

## Teacher Notes



# U. S. Federal Budget and Debt

## Activity 1 Exploring the Budget of the Federal Government

### *Activity Overview*

First, divide the class into pairs of students. In each pair, one student will be responsible for exploring the sources of revenue for the federal government and the other student will be responsible for exploring the areas of expenditures. Students will review their findings and work together through the exercises on the student handout. The whole class should then discuss and share their conclusions.

### *Tip*

It is important that the entire class have an opportunity to discuss their findings and avoid any misunderstandings.

## Activity at a Glance

- ◆ **Subject:** Social Studies
- ◆ **Subject Area:** U. S. Government Economics
- ◆ **Category:** Federal Budget and National Debt
- ◆ **Topic:** Federal Budget
- ◆ **Grade Level:** 9-12
- ◆ **Prerequisites:** Students should be familiar with the responsibilities of each level of government and the methods by which funds are raised.
- ◆ **Total Teaching Time:** 60-90 minutes

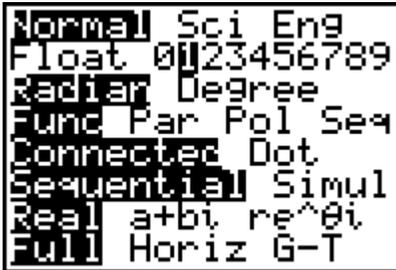
## Materials

- ◆ TI-83 Plus
- ◆ CellSheet™ Application
- ◆ Student Work Sheets: **The Federal Budget Revenue, The Federal Budget Expenditures**

## **Directions**

### **Before the Activity Begins**

Make sure each student has a TI-83 Plus loaded with the CellSheet™ Application. It may be easier for some students to read the numbers on the pie chart if they are rounded to one decimal place. To set the mode, press **[MODE]** on the device, highlight the number 1, and press **[ENTER]**. The screen should look like the following:



### **Warm-up Activity**

The students should already have some background about the responsibilities of the federal government and how the government raises revenue.

It will be helpful to review what items are funded by the federal government; such as social security, defense, Medicare, national parks, and so on. Remind the students that in this activity, they will only be focusing on the federal government's budget.

It will be necessary to discuss various categories of government revenue and expenditures and what is included in each category. A section from a textbook or information from a web site may provide a resource for the students to investigate on their own to determine what is included in each category. An alternative is to discuss and categorize items as a class. Two web sites that can provide information are:

<http://www.whitehouse.gov/omb/budget/fy2003/hist.html>

<http://www.udel.edu/htr/Psc105/Texts/budget.html>

Examples include:

- ◆ Payroll Taxes – includes social security taxes, unemployment insurance taxes
- ◆ Excise Taxes – includes taxes on alcohol, fuel, tobacco
- ◆ Other Sources of Revenue - includes estate taxes, customs duties, etc.
- ◆ Medicare – provides health coverage for elderly and those with disabilities
- ◆ Medicaid – provides health services for poor, elderly in nursing homes, etc.
- ◆ Means Tested Entitlements and Mandatory Spending – provides benefits to the poor, such as food stamps, child nutrition, veterans' pensions, unemployment insurance, etc.

- ◆ Non-Defense Discretionary Spending – provides monies that benefit education, training, technology, housing, transportation, foreign aid, etc.

Students could also brainstorm examples of products and services that the government pays for and categorize them.

### ***During the Activity***

Place students in pairs. Distribute Step One of **The Federal Budget Revenue** and **The Federal Budget Expenditures** student work sheets to the students. Distribute Step Two of these work sheets when the Step One sections are completed. Monitor student progress to insure that students are completing their work. It may be necessary to assist students by providing prompting for some answers. When students have finished their work sheets and discussed their answers as pairs, it is important that the class discuss the issues raised. When students are comparing 1962 and 2002, it may be helpful to review with them the historical context of 1962 compared to 2002. Two major items could be the Cold War and that 1962 is prior to Johnson's Great Society programs.

### ***After the Activity***

Lead a class discussion using the questions from the worksheets. Summarize with the class the key ideas about where money comes from and where it goes in terms of the federal budget.

Further follow up questions for the students to consider could include the following:

1. Looking at the 1962 budget, what various categories are as large or small as they are in the 2002 budget? Why?
2. What does the above information tell you about government priorities?
3. Why is an item like social security so large in terms of expenditures?
4. Why might the government not be eager to reduce spending on social security?
5. Many people think that spending on the poor is the cause of high government spending. Do you agree? Why or why not? Use the data to justify your answer.
6. Some advocate reducing the taxes that corporations pay. Do you agree? Why or why not? Use the data to justify your answer.

