## OBJECTIVES

- Students will set up and solve budget-related math problems.
- Students will apply a variety of math strategies to real-world situations related to budgeting.
- Students will use addition, subtraction, multiplication, and division to solve budget-related problems.
- Students will solve problems involving fractions and decimals.
- Students will calculate percents.
- Students will gather information from tables, charts, and graphs.
- Students will create pie charts.


## LESSON MATERIALS

sample budgets (printed from the Internet), computers, calculators, compasses, protractors

## LESSON PLAN

## Introducing the Topic

## What is a budget?

Ask students what they know about budgets. Display sample budgets, and discuss the different categories and money amounts listed. As a class, brainstorm to make a list of people and groups that might create budgets (e.g., individuals, families, businesses, schools, churches, clubs, and governments). Ask students why they think it is important to use a budget. Explain that it is very important to learn how to budget expenses in order to manage finances successfully. Point out that miscalculating expenses or income and having an unbalanced budget can cause serious financial problems.

## What are some ways we use math when preparing a budget?

Discuss the math skills needed for creating a balanced budget. Explain how to allot certain amounts of money to different expense categories without exceeding the amount of income earned. Ask students to estimate how much money they or their families spend in various expense categories each month.

## Key Concepts

Show students how to create a budget using a spreadsheet on the computer. Have each student practice creating a sample budget this way. Instruct the student to make sure the expenses listed do not exceed the income earned.

## Parent Letter

Photocopy the parent letter on page 146, and give each student a copy to take home. This letter explains the topics being studied in this unit and suggests a variety of activities to be completed at home.

## Activity Sheets

Photocopy the activity sheets on pages 147-159, and have the students complete the activities. Allow the students to use calculators as necessary.

## Extension Activities

Photocopy the list of extension activities on page 160. At the end of the unit, have each student choose one project to complete.

## Assessment

Photocopy the unit assessment on pages 161-163, and have the students complete the activities to determine whether or not they have mastered the skills covered in this unit. Allow the students to use calculators as necessary.
$\qquad$

## What Is a Budget?

A budget is a money plan. It takes into account how much you earn and how much you spend. A budget can help you plan for future expenses and show you exactly where your money goes. Many people use computer software programs to create a budget for their household, but you can use a variety of methods.

DIRECTIONS: Use each sample budget to answer the questions that follow.
1.

| Income (monthly) |  | Expenses (monthly) |  |
| :--- | ---: | :--- | ---: |
| Job at Bank | $\$ 1,800.00$ | Rent | $\$ 550.00$ |
| Job at Video Store | $\$ 320.00$ | Utilities | $\$ 270.00$ |
|  |  | Groceries | $\$ 200.00$ |
|  |  | Vehicle Expenses | $\$ 475.00$ |
|  |  | Miscellaneous | $\$$ |
|  |  | Savings | $\$ 100.00$ |
| Total | $\$$ | Total | $\$$ |

What is the total monthly income? $\qquad$
If the total expenses are equal to the total income, how much money is available for the miscellaneous category? $\qquad$
2.

| Income (monthly) |  | Expenses (monthly) |  |
| :--- | :--- | :--- | ---: |
| Job at Day Care | $\$ 1,200.00$ | Rent | $\$ 500.00$ |
| Babysitting Jobs | $\$ 300.00$ | Utilities | $\$ 220.00$ |
|  |  | Groceries | $\$ 175.00$ |
|  |  | Clothing | $\$ 100.00$ |
|  |  | Entertainment | $\$ 80.00$ |
|  |  | Gas/Transportation | $\$ 75.00$ |
| Total |  | Savings | $\$$ |

What is the total monthly income? $\qquad$
If the total expenses are equal to the total income, how much money is available for the savings category? $\qquad$
$\qquad$

## Budgeted Spending Versus Actual Spending

The amount you budget for a particular expense category may differ from the actual amount you spend. There are some expenses, like a mortgage payment, that are the same every month. Other expenses, like utilities, can vary from month to month.

DIRECTIONS: Look at the expenses listed below. For each expense, compare the amount budgeted to the amount actually spent. Decide whether the amount actually spent is over or under the budgeted amount. Then, calculate the difference between the two amounts.

| Expenses | Budgeted <br> Spending | Actual <br> Spending | Over/Under <br> Budget | Difference |
| :--- | :---: | :---: | :---: | :--- |
| Cell Phone Bill | $\$ 75.00$ | $\$ 78.99$ |  |  |
| Electric Bill | $\$ 150.00$ | $\$ 129.88$ |  |  |
| Eating Out | $\$ 80.00$ | $\$ 123.50$ |  |  |
| Movies | $\$ 40.00$ | none |  |  |
| Clothing | $\$ 75.00$ | $\$ 30.00$ |  |  |
| Gas/Transportation | $\$ 170.00$ | $\$ 150.00$ |  |  |
| Groceries | $\$ 275.00$ | $\$ 224.65$ |  |  |
| Household Items | $\$ 30.00$ | $\$ 15.99$ |  |  |
| Mravel | $\$ 30.00$ | none |  |  |

$\qquad$

## Unexpected Expenses

Expenses can vary from month to month. Different months bring different holidays, celebrations, and events, as well as unexpected repairs or needs. Having money set aside in savings or having extra money available in your checking account will help you adjust your budget when unexpected expenses arise. In an ideal situation, your expenses should be less than your income. Expenses should never exceed the amount of money you are bringing in.

DIRECTIONS: List the extra expenses you think you might have in each month of the year. Think about when you might do things like take vacations, give gifts, have parties, and buy seasonal clothing. List the reason for each extra expense, and record how much money the expense will cost. Then, calculate the total extra expenses for each month.

| January | February | March | April | May | June |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |

$\qquad$

## Extension Activities

- Create a budget spreadsheet on the computer.
- Survey 30 people to find out if they use a written budget each month. Ask questions about the expense categories used, and find out whether each person sticks to the budget or not. Create charts and tables to display your findings.
- Use a graphing software program to create pie charts for three sample budgets. Use a different income level for each budget.
- Draw a pie chart for a sample household budget. Then, create the same pie chart using a graphing software program. Display both charts on a poster along with a short essay describing the process used to make each one.
- Make a sample monthly budget for a person who has a gross income of $\$ 35,000.00$ per year and a sample monthly budget for a person who has a gross income of $\$ 95,000.00$ per year. Write ten math problems for others to solve based on these two budgets.
- Keep a money diary to keep track of how much money you spend in one month.
- April is financial literacy month. Design a brochure providing tips about budgeting that could be distributed in that month.
- Visit www.jumpstart.org/madmoney/pgv_money_rc_main.html or www.themint. org/kids/determining-your-budget.html, and complete the activities. Write an essay to summarize what you learned.
- Research the budget for your school district. Create charts and tables to display your findings. Then, write a one-page summary sharing your opinion about the budget.
- Visit www.centeroncongress.org/learn_about/launcher.htm\#budget. Scroll down to the bottom of the screen, and click on the link for Federal Budget Allocation. Complete the activity, taking notes about various facts and figures. Write a one-page essay to summarize what you learned.

