Worthington Independent School District 518

Essential Outcomes & Student Learning Targets

Standards define expectations for the educational achievement of all students. The Essential Outcomes listed below were determined through a process of evaluating standards based on; endurance, leverage, readiness, and "high testing value." A learning target describes the standard from a student's point of view.

Below is a summary of the Essential Outcomes and learning targets for the listed grade/team and subject.

Grade/Team: High School Math	**Subject:** Probability Statistics

Essential Outcomes:
Display and analyze data; use various measures associated with data to draw conclusions, identify trends and describe relationships. (9.4.1.1)

Learning Targets:
I can represent qualitative and quantitative data set using graphs and tables.
I can evaluate data sets using mean, median, mode.
I can evaluate data using quartiles, percentiles, range, and standard deviation.
I can compare data sets using items such as mean, median and standard deviation.
I can use a calculator or other technology to display data and calculate summary statistics.

Essential Outcomes:
Use scatterplots to analyze patterns and describe relationships between two variables. Using technology, determine regression lines (line of best fit) and correlation coefficients; use regression lines to make predictions and correlation coefficients to assess the reliability of those predictions. (9.4.1.3)

Learning Targets:
I can create a scatter plot with and without technology.
I can describe the shape, direction, strength, and unusual features of a scatterplot.
I can find the correlation coefficient using technology.
I can interpret the correlation coefficient in the context.
I can find the regression line (line of best fit).

I can use the regression line (line of best fit) to make predictions in context.

Essential Outcomes:
Display and analyze data; use various measures associated with data to draw conclusions, identify trends and describe relationships. (9.4.1.4)

Learning Targets:
I can use the mean and standard deviation to compare the data set to a normal distribution curve.
I can use the normal distribution curve to estimate population percentages and probabilities.
I can recognize that a normal distribution curve is not appropriate for all situations.
I can use a calculator, spreadsheets, or tables to estimate areas under the normal distribution curve.

Essential Outcomes:
Calculate probabilities and apply probability concepts to solve real-world and mathematical problems. (9.4.3.1)

Learning Targets:
I can determine the appropriate counting procedure to use in any given problem.
I can calculate probabilities by using appropriate counting procedures.
I can apply probabilities to concepts to solve real world and mathematical problems.

Essential Outcomes:
Understand that the Law of Large Numbers expresses a relationship between the probabilities in a probability model and experimental probabilities found by performing simulations or experiments involving the model. (9.4.3.3)

Learning Targets:
I can use the Law of Large Numbers to explain why the experimental probabilities will approach the actual (theoretical) probability as you increase sample size.
I can create a simulation a probability experiment.
I can make predictions using the Law of Large Numbers.

Essential Outcomes:
Calculate probabilities and apply probability concepts to solve real-world and mathematical problems. (9.4.3.5)

Learning Targets:
I can apply intersections, unions, and complements of events to calculate and solve Probability in context.
I can apply conditional probability and independence to calculate and solve probability in context.

Essential Outcomes:
Understand and use simple probability formulas involving intersections, unions, and complements of events. (9.4.3.7)

Learning Targets:
I can determine the appropriate probability rule to use in any given problem.
I can calculate probabilities by using appropriate probability rules.
I can apply intersections, unions, and complements of events to calculate and solve probability.
I can apply conditional probability and independence to calculate and solve probability.
I can use complements to calculate and solve probabilities.