

UNIT OVERVIEW

Unit Length	Three weeks, 15 class periods
Grade Level(s)/Subject(s)	9th to 12 th grade / U.S. History and Algebra I or II
Unit Overview	<p><i>The Essential Question: Should reparations be paid to descendents of enslaved Africans and African-Americans in the United States? If so, what would be the basis of those payments?</i></p> <p>Inspired by HR-40, a bill in the U.S. Congress that proposes funding a commission to study and develop proposals for reparations to African Americans in the United States, students will apply math and research skills to an investigation into whether or not reparations should be paid to the descendents of enslaved people in the U.S. They will study, document, and analyze activities that led to the worldwide domination of crops produced using slave labor due to the Trans-Atlantic Slave Trade. They will also evaluate the way that enslavement of African Americans has led to a wealth gap for African Americans over time.</p> <p>Next, students will evaluate how reparations have been paid throughout history to communities throughout the world. They will also analyze proposals made throughout U.S. history for reparations to African Americans, and apply algebra skills to evaluate the mathematical models for different proposals for reparations. In the end, students will create presentations for their communities that explain the mathematical model for a reparations proposal explored during the unit. They will also apply details and analysis from the unit to present on whether or not they think reparations should be paid to descendants of formerly enslaved Africans and African-Americans, and why.</p> <p>The original pedagogical vision for this project was that students would study this unit in a mixed-interdisciplinary fashion among two teachers (like a one-room schoolhouse): one math teacher and one social studies or history teacher. They would approach the unit like a problem they are trying to solve using methods of Problem Based Learning (PBL). The unit is written to reflect content taught in</p>

	<p>both the math and social studies classes.</p> <p>Note: It may be helpful for students to review linear functions before engaging with this unit, or throughout the unit. The resource referenced in this unit to review linear functions is Common Functions Reference from www.mathisfun.com.</p>
<p>Objectives & Outcomes</p>	<p>Students will be able to....</p> <ol style="list-style-type: none"> 1. Analyze the way that the sugar industry, and other industries that grew as a result of slave labor, have led to a wealth gap for African Americans in the U.S. 2. Apply analysis of news articles and primary source documents to evaluate whether they think reparations should be paid to descendents of enslaved people in the U.S. 3. Investigate the historical and financial backgrounds of various proposals for reparations in the U.S. and the world. 4. Match the pattern of payments of reparations with patterns of function families (such as linear, exponential, and absolute value). 5. Use patterns of function families to suggest steps the U.S. government can take to provide financial reparations 6. Report research and findings in a presentation.
<p>Standards</p>	<p><u>Common Core Standards (Math):</u> HSF.IF.B.4 For a function that models a relationship between two quantities, interpret key features of graphs and tables in terms of the quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior; and periodicity. HSF.LE.A.1 Distinguish between situations that can be modeled with linear functions and with exponential functions.</p> <ol style="list-style-type: none"> a. Prove that linear functions grow by equal differences over equal intervals, and that exponential functions grow by equal factors over equal intervals. b. Recognize situations in which one quantity changes at a constant rate per unit interval relative to another. c. Recognize situations in which a quantity grows or decays by a constant percent rate per unit interval

	<p>relative to another.</p> <p>Common Core Standards (ELA): CCSS.ELA-LITERACY.SL.9-10.2 Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source. CCSS.ELA-LITERACY.RI.11-12.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.</p>
<p>Unit Resources</p>	<p>Resources from <i>The 1619 Project</i>: “Sugar” by Khalil Gibran Muhammad for <i>The New York Times Magazine</i> “Mortgaging the Future” by Mehrsa Baradaran for <i>The New York Times Magazine</i> The 1619 Project Podcast Episode 2: “The Economy that Slavery Built” “The Wealth Gap” by Trymaine Lee for <i>The New York Times</i></p> <p>Text resources: Overdue reparations is the key to closing the racial wealth gap” by Dr. William Darity Jr. for MLK50: Justice Through Journalism H.R.40 - 117th Congress (2021-2022): Commission to Study and Develop Reparation Proposals for African Americans Act Examining the Black-white wealth gap by Kriston McIntosh, Emily Moss, Ryan Nunn, and Jay Shambaugh for <i>The Brookings Institute</i> “The New Reparations Math interview with Thomas Craemer” by Maya A. Moore for UConn Magazine “Cory Booker economic plan: How close are "baby bonds" to reparations?” by Jordan Weissman for <i>Slate</i> “Do the math: why reparations are the talk of 2020” by Nick Douglas for AFROPUNK</p> <p>Video resources: “The History of Reparations” by Danielle Bainbridge for <i>PBS Origins</i> “We May Be the First People to Receive Reparations for Slavery” from <i>The New York Times Opinion</i></p> <p>Other teaching materials:</p>

