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Hands on Banking®
Money skills you need for life

Middle School Version

Instructor guide

VERSION 5.1

Hands on Banking® Instructor's Guide
Middle School Version (Grades 6–8)
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Introduction

The *Hands on Banking*® program is an interactive financial-literacy curriculum for students grades 4-12 and adults. This teacher's guide is designed for the Kids' (grades 4 and 5) curriculum of the program.

The *Hands on Banking* program was developed to teach both the basics of good money management and the skills needed to create a brighter financial future. The lessons examine financial concepts and decision-making through illustration, real-life problems, and mathematical computation. The curriculum is relevant to students' lives, and is designed to support their financial success.

This fun and innovative program was developed by Wells Fargo as a free community service. It is intended for educational purposes only and contains no commercial content.

The *Hands on Banking* program is available free of charge in both English and Spanish, both on the Web (at **www.handsonbanking.org** and **www.elfuturoentusmanos.org**) and on CD-ROM. The curriculum is designed for self-paced, individual learning or for classroom use.

This teacher's guide is designed to be used alone or as an adjunct to the online program.

Educational standards

The lessons in this program adhere to the following mathematics and financial literacy standards:

- National Council of Teachers of Mathematics (*Principles and Standards for School Mathematics*, 2000)
- National Council of Economic Education and the National Association of Economics Educators and the Foundation for Teaching Economics, *Voluntary National Content Standards in Economics* (1997)
- JumpStart Coalition for Personal Financial Literacy, *National Standards in K–12 Personal Finance Education* (2007)

Common Core State Standards (2017 update)

This guide has been updated with lessons and activities that meet the Common Core State Standards in both mathematics and English language arts. A crosswalk and listing of lessons and activities is included in the Appendix.

Teachers are encouraged to integrate the content into other lesson plans, and use the curriculum as a springboard to address real-life situations.

Please refer to your own state, local, district, or school standards to determine the appropriateness of the lessons for your students.

The **No Child Left Behind Act** is a federal law designed to improve the academic achievement of all students, particularly those who are minorities, disabled, economically disadvantaged, or have limited English proficiency. The Act requires teachers of mathematics to provide all students with equal opportunities to excel and the mathematical skills and knowledge they need to actively participate in American society. Consistent with the objectives of the No Child Left Behind Act, the *Hands on Banking / El futuro en tus manos* curriculum and supplemental materials for grade levels 4–12 are aligned with both state and national educational standards for mathematics, reading, and economics.

Curriculum overview

The online Teens' *Hands on Banking* curriculum is divided into five units, plus an assessment**.** Each unit contains multiple lessons. The teacher's guide condenses each online unit's lessons into a smaller number of sections. The lessons in this guide contain activity worksheets for you to use with your students.

This curriculum is designed to be presented in the given lesson sequence. However, depending on what is appropriate for your students, you may wish to establish your own sequence.

Problem solving is woven into all of the program's units. Students apply both their understanding of basic banking concepts as well as strategies to solve challenging problems in different contexts.

To be successful with the *Hands on Banking* curriculum, students should be able to:

- Perform basic functions on a calculator
- Read proficiently at a level commensurate with their grade level
- Follow basic written and oral directions, and readily understand oral dialogue

Because students' mathematical skills vary, teachers should review the problems in this guide before having students use the *Hands on Banking* Web site.

To request a free CD-ROM

To request a CD-ROM for your classroom, please contact us via email at **HOBCD@wellsfargo.com**. The CD-ROM contains both the English and Spanish versions of the program for all age groups. There is no charge for small quantities of the CD-ROM. Please call for information regarding high-volume requests. Please allow two weeks for delivery.

Your thoughts are welcome

We welcome your comments and suggestions for future versions of the *Hands on Banking* curriculum and this teacher's guide. Please contact us via email at **HOBinfo@wellsfargo.com**.

Thank you for sharing these valuable financial literacy programs with students and adults in our communities. As a teacher, your training and guidance will provide others with the knowledge and skills they need for a brighter financial future!

The *Hands on Banking* program is sponsored and developed by Wells Fargo to serve our communities. The products and services mentioned are those typically offered by financial institutions and do not represent the specific terms and conditions of Wells Fargo's products and services. The site contains no advertising and does not require or collect any personal information.

How to Use This Guide

The purpose of this teacher's guide is to support the effective presentation of the *Hands on Banking* curriculum in your classroom. As a first step, we strongly encourage you to review the program online (at **www.handsonbanking.org** and **www.elfuturoentusmanos.org.** Even if your students will not be using computers at school, gaining familiarity with the program will help you present it more effectively.

Five ways this guide can help you

This teacher's guide is designed to be used alone or as an adjunct to the online program. If you're a teacher or group leader, this guide can help you in five ways:

1. **Gain familiarity with the program:** Reviewing this guide is a convenient way to familiarize yourself with the Kids' curriculum if you do not have ready access to a computer or the Internet.
2. **Prepare lessons:** If your students will not have access to computers, you can use this teacher's guide as a resource for preparing your lesson plan.
3. **Utilize worksheets:** The teacher's guide includes activity worksheets which allow your students to apply what they have just learned to real-life scenarios. A teacher's copy of each worksheet, including answers and hints, follows the students' worksheet.
4. **Extend or modify lessons:** The guide features suggested teaching tips. Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.
5. **Assess progress:** Finally, this guide includes an assessment that students can use to test their knowledge.

How the guide is organized

This guide covers four units, followed by an assessment and a dictionary of financial terms. The *Hands on Banking* curriculum is designed to be presented in unit and lesson sequence. However, depending on what is appropriate for your students, you may use this guide to establish your own sequence. You may choose to present individual units or lessons on a stand-alone basis, or in different combinations, based on your specific educational objectives.

Each unit of this guide adheres to the following format:

- **Unit Overview**
  A summary of the unit's content
- **Learning Objectives**
  The specific financial-literacy and mathematical objectives of the lessons.
- **Alignment with Educational Objectives**
  The financial literacy, English language arts, and mathematics standards, by grade level, to which these lessons are aligned.

Sections
A grouping of related *Hands on Banking* lessons. Each individual section includes:

Opening Questions
Questions to start your students thinking about the concept and how it relates to them.

Key Points
A series of bullet points summarizing critical concepts. Please note that this portion of the guide frequently includes extra information to complement and enrich what is offered in the online/CD-ROM version of the *Hands on Banking* program.

Activities
Indicates that a worksheet follows.

Student worksheet
These worksheets allow your students to apply what they have just learned to real-life scenarios.

Teacher's copy of Worksheet
A teacher's copy of each worksheet, including answers and hints, follows the students' worksheet. The students' copy can be duplicated or made into an overhead transparency for a whole-class activity.

Teaching Tips
Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.

About content modifications
Please note that in some cases the content of the teacher's guide has been modified from the online program. (For example, the online lesson may ask students to use a calculator, ATM simulator, or computerized worksheet—features that are available to only those students using a computer.) In these cases, a modification icon appears in the teacher's guide. Watch for this icon—it will quickly alert you to any content that differs from the online curriculum.

About the narrators
The online narrators of the Middle School Version of the *Hands on Banking* program are Angie and Alex, two outgoing, money-savvy teenagers. Alex and Angie share with other teens what they have learned about managing money.

Prepare yourself—and your students

Prepare your students for a positive learning experience with the *Hands on Banking* program:

- *Know the program*. Get familiar with each unit and its lessons. If possible, review the program online.
- *Review the math concepts*. Before assigning students to work on any unit, review with them the underlying mathematical concepts needed for problem solving. Be sure your students are able to do the necessary level of computation before they begin.
- *Introduce financial vocabulary*. Be sure your students gain a working understanding of new financial terms. Key terms, shown in **boldface**, appear in the dictionary at the back of this guide.
- *Prepare for work*. Encourage students to bring a calculator and pencil and paper to work through the math, whether or not they are at a computer.
- *Encourage collaboration*. Allow students to work in pairs on the worksheet problems. Encourage them to share their approaches to finding the solutions.
- *Promote discussion*. Discuss the examples with your students. Talk through the problems and how to arrive at the solutions. Math problems in the online/CD-ROM program provide both answers and hints to arrive at the solutions. This guide provides hints and answers only on the teacher's copy of each activity.
- *Use the teaching tips*. Refer to the teaching tips found at the end of each unit in this guide to modify and extend the new ideas presented in the *Hands on Banking* curriculum.

If your students are using computers

- *Review the basics of computer literacy.* To be successful, students should be able to work with a mouse (to scroll, highlight, and drag and drop words and numbers) and enter an answer on the screen.
- *Orient students to the site*. Help students explore how to navigate the program and access its primary features .
- *Use the computerized calculators*. Introduce students to the basic calculator featured on the Web site and CD-ROM. It can be accessed by clicking the Tools button.
- *Take advantage of on-screen hints.* With an incorrect answer to a problem, students may be shown a hint automatically.
- *Encourage ATM practice*. Introduce students to the ATM simulator, which can be accessed by clicking the Tools button.
- *Use the Glossary*. Teach students how to access the glossary of financial terms, which can be accessed from each page. Key terms are shown in **boldface** in the site's closed-captioning.

After studying the curriculum

- *Encourage students* to take the assessment. Students may use the assessment to test their knowledge of the *Hands on Banking* curriculum for their specific age group.
- The teacher's copy of the assessment, including hints and answers, follows the students' worksheet.
- Ask students to complete the assessment after they have studied the curriculum. Students should use their incorrect answers to identify areas for review, and following a review, take the assessment again.
- If using the online or CD-ROM versions of the *Hands on Banking* program, the program will automatically score the results. For a score of 70% or higher, students can print out a certificate of achievement, personalized with their names. If you are not online or using the CD-ROM, a certificate of achievement template is included for photocopying.

You and Your Money

Unit Overview

In these lessons for middle-school students (grades 6–8), we reinforce the concept that money is earned and used to buy things. Students explore the meaning of "buying power" in order to make sound decisions about their own spending. Students also review the basic purposes of banks and banking. Finally, students consider how their education, skills and career choices may influence their income. At the end of these lessons, students will be able to identify the real buying power of earnings and money, and the role banks and other financial institutions can play in assisting people to manage their money wisely.

In the online/CD-ROM version of the *Hands on Banking* program, there are eight lessons that are condensed into three sections, below.

Section 1: Money and Banking
What is money, how is it used in our society? What roles can banks and other financial institutions play in helping you to manage your money?

Section 2: Value
Money has value, and individuals can make choices about how, when and where to spend their money to receive the most in return.

Section 3: Earning Power
An individual's education, skills, and career choices influence his or her income.

Learning Objectives

The financial-literacy objectives of these lessons are for students to identify sources of income, recognize the importance of money in society, and describe the role of banks.

The mathematical objectives of these lessons are for students to do mathematical computations in the process of solving real-life mathematical problems.

Alignment with Educational Standards

National Council of Economic Education and the National Association of Economics Educators and the Foundation for Teaching Economics, *Voluntary National Content Standards in Economics* (1997), Grade 8:

- Content Standard 10: "Describe the roles of various financial institutions. Banks and other financial institutions channel funds from savers to borrowers and investors."
- Content Standard 11: "Money makes it easier to trade, borrow, save, invest, and compare the value of goods and services. As a store of value, money makes it easier for people to save and defer consumption until the future. As a unit of account, money is used to compare the market value of different goods and services."

JumpStart Coalition for Personal Financial Literacy, *National Standards in K-12 Personal Finance Education* (2007), Grade 8 Standards:

- Financial Responsibility and Decision Making; Income and Career

National Council of Teachers of Mathematics *Principles and Standards for School Mathematics*, (2000), Grades 6–8:

- Number and Operations Expectations: "…work flexibly with fractions, decimals, and percents to solve problems."
- Problem-Solving Expectations: "… solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems."

National Governors Association Center for Best Practices and Council of Chief State School Officers (2010). Mathematics and English language arts content standards.

Section 1: Money and Banking

What is money, how is it used in our society, and what roles can banks and other financial institutions play in helping you to manage your money?

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Does anyone know where money comes from—how is money produced originally?
- What are some of the reasons that people use banks?
- What are some examples of how money changes hands in our society? What makes money flow between people, businesses, and banks?

Key Points

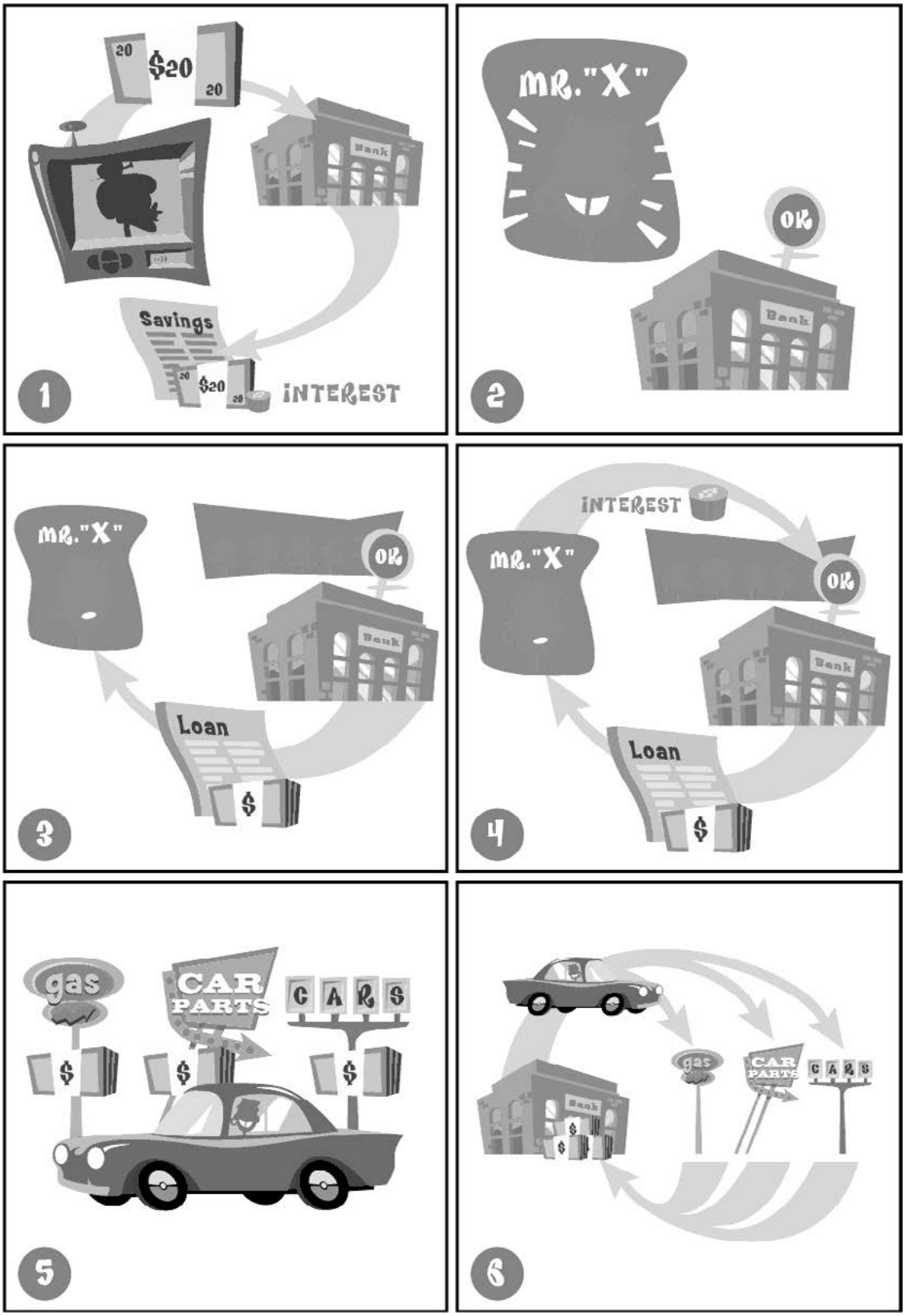
Money and how it is used

- Money is how we measure economic **value.** The cash and coins we use, called **currency,** are what we use in our society to pay for goods and services.
- Most countries create their own currency. In the U.S., the federal government prints money and regulates the amount. In North America alone, several forms of currency are in use: the Canadian dollar in Canada, the U.S dollar in the U.S., and in Mexico, the peso.
- All the coins and bills in the U.S. are created, or "minted," by the **Treasury** of the federal government. The Treasury carefully controls how many dollars and coins are distributed.
- Money is the glue that binds products, services, and people together in our **economy.** Our country's economic engine is fueled by what people create, and money allows people to both produce and buy what is created.
- People earn money by working and being paid for their work.
- Aside from being fun to have, money helps you handle the necessities of everyday life.
- Money changes hands frequently—it's exchanged everyday between people, businesses and banks.
- Money may come to a bank from many sources. It starts at the Treasury, which keeps banks supplied with the money they need for their customers. But money that's *already* in the economy also goes to banks—from individuals and businesses who keep their money in banks.
- People put their money in a bank for safekeeping. Banks *pay interest* on the money people put in the bank for extended periods of time.
- Banks *lend* the money to borrowers and investors. Banks *charge interest* on the money they lend.
- Money leaves the bank, goes through the economy, and comes back again. Money recycles!

Activity

Introduce students to the cycle of money in the following diagram. Use the examples below to discuss how money flows from hand to hand:

- Let's say your grandmother gives you $20 for your birthday, and you decide to keep it safe at the bank, in a **savings account.** The bank then pays you a small amount for keeping your money in that account. This is called **interest**.
- Now let's say that Mr. X comes to the bank for a loan to buy a car. Because they know he manages his money carefully, the bank is sure he'll repay the loan. The bank gives him the loan, and Mr. X is a happy customer!
- The bank uses a portion of your money—and money from lots of other bank customers—to give Mr. X his car loan.
- Mr. X will have to pay back every penny he borrowed—*plus* he'll pay the bank **interest.** That's right—you see, interest works both ways. You *earn* interest if you're saving money at the bank, and you *pay* interest if you borrow money from the bank.
- Mr. X now pays the car dealer for his new car. On his way home, Mr. X fills up the tank at the gas station, and then buys some car supplies.
- With each purchase, Mr. X's money changes hands once again. The gas station and car supply store owners use Mr. X's money to pay their expenses and their workers' paychecks. And then, the stores and the workers take their money—once again—back to the bank. Mr. X's money has gone full circle!



Key Points

Banks and you

- Banks and similar financial institutions provide a number of helpful services to help you manage your money:
    - **Savings accounts** enable you to keep your money safe and make it grow with **interest.**
    - **Checking accounts** allow people to make purchases and pay bills using paper checks instead of cash.
    - **Loans** help people to purchase expensive items, such as cars, and then pay the money back over time, plus interest.
    - **Credit cards** can be a convenient way to buy things and pay for them over time, but the interest rate is frequently higher than with loans.
    - **Investment accounts** can help people make their money grow over time, and be prepared for large expenses, for example college education.
- Once you're set up with accounts at a bank, how do you manage your money? How do you put money into your accounts and take money out? How do you keep track of it? Banks help you to do all of these things, and make money management easy.
- When you work with a bank, you can get cash, add cash, and transfer money between accounts, either at a bank store or at an **automated teller machine,** or **ATM.** At some ATMs, you can get cash 24 hours a day. Some bank stores are even located in grocery stores! At some banks, you can manage your accounts by phone or online. It all adds up to a lot of convenience!
- Students may practice with the ATM simulator on the *Hands on Banking* site or CD-ROM.

Section 2: Value

Money has value, and individuals can make choices about how, when and where to spend their money to receive the most in return.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Describe a time that you bought something that was important to you. How did you decide exactly what to buy and where to buy it?
- Describe a time when you bought something and then later wished you hadn't.
- What does it mean when someone describes a purchase as a "good value"?

Key Points

- The value of an item to an individual is determined by the amount that individual is willing to pay.
- Individuals can save money by comparing what's offered by different sellers and shopping for the best price.

Activity

Students use the following worksheet to explore what is meant by "shopping for value." The teacher's copy of this activity follows the students' worksheet.

Shopping for Value Worksheet

Name _____

1. Pogo sells shirts for $14.99 each. Baja Coast has a special deal: buy 2 and get the third at 30% off the least expensive shirt. There are 3 shirts you want to buy. At Baja Coast, the 3 shirts you want are $16.99, $15.99, and $15.50. What is the least amount you can pay for all 3 shirts?

2. You're having a party and you want to buy some soda. Two different stores are advertising the same brand and the same size bottles of soda. You want to buy two bottles of soda. At which store will you get a better buy?

   Store A: 3 bottles of soda for $6.50
   Store B: 4 bottles of soda for $8.89

Teacher's Copy of Shopping for Value Worksheet

Name _____

1. Pogo sells shirts for $14.99 each. Baja Coast has a special deal: buy 2 and get the third at 30% off the least expensive shirt. There are 3 shirts you want to buy. At Baja Coast, the 3 shirts you want are $16.99, $15.99, and $15.50. What is the least amount you can pay for all 3 shirts?
   ($43.83 at Baja Coast; $44.97 at Pogo)
   Hints:
   - *Take 30% off $15.50, which is the least expensive shirt, by multiplying $15.50 x .30 (30%).*
   - *Subtract that amount from $15.50 to calculate how much that shirt will now cost.*
   - *Add that total to the $16.99 price and the $15.99 price.*
   - *Then multiply $14.99 by 3, which is the cost of 3 shirts at Baja Coast.*
   - *Which is the lesser total price?*

2. You're having a party and you want to buy some soda. Two different stores are advertising the same brand and the same size bottles of soda. You want to buy two bottles of soda. At which store will you get a better buy?

   Store A: 3 bottles of soda for $6.50
   Store B: 4 bottles of soda for $8.89

   (Store A: $4.34 for 2 bottles)
   Hints:
   - *Calculate the cost of 1 bottle of soda at each store by dividing the price by the number of bottles for that price.*
   - *Divide $6.50 by 3.*
   - *Divide $8.89 by 4.*
   - *Multiply that by 2 to get the cost of 2 bottles of soda.*
   - *Compare the costs.*

Section 3: Earning Power

An individual's education, skills, and career choices influence his or her income.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Have you ever earned money for your work? What work did you do and how much did you get paid? Why did you get paid more for one type of work than for another?
- Let's say a person wants to earn more money than he does currently. What are some of the things he might try in order to make that happen?
- When you think about your own future, what is one type of work or job you have thought about for yourself? What kind of education and skills would you need to succeed in that career?

