

Teacher Notes



The Antebellum Period – The Issue of Slavery and the Question of Secession

Activity 2 Analyzing Southern Statistics

Activity Overview

In this activity, students will analyze and compare primary source data on various statistics about the three regions of the South (Upper, Middle, and Lower). Students will then work in groups of three to apply this information and make inferences about the secession of the South.

Activity at a Glance

- ◆ **Subject:** Social Studies
- ◆ **Subject Area:** U. S. History
- ◆ **Category:** Westward Expansion and Reform
- ◆ **Topic:** The Antebellum Period
- ◆ **Grade Level:** 8 - 11
- ◆ **Prerequisites:** Students should be familiar with the political, economic, and socio-cultural long-range causes of the Civil War, such as states' rights, tariffs, and the differences between the North and the South. Students should also understand the meaning of "secession."
- ◆ **Total Teaching Time:** 90 minutes

Materials

- ◆ TI-83 Plus device
- ◆ Student Data Sheets: **Southern Statistics: Exploring the Data, Part 1, Part 2, Part 3; Southern Statistics: The Question of Secession: Group Debriefing Guide**
- ◆ CellSheet™ AppVar, **POP**
- ◆ Instructions for using the **POP** AppVar
- ◆ TI-Navigator™, TI-GRAPH LINK™ Cable, USB Cable
- ◆ Unit-to-unit Cables
- ◆ TI External Keyboard

Directions

Before the Activity Begins

Make sure each student has the CellSheet™ Application on their TI-83 Plus. Send the students the CellSheet™ AppVar, **POP**.

Distribute Student Data Sheet, **Southern Statistics: Exploring the Data, Part 1**, and read the directions. Answer any questions the students have about the exercise.

During the Activity

Exploring the Data, Part 1

Circulate and assist students. Monitor students' progress, and if needed, provide technological assistance. When the class has completed this exercise, review the questions and answers with the students. Generate a class discussion based upon the students' conclusions about the three regions of the South .

Exploring the Data, Part 2

Distribute Student Data Sheet, **Southern Statistics: Exploring the Data, Part 2**, and read the directions. Answer any questions the students have about the exercise.

Circulate and assist students. Monitor students' progress, and if needed, provide technological assistance. When the class has completed this exercise, review the questions and answers with the students.

Exploring the Data, Part 3

Distribute Student Data Sheet, **Southern Statistics: Exploring the Data, Part 3**, and read the directions. Answer any questions the students have about the exercise.

Circulate and assist students. Monitor students' progress, and if needed, provide technological assistance. When the class has completed this exercise, review the questions and answers with the students.

The Question of Secession: Group Debriefing Guide

Distribute Student Data Sheet, **Southern Statistics: The Question of Secession: Group Debriefing Guide**, and read the directions. Divide the class into work groups of three students. Answer any questions the students have about the exercise.

Circulate and assist students. Monitor students' progress, and if needed, provide technological assistance.

After the Activity

Review questions and answers with students from **The Question of Secession** exercise. Remind the class that they will need to keep their notes from this activity to use in the next activity. Within each work group, assign a spokesperson role to each member of the group.

Student Data Sheet

Name: _____

Southern Statistics: Exploring the Data – Part 1

Date: _____

The North and South were divided over the issue of slavery. In the South, differences also existed among the three regions of the Upper, Middle and Lower South. These regions varied in the types of crops they produced, the number of slaves they owned, and their slave, free black and white populations. Because of these differences, many Southerners held diverse opinions about the importance of slavery and the question of secession.

Directions

You will investigate these regional differences by graphing and analyzing data on population statistics in the South from the decades 1800-1860, and answering questions based on the data.

The three regions consisted of the following states:

- ◆ Upper South: Delaware, Maryland, Missouri, Kentucky.
- ◆ Middle South: Virginia, North Carolina, Tennessee, Arkansas.
- ◆ Lower South: South Carolina, Mississippi, Georgia, Alabama, Louisiana, Florida, Texas.