Reparations Math and Reparations History

Unit by BDEA Academy 2.0, part of the 2021 cohort of *The 1619 Project* Education Network

	<p>RQI protocol from The Right Questioning Institute Reading guide for essays from <i>The 1619 Project</i> Listening guide for <i>The 1619 Project</i> Podcast Episode 2: “The Economy that Slavery Built” Common Functions Reference from mathisfun.com Reparations Math Final Project Instructions and Presentation Template [.docx] [.pdf]</p>
Performance Task	<p>Students will create presentations that explain the mathematical model for a reparations proposal explored in the unit, and reflect their analysis of the unit’s essential question. Students will use the Reparations Math Final Project Instructions [.docx] [.pdf] and Presentation Template (.pptx) to prepare their final presentations.</p>
Assessment/Evaluation	<p>A project-based learning rubric will be used to evaluate final presentations created by students to share their research into the lasting impacts of slavery on the wealth gap for African Americans, and their cases for reparations to descendants of enslaved Africans and African Americans. Their presentations should also share what math function the U.S. should use to determine and provide monetary preparations.</p>

UNIT PACING/DAILY LESSONS

Pacing	Focus text(s) / resource(s) for today’s lesson	Lesson Objective(s) or Essential Question(s)	Lesson / Activities	Lesson Materials
<i>Week 1</i>				
Accessing Prior Knowledge on Reparations Proposals and Exploring Connections Between Enslavement and Racial Wealth Gaps				
Days 1-2	<p>“Overdue reparations is the key to closing the racial wealth gap” by Dr. William Darity Jr. for MLK50: Justice Through Journalism</p> <p>H.R.40 - 117th Congress (2021-2022): Commission to Study and Develop Reparation Proposals for African Americans Act</p>	Should reparations be paid for the United States’ use of enslaved labor? If so, what is the basis of those payments?	<ol style="list-style-type: none"> Students reflect on their own, and then discuss, the following questions: <ul style="list-style-type: none"> What are reparations? What have you heard about them? What arguments have you heard about whether or not reparations should be paid? Do you think reparations should be paid? Why or why not? Students review dictionary definitions of reparations, and explore the opening of the article “Overdue Reparations is the Key to Closing the Racial Wealth Gap” by Dr. William Darity Jr. in <i>MLK50</i> to 	

			<p>continue to develop their understanding of the word, “reparations.” Students read the article until the line, “Black reparations also must include a systematic plan to maintain historical memory of the conditions that motivated the inauguration of the program of restitution,” and then proceed to generate as many questions as they can in groups using the RQI protocol from The Right Questioning Institute</p> <ol style="list-style-type: none"> 3. Introduce students to the bill HR-40. 4. Finally, students review the unit overview essential question, and final project. 	
<p>Days 3-5</p>	<p>Examining the Black-white wealth gap by Kriston McIntosh, Emily Moss, Ryan Nunn, and Jay Shambaugh for <i>The Brookings Institute</i></p>	<p>What is the lasting legacy of slavery on the descendents of enslaved people today?</p> <p>How has that lasting legacy led to economic disparity?</p>	<ol style="list-style-type: none"> 1. Review the terms “wealth” and “wealth disparity” with students, and then discuss the following questions: <ol style="list-style-type: none"> a. What is wealth? What are some ways that people earn wealth? b. Do all people have equal access to wealth? Why or why not? c. What are some of the 	<p>Reading guide for essays from <i>The 1619 Project</i></p> <p>Listening guide for <i>The 1619 Project</i> Podcast Episode 2: “The Economy that Slavery Built”</p>