Key Points

- Some people earn money by working on their own, or owning their own business. Other people earn money by working as employees—they work for another person, organization or company, who is called their employer.
- The money workers make is called **income,** or **earnings.**
- **Earning power** is the ability to earn money in exchange for work.
- In our society, people with higher education and more skills earn more money on the job than those with less education and fewer skills. Start planning now to get as much education and training as you can!
- There are several ways that you can increase your earning power:
    - One way to increase your earning power is to increase the amount of time you work. If you get paid by the hour, for example, you can earn more by working more hours.
    - A second way to increase your earning power is to achieve more results on the job. For example, if you have a job as a salesperson, you may be paid more for making more sales, no matter how much time it took you to do that.
    - A third way to increase your earning power is to do work of high quality. For example, let's say you had your own business making furniture. Customers might pay more for your furniture than for someone else's because they believe your product is better quality.
    - One of the most valuable ways you can increase your earning power is by gaining new knowledge, experience, or skills. A few examples include knowing how to use a computer, being a good writer, having math skills, and knowing a foreign language. If you have knowledge, skills and experience that are valuable to an employer, you may have the ability to handle a wider variety of jobs, more challenging jobs, and jobs that pay more.

Teaching Tips

Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.

1. Problems in these lessons can be used to address the value of one's time. In the problem that compares costs of shirts, students should be encouraged to consider the location of the two stores. Even if the price of the shirts is a few cents less at one store, would it be cost-efficient to shop there if the other store is considerably closer? A similar discussion can also follow the problem comparing the cost of soda. What if an individual has to travel roundtrip by bus to shop at the less expensive store? Suppose it takes an hour to go roundtrip. Would that be cost-efficient? When wouldn't that matter? When would that matter? Allow students to discuss this and encourage them to justify their thinking.

2. Modify the problem comparing the cost of soda:
   Two different stores are advertising the same brand and the same size bottles of soda.
   Store A: 3 bottles of soda for $6.50
   Store B: 4 bottles of soda for $8.89
   - How much will 3 bottles of soda cost at Store B?
   - How much will 4 bottles of soda cost at Store A?
   - At which store will you get the best value for your money?

3. Use this problem to encourage students to find different solutions:
   Baja Coast has a special deal—buy two shirts and get the third at 30% off the least expensive shirt. You want to buy three shirts that cost $16.99, $15.99 and $15.50. How much will the three shirts cost?
   - Encourage students to find and explain alternative ways of solving the problem. For example, find 30% of $15.50, subtract that answer from $15.50, and add that new amount to $16.99 and $15.99. Or, calculate 70% of $15.50, and add that amount to $16.99 and $15.99. Or, do some mental arithmetic—$16.99 is almost $17.00, and $15.99 is almost $16.00. Students can calculate 70% of $15.50 in their heads ($10.85) and add that to $33.00, and subtract $.02. Encourage students to come up with and explain their own ways to solve this and similar problems. Change the costs or the amounts of the shirts, and have students solve a similar problem in at least two different ways.
   - In these new problems, adjust the prices to reflect the abilities and needs of individual students. Use larger, more difficult numbers for more capable students, or for all students as calculator practice. Use smaller, more "friendly" numbers for students who need additional computation practice or for all students as mental math work.

4. Have students look in the newspaper to find an ad for shirts or another product. Ask them to create their own problems to solve using that information.

5. Have students look in the newspaper to find grocery ads. Have them create a grocery list and compare prices at two or more stores.

6. Have students look in the classified ads to find hourly wages for different jobs. Students can use that information to calculate how many hours they would have to work at different jobs to have enough money to buy something they see advertised in the newspaper.

7. What is meant by the term, "minimum wage"? What is the current minimum wage for workers in the United States? In your area?

8. Have students explain the differences between "earning interest" and "paying interest."

9. Ask students to provide examples of ways they can earn money.

10. Create problems such as these:
    - You want to buy a jacket that is on sale for $49.95. If you are paid $2.75 an hour for babysitting, how many hours will you have to baby-sit to earn enough money to pay for the jacket?
    - Your neighbor will pay you $7.50 to wash his car. How many hours will you have to baby-sit now to pay for the jacket?
    - If you had a job that paid minimum wage, how many hours would you have to work to have enough money to buy the jacket for $49.95?
    - If you decide that $49.95 for the jacket is too much to pay, what does that tell you about the value of the jacket to you?

11. Students should be encouraged to research and compare the education requirements for different jobs and occupations that interest them.

Budgeting

Unit Overview

In these lessons, middle-school students (grades 6-8) are introduced to a personal budget. At the end of these lessons, students will be able to explain the purposes of budgeting and basic budgeting strategies. Students will be able to create their own personal budgets.

In the online/CD-ROM version of the *Hands on Banking* program, there are eight lessons that are condensed into two sections, below.

Section 1: Understanding and Creating Budgets
Individuals use budgets to itemize and manage their income, expenses, and savings. To be financially sound, it's important to spend less than you earn. Students identify fixed, flexible, and discretionary expenses. Students create a personal budget showing income, expenses, and savings.

Section 2: Using a Budget
Students apply what they know about budgets to make sound financial decisions.

Learning Objectives

The financial-literacy objective of these lessons is for students to recognize that a major factor in being financially solvent is to spend less than one earns and to save the difference. A personal budget is a tool that can assist an individual stay within his or her income.

The mathematical objective of these lessons is for students to compute the sum or difference of whole numbers and positive decimals to two places.

Alignment with Educational Standards

National Council of Economic Education and the National Association of Economics Educators and the Foundation for Teaching Economics, *Voluntary National Content Standards in Economics*, (1997), Grade 8:

- Content Standard 2, "To determine the best level of consumption of a product, people must compare the additional benefits with the additional costs of consuming a little more or a little less."

JumpStart Coalition for Personal Financial Literacy, *National Standards in K–12 Personal Finance Education* (2007), Grade 8 Standards:

- Planning and Money Management

National Council of Teachers of Mathematics *Principles and Standards for School Mathematics*, (2000), Grades 6–8:

- Number and Operations Expectations, "[Students will] work flexibly with fractions, decimals, and percents to solve problems…[Students will] select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods."
- Problem-Solving Expectations: "Solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems."
- Connections Expectations: "Recognize and apply mathematics in contexts outside of mathematics."

Section 1: Understanding and Creating Budgets

Individuals use budgets to itemize and manage their income, expenses, and savings. To be financially sound, it's important to spend less than you earn. Students identify fixed, flexible, and discretionary expenses. Students create a personal budget showing income, expenses, and savings.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Describe a time when you wanted to buy something but didn't have enough money to pay for it.
- Explain ways you could save money for something you wanted to buy.
- What are examples of something you or your family *need* to buy—versus something you'd *like* to have?
- What are some reasons you might want to have a written plan for how you are going to spend your money?

Key Points

- A personal budget:
  - helps you identify how you spend your money and how much you spend in a given period of time;
  - helps you plan the savings you'll need for unexpected expenses or changes in income; and,
  - helps you make decisions about your money both today and as your situation changes over time.
- Remember, your budget is a general plan. If your expenses change, or if you have an emergency expense, your budget will have to change, too. So try to allow yourself a few dollars left over every month for pocket change—or for the unexpected.
- What information do you need to make a personal budget? You need to know:
  - how much money you have coming in during a given period of time, that is, your **income**;
  - how much money you have going out in a given period of time, that is, your **expenses**; and,
  - how you can adjust your spending habits to save for unexpected events and get the most **value** for your money.
- Types of Expenses
  - **Fixed Expenses:** These expenses occur regularly and don't change from month to month. Examples of fixed expenses are rent and car payments.
  - **Flexible Expenses:** Like fixed expenses, flexible expenses occur on a regular basis. The difference is that with flexible expenses, you have some control over how much you spend. Examples of flexible expenses include food and gasoline.
  - **Discretionary Expenses:** This is money that you *choose* to spend—like money for movies or having pizza with friends. It also includes the money that you save.

Activity

Students use the following worksheet to analyze a personal 4-week budget. The teacher's copy of this activity follows the students' worksheet.

Personal Budget Worksheet

Name _____

Alex's 4-Week Budget

Description	Income (+)	Expense (-)	$ Available
Earnings - babysitting and running errands	$80.00		$80.00
College fund		$15.00	$65.00
Snack money		$20.00	$45.00
Savings for a computer		$15.00	$30.00
Entertainment/Clothes		$20.00	$10.00

1. The budget above was created by Alex to help him plan how he will spend the money she earns. He usually earns $20 each week by babysitting and running errands for his parents. If Alex is sick one weekend and can't earn the $20, how much will he earn for that 4-week period (assume there are 4 weekends in the month)?

2. Alex wants to buy a pair of shoes. But they cost $45.99, not including tax. Using Alex's entertainment/clothing buget, how long will it take him to have earned enough money for the shoes?

3. Alex has kept within his budget during this 4-week period! He also earned an extra $12 one week for cleaning his neighbor's garage. If Alex wants to save the $10 he has left over every 4-week period, how much less time will it take for him to earn enough money for the shoes? Remember, the shoes cost $45.99 plus tax.

4. Alex saves $15 every 4 weeks for his college fund. How much does Alex save in 1 year?

5. If Alex saves $195 a year in his college fund, how much will he have saved, without interest, by his senior year in high school, in 6 years?

Teacher's Copy of Personal Budget Worksheet

Name _____

Alex's 4-Week Budget

Description	Income (+)	Expense (-)	$ Available
Earnings - babysitting and running errands	$80.00		$80.00
College fund		$15.00	$65.00
Snack money		$20.00	$45.00
Savings for a computer		$15.00	$30.00
Entertainment/Clothes		$20.00	$10.00

1. The budget above was created by Alex to help him plan how he will spend the money she earns. He usually earns $20 each week by babysitting and running errands for his parents. If Alex is sick one weekend and can't earn the $20, how much will he earn for that 4-week period (assume there are 4 weekends in the month)? **($60)**
   Hints:
   - *Alex will earn $20 less than his usual 4-week earnings.*
   - *Calculate Alex's 4-week earnings if he is not sick.*

2. Alex wants to buy a pair of shoes. But they cost $45.99, not including tax. Using Alex's entertainment/clothing buget, how long will it take him to have earned enough money for the shoes? **(3 months)**
   Hints:
   - *Because the shoes cost $45.99, not including tax, the estimated cost is around $50.*
   - *If Alex sticks to his entertainment/clothing budget, he will save $20 each 4-week period.*
   - *That means Alex needs to save $20 every 4 weeks for approximately 3 months.*

3. Alex has kept within his budget during this 4-week period! He also earned an extra $12 one week for cleaning his neighbor's garage. If Alex wants to save the $10 he has left over every 4-week period, how much less time will it take for him to earn enough money for the shoes? Remember, the shoes cost $45.99 plus tax.
   (1 month sooner. He can buy the shoes after 2 months instead of 3.)
   Hints:
   - *If Alex doesn't use the $10 left over from his 4-week budget, he will have $20 to spend on shoes each month, approximately.*
   - *If he saves $20 each 4-week period, he will save for the shoes in 3 months.*
   - *If he earns an extra $12 in a 4-week period, he will earn $32 in this 4-week period.*
   - *$20 (4-week clothing budget) + $32 (amount budgeted + extra $12 earned) = $52*

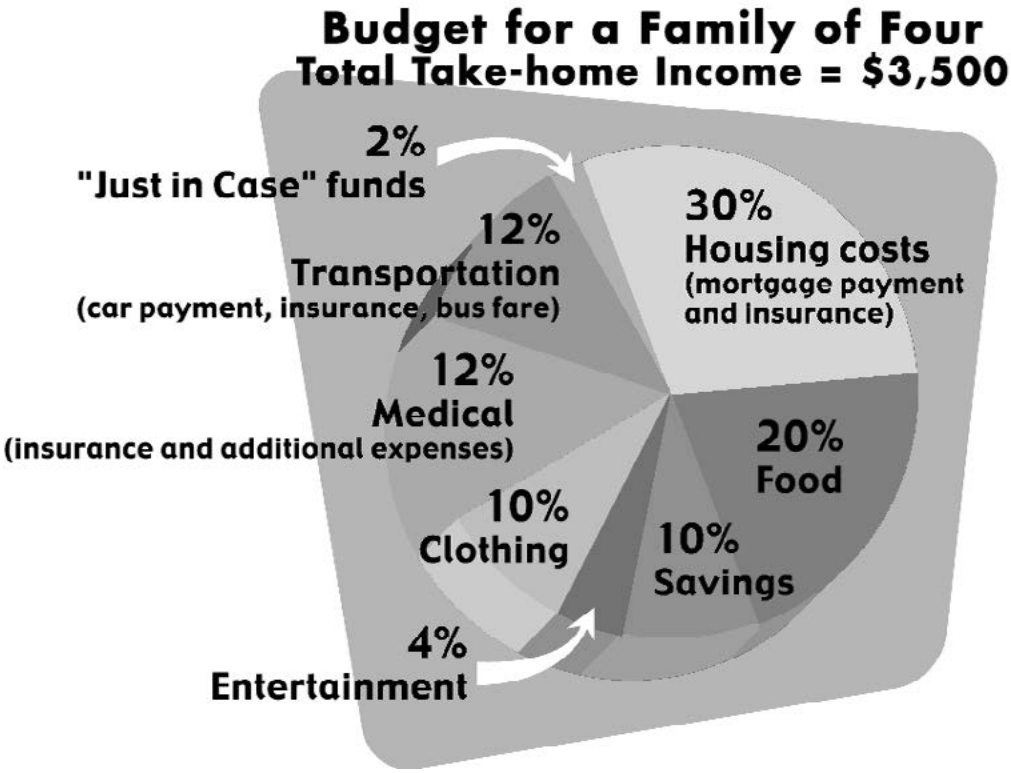
Teacher's Copy of Personal Budget Worksheet (continued)

4. Alex saves $15 every 4 weeks for his college fund. How much does Alex save in 1 year? **($195)**
   Hints:
   - *How many 4-week periods are there in 1 year? Divide 52 by 4.*
   - *Multiply 13, the number of 4-week periods in 1 year, by $15, the amount Alex saves every 4-week period.*

5. If Alex saves $195 a year in his college fund, how much will he have saved, without interest, by his senior year in high school, in 6 years? **($1,170)**
   Hint: Multiply the amount Alex saves in 1 year ($195) by 6.

Monthly Family Budget

Let's look at a household budget for a family of four. In this example, the family takes home $3500 a month in income. The pie chart and the budget below indicate that the family spends 30% of their income on fixed housing costs, which include the mortgage payment and insurance. That equals $1,050 a month. The family also budgets 20% of their income for food, a flexible expense. That's another $700.



Sample Monthly Family Budget

Item	Percentage	Amount ($)
Monthly income		$ 3500.00
Housing costs (mortgage payment and insurance)	30%	1050.00
Food	20%	700.00
Clothing	10%	
Transportation (car payment, insurance, bus fare)	12%	
Medical (insurance and additional expenses)	12%	
Savings	10%	
Entertainment	4%	
"Just in Case" funds	2%	

Activity

Students use the two worksheets on the following page, to analyze a sample family monthly budget and to create their own personal budgets. The teacher's copies of these activities follow the students' worksheets.

Family Budget Worksheet

Name _____

Sample Family Monthly Budget

Item	Percentage	Amount ($)
Monthly income		$ 3500.00
Housing costs (mortgage payment and insurance)	30%	1050.00
Food	20%	700.00
Clothing	10%	
Transportation (car payment, insurance, bus fare)	12%	
Medical (insurance and additional expenses)	12%	
Savings	10%	
Entertainment	4%	
"Just in Case" funds	2%	

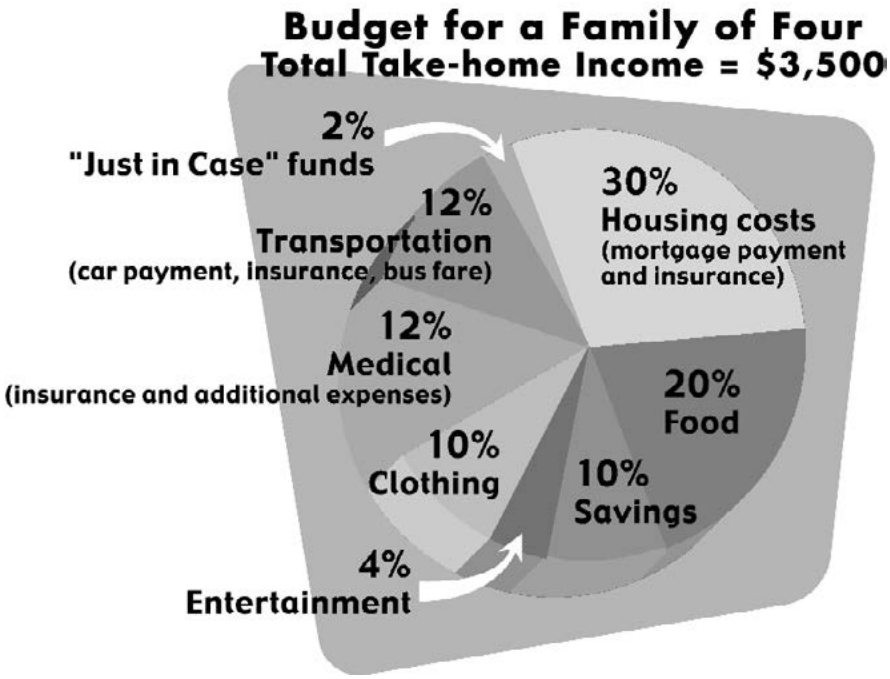
1. It's a good thing this family has "Just-in-Case" funds because one month their car had a flat tire, and they spent $97.00 to buy a new tire! What percent of their monthly income was that expense? (Round your answer to the nearest whole percent.)

2. How many months of "Just-in-Case" funds did the family need to pay for the tire?

3. The family makes a decision to save their entertainment funds every month so they can take a special trip during the summer. How much money will they save in 12 months?

Family Budget Worksheet (continued)

4. One month the family decides to shop around for "best buys" at different supermarkets. They are able to reduce the amount they spend on food from $700 that month to $615. What percent of their monthly income did they save? (Round your answer to the nearest whole percent.)



5. Compare the family's budget on the pie chart to the printed budget. What information can you see on the printed budget that you cannot see on the pie chart?

6. What does the pie chart illustrate that the printed budget doesn't?

Teacher's Copy of Family Budget Worksheet

Name _____

Sample Family Monthly Budget

Item	Percentage	Amount ($)
Monthly income		$ 3500.00
Housing costs (mortgage payment and insurance)	30%	1050.00
Food	20%	700.00
Clothing	10%	
Transportation (car payment, insurance, bus fare)	12%	
Medical (insurance and additional expenses)	12%	
Savings	10%	
Entertainment	4%	
"Just in Case" funds	2%	

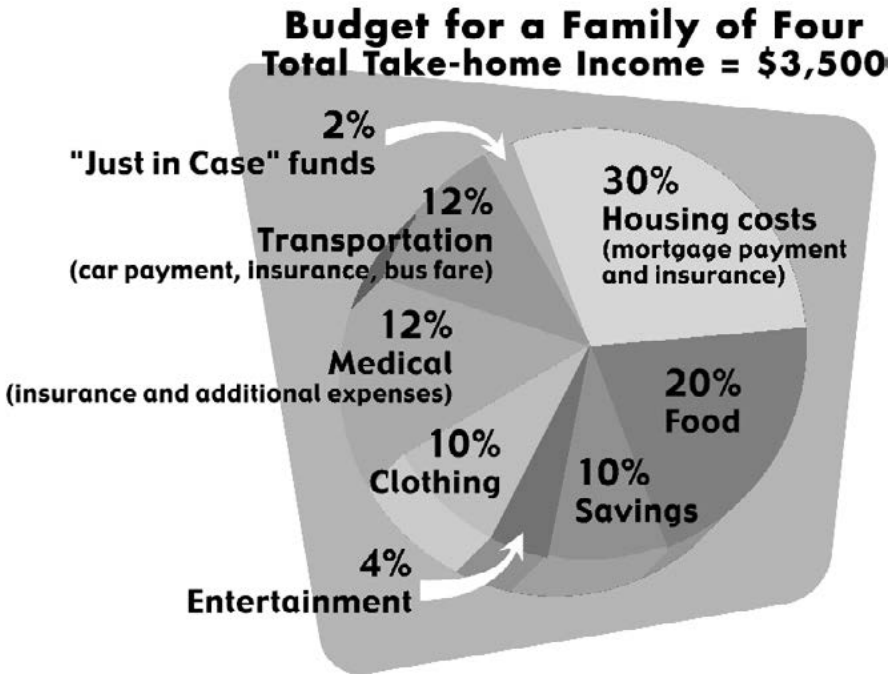
1. It's a good thing this family has "Just-in-Case" funds because one month their car had a flat tire, and they spent $97.00 to buy a new tire! What percent of their monthly income was that expense? (Round your answer to the nearest whole percent.) **(3%)**
   Hint: To calculate the percentage of the $3,500 budget, divide 97 by 3,500 x 100.

2. How many months of "Just-in-Case" funds did the family need to pay for the tire? **(2)**
   Hints:
   - *To determine the number of months of just-in-case funds, multiply $3,500 by .02 (2%) to get $70 of just-in-case funds per month.*
   - *If the family has $70 of just-in-case funds for 1 month, it will take almost 2 months or $140 for them to have enough money to cover the extra $97 expense.*

3. The family makes a decision to save their entertainment funds every month so they can take a special trip during the summer. How much money will they save in 12 months? **(1680)**
   Hints:
   - *Calculate the amount the family puts aside for entertainment every month by multiplying $3,500 x .04 (4%).*
   - *Multiply the family's entertainment budget of $140 (4%) every month by 12 (twelve) 12 months.*

4. One 4-week period the family decides to shop around for "best buys" at different supermarkets. They are able to reduce the amount they spend on food from $700 that month to $615. What percent of their monthly income did they save? (Round your answer to the nearest whole percent.) **(2%)**
   Hints:
   - *To determine the amount they saved, subtract $615 from $700, which is the amount they usually budget for food.*
   - *To determine what percentage $85 is of $3,500, divide 85 by 3,500 x 100, and then round to the nearest whole percent.*

Teacher's Copy of Family Budget Worksheet (continued)



5. Compare the family's budget on the pie chart to the printed budget. What information can you see on the printed budget that you cannot see on the pie chart?

6. What does the pie chart illustrate that the printed budget doesn't?

Section 2: Using a Budget

Students apply what they know about budgets to make sound financial decisions.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Let's say you're ready to make a budget—a written plan for how you will spend your money. What are some of the kinds of things you would list on your budget? What do you spend your money on now?
- What are some things you never seem to have enough money for? How could your budget help you buy those things?
- What are some ways you can save money when you go shopping?