In addition, students can investigate "what if" scenarios using their data, spreadsheets, and pie charts. For example, students may investigate further how the budget would change if corporate taxes stayed at the same percent as they were in 1962. Conversely, they can explore the possible effects if social security was reduced to the same percentage as spent in 1962.

**Student Data Sheet**  
**The Federal Budget Revenue**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Working with a partner, you will examine the sources of revenue for the federal government in the 1962 and 2002 fiscal years.

**Step One**

Identify the categories.

Obviously there are many different sources from which the federal government receives funds. Below are five major categories. With your partner define briefly what is covered under each category.

1. Individual Income Taxes

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2. Corporate Income Taxes

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3. Payroll Taxes

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4. Excise Taxes

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5. Other

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For the following questions, think of the 2002 federal budget:

- ◆ Which category would you expect to provide the greatest amount of revenue? Explain.

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- ◆ Which category would you expect to provide the least amount of revenue? Explain.

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- ◆ What changes might you expect when comparing the amounts of revenue in each category from 1962 and 2002? Explain.

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Now you are ready to proceed to Step Two.

## Step Two

One of you will enter the data from 1962 and the other will enter the data from 2002.

### Accessing the CellSheet™ Application

1. Press **[APPS]** to view the application menu. Use the **▲** or **▼** keys to highlight CellSheet. Press **[ENTER]** to start the CellSheet™ Application.



2. Press **[ENTER]** (or any key) to continue past the information screen.

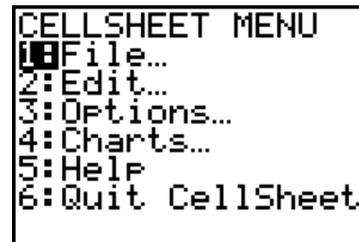


3. Press **[ENTER]** (or any key) to continue past the CellSheet™ Help screen.

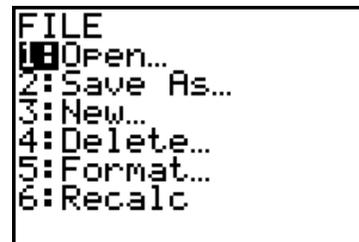
S01	A	B	C
1			
2			
3			
4			
5			
6			

A1: [Menu]

4. If the spreadsheet is blank, press **[GRAPH]** to display the CellSheet™ Menu.



5. Select 1:File... by pressing 1 or **[ENTER]**.



6. Select 2:Save As... by pressing **2**.

```
SAVE AS...  
Old:S01  
New:█  
Enter
```

7. Name the file either **FEDREV62** or **FEDREV02**, depending upon which year you are working. Press **[ALPHA]** to turn off the Alpha mode so you can enter numbers.

```
SAVE AS...  
Old:S01  
New:FEDREV02  
Enter
```

8. If a previously loaded spreadsheet appears, press **[GRAPH]** to display the CellSheet™ menu.

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

9. Select 1:File... by pressing **1** or **[ENTER]**.

```
FILE  
1:Open...  
2:Save As...  
3:New...  
4>Delete...  
5:Format...  
6:Recalc
```

10. Select 3:New... by highlighting **3** and pressing **[ENTER]**.

```
NEW...  
Old:BBB  
New:  
Enter
```

11. Name the file either **FEDREV62** or **FEDREV02**, depending upon which year you are working. Press **[ALPHA]** to turn off the Alpha mode so you can enter numbers.

```
NEW...  
Old:BBB  
New:FEDREV02█  
Enter
```

The following instructions apply regardless of whether you are entering data for 1962 or 2002.

1. Move your cursor to cell A1 and enter the title for the spreadsheet. To enter text, first type " (above the + key). Since you will be entering a large amount of text, it may be helpful to turn on the alpha-lock by pressing [2nd] then [ALPHA].

Enter a title such as: FED REVENUE 1962 (or 2002). Note the space key is above the 0. Text will extend into the other cells if they remain empty.

2. In column A, enter the following categories of sources of revenue.

A2: INC TAX

A3: CORP TAX

A4: PAYROLL TAX

A5: EXCISE TAX

A6: OTHER

A7: TOTAL

3. In column B, enter the following amounts of revenues. This data is in billions of dollars (so 1,946 is actually \$1,946,000,000,000 or almost 2 trillion dollars).

**For 1962**                      **For 2002**

B2: 45.6                      949

B3: 20.5                      201

B4: 17                      708

B5: 12.5                      67

B6: 4                      21

4. You will total the revenues and enter the value in cell B7. Move the cursor to cell B7, press [STO] to assign a formula to the cell. Press [GRAPH] to access the **FUNCTIONS** menu and select **1:sum(**. You will sum cells B2 to B6. Enter **B2:B6** and close the parentheses as shown below. Note: The colon (:) is above the decimal key.

