

Stage 1 Desired Results		
ESTABLISHED GOALS CC.SS.M6.RP.A.1 – Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. CC.SS.M6.RP.A.2 – Understand the concept of a unit rate a/b associated with a ratio $a:b$ with b not equal to 0, and use rate language in the context of a ratio relationship. CC.SS.M6.RP.A.3 – Use ratio and rate reasoning to solve real-world and mathematical problems, e.g. by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. CCSS.D2.Civ.11.6-8 – Differentiate among procedures for making decisions in the classroom, school, civil society, and local, state, and national government in terms of how civic purposed are intended.	Transfer	
	<i>Students will be able to independently use their learning to...</i> Design a virtual poll interface to collect and analyze data to assess the accuracy of different voting methods. Analyze data to compose an email supported by their findings to persuade the reader to change town voting policies.	
	Meaning	
	UNDERSTANDINGS <i>Students will understand that...</i> The correlation of rates and ratios in data displays. Ratios are the description of the relationship between two or more quantities.	ESSENTIAL QUESTIONS <ul style="list-style-type: none"> How can data analysis be used to determine the most equitable way to elect a new member of government? What different types of voting are available to the public? How does voting really work?
	Acquisition	
	<i>Students will know...</i> The definitions of: <ul style="list-style-type: none"> Ballot District Election Proportion Ratio Writing a persuasive letter How to find: <ul style="list-style-type: none"> Unit Rate 	<i>Students will be skilled at...</i> Interviewing public officials with the goal of receiving information about voting policies in the town. Writing rates as relationship between two or more quantities. Finding unit rates given rates and ratios.

Stage 2 - Evidence

Evaluative Criteria	Assessment Evidence
Students will be assessed through the final assessment through the Big Ideas curriculum upon the completion of the final project stage.	PERFORMANCE TASK(S): Students will write a persuasive letter to local public officials including details and data support to inform policy change for voting in elections.
Students will be assessed through project benchmarks. Students will be assessed on the rubrics below.	OTHER EVIDENCE: Students will complete the <i>Big Ideas</i> curriculum mid-quiz and end-quiz with at least 75% accuracy. Students will complete task benchmark questions with 80% accuracy. Observation of group discussions.

Rubrics:

Data Analysis Display

CATEGORY	4	3	2	1
Mathematical Concepts	Explanation shows complete understanding of the mathematical concepts used to solve the problem(s).	Explanation shows substantial understanding of the mathematical concepts used to solve the problem(s).	Explanation shows some understanding of the mathematical concepts needed to solve the problem(s).	Explanation shows very limited understanding of the underlying concepts needed to solve the problem(s) OR is not written.
Completion	All problems are completed.	All but one of the problems are completed.	All but two of the problems are completed.	Several of the problems are not completed.
Diagrams and Sketches	Digital Diagrams are clear and greatly add to the reader's understanding of the procedure(s).	Digital Diagrams are clear and easy to understand.	Digital Diagrams are somewhat difficult to understand.	Digital Diagrams are difficult to understand or are not used.
Neatness and Organization	The work is presented in a neat, clear, organized fashion that is easy to read.	The work is presented in a neat and organized fashion that is usually easy to read.	The work is presented in an organized fashion but may be hard to read at times.	The work appears sloppy and unorganized. It is hard to know what information goes together.

