



Grades 6-8

Lesson 3

PLANNING A BUDGET

Rationale: This lesson is intended for middle school students in sixth through eighth grades during a forty minute time period. The lesson teaches students the concept of budgeting and calculating simple interest on a savings account. The activities rely on a variety of interactive and visual formats designed to be interesting and fun.

Lesson Objectives: Students will be able to:

- Identify sources of income.
- Identify monthly expenses.
- Calculate simple interest.
- Plan a monthly budget.

Materials:

- Resource Files: Sample Budget (1/student), Blank Budget Worksheet (1/student)
- Simple Interest Worksheet (1 copy per student)
**Materials not attached to this file may be found in a separate resource file.*

Setting the Stage:

Background Builder #1: Have students make the following t-chart on a piece of paper:

Needs	Wants
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

Ask students to complete the t-chart with 4-5 examples in each column. Remind them that a need is something that we must have to survive, and a want is something we would like to have. Discuss the results with the class. You may even want to make a t-chart on the chalkboard

representing the students' needs and wants. Ask students to think of ways that they can get what they need and want (i.e. working and saving). Finally, tell students that saving is a good thing, but a plan or budget will help them achieve their goal and guarantee financial success.

State the Objective: tell the students what they will be able to do upon conclusion of the lesson.

“At the end of this lesson, you will understand the purpose of budgeting and be able to create your own. You will also be able to calculate simple interest.”

The Lesson Procedure:

Budgeting is the process of making your needs and wants fit with the money you have. It can be difficult at times, but it is the key to making sure you have your money under control. Review sample budget found in resource file with students to demonstrate and clarify concepts.

Allow students to work in pairs with a calculator and pencil to complete the budget worksheet found in the resource file. Provide the following scenario:

You expect to receive \$100 each month as an allowance.

Use your calculator and school lunch menu to determine how much money you would need to buy lunch at school every day for the current month. Allow students to copy the correct answer onto the budget worksheet.

It is very difficult to go to school without buying pencils, paper, and other supplies. Even if your school or your teacher gives you most of your supplies, there will probably be some items you will need or want to buy. Maybe you buy gel pens, highlighters, and glue sticks. Gel pens cost \$5.95, highlighters cost \$3.50, and glue sticks cost \$2.50. How much will you need for school supplies this month? (Answer: \$11.95) Allow students to copy the correct answer onto the budget sheet.

Is this a week when a friend is celebrating a birthday? You will need to buy a gift. Is there a new movie that you want to see? Is there a CD that you really want? Add the following amounts together to see how much your other expenses will be.

Let's say that you buy a CD for your friend's birthday. A CD costs \$14.95. You went to the movies twice this month, and each time you bought a ticket you spent \$7.00. You bought popcorn once, and it cost \$3.50. Your favorite group just put out a new CD, and that costs \$21.99. What is your expense total for these categories? You may have to write these amounts on the chalkboard in order to help the students to record them correctly. (Answer: \$35.99 for

Entertainment/ \$14.95 for Gifts/ \$3.50 Snacks) Allow students to copy the correct answer onto the budget sheet.

How much did you spend of your allowance? How can we figure that out? (Add the totals for each category.) Allow students to add the totals together and then call on someone to give an answer. If we want to know how much is left over from our original \$100 a month allowance, what do we need to do? (Subtract expenses from income.) Your savings for this month would be what is left. When you look at how you spend your money, you should recognize that you have control over meeting your expenses. If you wanted to start saving more money, what spending could you change from this budget? Allow students to offer suggestions such as packing a lunch a few days a month, going to the movies only once, foregoing the CD, etc.

TD Bank, like other banks, allows you to store your savings with us. A bank is the safest place to keep your money, and because we want you to let us protect your money, we give you a thank you gift that we call interest. Interest is money that you earn just by having money in a savings account. It is a percent of the total amount of money that you keep with us. The interest rate and the length of time determine the amount of interest that you leave your money in the bank.

(PLEASE WRITE THIS OUT VERY CLEARLY ON THE CHALKBOARD. KEEP ALL PERCENTS AS DECIMAL AMOUNTS SINCE STUDENTS WILL CALCULATE INTEREST USING THE DECIMAL CONVERSION.) For example, if you save \$100 for one year in an account with a 5% interest rate (write 0.05 on the board) you would have earned \$5.00 for free as a thank you from the bank. Model how you arrived at this answer via the chalkboard and by using the calculator for computation.