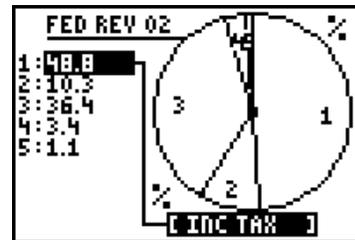
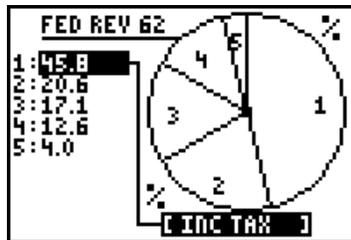
FEDR	A	B	C
2	INC TA	45.6	
3	CORPT	20.5	
4	PAYROL	17	
5	EXCISE	12.5	
6	OTHER	4	
7	TOTAL	99.6	
B7: =sum(B2:B6)			

FEDR	A	B	C
2	INC TA	949	
3	CORPT	201	
4	PAYROL	708	
5	EXCISE	67	
6	OTHER	21	
7	TOTAL	1946	
B7: =sum(B2:B6)			

- Construct Pie Charts of both sets of data and compare the percents. To construct a Pie Chart, press **GRAPH** to access the **MENU**. Select **4:Charts** and then **7:Pie**. Enter cells A2:A6 for the Categories and B2:B6 for the Series. Select **Percent** and enter an appropriate title such as "FED REV 62" (or 02). Move the cursor to **Draw** and press **ENTER** to see the Pie Chart. Press the **TRACE** key to identify the various categories. Note the numbers given are the percents of the total of all revenue.

```

PIE CHART
Categories:A2:A6
Series:B2:B6
Number:Percent
Title:FED REV 62
Draw
    
```



You and your partner should discuss the following questions and be ready to share your answers with the class.

- What are the largest and smallest sources of revenue in the two years studied? Explain why you think that is the case.
- Are you surprised at the results? Why or why not?
- Identify what major changes have taken place from 1962 to 2002 in terms of sources of revenue. Why might this be?
- Using the recent data, summarize the major sources of revenue for the federal government. Do you think there should be any changes?

**Student Data Sheet**

Name: \_\_\_\_\_

**The Federal Budget Expenditures**

Date: \_\_\_\_\_

Working with a partner you will examine the expenditures for the federal government in the 1962 and 2002 fiscal years.

**Step One**

Identify the categories.

There are many different areas in which the federal government spends funds. Below are seven major categories. With your partner, define briefly what is covered under each category.

- 1. National Defense

\_\_\_\_\_  
\_\_\_\_\_

- 2. Social Security

\_\_\_\_\_  
\_\_\_\_\_

- 3. Medicare

\_\_\_\_\_  
\_\_\_\_\_

- 4. Medicaid

\_\_\_\_\_  
\_\_\_\_\_

- 5. Means Tested Entitlements and Mandatory Spending

\_\_\_\_\_  
\_\_\_\_\_

- 6. Discretionary Spending (Non-Defense)

\_\_\_\_\_  
\_\_\_\_\_

7. Interest

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For the following questions, think of the 2002 federal budget:

- ◆ Which category would you expect to require the highest expenditures? Explain.

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- ◆ Which category would you expect to require the lowest expenditures? Explain.

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- ◆ What changes might you expect when comparing the amounts of expenditures in each category from 1962 and 2002? Explain.

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Now you are ready to proceed with Step Two.

## Step Two

One of you will enter the data from 1962 and the other will enter the data from 2002.

### Accessing the CellSheet™ Application

1. Press **[APPS]** to view the application menu. Use the **▲** or **▼** keys to highlight CellSheet. Press **[ENTER]** to start the CellSheet™ Application.



2. Press **[ENTER]** (or any key) to continue past the information screen.

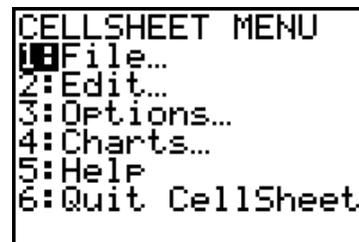


3. Press **[ENTER]** (or any key) to continue past the CellSheet™ Help screen.

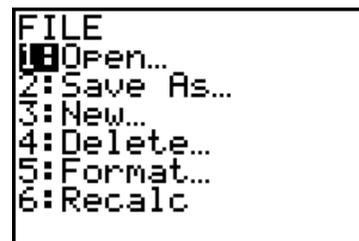
S01	A	B	C
1			
2			
3			
4			
5			
6			

A1: [Menu]