			<p>factors that have led to unequal distribution of wealth throughout history? Specifically, how might access to wealth over time look different for Black and White Americans?</p> <ol style="list-style-type: none">2. Introduce students to the blog “Examining the Black-white wealth gap” by Kriston McIntosh, Emily Moss, Ryan Nunn, and Jay Shambaugh for <i>The Brookings Institute</i> to introduce students to definitions of “wealth” and statistics about the wealth gap between white and Black Americans. The blog closes with the sentence, “There is no single, simple explanation for the racial wealth gap.” Ask students to predict what some factors might have been that contributed to the wealth gap over time.3. On their own, or in small groups, students will then review at least three of the following resources from <i>The 1619 Project</i> to evaluate policies and practices that have led to wealth disparities between Black and white Americans over time:	
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			<ul style="list-style-type: none"> a. “Sugar” by Khalil Gibran Muhammad for <i>The New York Times Magazine</i> b. “Mortgaging the Future” by Mehrsa Baradaran for <i>The New York Times Magazine</i> c. The 1619 Project Podcast Episode 2: “The Economy that Slavery Built” d. “The Wealth Gap” by Trymaine Lee for <i>The New York Times</i> magazine. <p>4. As students review the resources, they can use the reading guides in the lesson materials to support their comprehension and analyses. Students should also track key numbers and statistics from their readings. These can be tracked in students’ notes or on a shared document.</p> <p>5. After reviewing the resources, guide students in a discussion about the laws, policies, and practices that have contributed to a gap between the wealth</p>	
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			<p>acquired by Black Americans and the wealth acquired by white Americans over time. It may be helpful for students to create a timeline, or other organizing tool, to document significant moments in history that have contributed to wealth inequality.</p> <p>6. After reviewing and discussing the resources, guide students in a reflection using the essential questions for the lesson. Students may also respond to the questions as part of a written formative assessment.</p> <p>7. At the conclusion of the week, ask students to revisit the following question from the opening warm up of this week: Do you think reparations should be paid? Why or why not?</p>	
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Pacing	Focus text(s) / resource(s) for today's lesson	Lesson Objective(s) or Essential Question(s)	Lesson / Activities	Lesson Materials
<p><i>Week 2</i> Analyzing stories of reparations paid throughout history, and exploring mathematical models for proposed reparations for Black Americans</p>				
Days 1-2	<p>“The History of Reparations” by Danielle Bainbridge for <i>PBS Origins</i></p>	<p>Should reparations be paid for the United States' use of enslaved labor? If so, what is the basis of those payments?</p> <p>How can models for reparations that were paid by governments in the past be applied to the development of a plan for reparations to descendants of people who were enslaved in the United States?</p>	<ol style="list-style-type: none"> 1. Start by reviewing the first of the unit's essential questions with students. Ask students to recall information they explored in articles from the previous week to support their responses. 2. Ask students: “Have reparations ever been paid by a government to a group of people? If so, where and how? If not, why not?” Engage students in a discussion about what they have learned about reparations that have been paid in the past. 3. Then, explain that the next few lessons will focus on examples of how governments have made reparations in the past, and how governments determined the basis and structure of those payments. 	Graph paper

			<p>4. Watch minute 00:00- 6:18 of the video, “The History of Reparations” from PBS Origins. As students watch, they should document the following in their notes:</p> <ul style="list-style-type: none">a. Where and when have reparations been paid by governments in the past?b. Which governments made the payments, and to whom?c. Why were those payments made?d. How were the payment amounts determined in each example?e. <i>Option: Students create a table with the information above.</i>f. <i>Option: Students create a table that includes the number of individuals paid in each example from the video, the amount paid to each individual, and the total amount required for the payments in the example. Students can then create an equation that reflects</i>	
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			<p><i>each example (using x as a variable for either the number of payments or amount for each payment)</i></p> <p>5. <i>Option: Work with students to graph the functions they identified for each model represented in the video. Students can then use these visual models as part of the following class discussion.</i></p> <p>6. Engage students in a discussion:</p> <ul style="list-style-type: none"> • How do you feel about the models presented in the video, and why? • Where do you find evidence of algebra being used to support the calculations outlined in the video? • Based on these models, what do you think reparations should look like and why? 	
<p>Days 3-4</p>	<p>“The History of Reparations” by Danielle Bainbridge for <i>PBS Origins</i></p> <p>“We May Be the First People to Receive Reparations for Slavery” from <i>The New York</i></p>	<p>What efforts have been made to pay reparations to African Americans?</p>	<p>1. Review the types of functions that have been evident in the articles reviewed so far in the unit. Then, ask students to identify other types of algebraic functions that haven’t been named yet. Students can use the</p>	<p>Common Functions Reference from mathisfun.com</p>

