| | Marietta City Schools | | |
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| | **2024–2025 District Unit Planner** | | |

| | *AP Statistics* | | |
|---|---|---|---|
| **Unit title** | **Unit 2: Exploring Two-Variable Data** | **Unit duration (hours)** | 8 - 12 hours |

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

### GA DoE Standards

**Standards**

2.1 Introduction Statistics: Are Variables Related?
2.2 Representing Two Categorical Variables
2.3 Statistics for Two Categorical Variables
2.4 Representing the Relationship Between Two Quantitative Variables
2.5 Correlation
2.6 Linear Regression
2.7 Residuals
2.8 Least Squares Regression
2.9 Analyzing Departures from Linearity

**Concepts/Skills to support mastery of standards**

- Two-way tables
- Association
- Correlation
- Linear Regression Models
- Residuals
- Least Squares Regression
- Analyzing Departures from Linearity

**Vocabulary**

| Categorical Variable | Quantitative Variable | Association | Scatterplot | Explanatory Variable |
|---|---|---|---|---|
| Response Variable | Correlation | Regression | Residual | Least-Squares Regression |

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**Essential Questions**

How do you describe a relationship between 2 quantitative variables?
Can you guess the correlation?
How can you use a model to make predictions?
How do outliers affect the LSRL?

**Assessment Tasks**

*List of common formative and summative assessments.*

**Formative Assessment(s):**

Common Formative Assessment – Ticket out the Door, Homework, Group Presentations, Quiz

**Summative Assessment(s):**

Common Summative Assessment – Unit 2 Test (50% Multiple Choice/50% Free Response)

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**Learning Experiences**

| Objective or Content | Learning Experiences | Personalized Learning and Differentiation |
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| **2.C** Calculate summary statistics, relative positions of points within a distribution, correlation, and predicted response. | **How Many Rubber Bands does Barbie Need? (Math Medic)** Students will collect data about the distance Barbie travels for a bungee jump based on the number of rubber bands attached. Students will use a scatter plot to represent the relationship and describe the relationship. We will later use this model to make predictions. | Graphic organizers are provided for each lesson and additional practice as needed. Some students will move through the task independently. Others will need prompts and support for understanding |
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## Content Resources

| All notes are provided on schoology. The Practice of Statistics 5th edition AP College Board |
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