
Building Your Future

*A Student and Teacher Resource
for Financial Literacy Education*

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The Actuarial Foundation

About This Book

Personal finance is part knowledge and part skill – and the *Building Your Future* book series gives students a foundation in both. It addresses knowledge by covering the essential principles of banking in Book One, financing in Book Two and investing in Book Three. The series also addresses the mathematical skills that students need to live a financially healthy life. Students will be able to see the real-world consequences of mastering their finances, which helps them understand the relevance of good mathematical skills. We hope you enjoy this *Building Your Future* book series.

The catalyst for this book series was based on an original book authored and donated to The Actuarial Foundation by an actuary, James A. Tilley, FSA, who was interested in financial literacy education in schools. We thank Mr. Tilley for his original works that inspired this *Building Your Future* series.

About The Actuarial Foundation

The Actuarial Foundation, a 501(c)(3) nonprofit organization, develops, funds and executes education and research programs that serve the public by harnessing the talents of actuaries. Through *Advancing Student Achievement*, a program that seeks to improve and enhance student math education in classrooms across the country, we are proud to add *Building Your Future*, a financial literacy education curriculum for teachers and students, to our library of math resources. Please visit the Foundation's Web site at: www.actuarialfoundation.org for additional educational materials.

What is an Actuary? Actuaries are the leading professionals in finding ways to manage risk. It takes a combination of strong math and analytical skills, business knowledge and understanding of human behavior to design and manage programs that control risk. "Actuary" was included as one of the Best Careers of 2007 in US News and World Report. To learn more about the profession, go to: www.BeAnActuary.org.

Building Your Future

Table of Contents

Teacher's Guide

Chapter 1: Savings Accounts.....	1
Chapter 2: Checking Accounts	9
Chapter 3: Credit Cards.....	18
Chapter 4: Taxes	25

Appendices

Online Resources	34
"Did You Know?" Sources	35

Some of the activities in this book reference specific Web pages. While active at the time of publication, it is possible that some of these Online Resource links may be renamed or removed by their hosts at some point in the future. Note that these links were provided simply as a convenience; a quick search should reveal some of the many other online resources that can be used to complete these activities. Facts and opinions contained are the sole responsibility of the organizations expressing them and should not be attributed to The Actuarial Foundation and/or its sponsor(s).

Chapter 1: Savings Accounts

Looking Ahead

By saving even small amounts of money, one can build wealth slowly but steadily over time. Savings accounts are one means of putting money aside and earning interest on it. Money placed in these accounts is not intended for everyday expenses like purchasing movie tickets or buying a new music CD. Instead, these accounts have the purpose of providing the individual a safe place to save money that will be used at a later date to make a major purchase such as a car, to fund a large expense such as a college education, or to invest.

Getting Organized

- Students will need one class period to complete the activities for this lesson.
- While the use of individual computers with spreadsheet software best facilitates the lesson activities, materials are provided for students to complete the activities as pencil/paper tasks.

Learning Objectives

Focusing on the use of savings accounts, students will:

- Review definitions of key terms associated with savings accounts and the process of saving
- Calculate interest payments, ending/beginning account balances, future value and discount factor
- Construct savings account spreadsheets from a variety of data
- Study the power of compound interest
- Apply present value and future value and formulas for calculating discount factors
- Apply the Rule of 72 to savings accounts
- Analyze data from savings spreadsheets and draw conclusions about savings strategies
- Construct a savings account spreadsheet and use it to determine the amount of time it will take to save the amount needed to purchase a specific item

Standards

JumpStart:

- Apply reliable information and systematic decision-making to personal financial decisions
Standard 2: Find and evaluate financial information from a variety of sources
Standard 4: Make financial decisions by systematically considering alternatives and consequences
- Organize personal finances and use a budget to manage cash flow
Standard 4: Apply consumer skills to purchase decisions
- Implement a diversified investment strategy that is compatible with personal goals
Standard 1: Discuss how saving contributes to financial well-being

NCTM:

- Understand meanings of operations and how they relate to one another
- Compute fluently and make reasonable estimates
- Use mathematical models to represent and understand quantitative relationships
- Analyze change in various contexts
- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them
- Develop and evaluate inferences and predictions that are based on data

