

Unit 1: Statistics (Freshmen Only)

CCSS	4 – Mastery	3 – Proficient	2 - Basic	1 – Below Basic	0 – No Evidence
Making inferences on a random sample (S.IC.1)	<p>Can extend thinking beyond the standard, including tasks that may involve one of the following:</p> <ul style="list-style-type: none"> • Designing • Connecting • Synthesizing • Applying • Justifying • Critiquing • Analyzing • Creating • Proving 	Use sample data to make inferences about a population	<u>Use</u> sample data to make inferences about a population	<u>Identify</u> when sample data can be used to make inferences about a population	<p>Little evidence of reasoning or application to solve the problem</p> <p>Does not meet the criteria in a level 1</p>
Using simulations (S.IC.2)		<u>Explain</u> using randomization why a sample survey, experiment or observational study is most appropriate	<u>Determine</u> whether a sample survey, experiment or observational study is most appropriate	<u>Identify</u> whether a given scenario represents a sample survey, experiment or observational study	
Surveys, experiments, observational studies (S.IC.3)		<u>Decide</u> if data models are consistent with the results	Determine whether <u>experimental probabilities match given theoretical probabilities</u>	<u>Identify</u> experimental and theoretical probabilities	
Population mean and margin of error (S.IC.4)		Can do <u>all</u> of the following: <ul style="list-style-type: none"> • 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 <u>five</u> of the following: <ul style="list-style-type: none"> • 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 <u>four</u> of the following: <ul style="list-style-type: none"> • 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 	
Randomized experiments (S.IC.5)		Evaluate reports based on data (S.IC.6)	Fit a normal distribution (S.ID.4)	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 <u>and use the function to solve problems in context of the data</u>	Represent data on a scatter plot <u>and fit a function to the data</u> (function may be linear, quadratic or exponential)	Represent data on a scatter plot by hand <u>and</u> by technology	