



## Learning with Lincoln Institute

Sponsored by Teaching with Primary Sources at  
Eastern Illinois University and  
Southern Illinois University Edwardsville  
Endorsed by the  
Abraham Lincoln Bicentennial Commission



## Statistical War Map Analysis

by Julie Ladwig

Students will mathematically analyze several sets of statistics related to populations and sub populations in 1860 and during the Civil War. They will determine percentages, compare and solve proportions, and make judgments and conclusions about the time period, the maps, and the numbers provided.



The primary source maps offer a unique view into maps and characteristics of maps that were important at this time.

### Overview

|   |   |
|---|---|
| <b>Subject:</b>                             | Math  |
| <b>Time Required:</b>                       | Two 45 - 60 minute class periods  |
| <b>Grade Range:</b>                         | 6-12  |
| <b>Understanding Goal:</b>                  | Numeric data provided from multiple primary map sources allows students to see both objective data about slavery and get insight into the culture of the time simultaneously. Using real, emotionally-charged data to learn the concepts of percentages and proportions encourages understanding. |
| <b>Investigative or Essential Question:</b> | How can primary source maps teach us about issues in our past culture? How can numerical data from primary sources be used to further strengthen or cause us to question our prior beliefs? Can emotionally-charged issues be considered in an objective light?                                   |



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### Materials

**Purpose of Library of Congress Items:** These primary sources show the use of proportions in historic context and show the value of objective, real-world data in an important series of historic events

**Library of Congress Items:** Bibliographical Information attached.



#### Additional Materials:

-  Map 1: Historical WARMAP Sheets (attached)
-  Map 2: Election and Civil War Statistics Sheet (attached)
-  Final Thoughts (attached)
-  Possible Extensions and Activities (Attached)

**Required Vocabulary:** percentages, proportions, census

**Prior Content Knowledge:** Students will know how to solve proportions and how to determine simple percentages and percent increase / decrease. Students will need to convert decimals to percents and will need to use rounding.

**Technology Skills:** Students will need to use calculators to determine percentages and to solve proportions.

### Standards

**Illinois Learning Standards:** 6A3, 6B4, 6C3a, 6D3, 6D4  
8D3b  
10A3c, 10A4a, 10A4c

For information on specific Illinois Learning Standards go to [www.isbe.state.il.us/ils/](http://www.isbe.state.il.us/ils/)



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### Actions

#### Description of Teacher Actions:

1. Distribute the first map, Historical War Map, with all dated items covered and have students answer questions 1-3 on handout.
2. Check first answers, allowing students to remove covers and continue with questions.
3. Review finding basic percentages of a total amount as part/whole so that students may continue to work on activity packet through question 11.
4. Discuss analysis of map and data up to this point.
5. Distribute second map, Statistical Map of US, with election and war-time related statistics.
6. Review finding the percent of increase or decrease as difference/original, the forms of a proportion, comparing proportions, and solving proportions by cross multiplying so students may complete Part IV of packet.
7. Monitor student participation in step 5, final thoughts, ensuring everyone writes something for each question.
8. Lead discussion on use of primary sources as data sources and numeric data as an insight to a culture.
9. Evaluate students based on completion of handouts and participation in discussion. Perhaps collect the last page of questions as a grade.

#### Best Instructional Practices:

##### Teaching for Understanding

Students use calculators to solve proportions and find percentages. Students show understanding in the 'drill and practice' aspect of the activity. By practicing a process over and over, it becomes second nature.

##### Differentiated Instruction

Students are involved in differentiated instruction because multiple intelligences are addressed and different skill sets are used. Students use cognition and basic math skills to work with numbers. Students use their affective domain and subjectivity, logic and reasoning to analyze the value of the sources, data, and insights they provide.