Key Points

- Review what makes a good personal budget. A good personal budget:
  - covers basic expenses that occur on a routine basis,
  - has money available for unexpected expenses, and
  - includes regular savings for future expenses.
- Tips for sticking to a personal budget:
  - Keep your budget in mind when you shop!
  - Be prepared to make large purchases by saving money over time.
  - Compare prices for similar items at different stores.

Activity

Students use the following worksheet to practice budgeting. The teacher's copy of this activity follows the students' worksheet.

Create Your Own Budget Worksheet

Here is a sample personal budget for you to complete.

Instructions:

- First, decide what period of time you are budgeting for.
- Next, estimate your income (from jobs, allowance, gifts, etc.) for that period of time. Write these items in the "Description" column **(A)**, and the amounts in the "Income" column **(B)**.
- After entering any income, add that amount to the total money you have available **(D)**. That is how much money you have available now.
- Identify each of your expenses during that time period.
- For each expense, ask yourself if it's fixed, flexible, or discretionary.
- After entering each expense **(A and C)**, subtract that amount from the total money you have available. That is how much money you have available now **(D)**.
- Decide how much money you will save during this time period. Enter this as an expense **(C)**.
- Consider what you will do with any extra money you have available after you have identified all the items you will buy.
- Decide what you will need to do if you don't have enough money available for all the items you want or need buy.

Name _____

Monthly Budget for: _____

A Description	B Income (+)	C Expense (-)	D $ Available
Total			

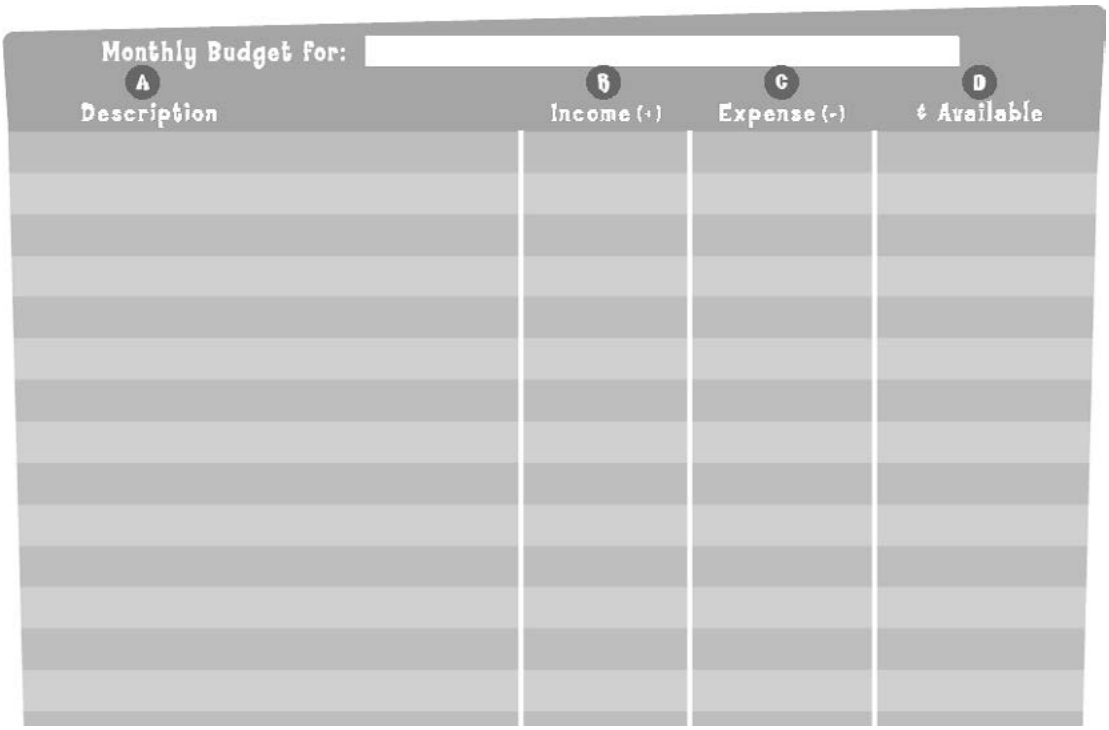
Teacher's Copy of Create Your Own Budget Worksheet

As you introduce this worksheet to your students, review with them the key points about personal budgets.

Here is a sample personal budget for you to complete.

Instructions:

- First, decide what period of time you are budgeting for.
- Next, estimate your income (from jobs, allowance, gifts, etc.) for that period of time. Write these items in the "Description" column **(A)**, and the amounts in the "Income" column **(B)**.
- After entering any income, add that amount to the total money you have available **(D)**. That is how much money you have available now.
- Identify each of your expenses during that time period.
- For each expense, ask yourself if it's fixed, flexible, or discretionary.
- After entering each expense **(A and C)**, subtract that amount from the total money you have available. That is how much money you have available now **(D)**.
- Decide how much money you will save during this time period. Enter this as an expense **(C)**.
- Consider what you will do with any extra money you have available after you have identified all the items you will buy.
- Decide what you will need to do if you don't have enough money available for all the items you want or need buy.



Activity

Students use the following activities to plan their own party budget. The teacher's copy of this activity follows the students' worksheets.

Budget Practice Worksheet

Name _____

You and a friend have a budget of $50 for a party. Use the list below to help plan.

1. If you spent $12.95 on food for this party, what did you buy?
   A. 2 cases of soda and 1 jumbo bag of chips.
   B. 1 paper product and 1 movie rental.
   C. 2 bags of bulk candy.
   D. 2 cases of soda and movie rentals.

2. If you spent $45.24 on food for this party, what did you buy?
   A. 3 sets of decorations and 1 paper product.
   B. 2 deli trays.
   C. 1 deli tray, 1 used video game, 1 bag of bulk candy, 1 case of soda.
   D. 1 bag of bulk candy.

3. Can you find two different combinations of purchases that total *exactly* $50?
   A. 10 bags bulk candy.
   B. 6 bags of bulk candy, 3 cases of soda, and 1 battery.
   C. 1 deli tray, 1 set of decorations, and movie rentals.
   D. 4 paper products, 1 jumbo bag of chips, and 2 cases of soda.

Teacher's Copy of Budget Practice Worksheet

Name _____

You and a friend have a budget of $50 for a party. Use the list below to help plan.

1. If you spent $12.95 on food for this party, what did you buy?
   A. 2 cases of soda and 1 jumbo bag of chips.
   B. 1 paper product and 1 movie rental.
   C. 2 bags of bulk candy.
   D. 2 cases of soda and movie rentals.
   Hints:
   - *Are there any of the above answers you can eliminate right away? How much would 2 bags of candy cost?*
   - *How much do 2 cases of soda cost?*
   - *If 2 cases of soda cost $9.50, how much more can you spend to equal $12.95? Do you see any items in the above list that cost $3.45?*

2. If you spent $45.24 on food for this party, what did you buy?
   A. 3 sets of decorations and 1 paper product.
   B. 2 deli trays.
   C. 1 deli tray, 1 used video game, 1 bag of bulk candy, 1 case of soda.
   D. 1 bag of bulk candy.
   Hints:
   - *Are there any answers that you can eliminate right away? How much does 1 bag of bulk candy cost?*
   - *Remember that just because something is advertised at "2 for (a price)," you may choose to buy only 1 of the items for half that price.*
   - *How much would 1 deli tray cost? Divide $45 by 2.*

Teacher's Copy of Budget Practice Worksheet (continued)

3. Can you find two different combinations of purchases that total *exactly* $50?
   A. 10 bags bulk candy.
   B. 6 bags of bulk candy, 3 cases of soda, and 1 battery.
   C. 1 deli tray, 1 set of decorations, and movie rentals.
   D. 4 paper products, 1 jumbo bag of chips, and 2 cases of soda.

   Hints:
   - *How much does 1 bag of candy cost? Remember, if 2 bags cost $10, then 1 bag costs $5.00.*
   - *How much will 1 deli tray cost if 2 trays cost $45? (Divide $45 by 2.)*
   - *If 5 movie rentals cost $30 (5 x $6), will you have enough left to buy a deli tray?*

Teaching Tips

Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.

1. Ask students to complete this sample family budget.

Sample Family Monthly Budget

Item	Percentage	Amount ($)
Monthly income		$ 3500.00
Housing costs (mortgage payment and insurance)	30%	1050.00
Food	20%	700.00
Clothing	10%	350.00
Transportation (car payment, insurance, bus fare)	12%	420.00
Medical (insurance and additional expenses)	12%	420.00
Savings	10%	350.00
Entertainment	4%	140.00
"Just in Case" funds	2%	70.00

2. Have students create new budgets using the blank budget worksheet in Section 1 of this guide. Have students use the want ads to find jobs and then use those salaries as weekly or monthly income. What expenses must they budget for?

3. After students have created their own budgets, have students calculate the percentages of their total budget that each item on their budget represents. Students can then create pie charts to show the percentages represented by each item on their budget.

4. Have students identify items in their budgets as Fixed, Flexible, or Discretionary Expenses.

5. Provide students with ads from the newspaper or catalogs. Using a fixed amount (such as $50), have students come up with as many combinations as they can to buy 3 items without going over $50. Vary the fixed amount and number of items to adapt the activity to meet the needs of individual students.

6. Have students repeat activity #5, above, this time using the sales tax in your local area. What adjustments must they make in their purchases to stay within their $50 budget?

7. Discuss which way students would prefer the sales tax on several items to be calculated: on the total purchase or on each individual item? (It actually doesn't matter to the consumer, but this relates to two important properties of multiplication, the associative and commutative properties. Have students investigate their results to "discover" these properties for themselves.)

Teaching Tips (continued)

8. Using what students have discovered in problems such as #7 above, extend students' thinking with problems such as the following. (Be sure to have students explain their rationale for their answers!)

   A computer is on sale for 25% off, and the sales tax is 6 3/4%. If you were the store owner, which way would you prefer to compute the total price? Which way would you prefer to compute the price if you were the taxman? Which way would you prefer to have the price computed if you were the customer?

   - The store owner would prefer to take off the 25% and then compute the tax on the discounted price.
   - The taxman would prefer to compute the tax on the original price, add the tax to the original price and then take the 25% off.
   - The customer doesn't care!

9. Have students use mental arithmetic and estimation to total the cost of the party goods listed on the Budget Practice Worksheet in Section 2.

Monthly Budget for: _____

A Description	B Income (+)	C Expense (-)	D $ Available
Total			

Savings and Checking Guide

Unit Overview

In these lessons, middle-school students (grades 6-8) explore and compare savings and checking accounts. At the completion of this unit, students will be able to explain how savings and checking accounts work, describe the benefits of using these basic accounts to manage their money, and complete the forms necessary for making deposits and withdrawals from these accounts. Students will do the necessary calculations to balance a checking account.

In the online/CD-ROM version of the *Hands on Banking* program, there are 16 lessons that are condensed into 3 sections, below.

Section 1: Savings Accounts
Saving money is an important step toward financial well-being. In this section, students recognize the purpose of savings accounts, how to make deposits and withdrawals, and how to manage a savings account. Students will do calculations to compare simple and compound interest.

Section 2: Checking Accounts
Checking accounts are another tool banks provide to help individuals manage their finances. Students will investigate the basics of checking accounts and practice writing checks.

Section 3: Balancing a Bank Account
Balancing a bank account is an important and basic financial skill. Students will perform the necessary computations to balance a checking account.

Learning Objectives

The financial-literacy objectives of these lessons are for students to recognize the services banks provide and how to use these services effectively, and that savers earn compound interest on principal and previously earned interest.

The mathematical objective of these lessons is for students to compute the sum or difference of whole numbers and positive decimals to two places.

Alignment With Educational Standards

National Council of Economic Education and the National Association of Economics Educators and the Foundation for Teaching Economics, *Voluntary National Content Standards in Economics* (1997), Content Standard 10:

- Grade 4: "Banks are institutions where people save money and earn interest, and where other people borrow money and pay interest."
- Grade 8: "Banks and other financial institutions channel funds from savers to borrowers and investors."

JumpStart Coalition for Personal Financial Literacy, *National Standards in K-12 Personal Finance Eudcation* (2007), Grade 8 Standards:

- Planning and Money Management
- Saving and Investing

National Council of Teachers of Mathematics *Principles and Standards for School Mathematics*, (2000), Grades 6–8:

- Number and Operations Expectations, "(Students will) work flexibly with fractions, decimals, and percents to solve problems.…(Students will) select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods."
- Problem-Solving Expectations: "Solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems."
- Connections Expectations: "Recognize and apply mathematics in contexts outside of mathematics."

Section 1: Savings Accounts

Saving money is an important step toward financial well-being. In this section, students recognize the purpose of savings accounts, how to make deposits and withdrawals, and how to manage a savings account.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Are you saving money for something you want or need? Describe how you are managing to save money.
- Why would you recommend opening a savings account to someone who doesn't have one yet?
- Let's say you have some money in a savings account, and you want to take some of the money out. Where would you go to do that, and what would you have to do?
- Even though the purpose of the account is to save money, why might it be necessary to withdraw money from a savings account?
- If you open a savings account, and start putting money in and taking money out, who's going to keep track of how much money you have in the account?
- What do the initials "ATM" stand for, and what's the purpose of an ATM? What banking transactions can people do at an ATM?

Key Points

Savings and Interest

- Saving means putting money aside for future use. Banks and other financial institutions offer incentives for people to keep their money in a savings account. These incentives are referred to as earning **interest**.
- The *amount* of interest people will earn depends on a number of factors, including the type of savings account they have, which financial institution has the account, and how long they keep their money in the account.
- Banks pay interest on money put into **savings accounts** because the bank is able to use the money to make loans to other customers.
- In fact, banks pay their customers for the privilege of using their money.

Types of savings accounts

There are many different savings accounts available, so do some research to determine which account is best for you. Three of the most common types of savings accounts are:

Regular Savings Account

- Interest is paid monthly.
- The bank may require a minimum **deposit.** (This means the amount of money you put into the account each time.)
- There may be limits on the number of deposits and **withdrawals** you can make.
- Some banks charge fees.

Certificates of Deposit (CDs)

- Your money must remain in the account for a fixed period of time, called the term.
- The more money you deposit, and the longer you keep it in the account, the more interest you'll earn.
- You'll have to pay a penalty if you withdraw your money before the term is completed.

Money Market Account

- This type of savings account allows limited checkwriting.
- You may have limited withdrawals each month.
- Generally these accounts pay higher interest rates than regular savings accounts.
- Interest is calculated at the end of a fixed time period, for example, every month.
- Interest rate may change.

Opening a savings account

- Middle-school students can open their own savings account at a bank or another financial institution. A parent or adult guardian must accompany the student. The student must know their Social Security number, and have some money to deposit.
- The parent or guardian will **co-sign** the student's account, which means that they will be sharing responsibility for the account.
- Here are some guidelines of how to open a savings account, and what the student will need to bring with them to the bank:

Opening a Savings Account—What to Bring

A parent or guardian must accompany a person under 18. They must bring 2 forms of current identification, with photo, including:

- Driver's license or State ID
- Passport
- U.S. Military ID
- Alien Registration card
- Matricula Consular card

OR they may bring 1 item from the above list ***and*** a major credit card or gas card.

The student may be asked to provide 1 of the following current IDs with photo, such as:

- Student ID
- Passport

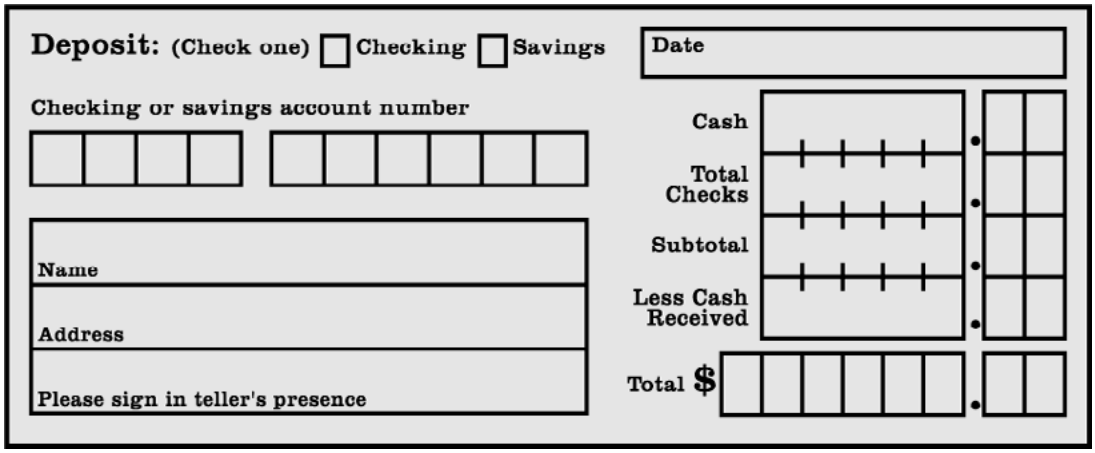
PLUS

- Social Security number or individual tax ID number (ITIN)
- Money to deposit—ask if there's a minimum.

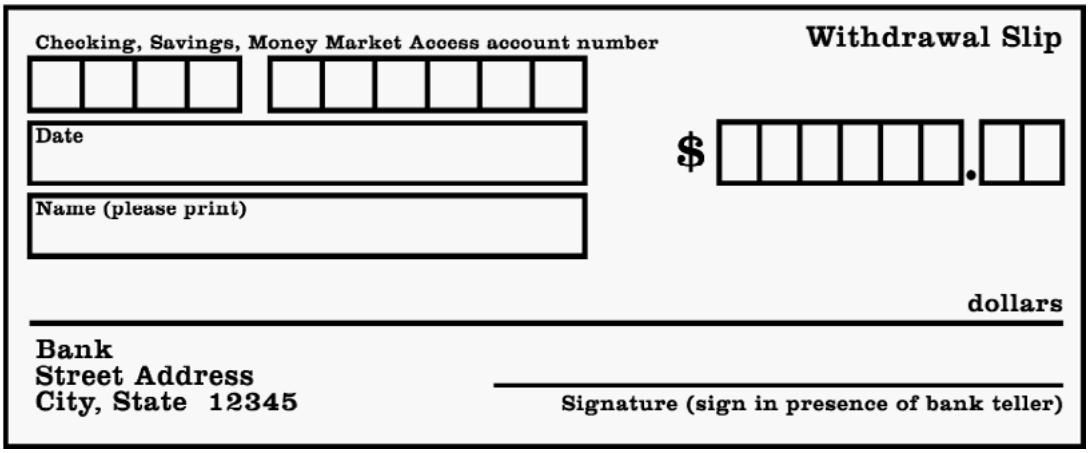
Bank requirements may vary, so ask your local bank what they require.

Making savings deposits and withdrawals at the bank

- To put money in your savings account at the bank, you fill out a **deposit slip**. A deposit slip is a form used to record the details of the transaction. Once you've filled out the deposit slip, you give it to the bank teller, who will take care of the rest.



- If you withdraw money at the bank, you'll need to fill out a **withdrawal slip** and have a teller watch you sign it. Then you must show the teller a photo ID.



Making savings deposits and withdrawals at the ATM

- Savings deposits can also be made by using an **automated teller machine,** or **ATM.** Students should check with their bank to find out the age requirement for using an ATM.
- Students may practice with the ATM simulator on the *Hands on Banking* site or CD-ROM.
- ATMs are simple to use and are found in banks and many other convenient locations. Many are open 24 hours a day!
- When the bank issues an ATM card, they also give you a **personal identification number**, or **PIN.** This PIN is like a secret password. If someone else knows it, they may be able to take money out of your account…so don't share your PIN with anyone! And *never* write your PIN on your ATM card!
- Before you deposit a check, you'll need to write your signature on the back, known as endorsing the check. Also be sure to write down your account number with your signature.
- You can withdraw money from a savings account by seeing a teller at the bank or by using an ATM.

- ATM deposits can be in any amount, but you can only make ATM withdrawals in increments of $20. The bank may place a limit on how much you can withdraw from an account in a day.
- Because ATMs issue money, always be alert and aware of people around you when using an ATM.

Keeping careful records

- Part of good money management is keeping careful record of deposits and withdrawals from bank accounts. As part of the service they provide, banks keep track of their customers' savings accounts. However, it's the account holder's responsibility to keep track of all **transactions** involving his or her account. It's essential to make careful calculations.
- When you open a savings account, the bank provides you with a **savings account register** to track your deposits and withdrawals.
- It's important to use the savings account register, and to make careful, accurate calculations.

Savings Register

DATE	DESCRIPTION	WITHDRAWAL		DEPOSIT		BALANCE	
9/01						$132	74
9/10	Birthday gift money			$15	00	$147	74
9/30	Rebate check			$2	25	$149	99
9/30	ATM withdrawal	20	00			$129	99
10/01	ATM withdrawal skateboard	35	00			$94	99

Activity

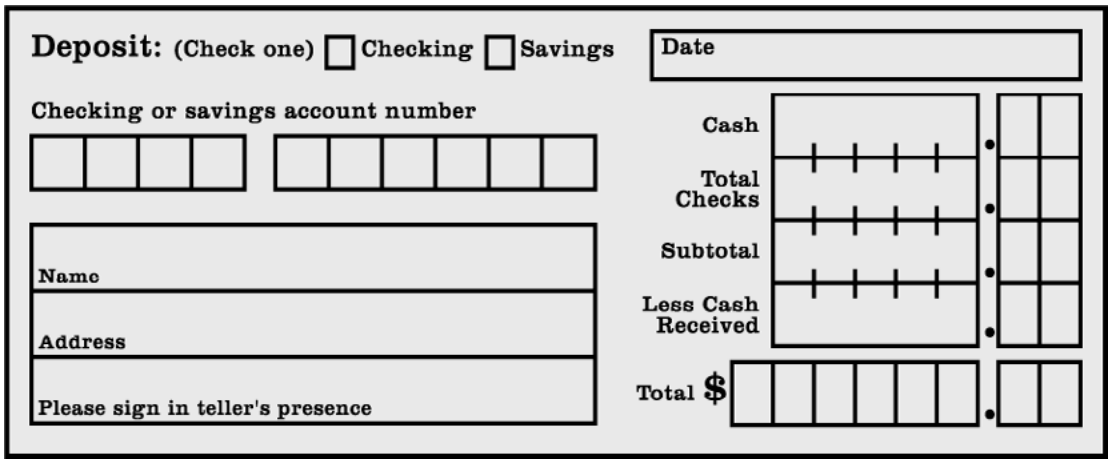
Students practice filling out a deposit slip and a withdrawal slip for a savings account. The teacher's copies of these activities follow the students' worksheets.