Step 1

Download the CellSheet™ AppVar, **POP**, from the teacher to your TI-83 Plus. The codes for the CellSheet™ heading Columns B-J are:

Column

B	USSLV=	Upper South Slave population
C	USFRBL=	Upper South Free Black population
D	USFRWH=	Upper South Free White population
E	MSSLV=	Middle South Slave population
F	MSFRBL=	Middle South Free Black population
G	MSFRWH=	Middle South Free White population
H	LSSLV=	Lower South Slave population
I	LSFRBL=	Lower South Free Black population
J	LSFRWH=	Lower South Free White population

Step 2

1. Create a triple line graph on the slave population for the three regions from the decades 1800-1860. Enter **A2:A5** for the years (X range). In the Y range,

enter **B2:B5** for the Upper South, **E2:E5** for the Middle South, and **H2:H5** for the Lower South. Use **TRACE** to access specific regions, and use **◀ ▶** to move the cursor right and left to view data for specific years.

- a. Which region had the highest slave population in 1800? _____
 - b. Which region had the highest slave population in 1820? _____
 - c. Which region had the highest slave population in 1840? _____
 - d. Which region had the highest slave population in 1860? _____
 - e. Which region had the lowest slave population in 1800? _____
 - f. Which region had the lowest slave population in 1860? _____
 - g. Which region experienced the greatest overall growth in its slave population? _____
 - h. Which region experienced the least overall growth in its slave population? _____
 - i. Is the general trend for all three regions upward or downward? _____
2. Next, create a triple line graph on the free black population for the three regions from 1800-1860. The X range stays the same, but the columns for the Y ranges are **C**, **F** and **I** for the Upper, Middle and Lower South's free black population. (Note: There is no available data for the year 1800.)
- a. Which region had the highest free black population in 1820? _____
 - b. Which region had the highest free black population in 1860? _____
 - c. Which region experienced the greatest overall growth in its free black population? _____
 - d. Which region experienced a decrease in its free black population? _____ In which decade did this decrease occur? _____
 - e. Which region had the smallest free black population in 1860? _____

Step 3

Calculate the population percentages for each region from 1800-1860 by creating a series of pie charts. Record the data on the following table.

To create pie charts for the Upper South, enter **B1:D1** in the **Categories** space, which will give you data on all three population categories. In the **Series** space, enter **B2:D2** for the year 1800, **B3:D3** for the year 1820, etc. Follow the same formula for the Middle South entering columns **E:G**, and entering **H:J** for the Lower South.

Population Percentages

Year	USSLV	USFRBL	USFRWH	MSSLV	MSFRBL	MSFRWH	LSSLV	LSFRBL	LSFRWH
1800									
1820									
1840									
1860									

Answer the following questions based on the Population Percentages table:

- a. Which region had a steady decrease in the percentage of its slave population? _____
- b. Which region’s slave population percentage was the most stable?

- c. What was the only region that increased the percentage of its slave population by 1860? _____
- d. Which region had a steady decrease in the percentage of its free black population? _____
- e. Which region’s free black population percentage was the most stable? _____
- f. Which region had the highest free black population percentage between 1820-1860? _____
- g. Which region had the greatest increase in its free white population percentage? _____
- h. Which region’s free white population percentage decreased by 1860?

- i. In which region were the percentages of slaves and free whites most equal?

Step 4

Review your findings from the line and pie charts to draw conclusions about the diverse population characteristics of the South. In the space provided below, write a brief summary about each region based on the data you analyzed.

Upper South:

Middle South:

Lower South:

Note: Data for this activity was compiled from the United States Historical Census Data Browser (<http://fisher.lib.virginia.edu/census/>).

Student Data Sheet

Name: _____

Southern Statistics: Exploring the Data, Part 2

Date: _____

Use your TI-83 calculator to complete the activity below.

