



**Marietta City Schools**  
**2025–2026 District Unit Planner**

*Statistical Reasoning*

<b>Unit title</b>	Unit 2: Statistics as a Problem-Solving Process and the Role of Questioning	<b>Unit duration (hours)</b>	14-17 hours
-------------------	---	------------------------------	-------------

**Mastering Content and Skills through INQUIRY (Establishing the purpose of the Unit): *What will students learn?***

**GA DoE Standards**

**Standards**

**SR.DSR.2** Formulate statistical investigative questions of interest to students that can be answered with data.

SR.DSR.2.1 Formulate statistical investigative questions about a population using samples taken from the population.

SR.DSR.2.2 Formulate comparative and associative statistical investigative questions for surveys, observational studies, and experiments to compare two or more groups or to investigate the association of two or more variables.

SR.DSR.2.3 Formulate multivariable statistical investigative questions.

SR.DSR.2.4 Formulate inferential statistical investigative questions regarding association and prediction.

**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**

- Formulate statistical & investigative questions
- Collect/consider data
- Analyze data
- Interpret results

## **Vocabulary**

- Response variable
- Explanatory variable
- Association
- Segmented bar chart
- Scatterplot
- Direction, form, strength, outlier
- correlation/correlation coefficient
- Regression line
- Extrapolation
- Residual
- Slope
- Least squares regression line
- Standard deviation
- Coefficient of determination

## **Notation**

### **Essential Questions**

Is there an association between categorical variables?

What would the segmented bar chart look like if there was no association?

How do we describe scatterplots?

How do we interpret correlation?

How do we make predictions using regression lines?

Does regression to the mean still occur when x and y variables measure different things?

Why do we look for patterns in residual plots?

What is the relationship between the standard deviation of the residuals and the coefficient of the determination?

How do outliers affect scatterplots, residuals, and the line of regression?

**Assessment Tasks**

*List of common formative and summative assessments.*

**Formative Assessment(s):**

Common quizzes, skills checks, exit tickets, warm ups, classwork/HW

**Summative Assessment(s):**

Unit Test(s)

**Learning Experiences**

Objective or Content	Learning Experiences	Personalized Learning and Differentiation
SR.DSR.2 • SR.DSR.2.1 • SR.DSR.2.2 • SR.DSR.2.3 • SR.DSR.2.4 SR.MM.1 SR.MP	Questioning Through the Investigative Process <a href="https://lor2.gadoe.org/gadoe/file/1eb14ead-a474-406e-94d6-a44fd9d3625e/1/Questioning-Through-Process-SR-U2-Learning-Plan.pdf">https://lor2.gadoe.org/gadoe/file/1eb14ead-a474-406e-94d6-a44fd9d3625e/1/Questioning-Through-Process-SR-U2-Learning-Plan.pdf</a>	Students can choose their investigative questions' focus.

**Content Resources**

- Stapplet - constructing visual representations
- Stats Medic Lessons, Statistics and Probability Applications Textbook 4th edition
- DOE resources
- Teacher created resources