Savings Deposit Worksheet

Name _____

Use the following information to complete the savings deposit slip below.

- Today's date.
- Print your name.
- Your account number. (Because this is practice, you can make up an account number here.)
- Sign your name. (This is usually done in front of the bank teller to protect you.)
- $50.00 cash deposit.
- Total the amount of the checks to deposit: $57.58, $10.92, $27.63.
- Compute the subtotal of the cash and checks deposited.
- Request $25.00 cash back from this deposit.
- Compute the total amount of the deposit minus the cash back.

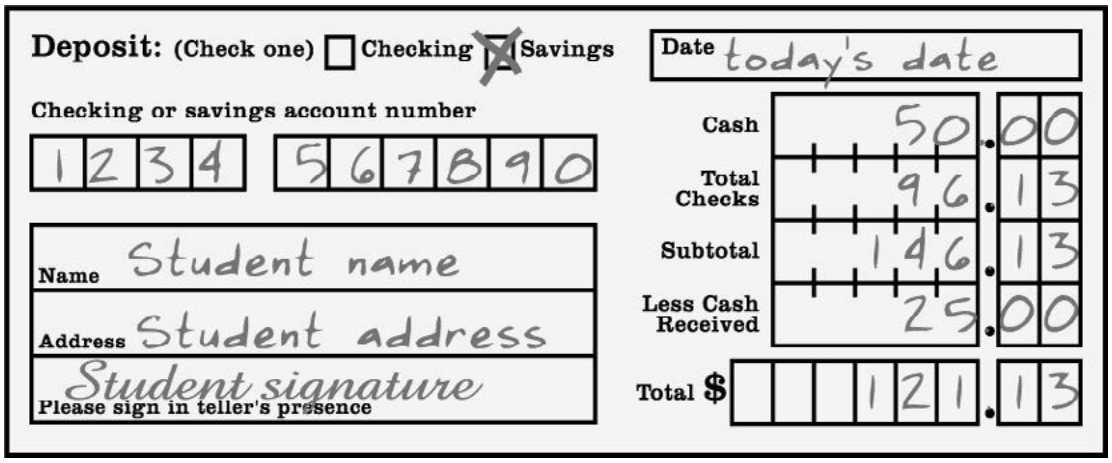


Teacher's Copy of Savings Deposit Worksheet

Name _____

Use the following information to complete the savings deposit slip below.

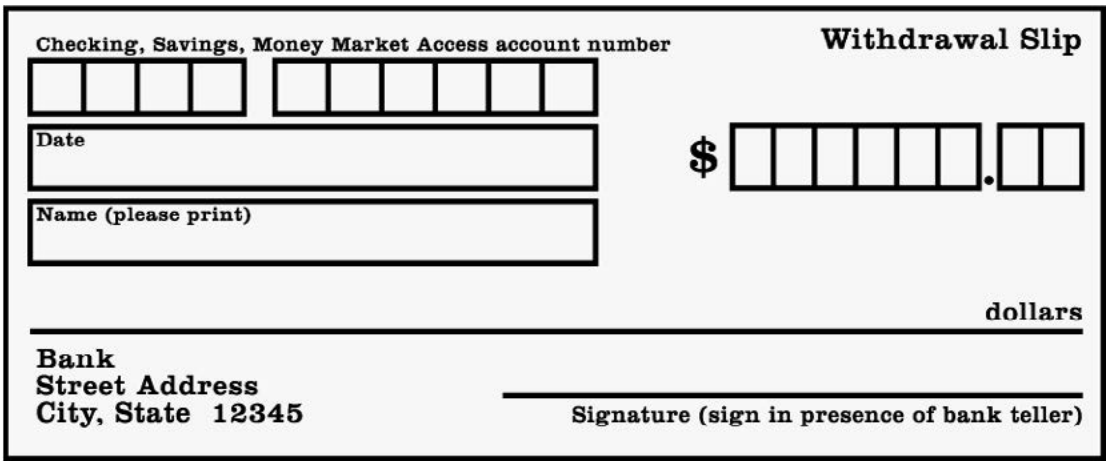
- Today's date.
- Print your name.
- Your account number. (Because this is practice, you can make up an account number here.)
- Sign your name. (This is usually done in front of the bank teller to protect you.)
- $50.00 cash deposit.
- Total the amount of the checks to deposit: $57.58, $10.92, $27.63.
- Compute the subtotal of the cash and checks deposited.
- Request $25.00 cash back from this deposit.
- Compute the total amount of the deposit minus the cash back.



Savings Withdrawal Worksheet

Name _____

1. Use the following information to complete the savings withdrawal form below.
    - Today's date.
    - Print your name.
    - Your account number. (Because this is practice, you can make up an account number here.)
    - Using words, write out the amount you wish to withdraw from your savings account. Pretend you wish to withdraw $375.00.
    - Using numbers, write out the amount you wish to withdraw from your savings account. It's important that this amount is the same as the written amount.
    - Your signature—this is done in front of the teller.



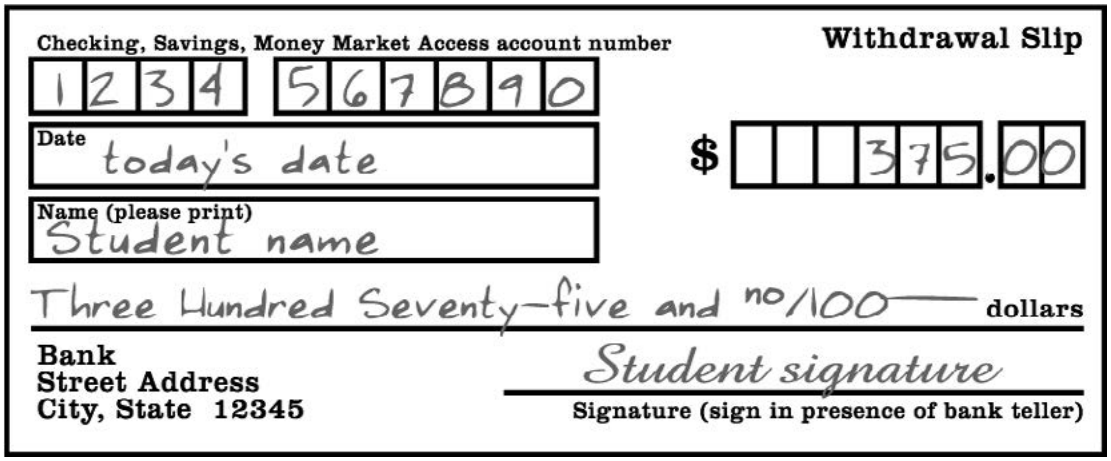
2. Imagine that your savings account has reached $175. This amount is called your **balance.** Your neighbor just wrote you a check for $40 for helping him with some odd jobs. You decide to use an ATM to deposit the check, and you want to get $20 back in cash. What will be your balance after you make this deposit and withdrawal?

3. You need $145 in cash. If you withdraw money from your savings account using the ATM, how much will you need to withdraw in order to have at least $145?

Teacher's Copy of Savings Withdrawal Worksheet

Name _____

1. Use the following information to complete the savings withdrawal form below.
    - Today's date.
    - Print your name.
    - Your account number. (Because this is practice, you can make up an account number here.)
    - Using words, write out the amount you wish to withdraw from your savings account. Pretend you wish to withdraw $375.00.
    - Using numbers, write out the amount you wish to withdraw from your savings account. It's important that this amount is the same as the written amount.
    - Your signature—this is done in front of the teller.



2. Imagine that your savings account has reached $175. This amount is called your **balance.** Your neighbor just wrote you a check for $40 for helping him with some odd jobs. You decide to use an ATM to deposit the check, and you want to get $20 back in cash. What will be your balance after you make this deposit and withdrawal? **($195)**
   Hints:
    - *Depositing $40 and making a $20 withdrawal at the same time means you've made a $20 total deposit ($40 - $20).*
    - *Add $20 to the beginning balance.*

3. You need $145 in cash. If you withdraw money from your savings account using the ATM, how much will you need to withdraw in order to have at least $145?
   ($160—because ATMs dispense money in $20 increments.)

Activity

Students use the following worksheet to practice recording their **transactions** in a savings register. The teacher's copy of this activity follows the students' worksheet.

Savings Register Worksheet

Name _____

Use the information below to fill in a blank savings account register. Remember, when you make a withdrawal, or take money out of your savings account, you subtract. When you make a deposit, or put money into your savings account, you add.

- On 10/2, you withdrew $25.00 cash.
- On 10/15, you deposited $15.50 that you earned babysitting.
- The bank paid you monthly interest of $2.32 on the last day of October.
- You went to the ATM on 11/3 and deposited $10.00.
- On November 4, you needed cash. You went to the ATM and withdrew $20.00

Savings Register

DATE	DESCRIPTION	WITHDRAWAL		DEPOSIT		BALANCE	
10/01						$112	74

Teacher's Copy of Savings Register Worksheet

Name _____

Use the information below to fill in a blank savings account register. Remember, when you make a withdrawal, or take money out of your savings account, you subtract. When you make a deposit, or put money into your savings account, you add.

- On 10/2, you withdrew $25.00 cash.
- On 10/15, you deposited $15.50 that you earned babysitting.
- The bank paid you monthly interest of $2.32 on the last day of October.
- You went to the ATM on 11/3 and deposited $10.00.
- On November 4, you needed cash. You went to the ATM and withdrew $20.00

Savings Register

DATE	DESCRIPTION	WITHDRAWAL		DEPOSIT		BALANCE	
10/01						$112	74
10/02	Cash	25	00			−25	00
						87	74
10/15	Babysitting money			15	50	+15	50
						103	24
10/31	Rebate check			2	32	+2	32
						105	56
11/03	ATM deposit			10	00	+10	00
						115	56
11/04	ATM withdrawal	20	00			−20	00
						95	56

Activity

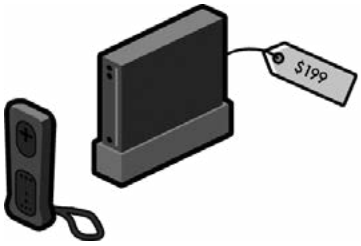
Students use the following worksheet to explore the process of saving for things they want to buy. The teacher's copy of this activity follows the students' worksheet.

Please note that the online/CD-ROM version of the *Hands on Banking* program features a credit calculator. For the benefit of students who do not have access to this credit calculator, the question involving compound interest has been modified for this guide.

Saving for Things Worksheet

Name _____

Computer: $500



Game Console: $199

Shoes: $75

1. You have $100 in your savings account. If you save $30 a month, how long will it take to save enough for a new computer? (The price shown includes sales tax). Remember to round the answer up to the nearest whole number.

2. You have $50 in your account. How much more do you need to get the game console?

3. If you save $10 a week, how long will it take to save the $149 you still need for the game console?

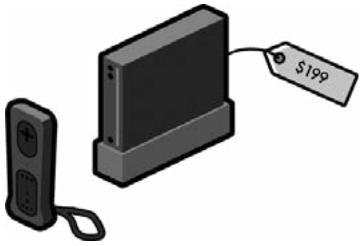
4. You have $50 in your account. Including tax, you need to save $28.75 more to buy new athletic shoes. If you save $7 a week, how long will it take you to save for the new shoes?

5. Angie is saving $15 every 4 weeks in her college fund. If the bank pays 5% interest compounded monthly, how much interest will Angie have earned after 6 months?

Teacher's Copy of Saving for Things Worksheet

Name _____

Computer: $500



Game Console: $199

Shoes: $75

1. You have $100 in your savings account. If you save $30 a month, how long will it take to save enough for a new computer? (The price shown includes sales tax). Remember to round the answer up to the nearest whole number. **(14 months)**
   Hints:
   - *If you already have $100, how much more do you need to save to have enough for the $500 computer?*
   - *Divide $400 (the amount you still need to save) by $30 (the amount you save each month).*

2. You have $50 in your account. How much more do you need to get the game console? **($149)**
   Hint: Subtract the amount you have already saved ($50) from the cost of the game console ($199).

3. If you save $10 a week, how long will it take to save the $149 you still need for the game console? **(15 weeks)**
   Hints:
   - *Divide the amount you need to purchase the game console ($149) by the amount you will save each week ($10).*
   - *Remember to round your answer up to the nearest whole number to determine the number of weeks you will need to keep saving.*

4. You have $50 in your account. Including tax, you need to save $28.75 more to buy new athletic shoes. If you save $7 a week, how long will it take you to save for the new shoes? **(5 weeks)**
   Hints:
   - *Divide $28.75 (the amount you need to save) by $7 (the amount you will save each week).*
   - *Round your answer up to the nearest whole number to determine the number of weeks you will need to keep saving.*

Teacher's Copy of Saving for Things Worksheet (continued)

5. Angie is saving $15 every 4 weeks in her college fund. If the bank pays 5% interest compounded monthly, how much interest will Angie have earned after 6 months? **($1.33)**
   Hints:
   - *Remember, with compound interest, you will earn interest on previously earned interest, as well as on the principal. Also remember that each time compounding is calculated, the interest rate needs to be divided by how often it is compounded. For example, if compounding occurs monthly (i.e., twelve times per year), you will need to divide by 12.*
   - *Begin by multiplying $15 x .05 and dividing by 12 (or multiplying by 0.0833). Add that amount ($0.06) to the original $15 deposit. That's how much Angie now has after one month. ($15.06)*
   - *Add the next month's $15 deposit.*
   - *Now multiply $30.06 x .05 and divide by 12 (or multiply by 0.0833). Add that amount ($0.13) to $30.06 to get the total Angie has after two months.($30.19)*
   - *Round your answer to the nearest penny.*
   - *Add the next month's $15 deposit.*
   - *Now multiply $45.19 x .05 and divide by 12 (or multiply by 0.0833). Add that amount ($0.19) to $45.19 to get the total Angie has after three months.($45.38)*
   - *Add the next month's $15 deposit.*
   - *Multiply $60.38 x .05 and divide by 12 (or multiply by 0.0833). Add that amount ($0.25) to $60.38 to get the total Angie has after four months. ($60.63)*
   - *Round your answer to the nearest penny.*
   - *Continue this process two more times so you have done it a total of six times (the six-month period).*
   - *To figure out how much interest Angie earned after 6 months, subtract the amount of her deposits ($90) from the amount you calculated she has, with interest, after 6 months. ($91.33 - $90.00 = $1.33)*

Calculating Interest Earned

Month	Amount in Account	Amount with Interest
1	15.00	15.06
2	30.06	30.19
3	45.19	45.38
4	60.38	60.63
5	75.63	75.95
6	90.95	91.33

Section 2: Checking Accounts

Checking accounts are another tool banks provide to help individuals manage their finances. In this section, students will investigate the basics of checking accounts and practice writing checks.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- Describe other ways people can pay for things besides paying in cash.
- When people write checks, why do stores accept them? Isn't a check just a piece of paper?
- What are some reasons that someone might want to pay by check rather than using cash?
- Suppose someone told you that they could write a check to pay for something even if they knew they didn't have enough money in their checking account to cover the amount of the check. What would you tell this person?

Key Points

- Checking accounts, like savings accounts, are part of an individual's personal money management system. Checking accounts are very similar to savings accounts. Both types of accounts keep your money safe, and both are very easy to access if you need cash.
- Checking accounts are designed to be day-in and day-out money-management tools, while savings accounts are designed for long-term money-management. Unlike savings accounts, banks expect people to make frequent withdrawals and deposits to checking accounts.
- An important difference between checking and savings accounts is that checking accounts come with **checks**!
- A second important difference is that most savings accounts earn interest, while many checking accounts do not.
- Checks can be used to make purchases, just like cash, and they help people pay bills or make simple purchases without carrying around cash or sending it through the mail. People use checks for rent, groceries, clothes.
- Checks are legal documents that function like cash. Knowing how to write a check correctly is fundamental to good money management.
- It's important for students to understand that in order to write a check, there must be sufficient funds in the checking account to cover the amount.
- When you write a check or make a deposit to your checking account, it's very important that you immediately record that transaction in your check register.
- Students can practice using an ATM on the *Hands on Banking* Web site or CD-ROM.

Key Points (continued)

- Just as with a savings account, you can use an Automated Teller Machine (ATM) to access your checking account. Many ATMs are open 24 hours a day. When the bank issues you an ATM card, they also give you a Personal Identification Number (PIN). The PIN is like a secret password. You should never write your PIN on your ATM card, and you shouldn't tell anyone your PIN.
- Some of the things you can use an ATM to do include:
  - Deposit money into a savings or checking account
  - Withdraw money from a savings or checking account
  - Check the balance in a savings or checking account
  - Transfer money between your accounts
- To open a checking account, students and the parent or guardian who accompanies them will probably need the same personal identification required to open a savings account. Students should check with their bank to see what they require.
- Here are some guidelines for how to open a checking account and what you may need to bring with you to the bank:

Opening a Checking Account—What to Bring

A parent or guardian must accompany a person under 18. They must bring 2 forms of *current* identification, with photo, including:

- Driver's license or state ID
- Passport
- U.S. military ID
- Alien Registration card
- Matricula Consular card

OR

- bring 1 item from the above list and
- a major credit card or gas card.

If over 18, the student may be asked to provide 1 of the following *current* IDs with photo, such as:

- Driver's license or State ID
- Student ID
- Passport
- Alien Registration card
- Matricula Consular card

PLUS

- Social Security number or individual tax ID number (ITIN)
- Money to deposit—ask if there's a minimum.

Bank requirements may vary, so ask your local bank what they require.

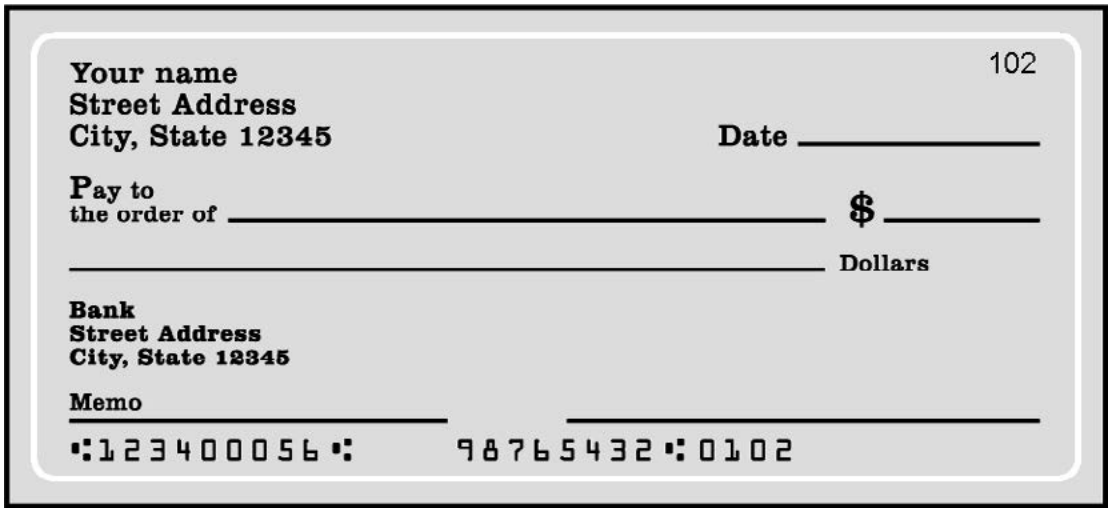
Activity

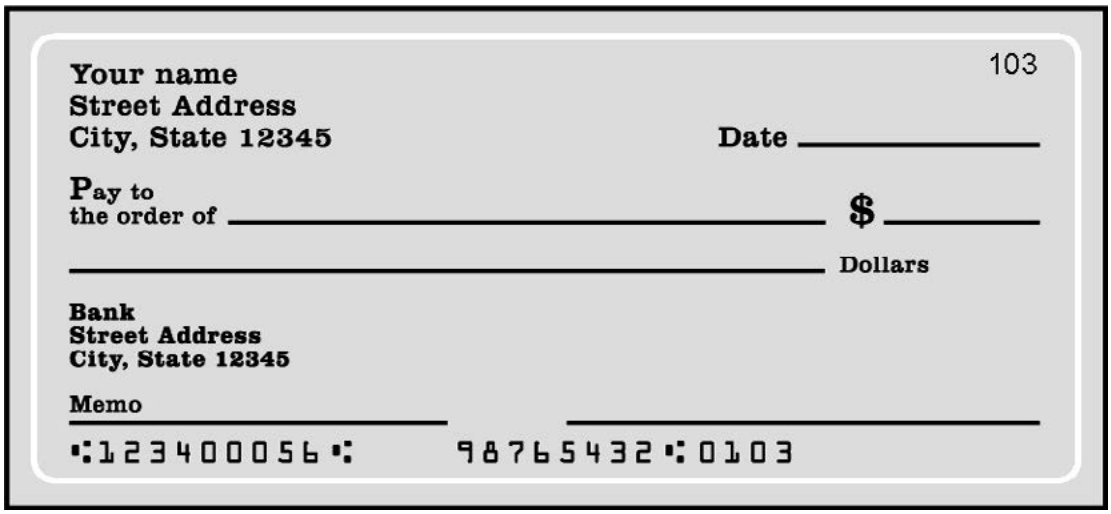
Students use the following worksheet to practice writing checks. The teacher's copy of this activity follows the students' worksheet.