Key Terms

- **Saving:** the process of setting money aside until a future date instead of spending it today
- **Investing:** the process of setting money aside to increase wealth over time and accumulate funds for long-term financial goals such as retirement
- **Deposit:** money you put into your savings account
- **Withdrawal:** money taken out of your savings account
- **Interest:** money paid to you by the bank for being able to use your money
- **Interest rate:** percentage you are paid for your money
- **Account balance:** total amount of money that is in the account
- **Compounding of interest:** when money is earned on the total amount in the account including the initial deposit and interest that has already been credited to the account
- **Future value:** how much a set amount of money will be worth in the future
- **Present value:** the value of money right now, today
- **Discount factor:** the amount that \$1 at some point in the future is worth today
- **Rule of 72:** a formula designed to help people estimate how long it will take to double their money at a certain expected interest rate

Teaching Strategies

1. Focus student attention by discussing the “Did You Know” factoids.
2. Practice activities throughout the chapter are cumulative and will assist students with the completion of the Independent Practice assignment. These can be done using a computer and projector, with students at individual computers, or longhand on the board or overhead.
3. Use techniques such as student pair/share to discuss chapter content, vocabulary terms and the major concepts found in the chapter.
4. Throughout the chapter, some topics for discussion could include:
 - How did the beginning balance grow over the course of the year?
 - Why do interest payments increase over time?
 - How long do you think it takes to double your money over time?
5. To explain the Rule of 72, you may wish to share some or all of the calculations from the table on the next page (“How Close is the Rule of 72?”). Remind students that this rule offers estimates and not exact values. You may wish to have students do the “Examples and Practice” exercise on page 7 of the student guide before sharing this data.
6. After students have made the modifications suggested in the example and practice activities for “Savings in the Real World,” facilitate a class discussion using the **Savings in the Real World Spreadsheet** data on the **Savings Accounts: Teacher Answer Keys** page.
7. To help students apply what they have learned, direct them to the Independent Practice assignment. All students should answer the question: *How long will it take you to save \$5,000 for a car if you put at least half of your earnings into the savings account each month?* Use the **Independent Practice Spreadsheet** on the **Savings Accounts: Teacher Answer Keys** page for grading/discussing the assignment.

- If individual computers are available, direct students to complete the activity using the computers. They should print out their final copy for submission upon completing the activity.
 - If the assignment is to be completed without computers, distribute the **Savings Accounts: Independent Practice Spreadsheet** so students can show their calculations in writing.
8. For additional practice, have students complete the **Savings Account Worksheet: Student Handout**. Use the **Savings Account Worksheet: Teacher Answer Key** to grade for accuracy and discuss as needed.
 9. Extend student learning by having students write an “Independent Practice” activity of their own using at least three of the main concepts that have been learned in the chapter. Direct them to the Key Terms for ideas about the concepts they could use. Students could then exchange these problem-solving activities with one another and check the final outcomes for accuracy.

Assessment Recommendations

1. Students could be assigned participation/completion grades for doing the in-class and large group “Examples and Practice” activities.
2. Students should receive individual grades for their completion of the Independent Practice Spreadsheet. These could be completion grades, accuracy grades or a combination of both based on teacher discretion.
3. Grade the Savings Account Worksheet for accuracy.
4. Assess participation, completion and/or accuracy grades for the extended student learning activity in step 9, above.

How Close is the Rule of 72?

	A	B	C	D
1	Rate of Return	Rule of 72 Estimate (in Years)	Actual Number of Years	Difference (in Years)
3	2%	36.0	35.0	1.0
4	3%	24.0	23.4	0.6
5	4%	18.0	17.7	0.3
6	5%	14.4	14.2	0.2
7	6%	12.0	11.9	0.1
8	8%	9.0	9.0	0.0
9	10%	7.2	7.3	0.1
10	12%	6.0	6.1	0.1

Savings Accounts: Answer Key

Examples and Practice, p. 6

	A	B	C	D	E	F
1	Month	Interest Rate	Beginning Balance	Interest Payment	Ending Balance	Discount Factor
2	1	0.25%	\$500	\$1.25	\$501.25	0.9975
3	2	0.25%	\$501.25	\$1.25	\$502.50	0.9950
4	3	0.25%	\$502.50	\$1.26	\$503.76	0.9925
5	4	0.25%	\$503.76	\$1.26	\$505.02	0.9901
6	5	0.25%	\$505.02	\$1.26	\$506.28	0.9876
7	6	0.25%	\$506.28	\$1.27	\$507.55	0.9851
8	7	0.25%	\$507.55	\$1.27	\$508.82	0.9827
9	8	0.25%	\$508.82	\$1.27	\$510.09	0.9802
10	9	0.25%	\$510.09	\$1.28	\$511.36	0.9778
11	10	0.25%	\$511.36	\$1.28	\$512.64	0.9753
12	11	0.25%	\$512.64	\$1.28	\$513.92	0.9729
13	12	0.25%	\$513.92	\$1.28	\$515.21	0.9705