- ◆ Upper South: Delaware, Maryland, Missouri, Kentucky
- ◆ Middle South: Virginia, North Carolina, Tennessee, Arkansas
- ◆ Lower South: South Carolina, Mississippi, Georgia, Florida, Alabama, Texas, Louisiana

Table 1: Slaveholding Population by Region in 1860*

	A	B	C	D	E	F
1	Region	Owned Under 10 Slaves	Owned 10-19 Slaves	Owned Over 20 Slaves	Total Number: Slaveholders	Total Families
2	Upper South	64,964	9414	2957		487,638
3	Middle South	98,827	22,147	14,137		533,192
4	Lower South	119,288	31,756	33,234		494,775

**Data Compiled from the United States Historical Census Data Browser (<http://fisher.lib.virginia.edu/census/>)*

Step 1

Find the total number of slaveholders for each region by adding the figures in each row (columns B-D) and placing the answer in the appropriate space in column E.

Which region had the highest number of slaveholders? _____

Table 2: Slaveholding Percentages by Region in 1860

	A	B	C	D	E
1	Region	Owned Under 10 Slaves	Owned 10-19 Slaves	Owned Over 20 Slaves	Total % of Slaveholders
2	Upper South				
3	Middle South				
4	Lower South				

Step 2

Now you are ready to begin calculating the percentages of slaveholders in the South, by region. Use the data from Table 1 to complete Table 2.

1. Calculate the percentage of slaveholders who owned **under 10 slaves** by dividing the number in Column B by the total number of families (Column F) in Table 1. Do this for each region and place the figure in the appropriate cell in Column B in Table 2.
2. Calculate the percentage of slaveholders who owned **11-19 slaves** by dividing the number in Column C by Column F in Table 1. Do this for each region and place the figure in the appropriate cell in Column C in Table 2.
3. Calculate the percentage of slaveholders who owned **20 slaves or more** by dividing the number in Column D by Column F in Table 1. Do this for each region and place the figure in the appropriate cell in Column D in Table 2.
4. Finally, calculate the **total percentage of slaveholders** for each region by dividing Column E by Column F in Table 1. Do this for each region and place the figure in the appropriate cell in Column E in Table 2.

Step 3:

Answer the following questions based on your data from Table 2.

1. From the data, you can conclude that for all three regions, most slaveholders owned slaves in which category? _____
2. Which region had the greatest percentage of slaveholders owning less than 10 slaves? _____
3. Which region had the lowest percentage of slaveholders owning more than 20 slaves? _____

4. Which region had the greatest percentage of slaveholders owning more than 20 slaves? _____
5. In which region did 4% of the slaveholders own between 11-19 slaves?

6. Which region had the lowest total percentage of slaveholders?

7. Which region had the greatest total percentage of slaveholders?

8. Describe the general trend or pattern in the percentage of slave ownership as the number of slaves owned increased.

9. The planter class (plantation owners) was the wealthiest class in the South. A plantation is usually defined by the ownership of twenty or more slaves. Using this information, what can you infer from the data in Table 2 Column D?

Student Data Sheet

Name: _____

Southern Statistics: Exploring the Data, Part 3

Date: _____

The South's economy was based on agriculture, and many crops such as tobacco, rice, sugarcane and cotton were grown throughout the region. After the invention of the cotton gin in 1793, the demand for cotton grew steadily, and by the mid-1800's, cotton became the South's most important crop. Primarily grown in the Lower South, cotton production dominated the South's economy; by 1860, the region produced 80% of the world's cotton supply and accounted for 57% of the total exports from the United States.

Step 1

Enter the data in Table 1 into the List Editor on the TI-83, create a line graph, and then answer the following questions.

Table 1

Year	1800	1810	1820	1830	1840	1850	1860
Cotton Bale Production	73,000	250,000	400,000	700,000	1,500,000	2,200,000	3,841,000

Source: *Historical Statistics of The United States*

1. Is there an upward or downward trend in cotton production from 1800-1860? _____
2. In which decades did the production of cotton begin to sharply increase?

Step 2

Clear the data from the L2 column on your TI-83. Enter the data from Table 2 into the List Editor, create a line graph, and then answer the following questions:

Table 2

Year	1800	1810	1820	1830	1840	1850	1860
Number of Slaves	887,612	1,130,781	1,529,012	1,987,428	2,482,546	3,200,600	3,950,528

Source: *United States Historical Census Data Browser* (<http://fisher.lib.virginia.edu/census/>)

11. Explain how your findings are important for the different regions of the South. Do you think all three regions were equally affected by this data?