Writing a Check Worksheet

Name _____

1. Fill out the first blank check, below, using the following information:
    - The date is 11/5
    - You are buying an item from the Dress Shop
    - Write the cost of the item, $49.67, in numbers
    - Now, write out the amount in words
    - Fill in the Memo line: "blue dress"
    - Sign the check with your complete signature

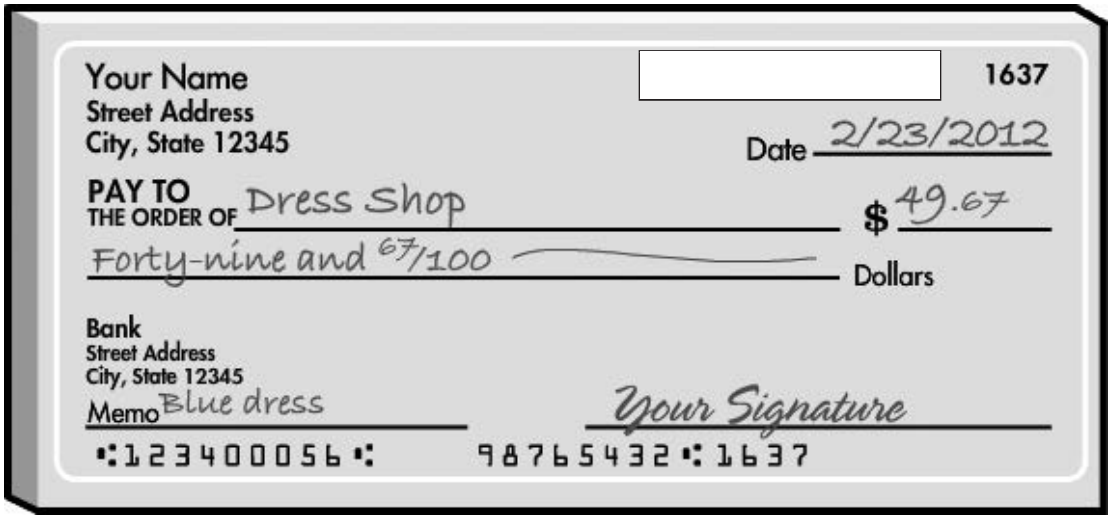


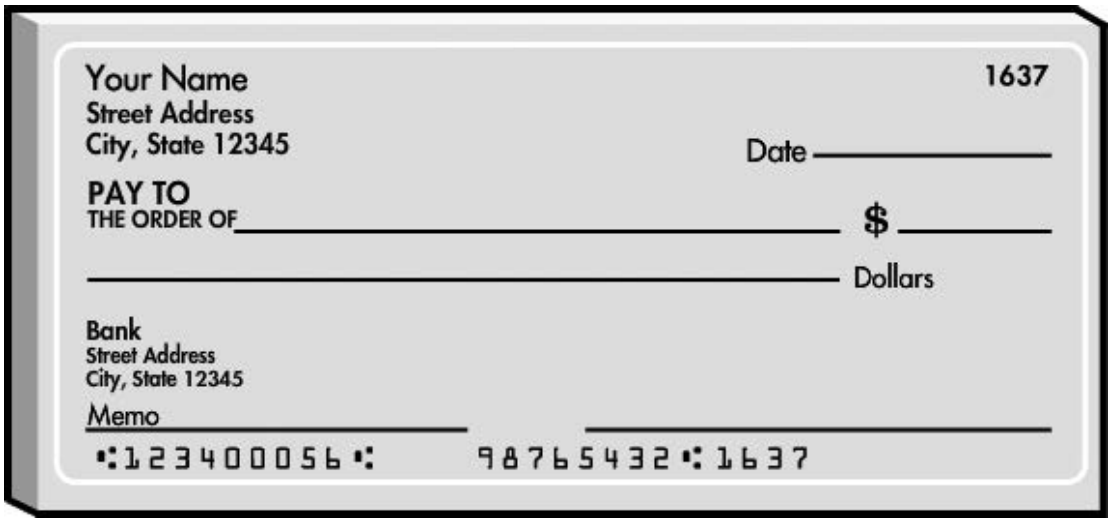


Teacher's Copy of Writing a Check Worksheet

Name _____

1. Fill out the first blank check, below, using the following information:
   - The date is 11/5
   - You are buying an item from the Dress Shop
   - Write the cost of the item, $49.67, in numbers
   - Now, write out the amount in words
   - Fill in the Memo line: "blue dress"
   - Sign the check with your complete signature





Section 3: Balancing a Bank Account

Balancing a bank account is an important and basic financial skill. In this section, students will perform the necessary calculations to balance a checking account.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- If you open a checking account, who's responsible for keeping track of how much money is in the account?
- What might happen if you never double-checked your math on your check register?
- What might happen if you never compared your records to the bank's records?
- How will you be sure the bank records for your checking account are correct?

Key Points

- When you have a checking account, the bank sends you a **statement** every month. This statement shows every **transaction** in the checking account during the last month—this means every deposit you've made and every check you've written.
- If you earn interest on your checking account, or if you pay a fee for your account, you'll see those on your statement, too.
- Be sure to check your statement carefully. It may show transactions you forgot to enter or that you entered incorrectly. Banks usually record the amounts and balances correctly, but it's a good idea to double-check because mistakes can happen.
- Comparing your records to the bank's records to make sure they match is called "balancing" the account. The process requires careful mathematical computation. Some of your students may be ready to learn how to balance a checking account. It can be useful to use a calculator.

Activity

Students use the following worksheet to practice balancing a checking account. The teacher's copy of this activity follows the students' worksheet.

Teaching Tips

Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.

1. Create problems such as the following for students to try:

    - Your bank statement shows you have a balance of $268.93. All the checks you have written during this statement period are shown on the account statement. But there is a deposit missing. If your account register shows you have a balance of $302.43, how much is the missing deposit? **($33.50)**

    - Your account balances this month! After you added in a check for $12.89 missing from this month's bank statement, you have calculated that the balance in your checking account is $75.62. What is the balance that is on the bank statement? **($75.62)**

    - What is the balance you show in your account register? **($62.73)**

    - Suppose the balance in your check register is $143.61. All the checks and all the deposits for this statement period match up with your account register, but the balance on the bank statement is $145.62, not $143.61. What will you do now? **(There must be a computation error. You will have to review all the calculations in your check register since your last bank statement! That's a lot of work, and shows why it's important to calculate carefully the first time!)**

2. Distribute copies of the sample blank checks. Have students fill them out for different amounts. Be sure to include amounts that include no cents or no dollars.

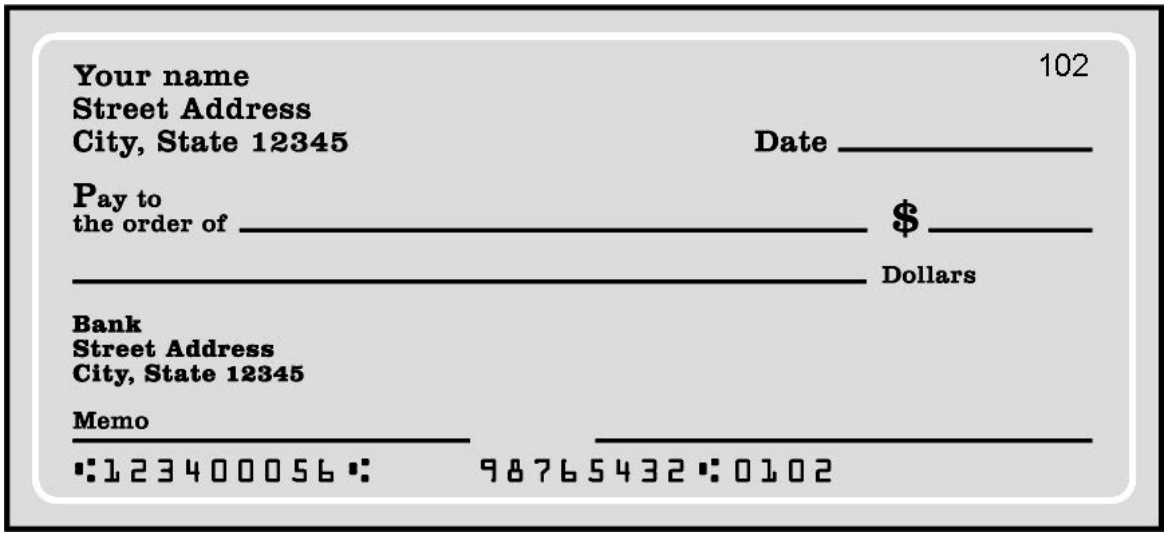
3. Make copies of the sample check register. Have students record the sample checks they write and do the computation in their registers. Be sure to start with a beginning balance.

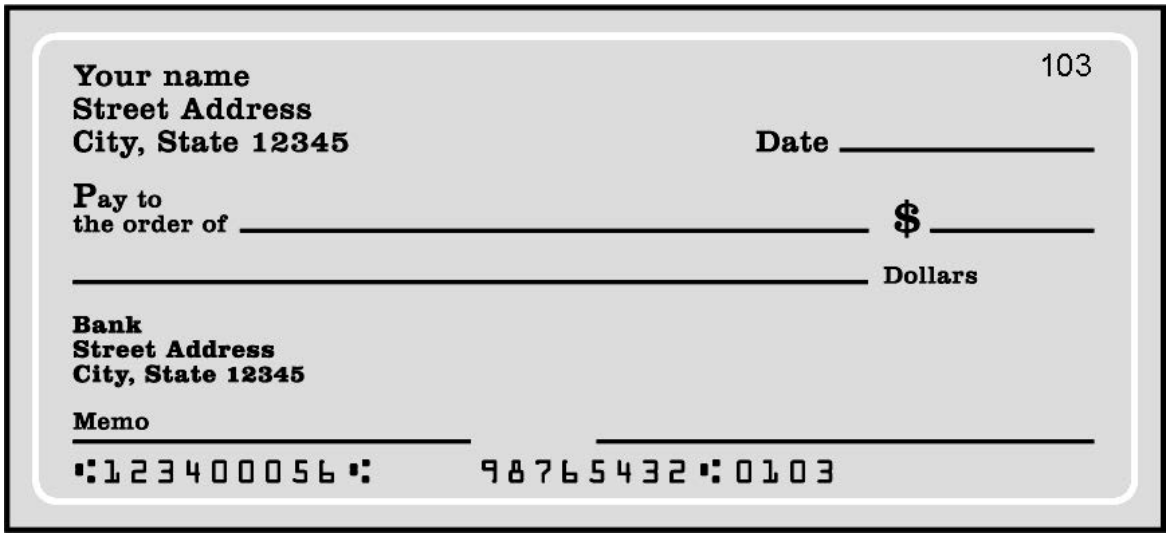
4. Have students check the rates for cashing checks at a check cashing store versus at a bank where they have an account.

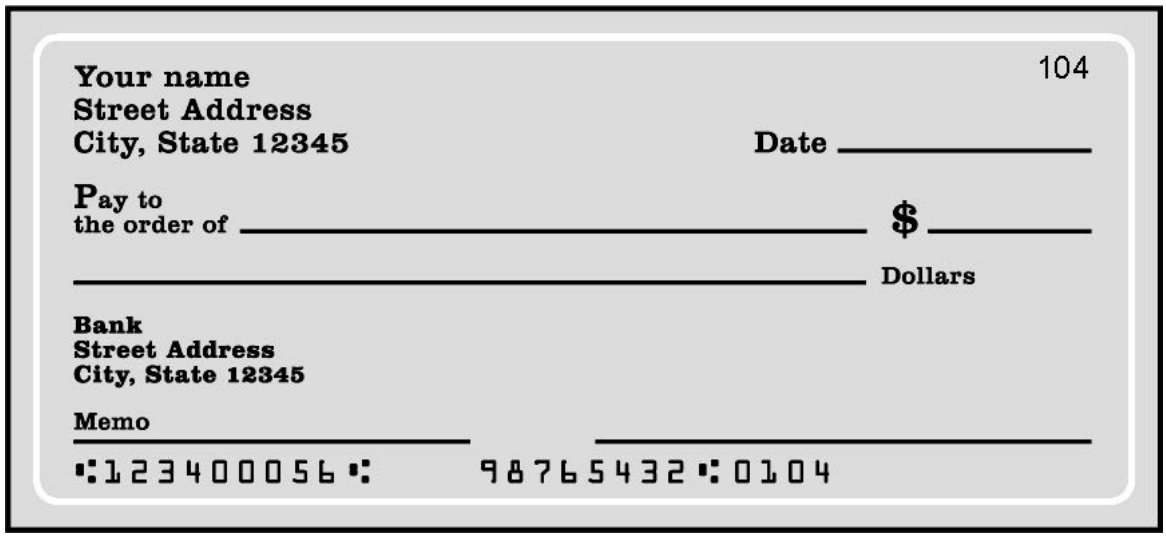
5. Simple interest is easy to compute, but it's also not commonly used. Students need to understand how to compute simple interest before they can compute compound interest, however. Once students can calculate simple interest using different percentages, have them calculate compound interest with increasingly longer terms and different interest amounts.

6. You may wish to refer students to the credit calculator in the *Hands on Banking* program. Using this calculator, students can put in an interest rate, amount, and term and calculate the total interest to be paid. There are also several websites that provide similar interest calculators.

7. Have students look in the financial section of the daily newspaper and investigate interest rates on different kinds of accounts and from different financial institutions. Ask students why an individual might choose one account over another.







Balancing a Checking Account Worksheet

Name _____

Follow the directions below to practice balancing a checking account.

1. Go through the register and check off (√) each check, withdrawal, ATM transaction, and deposit listed on the bank statement.
2. Using the worksheet on the back of your statement, enter the ending balance from your statement in part 1.
3. Make a list of all of the deposits that are in the check register that do not appear on the bank statement. Add those deposits together and enter them in part 2. These are called "outstanding" deposits because they did not reach the bank before the date of the bank statement.
4. Calculate the subtotal of parts 1 and 2 and enter the amount in part 3.
5. Make a list of all of the checks, withdrawals, and ATM transactions that do not appear on the bank statement. Add those amounts together and enter the total in part 4. These are called "outstanding" withdrawals because they did not reach the bank before the date of the bank statement.
6. Subtract part 4 (your outstanding withdrawals) from part 3 (the sum of your ending balance and your outstanding deposits) and enter the amount in part 5. This new amount should be the same as the current balance shown in your check register.

Check Register								$ BALANCE FORWARD	
NUMBER	DATE	DESCRIPTION		PAYMENT/DEBIT (-)		DEPOSIT/CREDIT(-)		117	58
100	11/2	My School		15	00			-15	00
		Club fees						102	58
	11/18	Deposit-transfer				30	00	+30	00
		from savings acct						132	58
101	11/21	Gift Shop		8	57			-8	57
		Present for Teresa						124	01
102	11/28	Dress Shop		49	67			-49	67
		Dress						74	34

Balancing a Checking Account Worksheet (continued)

BANK
Street Address
City, State 12345

ACCOUNT STATEMENT
November 1 through November 30
Account Number: 98765432

Balance as of 11/30 $124.01

Activity detail

Deposits

Date	Description	$Amount
11/18	Deposit	30.00
Total deposits		30.00

Withdrawals

Checks

Number	Date	$Amount
100	11/02	15.00
101	11/21	8.57
Total checks		23.57

Other withdrawals

Date	Description	$Amount
Total other withdrawals		0
Total withdrawals		23.57

BANK
Street Address
City, State 12345

Account Balance Calculation Worksheet

1. **ENTER**
   The NEW BALANCE shown on your statement. $ _____
2. **ADD**
   Any deposits listed in your register or transfers into your account which are not shown on your statement. $ _____
3. **CALCULATE THE SUBTOTAL**
   Add parts 1 and 2. $ _____
4. **SUBTRACT**
   The total outstanding checks and withdrawals not shown on your statement. $ _____
5. **CALCULATE THE ENDING BALANCE**
   (part 1 + part 2 – part 4)
   This amount should be the same as the current balance in your check register. $ _____

Teacher's Copy of Balancing a Checking Account Worksheet

Name _____

Follow the directions below to practice balancing a checking account.

1. Go through the register and check off (√) each check, withdrawal, ATM transaction, and deposit listed on the bank statement.
2. Using the worksheet on the back of your statement, enter the ending balance from your statement in part 1.
3. Make a list of all of the deposits that are in the check register that do not appear on the bank statement. Add those deposits together and enter them in part 2. These are called "outstanding" deposits because they did not reach the bank before the date of the bank statement.
4. Calculate the subtotal of parts 1 and 2 and enter the amount in part 3.
5. Make a list of all of the checks, withdrawals, and ATM transactions that do not appear on the bank statement. Add those amounts together and enter the total in part 4. These are called "outstanding" withdrawals because they did not reach the bank before the date of the bank statement.
6. Subtract part 4 (your outstanding withdrawals) from part 3 (the sum of your ending balance and your outstanding deposits) and enter the amount in part 5. This new amount should be the same as the current balance shown in your check register.

Check Register								$ BALANCE FORWARD	
NUMBER	DATE	DESCRIPTION		PAYMENT/DEBIT (-)		DEPOSIT/CREDIT(-)		117	58
100	11/2	My School		15	00			-15	00
		Club fees						102	58
	11/18	Deposit-transfer				30	00	+30	00
		from savings acct						132	58
101	11/21	Gift Shop		8	57			-8	57
		Present for Teresa						124	01
102	11/28	Dress Shop		49	67			-49	67
		Dress						74	34

Teacher's Copy of Balancing a Checking Account Worksheet (continued)

BANK
Street Address
City, State 12345

ACCOUNT STATEMENT
November 1 through November 30
Account Number: 98765432

Balance as of 11/30 $124.01

Activity detail

Deposits

Date	Description	$Amount
11/18	Deposit	30.00
Total deposits		30.00

Withdrawals

Checks

Number	Date	$Amount
100	11/02	15.00
101	11/21	8.57
Total checks		23.57

Other withdrawals

Date	Description	$Amount
Total other withdrawals		0
Total withdrawals		23.57

BANK
Street Address
City, State 12345

Account Balance Calculation Worksheet

1. **ENTER** The NEW BALANCE shown on your statement. $ 124.01
2. **ADD** Any deposits listed in your register or transfers into your account which are not shown on your statement. $ 0
3. **CALCULATE THE SUBTOTAL** Add parts 1 and 2. $ 124.01
4. **SUBTRACT** The total outstanding checks and withdrawals not shown on your statement. $ 49.67
5. **CALCULATE THE ENDING BALANCE** (part 1 + part 2 – part 4) This amount should be the same as the current balance in your check register. $ 74.34

Check Register

NUMBER	DATE	DESCRIPTION	√	PAYMENT/DEBIT (-)		DEPOSIT/CREDIT(-)		$ BALANCE FORWARD	

Credit and You

Unit Overview

In these lessons, middle-school students (grades 6-8) calculate and compare the total cost of paying for a purchase with cash compared to paying for it over time with a credit card. Students evaluate the characteristics of responsible borrowers.

In the online/CD-ROM version of the *Hands on Banking* program, there are seven lessons that are condensed into two sections, below.

Section 1: Credit and Credit Cards
Students will evaluate the costs associated with borrowing money. Students will recognize the advantages and disadvantages of making purchases with a credit card and paying for them over time.

Section 2: Loans
Students will distinguish between consumer loans and buying over time on credit cards.

Learning Objectives

The financial-literacy objectives of these lessons are for students to recognize the costs of different payment options and the responsibility of individuals to maintain their own good credit history.

The mathematical objective of these lessons is for students to compute the sum or difference of whole numbers and positive decimals to two places.

Alignment with Educational Standards

JumpStart Coalition for Personal Financial Literacy, *National Standards inK-12 Personal Finance Education* (2007), Grade 8 Standards:

- Credit and Debt

National Council of Teachers of Mathematics *Principles and Standards for School Mathematics*, (2000), Grades 6-8:

- Number and Operations Expectations, "(Students will) work flexibly with fractions, decimals, and percents to solve problems.…(Students will) select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods."
- Problem-Solving Expectations: "Solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems."
- Connections Expectations: "Recognize and apply mathematics in contexts outside of mathematics."

Section 1: Credit and Credit Cards

Students will evaluate the costs associated with borrowing money. Students will recognize the advantages and disadvantages of making purchases with a credit card and paying for them over time.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- What does it mean to "take personal responsibility" for something? Give an example of a situation where you have taken responsibility for making sure something got done.
- Have you ever borrowed money from someone? What kind of agreement did you make with them about paying the money back? Did you keep your promise?
- Have you ever loaned money to someone? What kind of agreement did you make about getting paid back? Did you put your agreement in writing?
- Why might someone want to make a purchase with a credit card rather than paying cash?

Key Points

Credit

- To put it simply, **credit** is about borrowing money. Credit refers to the ability of a person or a business to borrow money from a lender with the intent, or promise, to pay the money back.
- With loans and credit cards, people are able to borrow the money they need in order to buy something now.
- Earning credit requires earning people's trust. When you borrow money from a parent, guardian, neighbor or friend, you usually promise to pay it back by a certain time. They lend you the money because they trust you to keep your promise. The same holds true when you borrow from a bank.
- Taking personal responsibility is absolutely essential when it comes to credit. Taking personal responsibility means keeping your promise to pay back the money you owe.
- Not everyone can borrow money from a bank. Credit is a privilege—and it's granted only to those who have demonstrated their ability to manage their money over time. This is called your **credit history.**
- You can establish credit by opening a savings or checking account and carefully managing it. Careful management of a checking account means you don't write checks for more money than you have. Lots of teens have already started the process of establishing credit by opening savings and checking accounts. Nearly two of every three teenagers of high school age have savings accounts, and about one in five has a checking account.
- Building good credit is the key to getting the things you want—a car, college education, or a house. It's important to maintain a good credit history.

Credit Cards

- At age 21, you may be able to have a credit card in your own name. To do so, you will need to show the lender that you can use a credit card responsibly. First, the lender will want to know your **income,** or how much money you earn for your work. Second, they'll want to see if you have a history of paying your bills on time. This information helps the lender determine whether they can have confidence in you to repay your debts.
- Most lenders charge a fee for lending money. This fee varies and is referred to as "interest." (When you deposit money in a savings account, the bank pays *you* interest. But when you borrow money from the bank, you pay interest to the *bank*.) The amount of interest on credit is usually considerably higher than the interest paid by a financial institution on savings accounts. This is one way that banks and other financial institutions make money.
- The interest rate on loans is expressed as an **annual percentage rate**, or **APR.** The APR is the yearly cost of a loan stated as a percentage of the loan amount. It reflects the interest rate and other fees required to make the loan.
- Using a credit card is like getting a short-term loan from a bank. If you pay back the full amount you spend each month, the bank will not charge you interest, and the credit card is merely a convenient tool to use. However, if you do *not* pay the full amount each month, the bank will charge you interest on the unpaid portion, and this can get very costly!
- Banks and financial institutions set limits on individuals' credit cards. This means that an individual cannot charge more than a fixed amount on his or her credit card without paying the money back. Banks are more likely to offer higher credit limits to people who demonstrate that they are responsible about paying back the money they borrow.
- You can charge up to the limit on your credit card—or charge nothing at all. Whatever amount you spend, when you repay it, your full credit limit is available to spend again—but *only* if you repay it.
- Interest rates on credit cards vary. It's wise to shop around to find the bank or financial institution that offers the lowest interest rate.
- Credit cards may charge an annual fee. If you do not make your payment on time, you are usually charged a **late fee.**
- Financial institutions use different formulas to determine the amount of interest they charge on credit cards. Some institutions average the amount of debt in your account during the billing statement period and multiply that by a monthly finance rate.
- Your credit card may also allow a period of time for you to pay the balance in full before the interest rate applies. It's important to understand all the details of your credit card and the consequences of missing payments, paying late, or overcharging on your credit card
- What is **"bad credit"?** If an individual misses a payment on his credit card or makes a late payment, it's reflected negatively on his credit rating. As well, he may be charged a "late fee" and/or a higher interest rate as a penalty.