Examples and Practice, pp. 7-8

	A	B	C	D	E	F	G
1	Month	Interest Rate	Withdrawals	Beginning Balance	Interest Payment	Deposits	Ending Balance
2	1	0.25%		\$1,000.00	\$2.50	\$320.00	\$1,322.50
3	2	0.25%		\$1,322.50	\$3.31	\$320.00	\$1,645.81
4	3	0.25%		\$1,645.81	\$4.11	\$320.00	\$1,969.92
5	4	0.25%	\$45.00	\$1,696.92	\$4.81	\$320.00	\$2,249.73
6	5	0.25%		\$2,249.73	\$5.62	\$320.00	\$2,575.24
7	6	0.25%		\$2,575.24	\$6.44	\$320.00	\$2,901.80
8	7	0.25%		\$2,901.80	\$7.25	\$370.00	\$3,279.05
9	8	0.25%		\$3,279.05	\$8.20	\$320.00	\$3,607.25
10	9	0.25%		\$3,607.25	\$9.02	\$320.00	\$3,936.27
11	10	0.25%	\$200.00	\$3,936.27	\$9.34	\$320.00	\$4,065.61
12	11	0.25%		\$4,065.61	\$10.16	\$320.00	\$4,395.77
13	12	0.25%		\$4,395.77	\$10.99	\$320.00	\$4,726.76

Savings Accounts: Answer Key

Independent Practice Spreadsheet

	A	B	C	D	E	F
1	Month	Interest Rate	Beginning Balance	Interest Payment	Deposits	Ending Balance
2	1	0.2708%	\$250.00	\$0.68	\$320.00	\$570.68
3	2	0.2708%	\$570.68	\$1.55	\$320.00	\$892.22
4	3	0.2708%	\$892.22	\$2.42	\$320.00	\$1,214.64
5	4	0.2708%	\$1,214.64	\$3.29	\$320.00	\$1,537.93
6	5	0.2708%	\$1,537.93	\$4.17	\$320.00	\$1,862.09
7	6	0.2708%	\$1,862.09	\$5.04	\$320.00	\$2,187.14
8	7	0.2708%	\$2,187.14	\$5.92	\$320.00	\$2,513.06
9	8	0.2708%	\$2,513.06	\$6.81	\$320.00	\$2,839.87
10	9	0.2708%	\$2,839.87	\$7.69	\$320.00	\$3,167.56
11	10	0.2708%	\$3,167.56	\$8.58	\$320.00	\$3,496.14
12	11	0.2708%	\$3,496.14	\$9.47	\$320.00	\$3,825.61
13	12	0.2708%	\$3,825.61	\$10.36	\$320.00	\$4,155.97
14	13	0.2708%	\$4,155.97	\$11.26	\$320.00	\$4,487.22
15	14	0.2708%	\$4,487.22	\$12.15	\$320.00	\$4,819.38
16	15	0.2708%	\$4,819.38	\$13.05	\$320.00	\$5,152.43

Savings Accounts: Independent Practice Spreadsheet

Name _____ Date _____

	A	B	C	D	E	F	G
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
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32							

Savings Account Worksheet: Student Handout

Name _____ Date _____

Directions: Use what you have learned from *Building Your Future: Savings Accounts* to solve each problem below. Be prepared to discuss your answers.

1. You have \$65 in your savings account at the beginning of a month. The bank pays you 2.75% interest on this account each year; interest payments are made each month. Assuming you make no deposits or withdrawals over the next month, how much interest will you earn during the month?
2. You are given the opportunity to put your money in one of two savings account. Account 1 compounds interest monthly at a rate of 0.4%. Account 2 compounds every year at a rate of 4.8%. Which account would you choose and why?
3. You have \$30 today. What is its future value at the end of one year if the interest rate is 8% per year? The interest compounds yearly.
4. You are going to receive a payment of \$100 in one year. You want to determine the discount factor that can be applied to that payment amount in order to calculate the present value of the payment. The interest rate is 5%.
5. You have \$500 in a savings account. How long will it take to double that amount at the following interest rates? Assume interest is paid annually, and use the Rule of 72.
 - A. 1.5%
 - B. 4.75%
 - C. 9%

Savings Account Worksheet: Answer Key

Directions: Use what you have learned from *Building Your Future: Savings Accounts* to solve each problem below. Be prepared to discuss your answers.