Distribute worksheets (included in this file) and allow students to work on them independently. Circulate and help students as needed. When students have finished, review the answers and discuss how saving more money can earn more interest.

Closing the Lesson:

Ask students to clarify between needs and wants and how a budget can help them achieve their goals. Elicit from students that saving money in the bank is not only safe but also profitable because they will earn interest. See the suggestion page for “Ways to End and Review Lessons”, for additional ideas.

National Council of Teachers of Mathematics Principles and Standards for School Mathematics, 2000.

Number and Operations – (Students will) Understand meanings of operations and how they relate to one another.

Number and Operations – (Students will) Compute fluently and make reasonable estimates.

Algebra – (Students will) Understand patterns, relations, and functions.

Problem Solving – (Students will) Build new mathematical knowledge through problem solving.

Communication – (Students will) Use the language of mathematics to express mathematical ideas precisely.

Connections – (Students will) Recognize and use connections among mathematical ideas.

Representation – (Students will) Create and use representations to organize, record, and communicate mathematical ideas.

Ways to End and Review Lessons

Beach Ball Toss: Write end of lesson review questions on a beach ball. When it's tossed the individual who catches it must read and answer the question written under their right thumb.

Sample Questions:

- What are some expenses you may have currently?
- What types of earnings do you gather?
- Define interest.

Interview: In pairs of two, students interview one another with regard to lesson content. When both pupils have had ample time to interview, they must summarize the partner's feedback in either written report or oral format

Sample Questions:

- What item would you be willing to save money for in order to make the purchase?
- Where do you expect to get the money you'll save?
- How much spending money will be available?
- Are there items you'll need to forego in order to save enough money?
- How long will it take you to save enough money for the item you desire?

Student generated questions should also be encouraged in place of Or in addition to the ones listed above.

Quiz the Teacher: Students have the opportunity to flip roles and ask the teacher the questions typically asked of them. Questions need to be generated by each student.

Storyboard/Stretch to Sketch: Have students write and illustrate a storyboard. A piece of paper is folded into six or eight squares, which are filled with a picture and caption for each square. The story should be an example of how saving could be useful in each student's life.

Creative Writing: Develop any of the following items that demonstrate knowledge of lesson content: Advertisement/Brochure/Riddles. Focus on any new piece of information learned. This will differ from one student to another.

INTEREST WORKSHEET:

Name: _____

Date: _____

Use the formula $I=PRT$ to solve the following problems.

1. John received \$100 as a gift from his grandparents for his middle school graduation. He decided to save it in the bank until he decided what he would do with the money. The interest rate on his savings account is 4.9%. How much interest will he earn the first year?

2. Nicole received a check for \$50 when she won a local essay contest. Her mother told her to save it for college. If it earns interest at a rate of 6%, how much money will Nicole have after one year?

3. When Mary's new baby sister was born, her relatives gave her \$25 to start a savings account. How much will Mary's sister have when she turns 1 if her money is kept in the bank earning 5% interest?

4. Eduardo earned \$520 over the year for doing chores around the house. He decided to take \$200 to the bank where it will earn 8% interest. How much interest will he earn if he leaves it there for 1 year?

5. When Lori and Jeff got married, they put \$1,000 of their gifts into a savings account in the hopes of purchasing a bigger home sometime in the future. If they get a rate of 5.5%, how much will they have toward their home in 1 year?

Name: **INTEREST WORKSHEET ANSWER KEY**

Date: _____

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1. John received \$100 as a gift from his grandparents for his middle school graduation. He decided to save it in the bank until he decided what he would do with the money. The interest rate on his savings account is 4.9%. How much interest will he earn the first year?

\$4.90

2. Nicole received a check for \$50 when she won a local essay contest. Her mother told her to save it for college. If it earns interest at a rate of 6%, how much money will Nicole have after one year?

\$53.00

3. When Mary's new baby sister was born, her relatives gave her \$25 to start a savings account. How much will Mary's sister have when she turns 1 if her money is kept in the bank earning 5% interest?

\$26.25

4. Eduardo earned \$520 over the year for doing chores around the house. He decided to take \$200 to the bank where it will earn 8% interest. How much interest will he earn if he leaves it there for 1 year?

\$16.00

5. When Lori and Jeff got married, they put \$1,000 of their gifts into a savings account in the hopes of purchasing a bigger home sometime in the future. If they get a rate of 5.5%, how much will they have toward their home in 1 year?

\$1,055.00