Persuasive E-Mail

CATEGORY	4 - Above Standards	3 - Meets Standards	2 - Approaching Standards	1 - Below Standards	Score
Attention Grabber	The introductory paragraph has a strong hook or attention grabber that is appropriate for the audience. This could be a strong statement, a relevant quotation, statistic, or question addressed to the reader.	The introductory paragraph has a hook or attention grabber, but it is weak, rambling or inappropriate for the audience.	The author has an interesting introductory paragraph but the connection to the topic is not clear.	The introductory paragraph is not interesting AND is not relevant to the topic.	
Position Statement	The position statement provides a clear, strong statement of the author's position on the topic.	The position statement provides a clear statement of the author's position on the topic.	A position statement is present, but does not make the author's position clear.	There is no position statement.	
Evidence and Examples	All of the evidence and examples are specific, relevant and explanations are given that show how each piece of evidence supports the author's position.	Most of the evidence and examples are specific, relevant and explanations are given that show how each piece of evidence supports the author's position.	At least one of the pieces of evidence and examples is relevant and has an explanation that shows how that piece of evidence supports the author's position.	Evidence and examples are NOT relevant AND/OR are not explained.	
Sources	All sources used for quotes, statistics and facts are credible and cited correctly.	All sources used for quotes, statistics and facts are credible and most are cited correctly.	Most sources used for quotes, statistics and facts are credible and cited correctly.	Many sources are suspect (not credible) AND/OR are not cited correctly.	
Audience	Demonstrates a clear understanding of the potential reader and uses appropriate vocabulary and arguments. Anticipates reader's questions and provides thorough answers appropriate for that audience.	Demonstrates a general understanding of the potential reader and uses vocabulary and arguments appropriate for that audience.	Demonstrates some understanding of the potential reader and uses arguments appropriate for that audience.	It is not clear who the author is writing for.	
Grammar & Spelling	Author makes no errors in grammar or spelling that distract the reader from the content.	Author makes 1-2 errors in grammar or spelling that distract the reader from the content.	Author makes 3-4 errors in grammar or spelling that distract the reader from the content.	Author makes more than 4 errors in grammar or spelling that distract the reader from the content.	
Capitalization & Punctuation	Author makes no errors in capitalization or punctuation, so the essay is exceptionally easy to read.	Author makes 1-2 errors in capitalization or punctuation, but the essay is still easy to read.	Author makes a few errors in capitalization and/or punctuation that catch the reader's attention and interrupt the flow.	Author makes several errors in capitalization and/or punctuation that catch the reader's attention and interrupt the flow.	

Stage 3 – Learning Plan

Summary of Key Learning Events and Instruction

Day One:

- The mayor of Clark, NJ, will come into the classroom to speak to students about the electoral process for local elections. Students will collect all information from this individual and record in their project journal. Students will also answer their “need to know” questions to gauge their individual understanding of elections, their processes, and different methods involved in the process.

Day Two & Three:

- Students will complete research on the internet to discover the main types of voting methods. Students will work in small groups to use the e-portfolio website to view articles and amendments of the Bill of Rights and rewrite to share with the peers. Students will post this revision on Miro and will save to use for future steps.
 - Sites:
 - <https://constitutioncenter.org/interactive-constitution/article/article-i>
 - <https://votesmart.org/education/amendments#.YiUUQ-7MJmp>
 - <https://votesmart.org/education/amendments#.YiUUQ-7MJmp>
 - <https://votesmart.org/education/amendments#.YiUURO7MJmp>
 - <https://votesmart.org/education/amendments#.YiUURu7MJmp>
- Students in small groups will research the four basic voting methods. Students also post these findings to a new Miro and will share their results with the class. Students will save the Miro individually to use for future steps.
 - Fair Vote
 - https://www.fairvote.org/rcv#where_is_ranked_choice_voting_used
 - Approval Voting
 - <https://electionscience.org/library/approval-voting/>
 - Plurality Voting
 - https://www.fairvote.org/plurality_majority_systems
 - Proportional Representation
 - https://www.fairvote.org/how_proportional_representation_elections_work
- Students will then choose in their groups two voting methods to test.

Day Four & Five:

- Students will complete a quick review lesson on finding unit rate and ratios.
- Students will create a simple survey based on cartoon characters of their choosing using Google Forms. Students will conduct their survey digitally, sending to their peers and teachers for honest input. Students are to break their population into different districts, such as teachers in district 1, students in grade 8 in district 2, students in grade 7 in district 3, and so on.
- While students wait for the return of their results, they will begin to put together their infographic of the different types of voting to be shared with the mayor.

- Students, once all data is collected, will analyze their data using ratio and unit rate language. Students will use the data to process different situations using all the voting methods.
- Students will decide which voting method best suits the community offering an equitable experience for all.

Day Six & Seven:

- Students will draft their email to the mayor of Clark, NJ, supporting their choice of equitable voting method.
- Students will peer edit their essays for grammar and punctuation as well as format.
- Students will share their essays in small groups. Each group will decide the best essay and will be shared with the rest of the class.
- Students will send their emails and await a response from town council.
- Students will complete the closure activity upon the group review.