1. You have \$65 in your savings account at the beginning of a month. The bank pays you 2.75% interest on this account each year; interest payments are made each month. Assuming you make no deposits or withdrawals over the next month, how much interest will you earn during the month?

2.75% / 12 = .23% interest each month. The total interest earned for the month will be \$0.15.

2. You are given the opportunity to put your money in one of two savings account. Account 1 compounds interest monthly at a rate of 0.4%. Account 2 compounds every year at a rate of 4.8%. Which account would you choose and why?

Since the first account compounds monthly, the total interest paid over the course of the year is actually higher because of the rate at which it is compounded. For example, if you put \$100 into account 1, it would be worth \$104.91 at the end of the year. If you put that same \$100 into account 2, it would only be worth \$104.80.

3. You have \$30 today. What is its future value at the end of one year if the interest rate is 8% per year? The interest compounds yearly.

The future value is \$32.40 because $\$30 \times .08 (8\%) = \2.40

4. You are going to receive a payment of \$100 in one year. You want to determine the discount factor that can be applied to that payment amount in order to calculate the present value of the payment. The interest rate is 5%.

The discount factor would be .9524 meaning that in order to receive \$100 in 1 year, the present value would be \$95.24.

5. You have \$500 in a savings account. How long will it take to double that amount at the following interest rates? Assume interest is paid annually, and use the Rule of 72.

- A. 1.5% ($72 / 1.5 = 48$ years)
- B. 4.75% ($72 / 4.75 = 15.16$ years)
- C. 9% ($72 / 9 = 8$ years)

Chapter 2: Checking Accounts

Looking Ahead

Learning to maintain a checking account is a necessary skill to master before living independently. Today's checking accounts offer a wide range of banking options, and proper use of a checking account makes paying bills and tracking personal spending habits simple and convenient.

Getting Organized

- Students will need approximately one class period to complete the activities for this chapter.
- All check writing should be done as a paper/pencil task for practice purposes with the reminder that checks should always be written in ink.
- Provide a copy of the Independent Practice Handout for each student.

Learning Objectives

As students learn to use a checking account, they will:

- Identify the questions consumers need to ask in order to select a checking account that meets their individual needs
- Balance a checkbook using a bank statement
- Describe online banking and electronic payment options
- Understand checking account responsibilities and privileges
- Write checks correctly
- Calculate checking account balances
- Learn definitions of key terms associated with checking accounts
- Practice writing checks, recording debits and credits and balancing a check register using data provided

Standards

JumpStart:

- Apply reliable information and systematic decision-making to personal financial decisions
Standard 2: Find and evaluate financial information from a variety of sources
Standard 4: Make financial decisions by systematically considering alternatives and consequences
- Organize personal finances and use a budget to manage cash flow
Standard 2: Develop a system for keeping and using financial records
Standard 3: Describe how to use different payment methods
Standard 4: Apply consumer skills to purchase decisions

NCTM:

- Understand meanings of operations and how they relate to one another
- Compute fluently and make reasonable estimates
- Use mathematical models to represent and understand quantitative relationships
- Analyze change in various contexts
- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them
- Develop and evaluate inferences and predictions that are based on data

Key Terms

- **Check:** written order specifying the amount of money to be paid and the name of the person or company who should receive the funds
- **Deposit/Credit:** money you put into your account
- **Debit:** withdrawal from your account
- **Balance/Reconcile:** compare the amount of money in an account, equal to the net of credits and debits at that point in time for that account
- **Statement balance:** how much money you have in your checking account as of the statement date
- **Debit card:** a card that allows the user to withdraw money from a bank account to obtain cash or make a purchase
- **Personal Identification Number/PIN:** four-digit code connected to the debit card; verifies your identity
- **Electronic Funds Transfer/EFT:** the movement of funds using computer systems, telephones or electronic terminals
- **Online banking:** allows account holders to access their account information, view transaction history and perform banking transactions via the Internet
- **Automated Teller Machine (ATM):** a machine that allows you to perform basic banking functions without the help of a teller
- **Overdrawn:** having a negative balance in your account
- **Overdraft penalty:** a fee to cover the cost of processing your bad check
- **Overdraft protection:** arrangement with the bank to cover checks so they will not bounce
- **Identity Theft:** stealing someone's personal, identifying information and using it to make purchases or to get other benefits
- **Minimum account balance:** the amount of money you must keep in the account to avoid service charges, qualify for special service or earn interest on the checking account
- **Interest bearing account:** an account that earns interest

