

The Chew House: Slavery and Abolition in Philadelphia Mathematics

Lesson Plan Design

Cliveden and Breakthrough of Greater Philadelphia partnered in 2018 as a result of a grant from the Haley Foundation and the African American Cultural Heritage Action Fund of the National Trust for Historic Preservation with support from the Doris Duke Charitable Foundation to apply Breakthrough's unique students-teaching-students model to developing cross-curricular lesson plans.

These lesson plans were designed by college-aged teaching fellows and field tested by 7th and 8th grade student participants in a lesson-study model. The final lesson plans were adapted and formalized by professional educators for use in traditional educational environments. The lesson plan format used by Breakthrough of Greater Philadelphia includes individualized student packets that are aligned to the order of the lesson steps.

Goals

Students will visualize and analyze the prevalence of slavery in Philadelphia county from 1790-1850 by completing percentage problems and by creating/analyzing population graphs.

Standards Addressed

- CCSS.ELA-LITERACY.RH.6-8.1: Cite specific textual evidence to support analysis of primary and secondary sources.
- CCSS.ELA-LITERACY.RH.6-8.2: Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.
- CCSS.ELA-LITERACY.RH.6-8.7: Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- CCSS.ELA-LITERACY.RH.6-8.4: Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.
- CCSS.MATH.CONTENT.6.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.MATH.CONTENT.7.RP.A.2: Recognize and represent proportional relationships between quantities.
- CCSS.MATH.CONTENT.8.SP.A.1: Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

GETTING YOURSELF READY			
Materials: <ul style="list-style-type: none"> • Student Handouts • Calculators • Pages from 1790 Census • Laminated Handouts (10) <ul style="list-style-type: none"> ○ Double Sided Color Maps ○ Early Census Document 	Your Preparation: <ul style="list-style-type: none"> • Prepare to facilitate conversations around slavery in the North • Answer Keys 	Objective(s) and Proving Behavior: <p>Students will visualize and analyze the prevalence of slavery in Philadelphia county from 1790-1850 by completing percentage problems and by creating/analyzing population graphs.</p>	Agenda (w/times): <p>Do Now: 5 minutes Objective and Purpose: 2 minutes Positioning the Ideas: 10 minutes The United States Census: 5 minutes Review Ratio and Proportion: 3 minutes Practice: 20+ minutes Closure: 5 minutes</p>
GETTING YOUR STUDENTS READY			
Do Now: Students read the “History and Background” passage modified from the Cliveden website. The passage is at approximately a 10 th -11 th grade reading level, which means that students will not have 100% comprehension. Students should make annotations and try to summarize the main idea of each paragraph as they read in order to understand such a challenging passage.			
Purpose: Many middle school students have lived in Philadelphia their entire lives, but probably do not know the prevalence of slavery here. American history largely focuses on slavery in the South. In this lesson, students will utilize skills they have learned in math class to learn about how many slaves were in Philadelphia county from 1790-1850.			
BUILDING THE SKILL (EXPLORE, SAY, SEE, DO)			
Step 1: Positioning the Ideas	SAY: Today, we are going to be creating graphs that will help us understand the population of enslaved Africans in Philadelphia. In order to do this, first we want to understand more about the area of Philadelphia and some of the ways that we learn this information. Today’s passage was a much more challenging text than I usually have you read, but it contains a lot of information that will guide our conversations. The passage focuses on the Chew family and documents called “the Chew papers” which provide historians a lot of information to help guide their research. The Chew family built a summer home in the country outside of Philadelphia in Germantown, and there were many enslaved persons and servants who worked there. We’re going to have a conversation so that we understand why we are studying the numbers of enslaved persons in Philadelphia and how this relates to our city’s story. SEE: Technology in your classroom? Show images from the Cliveden website. No technology? Use the maps.		

