

Any standard **highlighted in yellow** has been determined by our WCSD teachers, district and state experts as essential for students to master.

<p>Strand 11.S.IC: I understand and can evaluate random processes underlying statistical experiments (Standard S.IC.1). I can draw and justify conclusions from sample surveys, experiments, and observational studies. (Standards S.IC.3-4, 6).</p>			
<p>Standard 11.S.IC.1: I understand that statistics allows inferences to be made about population parameters based on a random sample from that population.</p>			
<p>Learning Targets</p> <ul style="list-style-type: none"> I understand the importance of randomness in obtaining a representative sample from a population. I can use randomly collected data to make an inference about a population. 	<p>Academic Vocabulary & Notation</p> <ul style="list-style-type: none"> inference, parameter, population, statistic, sample, random, variability, standard deviation 	<p>Question Stems</p> <ul style="list-style-type: none"> How did you solve the problem? What would happen if....? What were the steps involved? 	<p>Possible Assessments</p> <ul style="list-style-type: none"> <u>District CFAs</u>
<p>Standard 11.S.IC.3: I can recognize the purposes of and differences among sample surveys, experiments, and observational studies and I can explain how randomization relates to each.</p>			
<p>Learning Targets</p> <ul style="list-style-type: none"> I can distinguish between and recognize the purposes and limitations of sample surveys, experiments, and observational studies. I can describe how randomization should occur in surveys, experiments, and observational studies. 	<p>Academic Vocabulary & Notation</p> <ul style="list-style-type: none"> randomization, sample survey, experiment, observational study 	<p>Question Stems</p> <ul style="list-style-type: none"> Design a study. Describe the appropriate use of randomization for the study. Do cell phones cause cancer? What would be an appropriate research design to answer this question. Justify your answer. 	<p>Possible Assessments</p> <ul style="list-style-type: none"> <u>District CFAs</u>

<p>Standard 11.S.IC.4: I can 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.</p>			
<p>Learning Targets</p> <ul style="list-style-type: none"> I can perform a simulation to model data. I understand that the margin of error refers to the expected range of variation in a poll if it were to be conducted multiple times under the same procedures. I can use sample survey results, interpret margins of error that estimate a population mean or proportion. I understand that the margin of error is greater when the population has more variability. 	<p>Academic Vocabulary & Notation</p> <ul style="list-style-type: none"> simulation model, population mean, population proportion, standard deviation, margin of error 	<p>Question Stems</p> <ul style="list-style-type: none"> Describe how variability impacts margin of error. Use verbal descriptions and models to demonstrate your understanding. 	<p>Possible Assessments</p> <ul style="list-style-type: none"> <u>District CFAs</u>
<p>Standard 11.S.IC.6: I can evaluate reports based on data.</p>			
<p>Learning Targets</p> <ul style="list-style-type: none"> I evaluate reports based on data. 	<p>Academic Vocabulary & Notation</p> <ul style="list-style-type: none"> evaluate, data 	<p>Question Stems</p> <ul style="list-style-type: none"> What were the steps involved? 	<p>Possible Assessments</p> <ul style="list-style-type: none"> <u>District CFAs</u>