Teaching Strategies

1. Discuss the "Did You Know" factoid.
Ask: The figure related to Internet banking was from 2006. How much do you think this figure has changed since then? Why?
2. Discuss your students' experience with checking accounts.
Ask: How many of you currently have a checking account that you use on a regular basis?
Record this number on the board.
Ask: How many of you have parents who use a checking account on a regular basis?
Record this number on the board.
Ask: Give some reasons why using a checking account is so popular among consumers.
List these reasons on the board.
3. Have your students complete the chapter's practice activities. Practice activities are cumulative and they will help students to complete the Independent Practice assignment. These activities can be facilitated using a computer and projector, with students at individual computers, or longhand on the board or overhead projector.

4. Direct students to read the chapter content and pair/share their learning with a classmate by summarizing each of the terms discussed using their own words.
5. Distribute the Checking Accounts: Independent Practice Handout (four pages) and review the directions with the class. Provide time for students to work on the project. Use the **Checking Accounts: Teacher Answer Key** (two pages) to grade their work.
6. Facilitate a short closing discussion about checking accounts including questions such as:
 - *What are the advantages of having a checking account? Using a debit card? Having EFTs? What are the disadvantages of each?*
 - *Based on your personal experience with checking accounts as well as the Independent Practice activity, what do you think are the most challenging aspects of having a checking account?*
 - *Do you think that paper checks will always be used, or do you believe online banking will become the only form of checking account available over time? Why?*
7. Have students phone or visit several local banks to learn about the checking account options they offer. Student should create a graphic organizer such as a Venn Diagram to compare at least two different checking accounts. After making the comparison, the student should indicate which account s/he selected and why.

Assessment Recommendations

1. Students could be assigned participation/completion grades for doing the in-class and large group “Examples and Practice” activities.
2. Students should receive an accuracy grade for the Independent Practice activity.
3. Assess participation, completion and/or accuracy grades for the extended student learning activity in step 7, above.

Checking Accounts: Independent Practice Handout

Name _____ Date _____

Directions: Use what you have learned from *Building Your Future: Checking Accounts* to complete the problem-solving activity below. Data, checks and a check register are provided for you.

Scenario:

You went on a school-sponsored trip over spring break to visit Washington, D.C. You had several things you needed to purchase for the trip before you left. In addition, you needed to have spending money while you were away. You carried a limited amount of cash on the trip because you didn't want to risk losing it. Before the trip you opened a checking account that included a debit card. Your parents provided the \$250 you needed for the trip as the beginning balance on the account. You know you will be getting your end of month bank statement soon, and you want to make sure that you will have some money left in your account now that you have returned from your trip. You tried to keep careful track of your money over the past month.

Data:

Below is a list of transactions for the month. These need to be recorded in your check register. If the transaction is in the form of a check, be sure to write the check correctly on the sample check provided. Extra checks are included for you. When you have finished recording all of the transactions, determine your current account balance. A paper check register has been included for you to use when completing this activity.

- On March 1 your parents helped you open the account by giving you the money you needed for the trip as your initial deposit into the account.
- You had to pre-pay your meals for the trip. You used your first check, number 101, to pay this expense. The amount was \$150 on March 2. The check was made payable to the Washington D.C. Food Fund.
- Your paycheck from your job was direct deposited via an EFT on March 4. The amount was \$86.63.
- On March 7 you made two debit card purchases. One was to Student Gear for \$25.73 for a new backpack. The other was to My Favorite School for the purchase of a new sweatshirt for the trip. It cost you \$18.45.
- On March 11 you bought some snacks for the trip. You wrote a check to the M and M Market for \$11.87.
- Before you left on your trip, you used your debit card on March 14 to get \$75 in cash to carry with you.
- When you arrived in Washington D.C. on March 15, you used your debit card to purchase some souvenirs for your family at White House Souvenirs. The amount of the transaction was \$37.56.
- During your visit to Washington, you had to pay admission to two museums, the History Museum on March 15 and The Museum of Famous Americans on March 16. Admission to each was \$7 and you used your debit card for these purchases.

Checking Accounts: Independent Practice Handout

- On March 16 your paycheck from your job was direct deposited via an EFT. The amount was \$77.45.
- On the last day of your trip, March 17, you went to a parade and wanted to buy a Washington, D.C. sweatshirt from a street vendor. The cost was \$40, and the vendor only accepted cash. Your friend Steve loaned you the cash. You repaid Steve via check when you returned on March 18.
- The day after you returned from your trip, you picked up some digital pictures you had printed at the Discount Drug Store. You paid the \$11.36 bill using your debit card.