Student Data Sheet

Name: _____

Southern Statistics: The Question of Secession: Group Debriefing Guide

Date: _____

Directions

The teacher will place you in groups of three. In your groups, discuss your findings and conclusions from Activity 1 and Activity 2 in order to make inferences about the possible secession of the South. Use the questions to guide your discussion, and take notes in the space provided below each question.

Step 1

Review and discuss the information on the Antebellum events from Activity 1. Use the following questions to guide your discussion.

1. In your opinion, which event(s) had the most beneficial effect on the South? Why?
2. Which event(s) had the most harmful effect on the South? Why?
3. Overall, were these events beneficial or harmful to the South? Explain.
4. Discuss how these events could have influenced the South's decision to secede from the Union.

Step 2

Review and discuss your findings and conclusions about the data from the three previous exercises in this activity. Use the following questions to guide your discussion.

1. Which region had the greatest number and percentage of the free black population? The lowest number and percentage? Explain the importance of this information in deciding whether or not to secede from the Union.

2. Which region had the highest number of slaves? The greatest percentage of slaves? Do you think that slavery was equally important for all three regions? Explain.

3. In your opinion, how significant was the number and percentage of slaves in each region in influencing the South's decision to secede or stay loyal to the Union?

4. In your opinion, how significant was the number and percentage of slaveholding families in each region in influencing the South's decision to secede or stay loyal?

5. In your opinion, how significant was the number and percentage of slaves each family owned in each region in influencing the South’s decision to secede or stay loyal?

6. How significant do you think cotton production was as a factor in the decision to secede or stay loyal to the Union?

7. Do you think that the geographic location of each of the three regions in the South was important in making the decision to secede or stay loyal to the Union?

8. What benefits would the South gain from seceding? What drawbacks?

9. What benefits would the South gain from staying loyal to the Union? What drawbacks?

Step 3

The teacher will assign each member of your group to a specific region of the South. You will be acting as the “representative” for your region in the next activity. Keep your notes from this activity; you will use them as a reference in Activity 3.

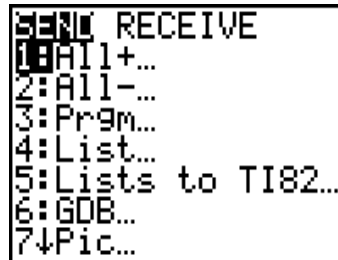
Instructions for using the TI-83 Plus to Download and Use the CellSheet AppVar, POP

Transferring the CellSheet Application from the Teacher's TI-83 Plus:

Connect your TI-83 Plus and the student's TI-83 Plus using the unit-to-unit cable. Firmly press the cable into the port at the base of each device.

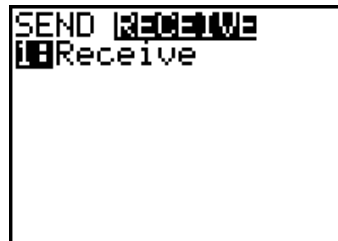
1. Prepare the student's TI-83 to receive data:

- a. Turn on the TI-83 Plus.
- b. Press **2nd** **[LINK]** to prepare for linking.



```
SEND RECEIVE
1:All+...
2:All-...
3:Pr9m...
4:List...
5:Lists to TI82...
6:GDB...
7↓Pic...
```

2. Press **▸** **[ENTER]** to highlight **RECEIVE**.

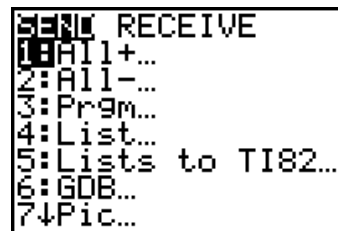


```
SEND RECEIVE
1:Receive
```

3. Press **[ENTER]** and leave TI 83-Plus on the waiting screen.

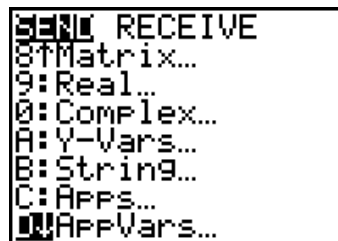
4. Prepare the your TI 83-Plus to send the data:

