Unit 1: Statistics

CCSS	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
Making inferences on a random sample (S.IC.1)		Use sample data to make inferences about a population	**Use** sample data to make inferences about a population	**Identify** when sample data can be used to make inferences about a population	
Using simulations (S.IC.2)		**Explain** using randomization why a sample survey, experiment or observational study is most appropriate	**Determine** whether a sample survey, experiment or observational study is most appropriate	**Identify** whether a given scenario represents a sample survey, experiment or observational study	
Surveys, experiments, observational studies (S.IC.3)		**Decide** if data models are consistent with the results	Determine whether **experimental probabilities match given theoretical probabilities**	**Identify** experimental and theoretical probabilities	
Population mean and margin of error (S.IC.4) Randomized experiments (S.IC.5) Evaluate reports based on data (S.IC.6) Fit a normal distribution (S.ID.4)	Can extend thinking beyond the standard, including tasks that may involve one of the following: • Designing • Connecting • Synthesizing • Applying • Justifying • Critiquing • Analyzing • Creating • Proving	Can do **all** of the following: • 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 • Use data from a randomized experiment to compare two treatments • Use simulations to decide if differences between parameters are significant • Evaluate reports based on data • Uses the means and standard deviations of data sets to fit them to normal distributions • Fits functions to data in order to solve contextual problems	Can do **five** of the following: • 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 • Use data from a randomized experiment to compare two treatments • Use simulations to decide if differences between parameters are significant • Evaluate reports based on data • Uses the means and standard deviations of data sets to fit them to normal distributions • Fits functions to data in order to solve contextual problems	Can do **four** of the following: • 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 • Use data from a randomized experiment to compare two treatments • Use simulations to decide if differences between parameters are significant • Evaluate reports based on data • Uses the means and standard deviations of data sets to fit them to normal distributions • Fits functions to data in order to solve contextual problems	Little evidence of reasoning or application to solve the problem Does not meet the criteria in a level 1
Represent and describe 2 variable data relationship (S.ID.6)		Represent data on two quantitative variables on a scatter plot, fit a function to the data **and use the function to solve problems in context of the data**	Represent data on a scatter plot **and fit a function to the data** (function may be linear, quadratic or exponential)	Represent data on a scatter plot by hand **and** by technology	