

Statistics Units Materials

Algebra 1 <https://www.statsmedic.com/>

Topic		Standard	Materials
11.0	Measures of Center and Spread		Cartoon Land and Activity Sheet Jo Boaler explains mean median and mode FAL: Representing Variability
11.1	Analyzing Data Displays	KY.HS.SP.1 Represent the distribution of data with plots on the real number line (stem plots, dot plots, histograms and box plots).	Slides How to make a histogram TI-84 How to make a box and whisker plot TI-84
11.2	Comparing Data Sets	KY.HS.SP.2 Use statistics appropriate to the shape of the numerical data distribution to compare center (median, mean) and spread (interquartile range when comparing medians and standard deviation when comparing means) of different data distributions.	Slides Zombie Outbreak and Answers FAL: Representing Data with Box Plots FAL: Comparing Data Using Statistical Measures
11.3	Interpreting Shapes of Data Displays	KY.HS.SP.3 Interpret differences in shape, center and spread in the context of the distributions of the numerical data, accounting for the presence and possible effects of extreme data points (outliers).	Slides DESMOS: The Shape of Distributions
11.4	Standard Deviation		Slides Jo Boaler explains standard deviation Desmos Standard Deviation Standard Deviation Organizer
11.5	Two-Way Frequency Tables	KY.HS.SP.5 Summarize categorical data for two or more categories in frequency tables. Calculate and interpret joint, marginal and conditional relative frequencies (probabilities) in the context of the data, recognizing possible associations and trends in the data.	Slides FAL: Interpreting Data: Testing a New Product

Topic		Standard	Materials
11.1	Statistical Questions and Variables	KY.HS.SP.9 Understand statistics as a process for making inferences and justifying conclusions about population parameters based on a random sample from that population.	Slides
11.2	Statistical Studies and Sampling Methods	KY.HS.SP.9 Understand statistics as a process for making inferences and justifying conclusions about population parameters based on a random sample from that population. KY.HS.SP.11 Recognize the purposes of and differences among sample surveys, experiments and observational studies; explain how randomization relates to each.	Slides FAL: Sampling and Estimating: Counting Trees DESMOS: Bias Stat Medic: Sampling and Surveys Stat Medic: Observational Studies and Experiments
11.3	Data Distributions	KY.HS.SP.2 Use statistics appropriate to the shape of the numerical data distribution to compare center (median, mean) and spread (interquartile range when comparing medians and standard deviation when comparing means) of different data distributions. KY.HS.SP.10 Decide if a specified model is consistent with the results from a simulation.	Slides FAL: Comparing Data Using Statistical Measures FAL: Interpreting Data: Muddying the Water DESMOS: Comparing Distributions
11.4	Normal Distributions	KY.HS.SP.10 Decide if a specified model is consistent with the results from a simulation.	Slides DESMOS: Practice the Normal Distribution DESMOS: More Normal Distribution Practice
11.5	Margin of Error	KY.HS.SP.9 Understand statistics as a process for making inferences and	Slides Stat Medic Margin of Error

		<p>justifying conclusions about population parameters based on a random sample from that population.</p> <p>KY.HS.SP.10 Decide if a specified model is consistent with the results from a simulation.</p> <p>KY.HS.SP.12 Use data from a sample survey to estimate a population mean or proportion and explain how bias may be involved in the process.</p>	
11.6	Introduction to Hypothesis Testing	<p>KY.HS.SP.9 Understand statistics as a process for making inferences and justifying conclusions about population parameters based on a random sample from that population.</p> <p>KY.HS.SP.13 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between estimates or statistics are significant.</p>	Slides