Activity

Students use the following worksheet to explore buying with credit cards. The teacher's copy of this activity follows the students' worksheet.

Please note that the online/CD-ROM version of the *Hands on Banking* program features a credit calculator. For the benefit of students who do not have access to this credit calculator, the questions and hints have been modified for this guide.

Buying with Credit Cards Worksheet

Name _____

1. You charge $100 on a credit card that has a limit of $300. The card has an annual interest rate of 18%. Estimate how long it will take you to pay off the total charge if you pay $20 a month.

2. At 18% a year, what will the interest be on the unpaid $80 balance at the end of the first month?

3. On the $100 charge, how much will your outstanding balance be at the end of the first month, if you only make a payment of $5?

4. Alex is buying a game console for $199 plus 6.5% sales tax. He decides to pay for it in 2 equal installments on his credit card over 2 months. If the interest on the credit card is 18% a year Alex will pay $4.82 in interest. What is the real cost of the game console to Alex?

5. Angie is saving $15 every 4 weeks in her college fund. If the bank pays 5% interest compounded monthly, how much interest will Angie have earned after 6 months?

Teacher's Copy of Buying with Credit Cards Worksheet

Name _____

1. You charge $100 on a credit card that has a limit of $300. The card has an annual interest rate of 18%. Estimate how long it will take you to pay off the total charge if you pay $20 a month. **(6 months)**
   Hints:
   - *If you weren't charged any interest, how long would it take you to pay $100 at $20 a month? Divide $100 by $20.*
   - *Remember, you have to pay interest each month.*

2. At 18% a year, what will the interest be on the unpaid $80 balance at the end of the first month? **($1.20)**
   Hints:
   - *18% interest per year is 1.5% interest per month. (18/12)*
   - *Multiply $80 by .015 (1.5%) to determine the amount of interest on $80 at 1.5% per month.*

3. On the $100 charge, how much will your outstanding balance be at the end of the first month, if you only make a payment of $5? **($96.43)**
   Hint: Subtract $5 from $100. Now multiply that answer by .015 (1.5%) and add that amount ($1.43) to $95.00.

4. Alex is buying a game console for $199 plus 6.5% sales tax. He decides to pay for it in 2 equal installments on his credit card over 2 months. If the interest on the credit card is 18% a year Alex will pay $4.82 in interest. What is the real cost of the game console to Alex? **($216.76)**
   Hints:
   - *Calculate the cost of the sales tax on the $199 game console by multiplying $199 by .065 (6.5%).*
   - *Add that amount to $199. That is what Alex must pay to purchase the game console. Add the amount of interest Alex was charged to the original cost of the game console.*

5. Angie is saving $15 every 4 weeks in her college fund. If the bank pays 5% interest compounded monthly, how much interest will Angie have earned after 6 months? **($1.33)**
Hints:

- *Remember, with compound interest, you will earn interest on previously earned interest, as well as on the principal. Also remember that each time compounding is calculated, the interest rate needs to be divided by how often it is compounded. For example, if compounding occurs monthly (i.e., twelve times per year), you will need to divide by 12.*
- *Begin by multiplying $15 x .05 and dividing by 12 (or multiplying by 0.0833). Add that amount ($0.06) to the original $15 deposit. That's how much Angie now has after one month. ($15.06)*
- *Add the next month's $15 deposit.*
- *Now multiply $30.06 x .05 and divide by 12 (or multiply by 0.0833). Add that amount ($0.13) to $30.06 to get the total Angie has after two months.($30.19)*
- *Round your answer to the nearest penny.*
- *Add the next month's $15 deposit.*
- *Now multiply $45.19 x .05 and divide by 12 (or multiply by 0.0833). Add that amount ($0.19) to $45.19 to get the total Angie has after three months.($45.38)*
- *Add the next month's $15 deposit.*
- *Multiply $60.38 x .05 and divide by 12 (or multiply by 0.0833). Add that amount ($0.25) to $60.38 to get the total Angie has after four months. ($60.63)*
- *Round your answer to the nearest penny.*
- *Continue this process two more times so you have done it a total of six times (the six-month period).*
- *To figure out how much interest Angie earned after 6 months, subtract the amount of her deposits ($90) from the amount you calculated she has, with interest, after 6 months. ($91.33 - $90.00 = $1.33)*

Calculating Interest Earned

Month	Amount in Account	Amount with Interest
1	15.00	15.06
2	30.06	30.19
3	45.19	45.38
4	60.38	60.63
5	75.63	75.95
6	90.95	91.33

Section 2: Loans

Students will distinguish between consumer loans and buying over time on credit cards.

Opening Questions:

Use these or similar questions to start students thinking about this concept and how it relates to them:

- What are some examples of the largest, highest-priced purchases that people make?
- We've learned that if you have a good credit history, you can get a credit card. Do you think that your credit limit on a credit card would be high enough to buy these very high-priced items we've named? If not, what's another way you can borrow the money you'll need?
- If you get a loan, do you think you'd pay more interest to the lender if you repay the money quickly or gradually over time? Explain your answer.

Key Points

- Loans are usually used for large purchases such as houses, cars, appliances, or education.
- With loans, you borrow *all* the money you need—all at once—and pay it back monthly. With loans, you also have to pay interest—but it's usually less interest than you'd pay with a credit card. It's good to shop around for a loan with the lowest interest rate.
- So getting a bank loan is a little different than buying with a credit card. (Remember, with a credit card you can charge up to the limit on your card each month—or charge nothing at all. Whatever amount you spend, when you repay it, your full credit limit is available to spend again—but *only* if you repay it.)
- Financial institutions are more likely to make loans to borrowers who have a good credit history. This means they have demonstrated their ability to repay loans or credit card balances in the past.
- When a consumer takes a loan from a financial institution, the amount of money borrowed is usually a fixed sum. The financial institution sets a rate of interest, minimum monthly payments, and a length of time for the loan. This means you know exactly how much you're going to have to repay each month, and for how long.
- For any loan amount and interest rate, the longer you take to pay off the loan, the smaller your *monthly* payment will be—yet the greater the *total* cost of the loan. It's important to borrow only what you can afford to repay.
- Before you take a loan, carefully consider both what you can afford to pay on a monthly basis and the total cost of the loan.

Teaching Tips

Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.

1. You may use the Credit Calculator in the *Hands on Banking* program to show students how much different interest rates add to the cost of an item. Construct problems such as:
    - Suppose a DVD player costs $199 (plus applicable sales tax). You want to buy it with your credit card. The interest is 18% APR (1.5% monthly). Use the Credit Calculator in the *Hands on Banking* program to figure out how much you would spend if you paid $20.00 a month. How many months would it take to pay for the DVD player?

2. Have students calculate the *monthly* interest rates for different *annual* percentage rates (APRs) that financial institutions are charging on credit card purchases. Students can check in the newspaper or online for current credit card interest rates.

3. Have students use the Credit Calculator in the *Hands on Banking* program to explore different interest rates and monthly payment options.

4. Create problems that allow students to compare buying goods on credit to saving for the items over several months. (This activity can be related to the information in the budgeting unit.) Modify the numbers you are working with to reflect the needs of your individual students.

5. Create a borrowing problem that includes a late fee for missing a payment or paying late. Use the Credit Calculator in the *Hands on Banking* program to create problems giving students the amount borrowed and the amount of the minimum payment. Have students use this information to calculate what percent of the balance the minimum payment is.

6. It's important for students to understand that only paying the minimum payment on a credit card can result in high costs. Students may use the Credit Calculator in the *Hands on Banking* program to investigate problems such as these:
    - Assume you have a balance of $1000 on your credit card, and the interest rate is 17¾% a year. To pay off the $1000 in three years, you will have to make minimum payments of $36.03 a month. How much will the $1000 loan cost you in interest?
    - Once again, assume you have a balance of $1000 on your credit card, and the interest rate is 17¾% a year. To pay off the $1000 in *five* years, you will have to make minimum payments of $25.26 a month. How much will the $1000 loan cost you in interest?
    - You have a $1000 balance on your credit card, and the interest rate is 15¾% a year. If you make monthly payments of $174.41, how long will it take for you to pay off the $1000?
    - How much would you need to pay each month at 15¾% interest in order to pay off a $2000 loan in the same length of time?

Teaching Tips (continued)

7. Suppose you purchased goods totaling $500 on your credit card. At 18% annual interest (1.5% monthly), paying $35 a month, it would take you 17 months to pay off the $500! Defend your decision to do this.

   On the same $500 purchase, if you paid $50 a month at 18% annual interest (1.5% monthly), it would take you 11 months to pay off your credit card. Explain why you would choose one payment plan over the other.

8. A parent took out a loan for $5000 to help pay for her daughter's college tuition. If she repays the loan over 24 months, she will pay $223.96 a month. If she repays the loan over 48 months, the monthly payments will be $45.96 less.
   - What is the total amount that this parent will pay if she repays the loan over 24 months? **($5375.04)**
   - What is the total amount that this parent will pay if she repays the loan over 48 months? **($8544)**
   - How much more will the loan cost this parent if she chooses to repay the loan over 48 months than over 24 months? **($3168.96)**
   - Why might the parent choose to take the 24-month loan? Why might the parent choose to take the 48-month loan?

Smart Investing

Unit Overview

In these lessons, middle-school students (grades 6–8) calculate and compare the returns on simple investments. Students compute the average of a given set of data.

In the online/CD-ROM version of the *Hands on Banking* program, there are seven lessons that are condensed into 2 sections, below.

Section 1: Introduction to Investing
Students will investigate different types of investments including stocks. Students will explore the concept of dividends.

Section 2: Capital Gains and Losses
Students will recognize the steps to responsible stock purchasing. Students will calculate capital gains and losses.

Learning Objectives

The financial-literacy objectives of these lessons are for students to evaluate reasons that individuals invest money, to distinguish between different types of investments, and to recognize that there are risks involved in investing.

The mathematical objective of these lessons is for students to compute the sum or difference of whole numbers and positive decimals to two places.

Alignment with Educational Standards

National Council of Economic Education and the National Association of Economics Educators and the Foundation for Teaching Economics, *Voluntary National Content Standards in Economics* (1997), Grade 8:

- Content Standard 15, "Investment in factories, machinery, new technology, and the health, education, and training of people can raise future standards of living."

JumpStart Coalition for Personal Financial Literacy, *National Standards in K-12 Personal Finance Education* (2007), Grade 8:

- Saving and Investing

National Council of Teachers of Mathematics *Principles and Standards for School Mathematics*, 2000, Grades 6–8:

- Number and Operations Expectations, "(Students will) work flexibly with fractions, decimals, and percents to solve problems.…(Students will) select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods."
- Problem-Solving Expectations: "Solve problems that arise in mathematics and in other contexts; apply and adapt a variety of appropriate strategies to solve problems."
- Connections Expectations: "Recognize and apply mathematics in contexts outside of mathematics."

Section 1: Introduction to Investing

Students will investigate different types of investments including stocks, mutual funds and real estate. Students will explore the concept of dividends.

Opening Questions:

Use these or similar questions to start your students thinking about this concept and how it relates to them:

- What's the difference between having a "short-term" goal and a "long-term" goal? Name one short-term and one-long term goal that you have.
- Of all the things you will buy in your life, name a few that you think will cost the most money. About how much do you think they will they cost? How do you think you may be able to save enough money to pay for those things?
- What does it mean to "take a risk"?
- If I asked you to lend me some money so that I could start a business, would your money be at risk? Why might you be willing to take that risk? Why might you *not* want to take that risk?

Key Points

- Students need to distinguish between long-term and short-term goals. Saving for short-term goals and for emergency expenses is best done with a savings account. Saving for long-term goals may involve other types of investments.
- Saving and investing money will enable individuals to achieve longer-term financial goals, such as buying a home, and paying for higher education.
- One of the main differences between saving and investing is that, with investing, there is **risk** involved: You may make more money on an investment than you would in a savings account, but there is a chance that you could lose money, too.
- Some common types of investments are stocks, bonds, mutual funds, and real estate.
- Because there is risk involved, it's very important to seek out information before you make any investment.
- Purchasing stock in a company means that you are purchasing a portion, or **share,** of ownership of that company. Share prices vary depending on a variety of factors, including the company's past performance and reputation. Values of individual shares fluctuate daily. Individuals try to buy stock at a price they believe will go up over time. If the price of the stock goes up, this gives investors the opportunity to sell their shares at a profit. However, if the price goes down, investors may lose money. This is why there is risk involved in buying stocks.
- If you are planning on buying stock, research how well the company has been doing. What are the forecasts for the company in the future?
- Some companies pay a **dividend** to their investors on a regular basis. This means the company is sharing a portion of its profits with its investors.

Key Points (continued)

STOCK SYMBOL	DIV	LAST	CHG
WXWX	1.65	14.62	+.50
WYZZ	0	23.37	+1.25
XYYZ	2.35	44.25	-4.00
XYZZ	3.56	8.35	+2.45
XZRL	3.05	32.50	+1.23
XZZ	1	65.90	+.65

- In this example:
  - "WXWX" is the abbreviation of the company name. This is called the stock symbol.
  - "DIV" stands for dividend. A dividend is part of a company's profits paid to its shareholders.
  - "LAST" indicates the current or most recent share price of the stock.
  - "CHG" stands for change. It signifies the change in the share price from the day before.
- Many factors can impact stock prices. These include:
  - Performance of the company. Is it growing? Are its products selling?
  - Government policies.
  - World events—natural disasters, war, political unrest.
  - Investor optimism or pessimism.
- We often hear on radio and television news about the Dow Jones and NASDAQ indexes. What are these? NASDAQ is the world's largest electronic stock market, trading shares of companies in many different industries, including technology, retail, financial services, communications and biotechnology. In 1896, Dow Jones & Company, a financial publisher, launched what is now known as the Dow Jones Industrial Average. It tracks the stock performance of thirty top U.S. companies, and is considered to be a barometer of the U.S. stock market. So when you hear that either the Dow or the NASDAQ is up or down, it means, in general, that a number of popular stocks are either going up or down in share price.
- If you'd like to invest in stocks, but you don't have the time to study individual companies and their stock's performance, there's an alternative. It's a **mutual fund.** When you buy into a mutual fund, you become an investor in many different companies. You become part of a group of people who put their money together and pay a professional investment manager to buy the stocks. As a result, you don't have to watch the ups and downs of each stock; you just follow the overall value of the mutual fund.

Key Points (continued)

- The idea behind a mutual fund is that it "spreads risk." That means that if the fund invests in Company A, and its stock loses value, another company in the fund, Company B, may on the same day, increase in value. The gains in Company B may even cancel out the losses in Company A—so you might not lose anything. So, by spreading the risk, the mutual fund can help guard against losses.
- Of course, not all mutual funds gain in value. Sometimes more stocks in a mutual fund lose value than gain, and the value of the fund goes down. The stock market makes no promises!
- If you are investing in real estate, check the values of similar properties in the same location:
- Have they maintained their **value,** or lost value, or increased in value in recent years?
- What about the location?
- What else is predicted for that location in the future?

Activity

Students use the following worksheet to increase their familiarity with stock pricing. The teacher's copy of this activity follows the students' worksheet.

Stock Pricing Worksheet

Name _____

Here is a chart showing the closing price for a certain stock each day in one week. Use the chart to answer the questions below.

1. What was the average price of this stock during the week shown?

2. What was the change in the stock's price from Day 1 to Day 5?

3. Did the stock go up or down this week? How do you know?

4. Angie decides to invest $200 of her college fund in a stock that is selling for $4.50 a share. How many shares of the stock will she be able to buy?

Teacher's Copy of Stock Pricing Worksheet

Name _____

Here is a chart showing the closing price for a certain stock each day in one week. Use the chart to answer the questions below.

1. What was the average price of this stock during the week shown? **($50.31)**
   Hints:
   - *Total the prices of the stock for the 5-day period.*
   - *Divide that total by 5 to get the average price over the 5-day period.*

2. What was the change in the stock's price from Day 1 to Day 5? **($2.09)**
   Hints:
   - *Subtract the lower price from the higher price.*
   - *Subtract $48.12 (Day 5) from $50.21 (Day 1).*

3. Did the stock go up or down this week? How do you know? **(The stock went down because the price was higher on Day 1 than on Day 5.)**
   Hints:
   - *Was the price of the stock higher on Day 1 or on Day 5?*
   - *If the price was higher on Day 1 than on Day 5, then the value of the stock went down this week.*
   - *If the price of the stock was higher on Day 5 than on Day 1, then the stock is said to have "gone up" this week.*

4. Angie decides to invest $200 of her college fund in a stock that is selling for $4.50 a share. How many shares of the stock will she be able to buy? **(44)**
   Hints:
   - *Divide $200 by $4.50.*
   - *Round your answer to the nearest whole number.*
   - *Remember, people mostly purchase whole shares of stock.*

Section 2: Capital Gains and Losses

Students will recognize the steps to responsible stock ownership. Students will calculate capital gains and losses.

Opening Questions:

Use these or similar questions to start your students thinking about this concept and how it relates to them:

- What are some differences between buying things—let's say clothes, or movie tickets—and buying something *as an investment* (like stocks or mutual funds)?
- If you buy something as an investment, what do you hope happens to its value or price over time?
- Let's say your grandparents bought a house in this neighborhood fifty years ago. If they sold the house today, do you think they would be able to sell it for less or more than they originally paid? Explain your answer.

Key Points

- If you sell stocks or any other investment for more than you originally paid, it's considered a **capital gain.** This means you have earned a **profit** on your initial investment.
- Another example of a capital gain is when you purchase a piece of property, such as a house. If you sell the house for more than you paid for it, the difference is referred to as a capital gain.
- However, if the price of the stock goes down, or the value of the property *decreases*, investors may *lose* money. This is called a **capital loss.** It's important to remember that investing involves *risk*.
- Over the last 50 years, stocks have generally gained value and earned investors more money than if they had invested in safer savings accounts.
- The longer your money is invested, the greater your chances to earn more money. Students can start now with savings accounts. At age 18, they can consider buying stocks for themselves.

Activity

Students use the following worksheet to increase their familiarity with capital gains. The teacher's copy of this activity follows the students' worksheet.

Capital Gains and Losses Worksheet

Name _____

Try to work these problems using mental arithmetic—no pencils, paper, or calculators!

1. You bought 2 shares of HIJK stock when it was selling for $42 a share. How much did the two shares cost you?

2. If you sold your 2 shares of HIJK stock when it was selling for $45 a share, how much money did you make? Remember, you bought it for $42 a share.

3. You bought a share of stock in CLNR Energy for $50. At the end of the year, the stock was selling for $35 a share. If you decide to sell the stock then, how much money will you have made? *Multiple choice:*

   a. $10

   b. -$15

   c. $35

Teacher's Copy of Stock Pricing Worksheet

Name _____

These problems are mathematically simple. Have your students work them using mental arithmetic—no pencils, paper, or calculators.

1. You bought 2 shares of HIJK stock when it was selling for $42 a share. How much did the two shares cost you?**($84)**
   Hint: Multiply $42 by 2.

2. If you sold your 2 shares of HIJK stock when it was selling for $45 a share, how much money did you make? Remember, you bought it for $42 a share. (**$6)**
   Hints:
   - *How much more a share did you sell the stock for than you purchased it for? ($45 - 42)*
   - *Multiply that difference by 2 because you had 2 shares of stock.*

3. You bought a share of stock in CLNR Energy for $50. At the end of the year, the stock was selling for $35 a share. If you decide to sell the stock then, how much money will you have made?
   Multiple choice:

   a. $10

   b. -$15, a capital loss

   c. $35

   Hints:
   - *If the price of the stock is less when you sell it than when you bought it, you will not have made any money. In fact, you will have lost money.*
   - *Calculate $35 - 50. That will tell you how much money you lost on the CLNR Energy stock if you sold it for $35.*

Teaching Tips

Use these additional activities to extend or modify the unit objectives to best meet the needs of your students.

1. Using the newspaper, have students follow a particular stock. Ask students to calculate the average price of the stock over a period of time. What was the stock's change in price over that time? Did the stock's value go up or down during this time? Suppose you bought *x* shares of that stock on Day 1. What would its value be on the final day? (Check with your local newspaper. Many participate in the *Newspapers in Education* project and will supply newspapers to schools at no charge.)

2. Ask students to look through different newspapers and publications such as a stockholder's prospectus and financial magazines. Have them describe the different types of information these publications provide to inform investors.

3. Have students investigate brokerage charges from different brokers, including online brokers.

4. Have students create a fictional corporation. Students describe their company and create a prospectus for potential investors.

5. Create scenarios such as this:
    - Your friend wants you to invest in a business he is trying to set up. He will mow people's lawns for $15 a lawn. He wants you to invest in his business by giving him $50 to buy a lawnmower. He will pay you a dividend every two months that is equal to 10% of his earnings during that time. Do you think this would be a good investment? Why or why not?
    - Your friend wants to encourage other people to invest in his business. What suggestions will you make to him for appealing to other investors?

6. Encourage students to do problems such as these using mental arithmetic—no pencils or calculators! You can adjust the difficulty of these problems depending on the skill level of your students.
    - You bought 2 shares of XYZ stock when it was selling for $42.00 a share. How much did the two shares cost you? If you sold the stock when it was selling for $45.00 a share, how much money did you make?
    - You bought one share of stock in company ABC for $50.00. At the end of the year, the stock was selling for $48.00 a share. If you decide to sell the stock then, how much money will you have made? **(None—you'll lose $2.00)**
    - You deposited $50.00 in a savings account that paid 2% simple interest once a year. How much interest did you earn on your money in one year?

7. Discuss factors that affect the risks associated with investments, including the state of the economy and world events.

Teaching Tips (continued)

8. Create problems such as the following, using appropriate numbers and calculations based on your students' skill levels.

Dividend Payouts

Quarter	Dividend	Dividend for 55 Shares
1	$.50/share	$ 27.50
2	$.35/share	19.25
3	$.62/share	34.10
4	$.50/share	27.50
Total Dividends for 1 Year		**$ 108.35**

- How much would an investor with 55 shares of this stock have earned in dividends in one year?
- Why do you think the amount of dividend payments varied from quarter to quarter?
- Do you think this company was making more money in Quarter 1 or in Quarter 3? Why do you think that?
- Suppose individual shares of this company's stock were selling for $13.50. The investor wants to use her yearly dividend to purchase some more shares. How many shares can she purchase? (Remember, you may only purchase whole shares of stock.) **(8 shares)**

9. Using the Web or the newspaper, have students compare the rates of return on different savings accounts and other investments.

