

ABSS Math Unit Planning Template

Introduction:

Grade/Course: 9_12 Discrete Mathematics		Suggested Unit Pacing (# of days): 8 days		
Unit Number and Title: Unit 3 - Graphs and Statistics		Mathematical Practices		
		P1	Make sense of problems and persevere in solving them.	
Conceptual Overview		P2	Reason abstractly and quantitatively.	
		P3	Construct viable arguments and critique the reasoning of others.	
Essential Understandings		P4	Model with mathematics.	
		P5	Use appropriate tools strategically.	
CCSS		P6	Attend to precision.	
		P7	Look for and make use of structure.	
CCSS		P8	Look for and express regularity in repeated reasoning.	
CCSS	Interpreting Categorical and Quantitative Data	CCSS.9_12.MA.SP.S.ID.1	Represent data with plots on the real number line (dot plots, histograms, and box plots).	
CCSS	Interpreting Categorical and Quantitative Data	CCSS.9_12.MA.SP.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.	
CCSS	Interpreting Categorical and Quantitative Data	CCSS.9_12.MA.SP.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).	
CCSS	Interpreting Categorical and Quantitative Data	CCSS.9_12.MA.SP.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.	
CCSS	Interpreting Categorical and Quantitative Data	CCSS.9_12.MA.SP.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.	
CCSS	Making Inferences and Justifying Conclusions	CCSS.9_12.MA.SP.S.IC.1	Understand statistics as a process for making inferences about population parameters based on a random sample from that population.	
SCS	The learner will analyze data and apply probability concepts to solve problems.	SCS.9_12.MA.2.01.a	Apply and compare methods of data collection.	
SCS	The learner will analyze data and apply probability concepts to solve problems.	SCS.9_12.MA.2.01.b	Apply statistical principles and methods in sample surveys.	
SCS	The learner will analyze data and apply probability concepts to solve problems.	SCS.9_12.MA.2.01.c	Determine measures of central tendency and spread.	
SCS	The learner will analyze data and apply probability concepts to solve problems.	SCS.9_12.MA.2.01.d	Recognize, define, and use the normal distribution curve.	
SCS	The learner will analyze data and apply probability concepts to solve problems.	SCS.9_12.MA.2.01.e	Interpret graphical displays of data.	
Learning Targets	<ul style="list-style-type: none"> Calculate the relative frequency of a list given a frequency table. Read and interpret data displayed in a two-way frequency table. Calculate relative frequencies of a two-way frequency table. Read the different types of graphs. Graph data using the different types of graphs. With bar graphs, see how changing the graph influences perception. Graph data from a list, frequency table and relative frequency tables using histograms and stem and leaf plots. Graph relative frequencies from single and two-way frequency tables using histograms. Use mean, median, mode, and five number summary to describe data. Compare data sets using measures of central tendency. Graph data with box and whiskers plot to represent five number summary. Determine if a data set contains outliers. Calculate the standard deviation of a list of data. Use standard deviation to fit data to a normal curve (curve grades) Use 68-95-99.7 Rule to estimate the percent of a normal population that falls within 1, 2, or 3 standard deviations of the mean. Calculate the z-score of one data point and determine the percent above or below using a z-score table. 			
Essential Terminology				
Literacy Integration	Literacy Standards	Level	Standard	Standard Name
	Literature Connections			
Technology Integration	Technology Standards	Level	Standard	Standard Name
	Websites			
Assessment	Formative			
	Performance Tasks			
Resources	Summative			
	Learning Plan	Instructional Sequence	<ol style="list-style-type: none"> Frequency/relative frequency Circle graph, dot plot, bar graph Histogram, stem and leaf plot Measure central tendency, box and whiskers plot(data spread, random sample) Standard deviation normal distribution , z-scores review test 	
	Remediation			

Differentiation

Enrichment