	<p>DO: Read each question aloud and have the students jot their answers on the paper before beginning a discussion.</p> <ol style="list-style-type: none"> 1. The text describes Benjamin Chew as the patriarch of “<i>of a large and late slave-holding family with property in Pennsylvania, Delaware and Maryland.</i>” Explain what that means in your own words (45 seconds) 2. According to the third paragraph, why was Benjamin Chew able to become a lawyer? Why do you think that is important information? (60 seconds) 3. Based on context clues from the text and my introduction, what do you think the Chew papers are? (45 seconds) 4. Plantation slavery is different from urban slavery. What are some of the ways that urban slavery is different from plantation slavery? (60 seconds) <p>Review: After students have had a chance to jot down their thoughts, open them up to conversation across the whole group. Encourage the students to build on each other’s answers. This will be about 4-5 minutes.</p>
<p>Step 2: The United States Census</p>	<p>SAY: One of the most important questions driving historical research is this: “How do we know what we know?” When we talk about population, it’s important to know where the numbers come from. For example, if I ask how many people are in this room right now, how do you find out? Well, some people might count every person in the room. Some might count the groups of people and multiply. Some might have another strategy. What if I asked you to find out how many people are in our school?</p> <p>SEE: Class group discussion of how to find out how many people are in the school.</p> <ul style="list-style-type: none"> • Prompting Possibilities: Do you use attendance lists? Where can those attendance lists come from? Do they actually show the right number of students in the class? Does one person go from classroom to classroom and count every person? Does the work get split up? <p>SAY: The United States Constitution requires that all citizens be counted in order to determine how many votes each state gets, and for tax purposes. This is required every 10 years and is called a census. I’m handing out a page from the 1790 census.</p> <p><i>Teachers: The census information is listed as follows. Depending on the level of your students, you may wish to create a table that translates the census columns to help them better understand.</i></p> <ol style="list-style-type: none"> 1. <i>Name of Head of Household</i> 2. <i>Number of Free White Males sixteen and upwards</i> 3. <i>Number of Free White Males Under sixteen</i> 4. <i>Number of White Females</i> 5. <i>All other Free Persons</i> 6. <i>Slaves</i> <p>DO: Find the name Rev. John Ewing. How many people were in Rev. Ewing’s household? What might that tell you about</p>

	<p>Rev. Ewing's family? (Discuss as needed)</p>
<p>Step 3: Review Ratio and Percentage</p>	<p>SAY: Remember that a percentage is found using the formula: Part divided by whole * 100. For example, if I have a group of 300 students and 7 of them are in kindergarten, I would find the percentage of students in kindergarten by dividing 7 by 300, which is 0.02333333... I then multiply by 100, which will give me 2.33333333...%. For our purposes, we will round after the hundredth's place of our answer: 2.33%</p> <div data-bbox="451 495 819 657" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> $\frac{\textit{part}}{\textit{whole}} \times 100 = \%$ </div> <p>SEE: Percentage Calculation Formula</p> <p>DO: What if 20 of the students are in first grade? What percentage of the 300 students are in first grade?</p>
PRACTICING THE SKILL	
<p>SAY: The questions you will be answering use real data from census information from the time period. This data is what researchers use when they try to understand things like how large families were, how many wage earners were in a household, and how abolition impacted the numbers of slaves in certain areas.</p> <p>Practice Assignment -</p> <ol style="list-style-type: none"> 1) Have students work in partners to answer questions 1 - 5. Jigsaw the groups to compare answers. 2) Students think individually for question 6 and discuss as a group. 3) Complete 7 - 9 4) Students think individually for questions 10 and 11 and discuss as a group. 	
<p>Closure: Write/Reflect - Why do you think historians consider the Chew papers important? What types of questions do you think they might help us answer?</p>	

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The Chew House: Slavery and Abolition in Philadelphia

Do Now

Directions: Read the following passage about the Chew family and slavery in the mid-Atlantic region. This is a challenging text, meant for high school students - your goal is to understand what you can. Be sure to annotate the text with questions and summarize the key ideas from each paragraph as you read.