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### Attachments

#### Library of Congress Resources:

|   |                       |   |   |
|---|-----------------------|---|---|
| Title:  |                       |   | The historical war map.                         |
|  | Collection or Exhibit | Map Collections   |   |
|   | Media Type:           | map   |   |
|   | URL                   | <a href="http://memory.loc.gov/cgi-bin/query/r?ammem/gmd:@field(NUMBER+@band(g3701s+cw0021000))">http://memory.loc.gov/cgi-bin/query/r?ammem/gmd:@field(NUMBER+@band(g3701s+cw0021000))</a> |   |
| Title:  |                       |   | Statistical map of the United States of America |
|  | Collection or Exhibit | Map Collections   |   |
|   | Media Type:           | Map   |   |
|   | URL                   | <a href="http://memory.loc.gov/cgi-bin/query/r?ammem/gmd:@field(NUMBER+@band(g3701s+cw0062600))">http://memory.loc.gov/cgi-bin/query/r?ammem/gmd:@field(NUMBER+@band(g3701s+cw0062600))</a> |   |



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## Map 1: Historical War Map

**Step I: Leaving the pieces of tape on the map, answer the following questions.**

1. What time period do you think this map is from? Give THREE indications from the map that make you think this.

1)

2)

3)

2. Name the president who was most crucial to this time period.

3. What war is being referenced by calling this a Historical "War" map?

**Have the instructor check your answers and sign here \_\_\_\_\_ before you move on...**

**Step II: Remove the tape to see if you were accurate and move on to the following questions.**

4. In what year was this map actually made?

5. What year is the data from?

6. Why are these two answers (4 and 5) different?



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### Step III: Now for some number crunching statistics...

7. What percent of the states/territories (that existed at that time) had slave populations?

8. What percentage of those states/territories that had slaves had also seceded from the Union?

9. Other than the slave populations, what other populations are featured on this map? Why do you think that is the case?

10. For each of the 40 states/territories that have populations listed from the 1860 census, determine the "total population" of the state (slaves and freemen) and then determine the percentage of that state/territory's population that is slaves. Use the chart below:

| State/Territory | Total population | % of population that is slaves | State/Territory  | Total population | % of population that is slaves |
|-----------------|------------------|--------------------------------|------------------|------------------|--------------------------------|
| Maine           |                  |                                | Minnesota        |                  |                                |
| New Hampshire   |                  |                                | Oregon           |                  |                                |
| Vermont         |                  |                                | California       |                  |                                |
| Massachusetts   |                  |                                | Kansas           |                  |                                |
| Rhode Island    |                  |                                | Delaware         |                  |                                |
| Connecticut     |                  |                                | Maryland         |                  |                                |
| New York        |                  |                                | Missouri         |                  |                                |
| New Jersey      |                  |                                | Kentucky         |                  |                                |
| Pennsylvania    |                  |                                | Nebraska         |                  |                                |
| Ohio            |                  |                                | Dacotah          |                  |                                |
| Indiana         |                  |                                | Washington       |                  |                                |
| Michigan        |                  |                                | Utah             |                  |                                |
| Illinois        |                  |                                | New Mexico       |                  |                                |
| Wisconsin       |                  |                                | Dist.of Columbia |                  |                                |
| Iowa            |                  |                                | Alabama          |                  |                                |
| Virginia        |                  |                                | Mississippi      |                  |                                |
| North Carolina  |                  |                                | Louisiana        |                  |                                |
| South Carolina  |                  |                                | Texas            |                  |                                |
| Georgia         |                  |                                | Arkansas         |                  |                                |
| Florida         |                  |                                | Tennessee        |                  |                                |

11. Which (if any) of these results surprises you? Explain/discuss.

Have your instructor sign here \_\_\_\_\_ and obtain a copy of the next map.



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## Map 2: Election and Civil War Statistics

### Step IV: Using and Comparing Statistical Data

This map contains population data from the 1860 census and other various statistics from the presidential election of 1860 and the Civil War. It was published in 1888, twenty-eight years after the census, in England.