- a. Turn on the TI 83-Plus.
- b. Press **2nd** **[LINK]** to prepare the TI 83-Plus for linking.



```
SEND RECEIVE
1:All+...
2:All-...
3:Pr9m...
4:List...
5:Lists to TI82...
6:GDB...
7↓Pic...
```

5. Press **▾** until the letter in front of **AppVars** is highlighted. Press **[ENTER]**.



```
SEND RECEIVE
8↑Matrix...
9:Real...
0:Complex...
A:Y-Vars...
B:String...
C:Apps...
D↓AppVars...
```

6. Move the cursor until it points to **POP**. Press **[ENTER]**.



```
SEND TRANSMIT
*Farmer AVAR
*Laborer AVAR
▶*POP AVAR
*S AVAR
*S01 AVAR
*SLVHOLDG AVAR
*TICSfile AVAR
```

7. Press **[ENTER]** to transmit the file to the student's device.

Accessing the CellSheet Application "POP"

1. Press **APPS** to view the application menu.

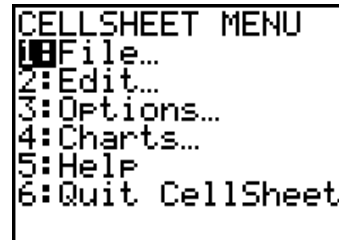


2. Press \square until the number in front of the **CellSheet** application is highlighted.

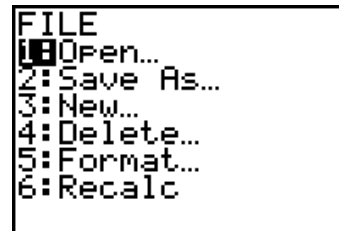
3. Press **ENTER** to begin the **CellSheet** Application. Press any key to move past the information screen.



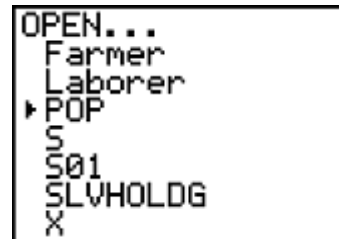
3. Press any key to move past the **CellSheet** help page. Press **GRAPH** to display the menu. Highlight **File**.



4. Press **ENTER**. Highlight **Open**.



5. Press **ENTER**. Move the cursor until it points to **POP**.



6. Press **ENTER**. The device should display a screen like the one shown to the right.

POP	A	B	C
1	YEAR	USSLV	USFRB
2	1800	152131	0
3	1820	248861	55794
4	1840	332598	87888
5	1860	429401	118027
6			
A1: "YEAR			[Menu]

Graphing in the CellSheet Application

1. Press **GRAPH** to view the CellSheet menu.
Highlight **4:Charts**.

```
CELLSHEET MENU
1:File...
2:Edit...
3:Options...
4:Charts...
5:Help
6:Quit CellSheet
```

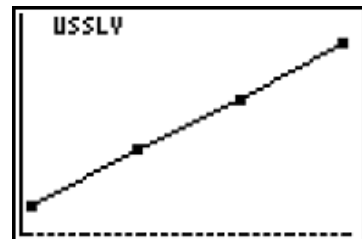
2. Press **ENTER**. Highlight **3:Line...**

```
CHARTS
1:Scatter...
2:Scatter Window
3:Line...
4:Line Window...
5:Bar...
6:Bar Window...
7:Pie...
```

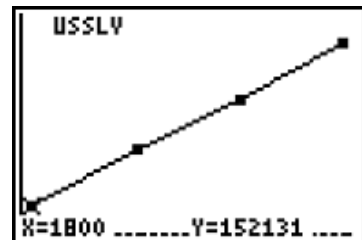
3. Press **ENTER** to select and create a Line Chart.
 - a. In the **XRange** enter A2:A5 for the years (1800,1820,1840,1860).
 - b. In the **YRange** enter the range for the variable. For example, B2:B5 will show the growth of the slave population for the Upper South (USSLV) for the years 1800-1860.
 - c. Use the arrow keys to highlight **AxesOn** and **DrawFit**.

```
LINE CHART
XRange:A2:A5
YRange1:B2:B5
YRange2:
YRange3:
Title:FRWH
AxesOn AxesOff
DrawFit Draw
```

