the expected number of sets per household. How many TV sets would you expect to find in 100 randomly selected households?	Properties of Probability Distributions Expected Value Applications with Standard Normal Distribution
	Use probability to evaluate outcomes of decisions	
S-MD.5.	(+) Weigh the possible outcomes of a decision by assigning probabilities to payoff values and finding expected values.	
S-MD.5(a)	Find the expected payoff for a game of chance. (For example, find the expected winnings from a state lottery ticket or a game at a fast-food restaurant.)	Expected Value
S-MD.5(b)	Evaluate and compare strategies on the basis of expected values. (For example, compare a high-deductible versus a low-deductible automobile insurance policy using various, but reasonable, chances of having a minor or a major accident.)	Expected Value
S-MD.6.	(+) Use probabilities to make fair decisions (e.g., drawing by lots, using a random number generator).	Expected Value
S-MD.7.	(+) Analyze decisions and strategies using probability concepts (e.g. product testing, medical testing, pulling a hockey goalie at the end of a game).	Designing a Study Expected Value