



Marietta City Schools
2023–2024 District Unit Planner

Statistical Reasoning

Unit title	Unit 1: Statistical Modeling	Unit duration (hours)	3-4 weeks
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Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?*

GA DoE Standards

Standards

SR.MM.1 Apply mathematics to real-life situations; model real-life phenomena using mathematics.

- SR.MM.1.1 Explain contextual, mathematical problems using a mathematical model.
- SR.MM.1.2 Create mathematical models to explain phenomena that exist in the natural sciences, social sciences, liberal arts, fine and performing arts, and/or the humanities.
- SR.MM.1.3 Using abstract and quantitative reasoning, make decisions about information and data from a real-life situation.
- SR.MM.1.4 Use various mathematical representations and structures with this information to represent and solve real-life problems.

Concepts/Skills to support mastery of standards

- Graphical representations of real-world data and applications.
- Abstract and quantitative reasoning.
- Mathematical representations of data.

Vocabulary

Association	Hypothesis Testing	Population Distribution	Sample Distribution	Statistical Investigative Question	Survey Questions
Bias	Interrogative Questions	Quantitative Variable	Sampling Distribution	Statistical Models	Variability
Categorical Variable	Methods for Collecting Data	Randomization	Statistical Estimators	Statistical Thinking vs. Non-statistical Thinking	

Notation

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Resources, materials, assessments not linked to SGO or unit planner will be reviewed at the local school level.

Essential Questions
<ul style="list-style-type: none"> • Can we distinguish statistical questions from nonstatistical questions? • How do we visually represent data? • Can we create interrogative or investigative questions? • Can you identify the population (subjects) to be studied? • Can you identify the data (values of a variable) to be collected? • How do we develop an intuitive understanding of the expected variation in the data?
Assessment Tasks
<i>List of common formative and summative assessments.</i>
<u>Formative Assessment(s):</u> Learning Tasks and Skills Checks <u>Summative Assessment(s):</u> Unit 1 Summative Assessment - Suggested Assessment Items from LOCUS

<u>Learning Experiences</u> Add additional rows below as needed.		
Objective or Content	Learning Experiences	Personalized Learning and Differentiation All information included by PLC in the differentiation box is the responsibility and ownership of the local school to review and approve per Board Policy IKB.
SR.MM.1	Ladybugs Task - What do you notice and what do you wonder? Investigating visual representations	Students will work at their own pace, Review of previous graphical representations, descriptive data vocabulary.

Content Resources
<p>Stapplet - constructing visual representations</p> <p>Stats Medic - Categorical v. Quantitative, Center vs. Spread (Descriptive Statistics), Review shape</p>