	<p>Times Opinion</p>		<p>Common Functions Reference to support their brainstorm.</p> <ol style="list-style-type: none"> 2. Students review minutes 6:20-14:03 of the video, "The History of Reparations" by Danielle Bainbridge for <i>PBS Origins</i> and take note of instances where U.S. government institutions have made payments to Black Americans due to harm inflicted as a result of the work of those institutions. The video reviews the following examples: <ul style="list-style-type: none"> • "40 acres and a mule" proposal following the Civil War • Payments made to victims of the Tuskegee Syphilis Study in 1974 • Victims of illegal interrogation practices by Police Commissioner Jon Burge in Chicago, IL 3. As students review the examples from the video, work with them to note the numbers outlined in the video for each example. Ask, "what additional information would we need to be able to create a function outlining each model described in the video? What kind of function could be used for each example?" 4. Next, review the video, "We May be the First People to Receive Reparations for Slavery" from <i>The New York Times Opinion</i>. As they did with the previous video, 	
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			<p>have students note key numbers shared and prepare to discuss the following after viewing the resource:</p> <ol style="list-style-type: none"> a. How do you feel about the models presented in the video, and why? b. Where do you find evidence of algebra being used to support the calculations outlined in the video? c. What kind of function could be used to graph the reparations plan outlined in this resource. <p>5. Guide students in using details from the videos explored this week as part of a reflection on the unit’s essential question: <i>Should reparations be paid to descendents of enslaved Africans and African-Americans in the United States? If so, what would be the basis of those payments?</i></p>	
<p>Day 5</p>	<p>“The New Reparations Math interview with Thomas Craemer” by Maya A. Moore for UConn Magazine</p>	<p>How have current proposals for reparations to descendents of enslaved Africans used algebraic</p>	<ol style="list-style-type: none"> 1. Introduce students to the resource, “The New Reparations Math,” an interview with Professor Thomas Craemer by Maya A. Moore. 	

		<p>functions to identify the structure and costs of payments?</p>	<ol style="list-style-type: none"> 2. Have students review the article in small groups or on their own. As they read, ask them to consider the following questions: <ol style="list-style-type: none"> a. What are Craemer’s views on reparations? b. What does Craemer present as the cost of reparations? How did he identify this number? Where do you see evidence of algebraic functions in his calculations? c. Who received reparations following the abolishment of slavery by Great Britain in 1833? How much was paid? To whom, and why? 3. Review students’ responses to the questions above, and then have students work in groups to develop a function that captures the plan proposed by Craemer for reparations to the descendents of people who were enslaved in the United States. 	
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Pacing	Focus text(s) / resource(s) for today’s lesson	Lesson Objective(s) or Essential Question(s)	Lesson / Activities	Lesson Materials
<p><i>Week 3</i> Summary of Lesson Themes</p>				
<p>Days 1-5</p>	<p>“Cory Booker economic plan: How close are "baby bonds" to reparations?” by Jordan Weissman for <i>Slate</i></p> <p>“The New Reparations Math interview with Thomas Craemer” by Maya A. Moore for <i>UConn Magazine</i></p> <p>“Do the math: why reparations are the talk of 2020” by Nick Douglas for <i>AFROPUNK</i></p> <p>“The History of Reparations” by Danielle Bainbridge for <i>PBS Origins</i></p>	<p>Students will be able to create and present algebraic functions that reflect proposals for reparations to descendants of people who were enslaved in the U.S.</p> <p>Students will be able to create and share presentations that respond to the unit’s essential questions:</p> <p><i>Should reparations be paid for the United States’ use of labor by enslaved Africans? If so, what would be the basis of those payments?</i></p>	<ol style="list-style-type: none"> 1. Students review the project description and slideshow template for students’ final project. 2. Students use the project description outline to identify a model for reparations that they hope to present in their final presentations 3. Students conduct the research for their final projects and create the mathematical models they hope to present. 4. Students work in pairs or small groups to share their draft presentations and brainstorm what they hope to share in their presentations as their final unit reflections. Students can use the following presentation guiding questions for their discussions: <ol style="list-style-type: none"> a. <i>Should reparations be paid for the United</i> 	<p>Final Project Description and outline [.docx] [.pdf] Example pre-prepared slideshow (.pptx)</p>

			<p><i>States' use of labor by enslaved Africans? If so, what would be the basis of those payments?</i></p> <p>b. How well do you think you did in this unit? How do you think your teachers and classmates did in this unit? How would you improve this unit?</p> <p>5. Students present their final projects and receive feedback using the attached rubric.</p>	
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