

6th Grade Social Studies

Financial Literacy

SS6E13 Understand that a basic principle of effective personal money management is to live within one's income.

- a. Understand that income is received from work and is limited.
- b. Understand that a budget is a tool to plan the spending and saving of income.
- c. Understand the reasons and benefits of saving.
- d. Understand the uses and costs of credit

BUDGET BASICS

Jason and Amy Hunter, 14-year-old twins, couldn't believe it! Their parents had agreed to let them look for a car that they could purchase in two years when they both got their licenses at 16. The only catch was they had to save enough over two years to buy the car themselves, and to also pay for costs like gas, repairs, and insurance.

Jason and Amy decided to "window shop" for cars at Friendly Fred's Autorama. Friendly Fred himself helped them find a reasonably priced car for \$6,000, an amount that they thought they could afford. "Remember," said Fred, "You won't be buying the car for two years, and with inflation, a similar car will probably cost about 5% more, or \$6,300. When you're ready, Friendly Fred will be here to help you!"

"Now that we know what we want, how can we possibly come up with \$6,300?" wondered Jason. Amy had an idea: "Let's figure out where we stand and make a budget—an estimate of our expected income and expenses. Then we can make adjustments to make sure we can save \$6,300 over the next two years." Jason and Amy got down to work and made a list of the money they expected to receive and spend each month.



QUESTIONS

Use the chart on the right. Show your work on separate paper.

- Prepare a monthly budget (a listing of expected income and expenses) for Amy and one for Jason.
 - How do their expenses compare to their incomes?
 - After two years, will they have enough to buy the car?
 - How much more money does each sibling need to save each month to afford to buy the car?
 - What would you suggest they do to make sure they save enough for the car?
- Jason and Amy are budgeting to make sure they save enough to buy the car. They also have to consider the expenses they will face to operate the car after they buy it. What kinds of operating expenses should they include?

Monthly Income or Expense Item	Jason	Amy
Allowance	\$40	\$40
Video Games	\$10	\$0
Babysitting Earnings	\$0	\$20 (2 jobs per month for 2 hours each at \$5 per hour)
Snacks	\$14	\$0
Art Supplies	\$0	\$44
Donation to Animal Shelter	\$0	\$5
Batting Cage Rentals	\$16	\$0

DEFINITIONS:

- Budget:** An estimate of expected income and expenses for a future period of time.
- Income:** Money received during a period of time from wages, interest, and other sources.
- Expenses:** Money spent during a period of time to pay for goods or services.

NOW TRY THIS!

Make a list of the income you receive and the expenses you have each month and prepare a budget for yourself. If your income and expenses are equal, you aren't saving anything. Do you think this is a problem? Explain your thinking.

CASH OR CREDIT?

Jason and Amy's big day had finally arrived! After blowing out the candles on their sixteenth birthday cake, they went with their parents to the State Department of Motor Vehicles where they both passed their drivers' tests!

Next, they returned with their parents to Friendly Fred's Autorama. With Fred's expert help, they were able to find a used red two-door car for \$6,300 (which included tax, title, and license). It was the amount they had managed to save over the past two years!

"Congratulations, I know you kids have worked hard to save for the car," Fred began. "But you might want to consider a loan so you can hold on to your little nest egg. I can get you a loan at 11.9% interest for no money down and 60 monthly payments of only \$143.02."

Their parents said they could think about it. "If we take out a loan, we won't have to touch our savings," declared Amy. "We could use our income from Cuckoo Cones to pay off the loan and use our savings to pay for gas, repairs, insurance, and other expenses." "Before we agree" said Jason, "we ought to figure out what the loan will really cost us."



QUESTIONS

Show your work on separate paper.

- How much will Jason and Amy pay in total if they take out the loan?
- How much interest will Jason and Amy pay over the life of the loan? (Hint: Compare the total cost of the loan payments to the cost of the vehicle.)
- Do you think Jason and Amy should take out a loan or use their savings to buy the car? Explain your thinking.

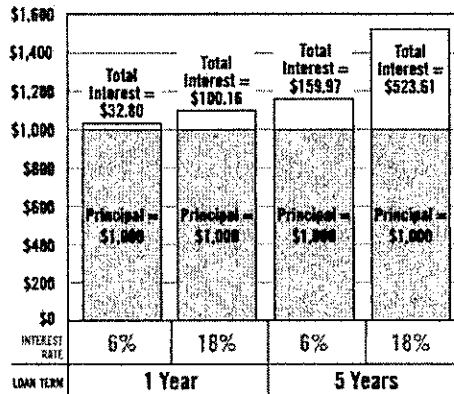
NOW TRY THIS!