Chris Student 123 Drive Avenue Someplace, PA 01234	101
	Date _____
pay to the order of _____	<input type="text"/>
_____ Dollars	
WATER MELLON BANK Commonwealth Region Harrisburg, PA	
Memo _____	
0312000002	250 126 0814 0004 101

Chris Student 123 Drive Avenue Someplace, PA 01234	102
	Date _____
pay to the order of _____	<input type="text"/>
_____ Dollars	
WATER MELLON BANK Commonwealth Region Harrisburg, PA	
Memo _____	
0312000002	250 126 0814 0004 102

Checking Accounts: Independent Practice Handout

Chris Student 123 Drive Avenue Someplace, PA 01234	103
Date _____	
pay to the order of _____	<input type="text"/>
_____ Dollars	
WATER MELLON BANK Commonwealth Region Harrisburg, PA	
Memo _____	
0312000002	250 126 0814 0004 103

Chris Student 123 Drive Avenue Someplace, PA 01234	104
Date _____	
pay to the order of _____	<input type="text"/>
_____ Dollars	
WATER MELLON BANK Commonwealth Region Harrisburg, PA	
Memo _____	
0312000002	250 126 0814 0004 104

Chris Student 123 Drive Avenue Someplace, PA 01234	105
Date _____	
pay to the order of _____	<input type="text"/>
_____ Dollars	
WATER MELLON BANK Commonwealth Region Harrisburg, PA	
Memo _____	
0312000002	250 126 0814 0004 105

Checking Accounts: Independent Practice Handout

	A	B	C	D	E	F	G
1			Check Register				
2	Check Number	Date	Transaction Description	Check/Debit Amount	Deposits/Credit Amount	Balance	
3							
4							
5							
6							
7							
8							
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10							
11							
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Checking Accounts: Independent Practice Answer Key

Chris Student 101
123 Drive Avenue
Someplace, PA 01234

Date 3-2-2008

pay to the order of Washington D.C. Food Fund \$150.00

One hundred and fifty and no/100 Dollars

WATER MELLON BANK
Commonwealth Region
Harrisburg, PA

Memo Food for trip Chris Student

031200002 250 126 0814 0004 101

Chris Student 102
123 Drive Avenue
Someplace, PA 01234

Date 3-2-2008

pay to the order of M and M Market \$11.87

Eleven and 87/100 Dollars

WATER MELLON BANK
Commonwealth Region
Harrisburg, PA

Memo Snacks for trip Chris Student

031200002 250 126 0814 0004 102

Chris Student 103
123 Drive Avenue
Someplace, PA 01234

Date 3-18-2008

pay to the order of Steve \$40.00

Forty and no/100 Dollars

WATER MELLON BANK
Commonwealth Region
Harrisburg, PA

Memo Repayment for sweatshirt Chris Student

031200002 250 126 0814 0004 103

Checking Accounts: Independent Practice Answer Key

	A	B	C	D	E	F	G
1			Check Register				
2	Check Number	Date	Transaction Description	Check/Debit Amount	Deposits/Credit Amount	Balance	
3		3/1	Deposit from parents		\$250.00	\$250.00	
4	101	3/2	Washington DC Food Fund	\$150.00		\$100.00	
5		3/4	Paycheck		\$86.63	\$186.63	
6		3/7	Student Gear	\$25.73		\$160.90	
7		3/7	My Favorite School	\$18.45		\$142.45	
8	102	3/11	M and M Market	\$11.87		\$130.58	
9		3/14	ATM for Cash	\$75.00		\$55.58	
10		3/15	White House Souvenirs	\$37.56		\$18.02	
11		3/15	History Museum	\$7.00		\$11.02	
12		3/16	The Museum of Famous Americans	\$7.00		\$4.02	
13		3/16	Paycheck		\$77.45	\$81.47	
14	103	3/18	Steve	\$40.00		\$41.47	
15		3/18	Discount Drug Store	\$11.36		\$30.11	
16							

Teacher's Guide

Chapter 3: Credit Cards

Looking Ahead

Credit can be a wonderful thing. It is what allows people to purchase homes, cars and other essential items quickly and easily. Credit can also turn into a nightmare for those who do not use it wisely or use it to live beyond their means. Credit cards have both positive and negative aspects, and using that knowledge will help students make informed spending decisions and maintain good financial health.

Getting Organized

- Students will need approximately one class period to complete the activities for this lesson.
- This lesson requires Internet access or the use of calculators.
- One credit card offer (mailer) should be available for students to see.
- Make a copy of the **Credit Cards: Independent Practice Handout** for each student.