Assessment

Introduction

Using this Assessment, students of the *Hands on Banking*® program can test their knowledge of the Teens' (grades 6-8) curriculum. Students may use calculators to compute the answers.

The teacher's copy of the Assessment, including the answers, follows the students' worksheet. The teacher's copy also includes hints that you may offer to students at your option.

Ask students to complete the Assessment after they have studied the curriculum. Students should use their incorrect answers to identify areas for review, and following a review, take the Assessment again.

If using the online or CD-ROM versions of the *Hands on Banking* program, the program will automatically score the results. For a score of 70% or higher, students can print out a certificate of achievement, personalized with their names. If you are not online or using the CD-ROM, a certificate of achievement template is included for photocopying.

Assessment Worksheet

Name _____

1. You want to buy a jacket that's on sale for $49.95, including tax. If you're paid $2.75 an hour for babysitting, how many hours will you have to babysit in order to earn enough money to pay for the jacket? You are paid to work only by the full hour.

2. Your neighbor will pay you $7.50 to wash his car. How many full hours will you now have to babysit (at $2.75 an hour) so you can pay for the $49.95 jacket?

Use this family budget to answer the following questions.

Family Budget

Description	Percentage (%)	Amount ($)
Monthly income		$ 3,500.00
Housing costs (mortgage payment and insurance)	30%	1,050.00
Food	20%	700.00
Clothing	10%	350.00
Transportation (car payment, insurance)	12%	420.00
Medical (insurance)	12%	420.00
Savings	10%	350.00
Entertainment	4%	140.00
"Just in Case" funds	2%	70.00

3. Which of the family's expenses are discretionary expenses? *(Please choose only one answer.)*
   a. Clothing, savings, entertainment, "Just in Case" funds
   b. Savings and "Just in Case" funds
   c. Housing costs and medical insurance

4. Fixed expenses account for what percentage of this family's budget?

5. Use the Rule of 72 to figure out how long it will take a $1,000 deposit to double at 7% interest. Following this rule will give you the number of years it will take for your money to double.

6. Your bank statement shows you have a balance of $268.93. All the checks you have written during this statement period are shown on the statement, but there is a deposit missing on your bank statement. If your check register shows you have a balance of $302.43, how much is the missing deposit?

Assessment Worksheet (continued)

7. If you have a balance of $1,000 on your credit card, and the interest rate is 17¾% a year, in order to pay off the $1,000 in 5 years, you will have to make minimum payments of $25.26 a month. How much will the $1,000 loan cost you in interest? Round your answer to the nearest whole dollar.

Use this chart to answer the following questions:

Dividend Payouts

Quarter	Dividend	Dividend for 55 Shares
1	$.50/share	$ 27.50
2	$.35/share	19.25
3	$.62/share	
4	$.50/share	27.50
Total Dividends for 1 Year		

8. What was the dividend paid for 55 shares of the stock during the third quarter?

9. How much would an investor with 55 shares of this stock have earned in dividends in 1 year?

10. If you owned 73 shares of stock in this company, how much would you have received in yearly dividends?

11. Match the words on the left with their definitions:

Word	Answer
Income	
Budget	
Compound interest	
ATM	
Money cycle	
Currency	
Mutual fund	
Annual percentage rate (APR)	

Definitions
A. A plan for using your money.
B. The money an individual makes or earns.
C. Interest that is paid not only on the principal amount, but also on the earned interest.
D. The way money moves from hand to hand.
E. Automated teller machine.
F. The interest paid on a credit card over one year.
G. Cash and coins.
H. Stocks from many different companies that are purchased and managed together.

Teacher's Copy of Assessment Worksheet

Name _____

1. You want to buy a jacket that's on sale for $49.95, including tax. If you're paid $2.75 an hour for babysitting, how many hours will you have to babysit in order to earn enough money to pay for the jacket? You are paid to work only by the full hour. **(19 hours)**
   Hints:
   - *Divide the cost of the jacket by the amount per hour you will earn.*
   - *Round your answer up to the nearest whole number. (Remember, you are paid by the whole hour only.)*
2. Your neighbor will pay you $7.50 to wash his car. How many full hours will you now have to babysit (at $2.75 an hour) so you can pay for the $49.95 jacket? **(16 hours)**
   Hints:
   - *Subtract the amount you will earn for washing your neighbor's car from the cost of the jacket. This is the amount you still need to earn.*
   - *Divide the amount you still need to earn by the amount per hour you will earn for babysitting.*
   - *Round your answer up to the nearest whole number. (Remember, you are paid by the whole hour.)*

Use this family budget to answer the following questions.

Family Budget

Description	Percentage (%)	Amount ($)
Monthly income		$ 3,500.00
Housing costs (mortgage payment and insurance)	30%	1,050.00
Food	20%	700.00
Clothing	10%	350.00
Transportation (car payment, insurance)	12%	420.00
Medical (insurance)	12%	420.00
Savings	10%	350.00
Entertainment	4%	140.00
"Just in Case" funds	2%	70.00

3. Which of the family's expenses are discretionary expenses? *(Please choose only one answer.)*
   a. Clothing, savings, entertainment, "Just in Case" funds
   b. Savings and "Just in Case" funds
   c. Housing costs and medical insurance

   Hint: A discretionary expense is money that you choose to spend—such as money for CDs or movies, or even money that you save.

4. Fixed expenses account for what percentage of this family's budget? **(54%)**

   Hint: Fixed expenses occur regularly and don't change from month to month. Examples of fixed expenses are rent and car payments.

Teacher's Copy of Assessment Worksheet (continued)

5. Use the Rule of 72 to figure out how long it will take a $1,000 deposit to double at 7% interest. Following this rule will give you the number of years it will take for your money to double. **(10.29 years)**

   Hint: Divide the interest rate into 72.

6. Your bank statement shows you have a balance of $268.93. All the checks you have written during this statement period are shown on the statement, but there is a deposit missing on your bank statement. If your check register shows you have a balance of $302.43, how much is the missing deposit? **($33.50)**
   Hints:
   - *If a deposit is missing on your bank statement, that means the balance showing on your bank statement is less than the balance in your check register.*
   - *Subtract the balance showing on your bank statement from the balance in your check register. That difference should equal the amount of the deposit that is missing from your current bank statement.*

7. If you have a balance of $1,000 on your credit card, and the interest rate is 17¾% a year, in order to pay off the $1,000 in 5 years, you will have to make minimum payments of $25.26 a month. How much will the $1,000 loan cost you in interest? Students round answer to nearest whole dollar. **($515.60)**
   Hints:
   - *Multiply the amount of the monthly payments by the number of months in 5 years.*
   - *There are 60 months in 5 years. That is the total amount you will repay.*
   - *Subtract the original balance of $1,000 from the total amount you will repay. That difference is the amount of interest you will have to pay if you pay off the $1,000 over 5 years.*

Use this chart to answer the following questions:

Dividend Payouts

Quarter	Dividend	Dividend for 55 Shares
1	$.50/share	$ 27.50
2	$.35/share	19.25
3	$.62/share	
4	$.50/share	27.50
Total Dividends for 1 Year		

8. What was the dividend paid for 55 shares of the stock during the third quarter? **($34.10)**

   Hint: Multiply the per-share dividend by the number of shares (55).

9. How much would an investor with 55 shares of this stock have earned in dividends in 1 year? **($108.35)**

   Hint: Add together the total dividends for each quarter for 55 shares of stock.

Teacher's Copy of Assessment Worksheet (continued)

10. If you owned 73 shares of stock in this company, how much would you have received in yearly dividends? **($143.81)**
    Hints:
    - *Total the dividend amounts per share for the entire year.*
    - *Multiply that answer by the number of shares you own (73).*

11. Match the words on the left with their definitions:

Word Match Exercise Answers

Word	Answer.
Income	**B.**
Budget	**A.**
Compound interest	**C.**
ATM	**E.**
Money cycle	**D.**
Currency	**G.**
Mutual fund	**H.**
Annual percentage rate (APR)	**F.**

Definitions	
A.	A plan for using your money.
B.	The money an individual makes or earns.
C.	Interest that is paid not only on the principal amount, but also on the earned interest.
D.	The way money moves from hand to hand.
E.	Automated teller machine.
F.	The interest paid on a credit card over one year.
G.	Cash and coins.
H.	Stocks from many different companies that are purchased and managed together.

Additional Student Activities

Proposing a Budget

Pretend that you are the principal of your school. The school district requires you to create a budget for each school year that they must approve. In order to create that budget, you will first need to find out what the current school budget is (this includes revenues and expenses). Suppose that there is a shortage of revenue, and your new budget will have to have 20% less expenses than last year's budget. Which expenses will you cut?

Graph or chart your budget proposal, and be prepared to defend your budget choices.

Brainstorm: What kinds of items would be in a typical school budget? Teacher salaries? Staff salaries? Teaching supplies? Utility charges?

Brainstorm: What do you know about the enrollment at your school? Is it going up, going down, or staying the same? Where does the funding for your school come from? Is that funding going up, down, or staying the same?

Brainstorm: Which items can be cut realistically from a school's budget that will cause the least effect on the students, faculty and staff?

Research similar necessary budget cuts in education. How did other schools and school districts handle the need to cut their budgets?

Activity

Students use the following worksheets to further explore financial education. The teacher's copies of the activities follow the students' worksheets.

Money Word Search

Name _____

See how many of the 15 words related to money you can find in the puzzle below. List the words, and write a definition for each of them.

Money Word Search

d	e	b	a	n	k	s	v	p	l	h	c
p	k	r	t	o	f	g	l	r	s	i	u
c	s	p	m	u	i	n	c	o	m	e	r
t	b	e	d	a	c	i	k	f	r	b	r
e	p	a	y	e	e	v	u	i	b	s	e
c	h	e	c	k	y	a	i	t	p	l	n
r	s	m	s	e	l	s	l	o	a	n	c
e	w	e	h	e	n	d	o	r	s	e	y
d	h	f	b	u	d	g	e	t	t	o	r
i	s	a	w	i	t	h	d	r	a	w	h
t	c	a	p	r	t	a	x	e	k	c	o

1. _____

_____

2. _____

_____

3. _____

_____

4. _____

_____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

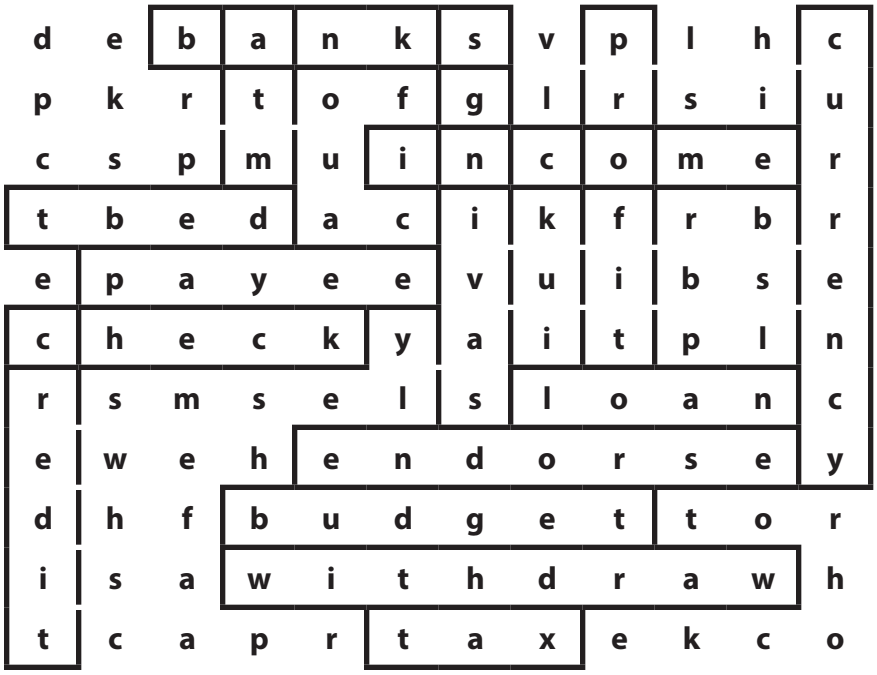
13. _____

14. _____

15. _____

Teacher's Copy of Money Word Search

Money Word Search Answers



ATM
Banks
Budget
Check
Credit
Currency
Debt
Endorse
Income
Loan
Payee
Profit
Savings
Tax
Withdraw

Money Match

Name _____

Match the name of the currency with the correct location where it is used.

Money Matching Exercise

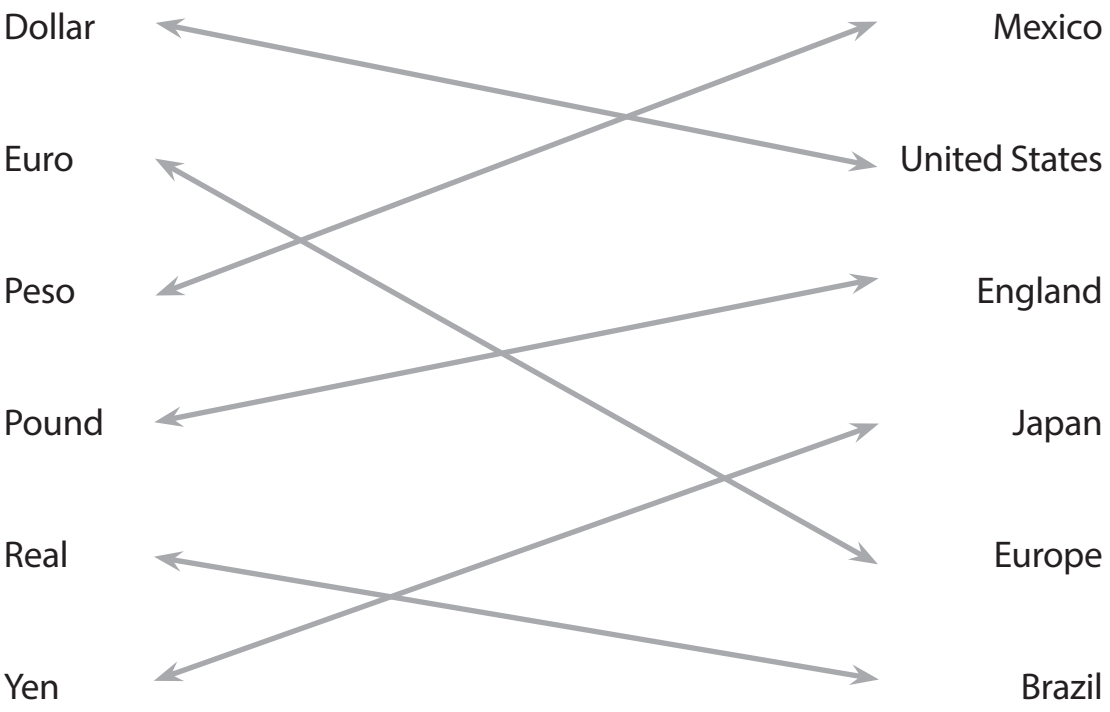
Dollar	Mexico
Euro	United States
Peso	England
Pound	Japan
Real	Europe
Yen	Brazil

Teacher's Copy of Money Match

Name _____

Match the name of the currency with the correct location where it is used.

Money Matching Exercise



Money Bingo

Students create "bingo cards" to reinforce new vocabulary and concepts related to money, banking, and finances. A sample bingo card follows.

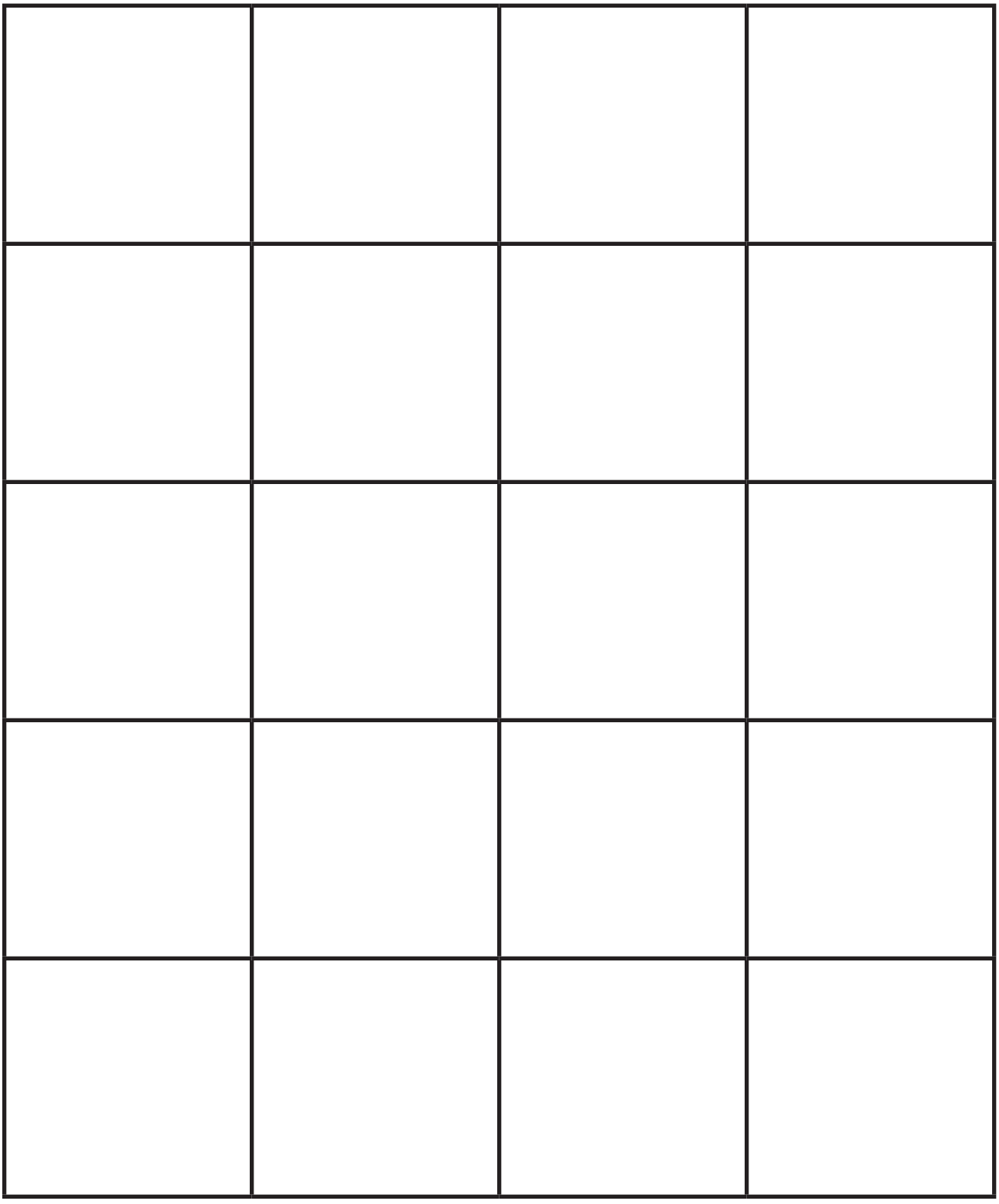
Students are given the following or a similar list to use to fill in their own bingo cards:

ATM	Income	$20.00
Bank	Interest	$30.00
Budget	Responsibility	Wants
Credit	Sales Tax	Withdraw
Deposit	Savings Account	
Five (5)	Six (6)	

After students have created their own bingo cards, the teacher or "caller" uses the following definitions for students to mark on their cards. When a student has four in a row, they call out "bingo." The teacher verifies that the student has marked off the correct terms.

1. A financial institution that handles money, including keeping if for saving or commercial purposes, and exchanging, investing, and supplying it for loans. **(BANK)**
2. A monthly or yearly spending and savings plan developed by a person, family or business. **(BUDGET)**
3. If Zing earns $5.00 each time he baby sits, how many times will he need to baby sit to have $26 to buy gas for his spaceship? **(SIX)**
4. To put money into your bank account. **(DEPOSIT)**
5. For an individual, the amount of money received during a period of time, including money received in exchange for labor or services, from the sale of goods or property, or as profit from financial investments. **(INCOME)**
6. Zing earns $2.00 each time he does an errand for his neighbor. How many times did he do an errand if he earned $10? **(FIVE)**
7. To take money out of an account. **(WITHDRAW)**
8. Things you can budget for if there is money left over after you buy what you need. **(WANTS)**
9. A tax charged by the state or city on the price of an item. **(SALES TAX)**
10. Automated Teller Machine **(ATM)**
11. A bank account that allows a customer to deposit and withdraw money and earn interest on the balance. **(SAVINGS ACCOUNT)**
12. You had $145.72 in your Savings Account. After making a deposit, you now have $165.72 in that account. How much was the deposit that you made? **($20.00)**
13. The balance in Zing's Checking Account Register is $120.75. After writing a check, the balance in Zing's Checking Account is now $90.75. For how much was the check that Zing wrote? **($30.00)**
14. The password to good credit. **(RESPONSIBILITY)**
15. When a bank or business allows its customers to purchase goods or services on the promise of future payment. **(CREDIT)**
16. The amount of money paid by a borrower to a lender in exchange for the use of the lender's money for a certain period of time. **(INTEREST)**

Money Bingo Card



Money Word Jumble

Name _____

Unscramble the letters below to make five words related to *MONEY*. Then use the letters in the boxes in the new words to solve the *MONEY RIDDLE!*.