4. If the spreadsheet is blank, press **[GRAPH]** to display the CellSheet™ Menu.



5. Select 1:File... by pressing 1 or **[ENTER]**.



6. Select 2:Save As... by pressing 2.

```
SAVE AS...
Old:S01
New:█
Enter
```

7. Name the file either FEDEXP62 or FEDEXP02, depending upon which year you are working. Press **ALPHA** to turn off the Alpha mode so you can enter numbers.

```
SAVE AS...
Old:S01
New:FEDEXP02█
Enter
```

8. If a previously loaded spreadsheet appears, press **GRAPH** to display the CellSheet™ menu.

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

9. Select 1:File... by pressing 1 or **ENTER**.

```
FILE
1:Open...
2:Save As...
3:New...
4>Delete...
5:Format...
6:Recalc
```

10. Select 3:New... by highlighting 3 and pressing **ENTER**.

```
NEW...
Old:BBB
New:
Enter
```

11. Name the file either FEDEXP62 or FEDEXP02, depending upon which year you are working. Press **ALPHA** to turn off the Alpha mode so you can enter numbers.

```
NEW...
Old:BBB
New:FEDEXP02█
Enter
```

The following instructions apply regardless of whether you will be entering data for 1962 or 2002.

1. Move the cursor to cell A1 and enter the title for the spreadsheet. To enter text, first type " (above the + key). Since you will be entering a large amount of text, it may be helpful to turn on the alpha-lock by pressing **2nd** then **ALPHA**.

Enter a title such as: FED EXP 1962 (or 2002). Note the space key is above the 0. Text will extend into the other cells if they remain empty.

2. In column A enter the following categories of expenditures.

A2: NAT DEF

A3: SOC SEC

A4: MEDCARE

A5: MEDAID

A6: MEANS TEST

A7: DISCRET

A8: INTEREST

A9: TOTAL

3. In column B enter the following amounts of the expenditures. This data is in billions of dollars (so 2,052 is actually \$2,052,000,000,000 or just over 2 trillion dollars).

<b>For 1962</b>	<b>For 2002</b>
B2: 52.3	348
B3: 14.3	455
B4: 0	247
B5: 0.3	145
B6: 13.5	286
B7: 19.5	393
B8: 6.9	178

- You will total the revenues and enter the value in cell B9. Move the cursor to cell B9, press **[STO]** to assign a formula to the cell. Press **[GRAPH]** to access the **FUNCTIONS** menu and select **1:sum(**. Sum cells B2 to B8. Enter B2:B8 and close the parentheses as shown below. Note: The colon (: ) is above the decimal key.

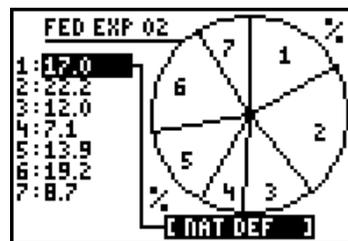
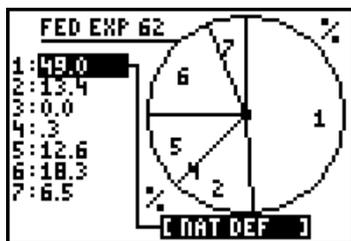
FEDE	A	B	C
4	MEDCAR	0	
5	MEDAID	.3	
6	MEANS	13.5	
7	DISCRE	19.5	
8	INTERE	6.9	
9	TOTAL	103.8	
B9: =sum(B2:B8)			

FEDE	A	B	C
4	MEDCAR	247	
5	MEDAID	145	
6	MEANS	286	
7	DISCRE	393	
8	INTERE	178	
9	TOTAL	2052	
B9: =sum(B2:B8)			

- Construct Pie Charts of both sets of data and compare the percents. To construct a Pie Chart, press the **[GRAPH]** key to access the MENU. Select **4:Charts** and then **7:Pie**. Enter cells A2:A8 for the Categories and B2:B8 for the Series. Select Percent and enter an appropriate title such as "FED EXP 62" (or 02). Move the cursor to Draw and press **[ENTER]** to see the Pie Chart. Press the **[TRACE]** key to identify the various categories. Note the numbers given are the percents of the total of all revenue.

```

PIE CHART
Categories:A2:A8
Series:B2:B8
Number Percent
Title:FED EXP 02
DRAW
    
```



You and your partner should discuss the following questions and be ready to share your answers with the class.

- In what categories are government expenditures the highest and lowest in the two years studied? Explain why you think that is the case.
- Are you surprised at the results? Why or why not?