History and Background	Annotations
<p>The institution of slavery is a big part of the financial and political growth and history of America. Benjamin Chew was from the British colonies that would become the United States. He was born on a Maryland plantation into a family with a history of slave-holding that went back to the 17th century. Benjamin was the patriarch (<i>male leader</i>) of a large and late slave-holding family with property in Pennsylvania, Delaware and Maryland.</p> <p>The Chews' ambivalence (<i>mixed feelings</i>) toward enslaved peoples can be found in the Chew papers. The enslaved were considered primarily to be property. Some Americans, like Benjamin Chew Jr., felt that the enslaved were better off in bondage than free.</p> <p>Much of the Chew family wealth created and sustained during the 18th and 19th centuries was built from investments directly or indirectly connected to slavery. The financial ability of Dr. Samuel Chew to send his son Benjamin to law school in London was built, in part, on the labors of the many enslaved Africans he owned. Benjamin Chew and his brother would go on to own a total of nine plantations in Maryland and the Lower Three Counties (<i>modern day Delaware</i>). At the Chews' Whitehall Plantation in Delaware, the Chew papers have uncovered sixty years of information about enslaved Africans. The lives, families, and resistance to authority of those enslaved on plantations owned by the Chews can be seen through the papers.</p> <p>Richard Allen, founder of the African Methodist Episcopal Church and its first Bishop, wrote in the first sentence of his autobiography that he was born enslaved to Benjamin Chew. The Chew papers contain letters written by enslaved Africans that give a more detailed description of the hardships and heartaches they endured. Many of the enslaved people on Chew plantations can now be identified by name, location, and year of birth because of the Chew papers. The Chew family held enslaved Africans in the city of Philadelphia and in Germantown during the 18th and early 19th centuries. Urban slavery offered the enslaved an environment where they could learn from, socialize, and worship with free Blacks as well as Whites. At any given time, there were enslaved Africans working next to free Blacks and European immigrants at Cliveden. The enslaved in urban areas were used as domestic servants, trained as artisans (<i>skilled tradespersons</i>), and even rented to other slave owners.</p> <p><i>*Adapted from http://www.cliveden.org/slavery-and-servitude/</i></p>	

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Comprehension and Discussion Questions

1. The text describes Benjamin Chew as the patriarch of “*a large and late slave-holding family with property in Pennsylvania, Delaware and Maryland.*” Explain what that means in your own words.
2. According to the third paragraph, why was Benjamin Chew able to become a lawyer? Why do you think that is important information?
3. Based on context clues from the text, what do you think the Chew papers are?
4. Plantation slavery is different from urban slavery. What are some of the ways that urban slavery is different from plantation slavery?

The United States Census

5. Find the name Rev. John Ewing. How many people were in Rev. Ewing’s household? What might that tell you about Rev. Ewing’s family?

Review Ratio and Percentage

6. Write down the percentage formula:
7. (Teacher-Led Problem) I have a group of 300 students and 7 of them are kindergarten. What percentage of the students are in kindergarten?
8. (Practice Problem) I have a group of 300 students and 20 of them are in first grade. What percentage of the students are in first grade?

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Student Practice: Slavery and Abolition in Philadelphia

1. In 1770, there were 1,375 slaves in Philadelphia and the total population was approximately 19,000 people total. What percentage of the population was enslaved persons?
2. In 1800, there were 85 slaves in Philadelphia and the total population was 81,009. What percentage of the population was enslaved?
3. 1790, there were 373 slaves in Philadelphia and 2,099 free blacks in Philadelphia. What percentage of the African Americans in Philadelphia were free persons? (Hint: find the total black population first)
4. In 1810, there were 8 slaves and 10,514 free blacks in Philadelphia. What percentage of the blacks in Philadelphia were enslaved persons?
5. In 1820, there were 7 slaves, 11,844 free blacks, and the total population was 137,097 in Philadelphia. What percentage of the people in Philadelphia were black?
6. Looking at the numbers for questions 3 and 4, why do you think the percentage of free blacks increased?
7. On the following pages, use the table of information to draw a graph of the total population in Philadelphia over time, and a graph of the slave population in Philadelphia over time.