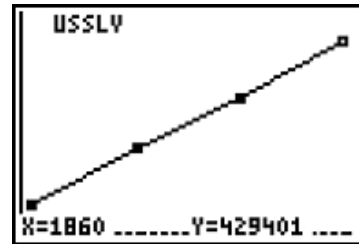
4. Press **ENTER**. The line graph is drawn on the device screen.



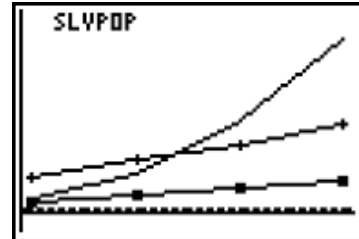
5. Press **TRACE** to display data for a specific year.



- Use **[←]** **[→]** to move left and right on the graph to display different years information. This data appears below the graph.



- By entering several variables at one time, the interplay between the information can be displayed. The graph at the right shows the slave population from the Upper South (B2:B5), Middle South (E2:E5), and Lower South (H2:H5) from 1800-1860.

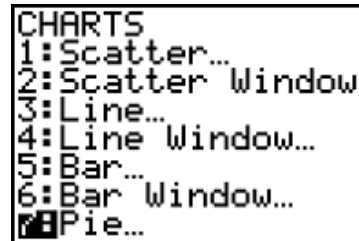


Drawing Pie Charts

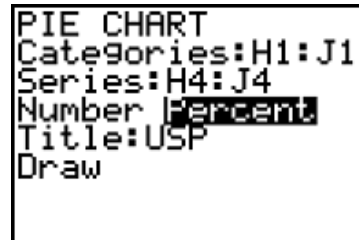
- Press **[GRAPH]** to view the CellSheet menu. Highlight **4:Charts**.



- Press **[ENTER]**. Highlight **7:Pie...**



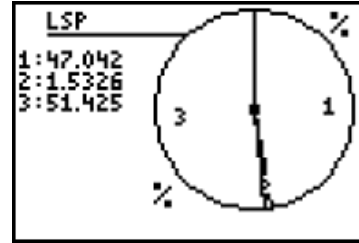
- Press **[ENTER]**. Enter the **Categories** that you want to view in the chart. In this example, H1:J1 displays the Slave, Free Black, and Free White populations in the Lower South.



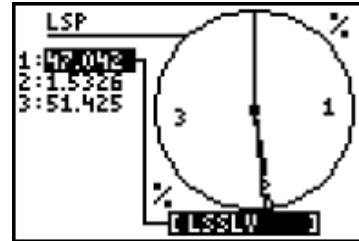
Enter the **Series**. In this example, H4:J4 will look at the Lower South's population described above for the year 1840.

Highlight **Percent** and **Draw**.

4. Press **ENTER**. The Pie Chart is displayed on the device.



5. Press **TRACE** to display data for a specific category. In the example to the right, the Lower South's slave population is highlighted at 47.042. Use **▲** **▼** to display information about other categories.



The complete graph is included below for reference.

POP	A	B	C	D	E	F	G	H	I	J
1	YEAR	USSLV	USFRBL	USFRWH	MSSLV	MSFRBL	MSFRWH	LSSLV	LSFRBL	LSFRWH
2	1800	152131	0	474645	493551	0	975202	205850	0	303620
3	1820	248861	55794	806136	710277	54228	1362001	550766	20465	634182
4	1840	332598	87888	1290906	897898	78573	1943529	1250894	40753	1367438
5	1860	429401	118027	2589480	1208758	95949	2828106	2312352	36811	2619114

Source: *Data Compiled from the United States Historical Census Data Browser
 (<http://fisher.lib.virginia.edu/census/>)

Note: There is no available data for the Free Black population in 1800. Several states are not included in the early years of the census because at the time, they were not a part of the United States or did not yet enter into statehood.