- Use an Internet search engine to find an online credit calculator. Assume you owe a \$1,000 balance on a credit card. Now compare the following credit card deals. Which one has the lowest monthly payment? Which one has the lowest total cost (total cost equals the number of payments times the monthly payment amount)?
 - 20% interest paid back in 24 months
 - 12% interest paid back in 36 months
 - 13.9% interest paid back in 30 months
 - 18% interest paid back in 12 months
- Additional Challenge:** Choose a period of one year for each of the four loans, and display the info in a bar graph.

DEFINITIONS:

- Loan:** A legal arrangement in which a lender gives money to a borrower who agrees to repay the amount, usually within a set period of time. Most loans require the borrower to pay the lender interest in addition to the amount of money borrowed (the principal).
- Credit Card:** A plastic card, usually issued by a bank or store, that enables consumers to make purchases and pay off the balance later. If you pay off your entire balance on time, you won't be charged interest.

THE REAL COST OF BORROWING \$1,000



WORKSHEET ANSWER KEY

WORKSHEET 1: "BUDGET BASICS"

INCOME		EXPENSES	
Allowance	\$40	Video games	\$10
		Snacks	\$14
		Batting cage	\$16
Total Income	\$40	Total Expenses	\$40
Amy's Monthly Budget			
INCOME		EXPENSES	
Allowance	\$40	Art supplies	\$44
Babysitting	\$20	Charity	\$5
Total Income	\$60	Total Expenses	\$49

- Amy saves \$11 per month and Jason saves nothing.
- No, after two years, their savings will only total \$264 (24 months x Amy's savings of \$11 per month).
- Each sibling needs to save \$131.25 per month (\$6,000 cost of the car ÷ 2 twins ÷ 24 months). Since Amy already saves \$11 per month, she needs to save an additional \$120.25 per month.
- Answers will vary but should include increasing income (e.g., more babysitting hours for Amy, getting part-time jobs, etc.), and/or cutting expenses.

NOW TRY THIS! Individual budgets will vary according to the economic circumstances of each student. Budgets should include sections for income and expenses. The concept of saving will be new to many middle school students so this will be an opportunity to introduce the idea. If they want to purchase a big ticket item in the future, savings will help make it possible. They may also want to put some money aside for a rainy day. Through discussion, ensure that students understand the need for a reserve fund.

WORKSHEET 2: "WHERE DID THE MONEY GO?"

- 15.07% (rounded to four decimal places) $(\$3.68 + \$2.35 + \$0.81 + \$1.60) / \$56$
- 64.29% $(\$36 / \$56)$
- 1.45% $(\$0.81 / \$56)$

NOW TRY THIS!

- Jason saves \$35 per week through direct deposit. He gives \$1 per week through payroll deduction to charity and he has \$11.56 to spend (or save or give if he so chooses).
- Answers will vary, but the importance of saving and giving should be emphasized as part of the class discussion.

WORKSHEET 3: "MAKING MONEY WHILE YOU SLEEP"

- \$8.04 (1st year's interest of $\$400 \times .01$ + second year's interest of $\$404 \times .01$)
- \$358 ($\$400 - \2×21)
- \$10.15 [Savings account interest = $\$10.05$ ($\$500 \times .01$ + $\$505 \times .01$) CD interest = $\$20.20$ ($\$500 \times (1 + .02)^2 - \500] The difference is $\$20.20 - \$10.05 = \$10.15$

NOW TRY THIS! Answers will vary, but should consider the trade-offs between higher interest rates and ease of access to funds.

BONUS WORKSHEET: "CASH OR CREDIT?"

- \$8,581.20 ($60 \times \143.02)
- \$2,281.20 ($\$8,581.20 - \$6,300$)
- Answers will vary, but should indicate that the interest cost is a significant portion of the total cost. If they use their savings, they will pay nothing in interest expense.

NOW TRY THIS! An online calculator will compute the following: a) \$50.90 monthly; \$1,221.16 total; b) \$33.21 monthly; \$1,195.56 total; c) \$39.65 monthly; \$1,189.50 total; d) \$91.68 monthly; \$1,100.16 total. (Note: Answers may differ slightly due to rounding methods of different online calculators.) The 12% interest loan (option b) has the lowest monthly payment; the 18% loan (option d) has the lowest total payment.