Learning Objectives

As students learn about credit cards, they will:

- Discuss key terms associated with credit cards and making purchases using credit
- Describe the pros and cons of making purchases using credit cards
- Practice calculating minimum payments, average daily balances and daily finance charges
- Evaluate and interpret a sample credit card statement
- Analyze spreadsheet data to draw conclusions about the true cost of using credit for purchases
- Consider how to select credit cards based on individual spending habits and consumer needs

Standards

JumpStart:

- Apply reliable information and systematic decision-making to personal financial decisions
Standard 2: Find and evaluate financial information from a variety of sources
Standard 4: Make financial decisions by systematically considering alternatives and consequences
- Organize personal finances and use a budget to manage cash flow
Standard 4: Apply consumer skills to purchase decisions
- Implement a diversified investment strategy that is compatible with personal goals
Standard 1: Discuss how saving contributes to financial well-being
- Maintain creditworthiness, borrow at favorable terms and manage debt
Standard 1: Identify the costs and benefits of various types of credit

NCTM:

- Understand meanings of operations and how they relate to one another
- Compute fluently and make reasonable estimates
- Use mathematical models to represent and understand quantitative relationships
- Analyze change in various contexts
- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them
- Develop and evaluate inferences and predictions that are based on data

Key Terms

- **Credit:** the ability to make purchases with the promise that the money will be repaid later
- **Credit Card:** a card issued by a bank, retail store or business that allows the card holder to repeatedly purchase products and services on credit
- **Credit limit:** the maximum amount of money that the credit card issuer will allow you to borrow or charge
- **Charge:** monies borrowed using a credit card
- **Interest rate:** the percentage you pay on the money you have borrowed
- **Payment due date:** the date by which the credit card company must receive your payment
- **Outstanding balance:** the amount of money you still need to repay
- **Finance charge:** the interest payment you owe on the credit card balance
- **Minimum payment:** the least amount you can pay on the card and still keep your account in good standing; typically, a percentage of what you owe on the outstanding loan or some pre-set minimal amount if your balance is low
- **Average daily balance:** the average amount you owe on the credit card during each day of the billing cycle
- **Grace period:** a period of time, generally 20-25 days, before a credit card company starts charging you interest on a purchase
- **Late fee:** a penalty you are charged for not making your minimum payment by the established payment due date
- **Annual fee:** the amount of money the credit card issuer charges you for having the credit card account each year
- **Cash advance:** money you are allowed to obtain in the form of cash through the use of an ATM or bank
- **Cash advance limit:** the total amount of money you are allowed to take from the account in the form of cash
- **Daily finance charge:** the interest rate you pay each day on the outstanding balance
- **Annual percentage rate:** the yearly interest rate you pay on the credit card balance

Teaching Strategies

1. Discuss the "Did You Know" factoid and ask:
 - *How would you feel if you owed that much money?*
 - *Do you think that using a credit card is a good or bad thing? Why?*
2. Practice activities throughout the chapter are cumulative and will assist students with the completion of the Independent Practice assignment. You can facilitate these activities using a computer and projector, with students at individual computers, or longhand on the board or overhead.
3. Discuss the positive and negative aspects of using a credit card. Create "Pros" and "Cons" lists on the board or overhead and work as a class to list what students already know about the pros and cons of using credit.
4. Discuss how credit card companies market their services.
 - Show students a credit card offer.
 - Ask: *Why do you think credit card companies are so eager to issue cards to so many people, particularly young consumers?*

5. After reading the “Credit Card Basics” section, extend the discussion from step 4 by asking “*What is a typical interest rate for a credit card? What determines this rate?*” Encourage students to think back to their prior learning from earlier chapters to formulate ideas.
6. Direct students to complete the **Credit Cards: Independent Practice Handout** as a homework practice activity. Correct upon completion (see the **Credit Cards: Independent Practice Answer Key** for support). Discuss the following questions related to the assignment:
 - *Based on what you have learned about using credit cards, is it wise to purchase the gaming system and games using a credit card? Explain your answer.*
 - *If you had the opportunity to purchase something you really wanted using a credit card vs. waiting until you saved the money needed to make the purchase, which option would you choose? Explain why.*
 - *As a class, refer back to the Pros and Cons lists you created in Step 3, above, and see if you would change or add to either the pros or cons. Select volunteers to explain why these changes should be made using examples from what they learned.*

Assessment Recommendations

1. Students could be assigned participation/completion grades for doing the in-class activities and the “Examples and Practice” activities.
2. Students should receive accuracy grades for completing the **Credit Cards: Independent Practice Handout** assignment since it requires precise calculation and analysis of information.