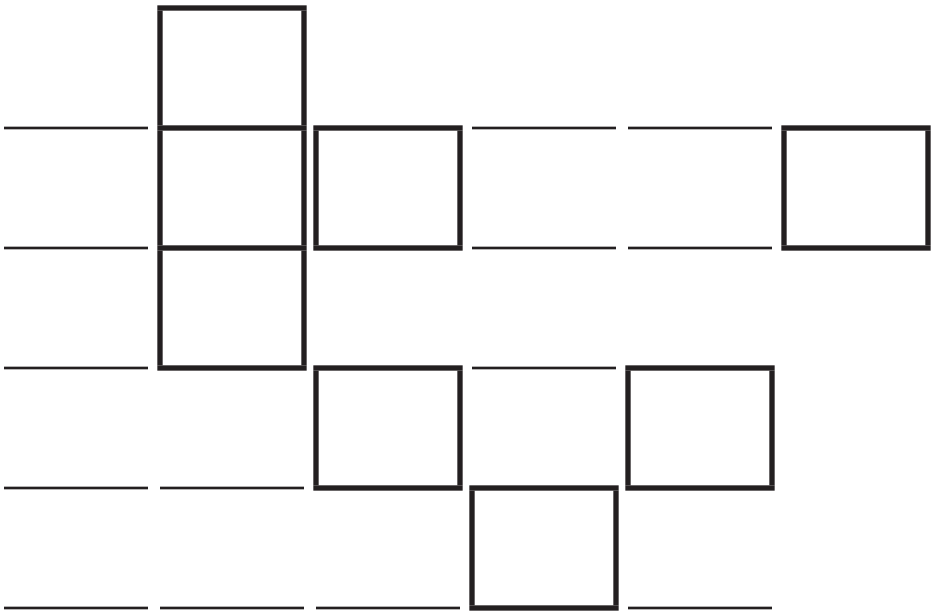
CMEOIN

TIDERC

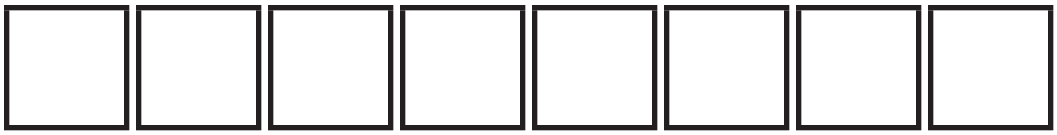
IZNG

NDEES

SWATN



Money kept in a bank savings account is never boring because it keeps giving



Teacher's Copy of Money Word Jumble

Name _____

Unscramble the letters below to make five words related to *MONEY*. Then use the letters in the boxes in the new words to solve the *MONEY RIDDLE!*.

CMEOIN	I	N	C	O	M	E
TIDERC	C	R	E	D	I	T
IZNG	Z	I	N	G		
NDEES	N	E	E	D	S	
SWATN	W	A	N	T	S	

Money kept in a bank savings account is never boring because it keeps giving

I	N	T	E	R	E	S	T

Answers: INCOME, CREDIT, ZING, NEEDS, WANTS, INTEREST

Growing Your Money

Name _____

Look how fast your money can grow!

If you save one penny a day for a week, how much money will you have at the end of one week?

Now, say you save one penny on the first day and then double the number of pennies you save each day for a week. Now, how much money will you have after one week?

Day 1 _____

Day 2 _____

Day 3 _____

Day 4 _____

Day 5 _____

Day 6 _____

Day 7 _____

Are you surprised?? Predict and then figure out how much money you will have at the end of two weeks!

I predict I will have at the end of two weeks.

Day 8 _____

Day 9 _____

Day 10 _____

Day 11 _____

Day 12 _____

Day 13 _____

Day 14 _____

Was your prediction accurate???

After how many days will you have $10,000?

Teacher's Copy of Growing Your Money

Name _____

Look how fast your money can grow!

If you save one penny a day for a week, how much money will you have at the end of one week? **($.07)**

Now, say you save one penny on the first day and then double the number of pennies you save each day for a week. Now, how much money will you have after one week?

Day 1: $.01

Day 2: $.02

Day 3: $.04

Day 4: $.08

Day 5: $.16

Day 6: $.32

Day 7: $.64

Total for the seven days: $1.27

Day 8: $1.28

Day 9: $2.56

Day 10: $5.12

Day 11: $10.24

Day 12: $20.48

Day 13: $40.96

Day 14: $81.92

Total for week 2: $162.56. The total for weeks one and two together is $163.83!

If you keep up this pattern, you will have over $10,000 on Day 21! (You will have $5242.88 on Day 20. If you double that, you will have $10485.76 on Day 21!)

Additional Financial Literacy References for Teens*

Berg, Adriane & Arthur Berg Bochner, *The Totally Awesome Money Book for Kids*

Berg, Adriane & Arthur Berg Bochner, *The Totally Awesome Business Book for Kids*

Berger, Melvin, *Round and Round the Money Goes: What Money Is and How We Use It* (Discovery Readers)

Brennan-Nelson, Denise, *Penny: The Forgotten Coin*

Burkett, Larry, *Money Planner for Kids*

Cribb, Joe, *Money* (Eyewitness Books)

Dahl, Michael, *Pass the Buck: A Fun Song about the Famous Faces and Places on American Money (*Fun Songs*)*

Drobot, Eve, *Money, Money, Money: Where it Comes From, How to Save it, Spend it and Make it*

Giesecke, Ernestine, *From Seashells to Smart Cards: Money and Currency* (Everyday Economics, Series)

Godfrey, Neale S., *Why Money Was Invented*

Harman, Hollis Page, *Barron's Money Sense for Kids,* Second Edition

Kiyosaki Robert, *Rich Dad, Poor Dad for Teens: The Secrets about Money that You Don't Learn in School*

Kravetz, Stacy, *Girl Boss: Running the Show like the Big Chicks: Entrepreneurial Skills, Stories, and Encouragement for Modern Girls*

Lea, Ted & Lora Lea*, When I Grow Up I'm Going to Be a Millionaire (*A Children's Guide to Mutual Funds*)*

Leedy, Loreen, *Follow the Money*

Linecker, Adelia Cellini, *What Color Is Your Piggy Bank?: Entrepreneurial Ideas for Self-Starting Kids* (Millennium Generation Series)

Mayr, Diane, *The Everything Kid's Money Book: From Saving to Spending to Investing—Learn All About Money!*

McGillian, Jamie, *The Kid's Money Book: Earning, Saving, Spending, Investing, Donating*

Olsen, Timothy, *The Teenage Investor*

Roper, Ingrid & Susan Synarski, *Moneymakers: Good Cents for Girls* (American Girl Library)

Schwartz, David, *If You Made a Million*

Viorst, Judith, *Alexander who Used to be Rich Last Sunday*

Waters, Jennifer, *Money*

Young, Robert, *Money*

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Glossary

401(k) Plan. A flexible retirement plan for businesses with employees. Investors in the plan don't have to pay taxes on the income they invest until they withdraw the funds at retirement age.

Account. (see Bank account)

Account fee. The amount charged by a financial institution for the services they provide in managing the account. This may also be called the monthly service fee.

Annual fee. The fee a credit card company charges a credit card holder to use the card for a year. Or, the fee a lender charges a borrower for the use of a line of credit for a year.

Automated teller machine (ATM). A specialized computer used by bank customers to manage their money, for example, to get cash, make deposits, or transfer money between accounts.

Available balance. The amount of money in your account that you can use or withdraw. Your available balance may not reflect all transactions that you have made, for example checks you have written that have not yet been paid from your account.

Bad check. (See Non-sufficient funds)

Bad credit. A situation in which lenders believe that, due to a borrower's poor history of repaying his or her debts, further loans to this person would be especially risky.

Balance your checkbook. The process of comparing your monthly checking account statement with your check register to make sure that your records and the bank's records match. Also called reconciling your account.

Bank. A financial institution that handles money, including keeping it for saving or commercial purposes, and exchanging, investing, and supplying it for loans.

Bank account. A banking service allowing a customer's money to be handled and tracked. Common bank accounts are savings and checking accounts.

Bank statement. A monthly accounting document sent to you by your bank that lists your account balance at the beginning and end of the month, and all of the checks you wrote that your bank has processed during the month. Your statement also lists other deposits, deductions, and fees, such as service charges.

Bounced check. (see Non sufficient funds)

Budget. A monthly or yearly spending and savings plan developed by a person, family, or business. A written budget helps people to be better money managers and to prepare for major or unexpected expenses.

Canceled check. A customer's check that the bank has paid and charged against the check writer's account. Cancelled checks may be returned to the check writer with the monthly bank statement, or they may be kept on film by the bank.

Charge card. Similar to a credit card, except that a charge card requires the card holder to pay off the entire balance monthly. See also Credit card.

Check. A written order instructing the bank to pay a specific amount of money to a specific person or entity. The check must contain a date, payee (person, company, or organization to be paid), amount, and an authorized signature.

Check register. A small notepad you receive when you open a checking account for the purpose of tracking your checks, deposits, and current balance.

Checking account. A bank account that allows a customer to deposit and withdraw money and write checks. Using a checking account can be safer and more convenient than handling cash.

Co-signer. A second person who signs your credit or loan application. Just like the borrower, the co-signer on a loan is equally responsible for repaying the debt. Also called a co-borrower.

Glossary (continued)

Cost of the loan. The total amount the borrower pays for a loan, including the amount borrowed (or principal), the total interest paid over the term of the loan, and all loan fees.

Credit. When a bank or business allows its customers to purchase goods or services on the promise of future payment. Also used to describe any item that increases the balance in a bank account. Deposits and interest payments are both examples of credits. redit card. Any card that may be used repeatedly to borrow money or buy products and services on credit. Credit cards are issued by financial institutions, retail stores, and other businesses. A credit card offers the card holder revolving credit that can be paid monthly with as little as the required minimum payment. See also Charge card.

Credit history. A written record of a person's use of credit, including applying for credit, and using credit or loans to make purchases. Also called a credit record.

Credit limit. The maximum dollar amount the lender is willing to make available to the borrower according to the agreement between them. For example, if you have a credit card, the credit agreement will usually specify the maximum amount of money you're allowed to charge.

Credit record. (see Credit history)

Credit union. A non-profit financial institution that is owned and operated entirely by its members. Credit unions provide financial services for their members, including savings and lending. Large organizations may organize credit unions for their members, and some companies establish credit unions for their employees. To join a credit union, a person must ordinarily belong to a participating organization, such as a college alumni association or labor union. When a person deposits money in a credit union, he or she becomes a member of the union because the deposit is considered partial ownership in the credit union.

Creditor. An individual or business that lends money or extends credit.

Currency. Any form of money that is in public circulation, for example, paper bills and coins.

Debit card. A card linked to a checking account that can be used to withdraw money and make deposits at an ATM and to make purchases at merchants. When you use a debit card, the money will be deducted from the linked checking account.

Debt. Money, goods, or services you owe to others.

Deposit. To put money into your account.

Deposit envelope. A printed envelope provided by a financial institution. Customers place cash and checks for deposit into the envelope and record information about the deposit on the outside of the envelope.

Deposit slip. A printed form supplied by a financial institution. Customers list the amounts and types of funds (such as checks and bills) they are depositing and include the slip with their deposit.

Discretionary expense. The purchase of goods or services which are not essential to the buyer, or are more expensive than necessary. Examples include entertainment and restaurant meals.

Earning power. The amount of money a person is able to make from his or her work.

Earnings. (see Income)

Economy. Activities related to the production of goods and services in a particular geographic region, such as a country, state, or county.

Endorse. To sign the back of a check, authorizing the check to be exchanged for cash or credit.

Establishing credit. Giving lenders the trust and confidence to make loans to you based on a good history of paying your debts.

Expense. For individuals, an expense is a cost of living for example rent or groceries. For businesses, an expense is any cost resulting from the money-making activities of the business.

Glossary (continued)

Federal Deposit Insurance Corporation (FDIC). An agency of the federal government that insures all bank deposits up to $250,000 per person.

Federal Reserve. An independent governmental agency established by Congress to organize and regulate banking throughout the United States.

Fees. Charges for services by a financial institution or lender.

Finance charge. The amount of money a borrower pays to a lender for the privilege of borrowing money, including interest and other service charges.

Fixed cost, Fixed expense. For an individual, a fixed cost is an expense that stays the same each month, such as rent or a car payment. For a business, a fixed cost is an expense that does not vary depending on production or sales levels, such as an equipment lease or property tax.

Flexible expense. An expense that you can control or adjust, for example, how much you spend on groceries, clothes, or long distance phone calls.

Good credit. A situation in which lenders are willing to make loans to an individual, due to his or her good history of repaying debts.

Income. For an individual, income means the amount of money received during a period of time, including money received in exchange for labor or services, from the sale of goods or property, or as profit from financial investments. For a business, income is (all the money brought in) minus cost of sales, operating expenses, and taxes, over a given period of time.

Interest. The amount of money paid by a borrower to a lender in exchange for the use of the lender's money for certain period of time. For example, you earn interest from a bank if you have a savings account and you pay interest to a lender if you have a loan.

Interest rate. The amount of interest paid per year divided by the principal amount (that is, the amount loaned, deposited, or invested). For example, if you paid $500 in interest per year for a loan of $10,000, the interest rate is 500 divided by 10,000, or five percent (5%).

Joint account. A bank account owned by two or more people who are equally responsible for the account.

Late fee. The charge or fee that is added to a loan or credit card payment when the payment is made after the due date.

Lender. A business that makes money available for others to borrow.

Loan. An agreement between a borrower and a lender, where the borrower agrees to repay money with interest over a period of time.

Minimum balance. A specific amount of money required by a financial institution in order to open or maintain a particular account. In some cases, a financial institution may charge the account holder fees, or even close an account, if the minimum balance is not maintained.

Minimum payment. The least amount of money to be repaid on a loan or credit card in order to keep the account in good standing.

Non-sufficient funds. The lack of enough money in an account to pay a particular check or payment. Also known as insufficient funds. A check with insufficient funds may be returned unpaid to the person cashing it. This has a negative impact on the check writer's history of handling his or her account, and may prevent opening of future accounts. See also Overdraft.

Online banking. A service that allows you to handle banking activities by computer, using the Internet.

Outstanding balance. The amount still owed on a bill, loan, or credit line.

Glossary (continued)

Overdraft. When there is not enough money in an account to cover a transaction and the bank pays it on your behalf, creating a negative balance in the account that you need to repay.

Overdraft Protection. Offered by many banks, overdraft protection is a service that automatically transfers money from a linked account that you select, such as a savings or credit account, when you don't have enough money in your checking account to pay your transactions.

Payee. The person, company, or organization to whom a check is written: a person or company who is to receive money.

Payor (or Payer). The person or company from whose account the money is to be taken to pay a check: a person or company who pays money.

Personal identification number (PIN). A secret combination of letters or numbers you use to gain access to your account through an electronic device such as an ATM.

Principal. The total amount of money borrowed, loaned, invested, etc., not including interest or service charges.

Reconcile. The process used to determine if the balance in your account register matches the balance reported by the bank on your account statement. Also called balancing your account.

Register. A small notepad you receive when you open a bank account for the purpose of tracking your deposits, withdrawals, and current balance.

Regular savings account. (see Savings account)

Risk. The measurable likelihood of loss, or less-than-expected return, on an investment or a loan.

Routing number. The nine-digit number on the bottom left hand corner of your checks, to the left of your account number. The routing number identifies the bank that issued the check. Every bank in the United States has at least one routing number.

Rule of 72. A way to estimate the time or interest rate you would need to double your money on an investment. For example, if you have an investment that's earning 8% per year, 72 divided by 8 equals 9. This means it would take about nine years for your original investment to double.

Sales tax. A tax charged by the state or city on the retail price of an item, collected by the retailer.

Savings account. A bank account that allows a customer to deposit and withdraw money and earn interest on the balance.

Savings account register. A small notepad you receive when you open a savings account for the purpose of tracking your deposits, withdrawals, and current balance.

Service fees. (see Fees)

Spending limit. (see Credit limit)

Statement. (see Bank statement)

Term. A period of time over which a loan is scheduled to be repaid. For example, a home mortgage may have a 30-year term, meaning it must be repaid within 30 years.

Unpaid balance. The amount that is still owed on a loan or credit card debt.

Value. Having worth, desirability, or usefulness.

Withdraw. To take money out of an account.

Withdrawal slip. A printed form supplied by a financial institution onto which the customer writes the amount of money to be taken out.

Appendix
Common Core State Standards Alignment

Topic	Lesson	Section/Activity	Standards	Notes
1	You and Your Money	Teaching Tips: 1	CCSS.MATH. CONTENT.6.NS.B.3; CCSS.MATH. CONTENT.7.RP.A.3	
1	You and Your Money	Teaching Tips: 2	CCSS.MATH. CONTENT.6.RP.2	
1	You and Your Money	Teaching Tips: 3	CCSS.MATH. CONTENT.7.RP.A.3	
1	You and Your Money	Teaching Tips: 4	CCSS.MATH. CONTENT.6.NS.B.3; CCSS.MATH. CONTENT.7.RP.A.3	
1	You and Your Money	Teaching Tips: 5	CCSS.MATH. CONTENT.6.NS.B.3	
1	You and Your Money	Teaching Tips: 6	CCSS.MATH. CONTENT.6.NS.B.3	
1	You and Your Money	Teaching Tips: 10	CCSS.MATH. CONTENT.6.NS.B.3	
2	Budgeting	Teaching Tips: 2	CCSS.MATH. CONTENT.6.NS.B.3; CCSS.MATH. CONTENT.7.RP.A.3	
2	Budgeting	Teaching Tips: 3	CCSS.MATH. CONTENT.7.RP.A.3	
2	Budgeting	Teaching Tips: 4		
2	Budgeting	Teaching Tips: 5	CCSS.MATH. CONTENT.6.RP.3	
2	Budgeting	Teaching Tips: 6	CCSS.MATH. CONTENT.7.RP.A.3	
2	Budgeting	Teaching Tips: 7	CCSS.MATH. CONTENT.7.RP.A.3	
2	Budgeting	Teaching Tips: 8	CCSS.MATH. CONTENT.7.RP.A.3	
2	Budgeting	Teaching Tips: 9		
3	Credit and You	Section 1: Credit and Credit Cards - Buying with Credit Cards Worksheet	CCSS.MATH. CONTENT.7.RP.A.3	
3	Credit and You	Section 2: Loans		

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Common Core State Standards Alignment

Topic	Lesson	Section/Activity	Standards	Notes
3	Credit and You	Teaching Tips: 1	CCSS.MATH. CONTENT.7.RP.A.3	
3	Credit and You	Teaching Tips: 2	CCSS.MATH. CONTENT.7.RP.3	In order to meet the standard, students should not use a calculator.
3	Credit and You	Teaching Tips: 3	CCSS.MATH. CONTENT.7.RP.A.3	In order to meet the standard, students should not use a calculator.
3	Credit and You	Teaching Tips: 4	CCSS.MATH. CONTENT.7.RP.A.3	In order to meet the standard, students should not use a calculator.
3	Credit and You	Teaching Tips: 5	CCSS.MATH. CONTENT.7.RP.A.3	In order to meet the standard, students should not use a calculator.
3	Credit and You	Teaching Tips: 6	CCSS.MATH. CONTENT.7.RP.A.3	In order to meet the standard, students should not use a calculator.
3	Credit and You	Teaching Tips: 7	CCSS.MATH. CONTENT.7.RP.A.3	In order to meet the standard, students should not use a calculator.
3	Credit and You	Teaching Tips: 8	CCSS.MATH. CONTENT.7.RP.A.3	In order to meet the standard, students should not use a calculator.
4	Smart Investing	Section 1: Introduction to Investing / Stock Pricing Worksheet	CCSS.MATH. CONTENT.6.NS.B.3; CCSS.MATH. CONTENT.6.NS.7C	
4	Smart Investing	Section 2: Capital Gains and Losses / Capital Gains and Losses Worksheet	CCSS.MATH. CONTENT.6.NS.B.3; CCSS.MATH. CONTENT.6.NS.7C	
4	Smart Investing	Teaching Tips: 1	CCSS.MATH. CONTENT.6.NS.B.3; CCSS.MATH. CONTENT.6.NS.7C	If students present research in oral or written form, CCSS.LITERACY-ELA.WHST.6-8.2 may also apply however the standard needs to be further specified by letter (a, b, c, d, e, and f). Accordingly, the student would need to introduce the topic and specify the organizational structure, including relevant details and examples, transitions, and domain specific vocabulary. If the research is presented in oral form, students need to present in a logical sequence including relevant details and explanations, using appropriate eye contact, tone and volume.

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Common Core State Standards Alignment

Topic	Lesson	Section/Activity	Standards	Notes
4	Smart Investing	Teaching Tips: 2	CCSS.LITERACY-ELA.WHST.6-8.2	If students present research in oral or written form, CCSS.LITERACY-ELA.WHST.6-8.2 may also apply however the standard needs to be further specified by letter (a, b, c, d, e, and f). Accordingly, the student would need to introduce the topic and specify the organizational structure, including relevant details and examples, transitions, and domain specific vocabulary. If the research is presented in oral form, students need to present in a logical sequence including relevant details and explanations, using appropriate eye contact, tone and volume.
4	Smart Investing	Teaching Tips: 3	CCSS.LITERACY-ELA.WHST.6-8.2	If students present research in oral or written form, CCSS.LITERACY-ELA.WHST.6-8.2 may also apply however the standard needs to be further specified by letter (a, b, c, d, e, and f). Accordingly, the student would need to introduce the topic and specify the organizational structure, including relevant details and examples, transitions, and domain specific vocabulary. If the research is presented in oral form, students need to present in a logical sequence including relevant details and explanations, using appropriate eye contact, tone and volume.
4	Smart Investing	Teaching Tips: 4	CCSS.LITERACY-ELA.WHST.6-8.2	If students present research in oral or written form, CCSS.LITERACY-ELA.WHST.6-8.2 may also apply however the standard needs to be further specified by letter (a, b, c, d, e, and f). Accordingly, the student would need to introduce the topic and specify the organizational structure, including relevant details and examples, transitions, and domain specific vocabulary. If the research is presented in oral form, students need to present in a logical sequence including relevant details and explanations, using appropriate eye contact, tone and volume.
4	Smart Investing	Teaching Tips: 5	CCSS.MATH.CONTENT.7.RP.A.3	
4	Smart Investing	Teaching Tips: 6	CCSS.MATH.CONTENT.6.NS.B.3; CCSS.MATH.CONTENT.7.RP.A.3	
4	Smart Investing	Teaching Tips: 7		

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Topic	Lesson	Section/Activity	Standards	Notes
4	Smart Investing	Teaching Tips: 8	CCSS.MATH. CONTENT.6.NS.B.3	
4	Smart Investing	Teaching Tips: 9	CCSS.MATH. CONTENT.5.NBT.A.3.B	
5	Assessment		CCSS.MATH. CONTENT.6.NS.B.3	
6	Additional Student Activities	Proposing a Budget	CCSS.MATH. CONTENT.7.RP.A.3; CCSS.LITERACY-ELA. WHST.6-8.2	If students present research in oral or written form, CCSS.LITERACY-ELA.WHST.6-8.1 would need to be further specified by letter (a, b, c, d, or e). Students need to introduce their claim about the best course of action including relevant details and examples, as well as clearly explain the relationships between claims, counterclaims, reasons, and evidence. If the research is presented in oral form, students need to present in a logical sequence including relevant details and explanations, using appropriate eye contact, tone and volume.

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