12. For each of the 40 states/territories identified in the Warmap, compare the total population in your previous chart to the population listed on this new map. Determine the percent increase or decrease in reported population using the Warmap values as the "original" values.

| State/Territory | % Increase or Decrease | State/Territory  | % Increase or Decrease |
|-----------------|------------------------|------------------|------------------------|
| Maine           |                        | Minnesota        |                        |
| New Hampshire   |                        | Oregon           |                        |
| Vermont         |                        | California       |                        |
| Massachusetts   |                        | Kansas           |                        |
| Rhode Island    |                        | Delaware         |                        |
| Connecticut     |                        | Maryland         |                        |
| New York        |                        | Missouri         |                        |
| New Jersey      |                        | Kentucky         |                        |
| Pennsylvania    |                        | Nebraska         |                        |
| Ohio            |                        | Dacotah          |                        |
| Indiana         |                        | Washington       |                        |
| Michigan        |                        | Utah             |                        |
| Illinois        |                        | New Mexico       |                        |
| Wisconsin       |                        | Dist.of Columbia |                        |
| Iowa            |                        | Alabama          |                        |
| Virginia        |                        | Mississippi      |                        |
| North Carolina  |                        | Louisiana        |                        |
| South Carolina  |                        | Texas            |                        |
| Georgia         |                        | Arkansas         |                        |
| Florida         |                        | Tennessee        |                        |

13. Why do you think there is a difference in the reported populations on these two maps that claim to have the same data on them?

Blank space for student response to question 13.



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14. One of the statistics on this map is the proportions\* of soldiers to total population for both whites and "colored" persons. (\* abbreviated Prop'n on the map)

Consider the states in the chart below. Write the corresponding proportions given in the map in fractional form and determine which fraction is greater. Indicate which population "w" or "c" had a larger *proportion* of its members enlisted in the Civil War.

| State/Territory | Proportion of white soldiers to total white population | Proportion of "colored" troops to total "colored" population | Larger proportion of members enlisted in Civil War for this state/territory (W or C) |
|-----------------|--|--|--|
| Illinois        |  |  |  |
| Missouri        |  |  |  |
| Wisconsin       |  |  |  |
| West Virginia   |  |  |  |
| Kentucky        |  |  |  |
| Tennessee       |  |  |  |
| Mississippi     |  |  |  |
| Alabama         |  |  |  |
| Rhode Island    |  |  |  |
| New Jersey      |  |  |  |
| Maryland        |  |  |  |
| Texas           |  |  |  |

15. Pick two of the above states and discuss why you think the proportions of soldiers compare the way they do. Consider the location of the state in the country, consider the state's position on slavery, and consider the state's population breakdowns when you are thinking about this.

Blank space for student response to question 15.







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### Step V: Final Thoughts

The Civil War was fought for a number of reasons, not the least of which was the fight over the practice of slavery. You have had the opportunity to look at some statistics regarding slave populations during the early 1860's. Looking at that data and considering your previous assumptions, answer the following questions. *Back your answers up with good reasoning and/or numerical data.*

17. Would you say slavery was widespread in 1860?

18. Statistically, would slaves have had an impact on the battlefields in the Civil War?

19. Were slaves a true "minority" in 1860?

20. Do you believe the data on these maps to be accurate?



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### Possible Extensions or Additional Activities:

1) Create a timeline (with accurate spacing) of the dates of the secessions of the 11 Rebel States.

Template on next page

2) Create a pie graph or bar graph showing the number of states (or total population of the states) considered to be Free States, Border States and Rebel States.

3) Create a side-by-side or stacked double bar graph showing the populations of the states broken down into the categories of slaves and freemen.

4) Determine the actual percent of the people in each state who voted for Lincoln in the 1860 election. Discuss why this percent is so small compared to what you would expect in order for an individual to win an election. (Who actually voted vs who is in the population.)



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1)

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title

