Fairfax Collegiate

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Probability and Statistics 5-6 Syllabus

Course Goals

1 Data Analysis
Students compare data sets within the context of bar graphs, circle graphs, stem and leaf plots, line plots, histograms, box plots, and scatter plots. They also evaluate which graph would be most useful for visually expressing certain data sets.

2 Comfort with Making Predictions
Students are encouraged to estimate, make predictions, and analyze situations throughout the entire class. This is more clearly visible and comes to a crescendo when using lines-of-best-fit to predict values in data sets at the end of the course.

3 Accelerated Learning
Students are exposed to content that is above their grade level.

Course Topics

1 Simple Probability
Students calculate probability of simple events.

2 Theoretical and Experimental Probability
Students are exposed to the difference between theoretical and experimental probability through a coin flipped and number cube rolling activity. Students use their knowledge to solve word problems involving these two types of probability.

3 Dependent and Independent Events
Students learn about the difference between dependent and independent events. They use this knowledge to solve real-life problems associated with these two types of probability.

4 Data Analysis Overview
Students compare bar graphs, circle graphs, stem and leaf plots, line plots, histograms, box plots, and scatter plots. They also evaluate which graph would be most useful for visually expressing certain data sets.

5 Mean, Median, and Mode
Students review mean, median, and mode.

6 Bar Graphs
Students create and analyze bar graphs.

7 Circle Graphs
Students create and analyze circle graphs (pie charts).

8 Stem & Leaf Plots
Students create and analyze stem-and-leaf plots.

9 Line Plots
Students create and analyze line plots.

10 Histograms

Students create and analyze histograms.

11 Box Plots
Students create and analyze box plots.

12 Scatter Plots
Students create and analyze scatter plots with the intention of observing and describing correlation.

13 Correlation
Students describe the correlation of data on scatter plots and estimate the strength of correlation with the correlation coefficient.

14 Line of Best Fit
Students are shown how to use lines of best fit to make predictions as well as create a line of best fit for a data set on Desmos.

15 Direct and Inverse Variation
Students are exposed to direct and inverse variation in order to improve their algebra readiness through learning about correlation.

Updated on 1/12/2021