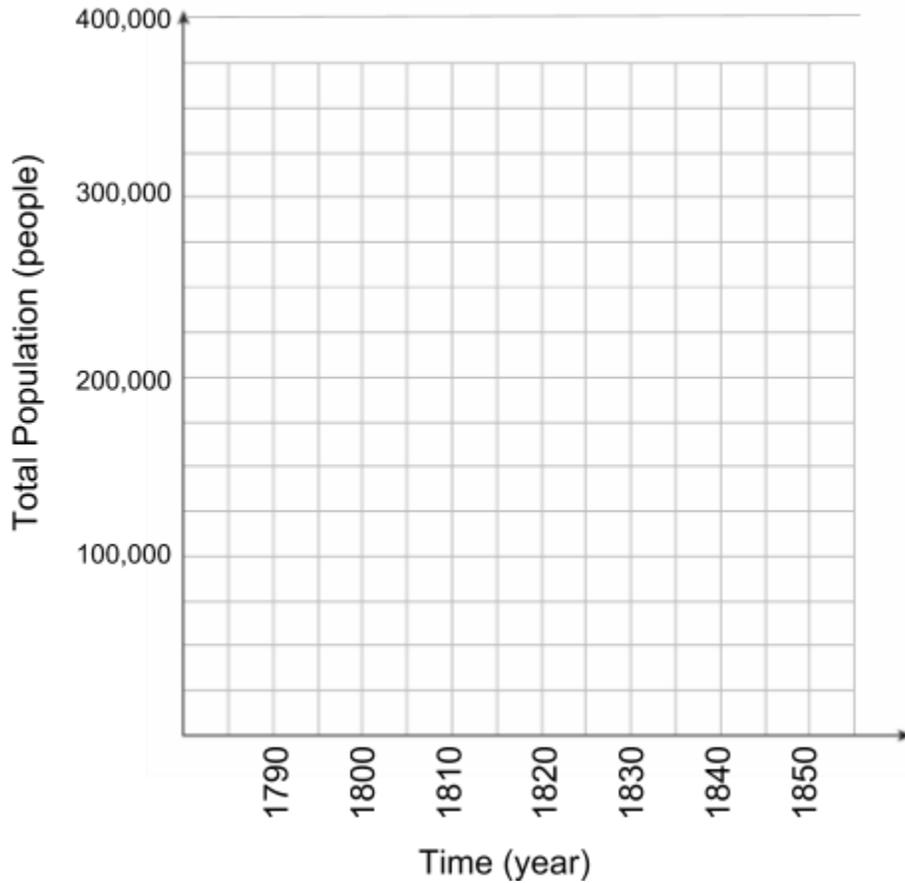
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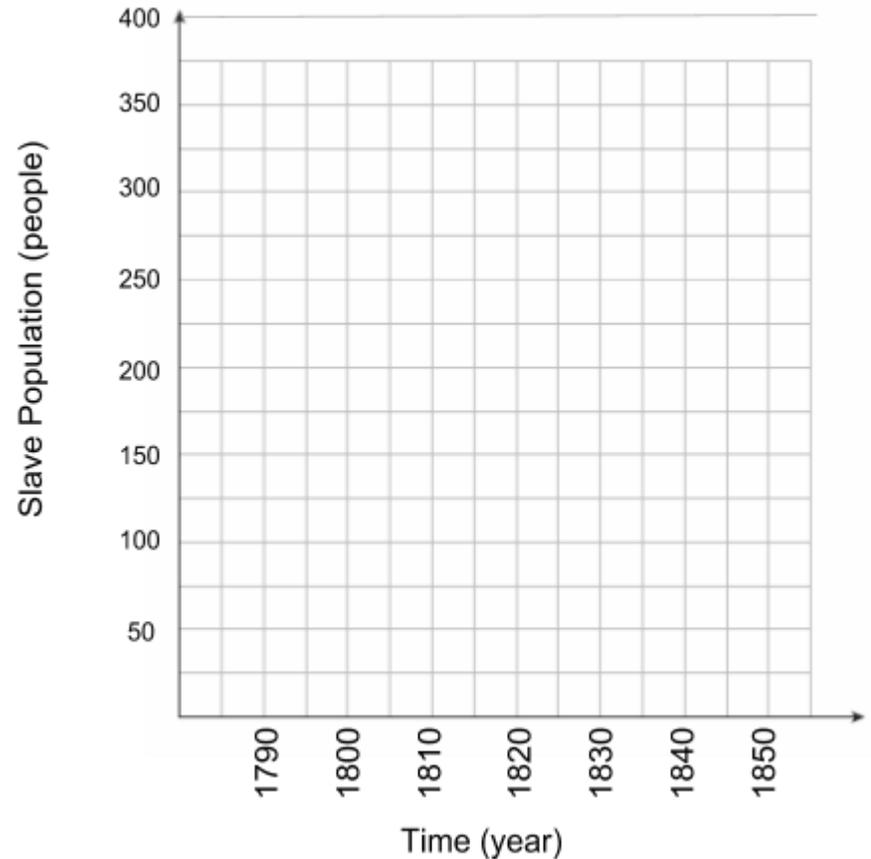
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Year	1790	1800	1810	1820	1830	1840	1850
Total Population	54,388	81,009	111,210	137,097	188,797	258,037	408,762
Slave Population	373	85	8	7	20	2	0

Total Population of Philadelphia



Slave Population of Philadelphia



Name: _____

Date: _____

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8. Compare the trend lines of the two graphs. Do they have similar trends or different trends?

9. Why do the trend lines mean?

10. Pennsylvania's Gradual Abolition Act of 1780 was the first legislative emancipation in history, but it didn't immediately free slaves. It led to three key things:
 - a. No slaves were immediately freed, slaves continued to be property of their slaveholder,
 - b. Any child born to a slave mother in Pennsylvania after the 1780 would be freed 28 years after they were born,
 - c. No more slaves could be brought into the state on a permanent basis. If a slave from another state was brought into Pennsylvania and they stayed for six months without leaving, they would be released from slavery.

How do you think the Gradual Abolition Act impacted the graphs above?

11. How do you think the Gradual Abolition Act of 1780 would have impacted lives for slaves at the Chew house in Germantown that came with the Chew family from their plantations in other states?

12. What challenges do you think the government had in completing the first census?

56.	Names of the Heads of Families	Third of Professions or Occupations	Number of House or Store	Dwelling	28	Free white Males	Over sixteen	Free white Males	Under sixteen	Free white Females	all other Free Persons	Slaves
	John Cole	Black Builder	..	D	..	1	..	3	..	4	..	..
	William Wilson	do.	..	D	..	1	..	..	..	7	..	..
	Vacant lots		86	..	..	..	..	..	..	..	..	..
	John Speile	Baker	88	D	..	1	..	1	..	..	..	..
	Jonathan Dilworth	Grocer	90	D	..	3	..	..	..	4	..	..
	Rebecca Dox	Woman	92	D	..	..	..	..	..	6	..	..
	Rev John Cwinn	Parson	94	D	..	2	..	2	..	8	1	..
	Vacant lots from 96 to 98		96 to 98	..	..	..	..	..	..	..	..	..
	Thos Willings	Shoemaker	100	D	..	..	..	3	..	7	2	..
	Vacant lots from 102 to 108		102 to 108	..	..	..	..	..	..	..	..	..
	Benj Cheevers	Shoemaker	110	D	..	1	..	..	..	8	..	3
	Samuel Powell	Shoemaker	112	D	..	3	..	..	..	3	..	..
	Vacant lots		114 to 120	..	..	..	..	..	..	..	..	..
	Wm Bingham	Shoemaker	122	D	..	7	..	..	..	8	..	..
	Vacant lots from 124 to 130		124 to 130	..	..	..	..	..	..	..	..	..
	John Gowers	Black Man	132	D	..	3	..	2	..	3	..	..
	Barbra Curran	House keeper	134	D	..	..	..	..	..	2	..	..
	Vacant lots		136 to 138	..	..	..	..	..	..	..	..	..
	Rich Mason	Engine maker	140	..	Shop	..	..	..	..	..	..	..
	James Cornish	Turner	142	D	..	1	..	..	..	4	..	..
	James Huston	Grocer	144	D	..	1	..	..	..	2	..	..
	Vacant lots		..	..	..	..	..	..	..	..	..	..
	Wm Stiles	Stone cutter	146	D	..	2	..	5	..	3	..	..
	Vacant lots		148 to 154	..	..	..	..	..	..	..	..	..
	Daniel M Carragher	Black Smith	156	..	Shop	..	..	..	..	..	..	..
	David Henderson	do	158	D	..	3	..	1	..	5	..	..
	Samuel Guthbert	German	160	D	..	1	..	..	..	2	..	..
	Wm West	Ment	162	D	..	1	..	..	..	3	..	..
	Meadow Batten	house keeper	164	D	..	..	..	..	..	2	1	..
	Ann McKeale	do	166	D	..	..	..	..	..	3	..	..
	Michael Falvey	Accountant	168	D	..	1	..	..	..	2	..	..
	Capt Henry Hawkins		170	D	..	2	..	2	..	4	..	..
	Edm Ralph	house keeper	172	D	..	2	..	3	..	2	..	..
	Edward Robert B Smith		174	D	..	1	..	1	..	2	..	..
	do do do		176	..	Shop	41	23	95	4	3		