Extension Activity

Invite a speaker from a consumer credit service to come in to speak to the class about the use of credit by young people (under age 25). Ask the speaker to identify common mistakes young borrowers make when using credit and offer students tips about avoiding the pitfalls of credit.

Credit Cards: Independent Practice Handout

Name _____ Date _____

Directions: Use what you have learned about credit cards to create a spreadsheet that will help you analyze the true cost of the item in your scenario. Then, use that data to answer the questions related to the credit purchase.

Scenario:

You have just purchased a new gaming system and some new games using your credit card. You paid \$325 for the system and the games. Using what you have learned, create spreadsheets that will help you analyze how long it will take you to pay off the balance, and the true cost of the purchase, based on your payment strategy.

- **Outstanding balance** = \$325.00
 - **Annual percentage rate** = 22%
 - **Minimum payment** = 3.5% of the outstanding balance or \$10, whichever is greater
1. Create a spreadsheet that will show how long it will take you to pay off the credit card balance if you make only minimum monthly payments. Answer the following questions.
 - *How long will it take you to pay off the credit card balance if you make only minimum monthly payments?*
 - *If you make only minimum monthly payments, what will the overall cost of the purchase be once you have paid it off?*
 - *How much of this amount will you have paid in interest?*
 2. Create a spreadsheet that shows what would happen to the overall cost of the items if you made a payment of \$50 per month. Answer the following questions.
 - *If you make a payment of \$50 per month, what happens to the overall cost of the item?*
 - *How long will it take you to pay it off?*
 - *How much will you pay in interest using this scenario?*
 3. Based on what you have learned about using credit cards, is it wise to purchase the gaming system and games using a credit card? Explain your answer.
 4. If you had the opportunity to purchase something you really wanted using a credit card vs. waiting until you saved the money needed to make the purchase, which option would you choose? Explain why.

Credit Cards: Independent Practice Answer Key

Directions: Use what you have learned about credit cards to create a spreadsheet that will help you analyze the true cost of the item in your scenario. Then, use that data to answer the questions related to the credit purchase.

Scenario:

You have just purchased a new gaming system and some new games using your credit card. You paid \$325 for the system and the games. Using what you have learned, create spreadsheets that will help you analyze how long it will take you to pay off the balance, and the true cost of the purchase, based on your payment strategy.

- **Outstanding balance** = \$325.00
 - **Annual percentage rate** = 22%
 - **Minimum payment** = 3.5% of the outstanding balance or \$10, whichever is greater
1. Create a spreadsheet that will show how long it will take you to pay off the credit card balance if you make only minimum monthly payments. Answer the following questions.
 - *How long will it take you to pay off the credit card balance if you make only minimum monthly payments?* **49 months**
 - *If you make only minimum monthly payments, what will the overall cost of the purchase be once you have paid it off?* **\$490.86**
 - *How much of this amount will you have paid in interest?* **\$165.86**
 2. Create a spreadsheet that shows what would happen to the overall cost of the items if you made a payment of \$50 per month. Answer the following questions.
 - *If you make a payment of \$50 per month, what happens to the overall cost of the item?* **It decreases**
 - *How long will it take you to pay it off?* **7 months**
 - *How much will you pay in interest using this scenario?* **\$24.22**
 3. Based on what you have learned about using credit cards, is it wise to purchase the gaming system and games using a credit card? Explain your answer.
Answers will vary, but most will see that using the credit cards is costly, especially when only minimum payments are made.
 4. If you had the opportunity to purchase something you really wanted using a credit card vs. waiting until you saved the money needed to make the purchase, which option would you choose? Explain why.
Answers will vary, but most will probably opt to save or pay the debt off with a set monthly payment rather than making only minimum payments.

Credit Cards: Independent Practice Answer Key

Credit Card Repayment at Minimum Payment Levels

	A	B	C	D	E	F	G
1	Month	Beginning Balance	Minimum Payment	Interest Rate	Interest Paid	Principal Paid	Ending Balance
2	1	\$325.00	\$11.38	1.833%	\$5.96	\$5.42	\$319.58
3	2	\$319.58	\$11.19	1.833%	\$5.86	\$5.33	\$314.26
4	3	\$314.26	\$11.00	1.833%	\$5.76	\$5.24	\$309.02
5	4	\$309.02	\$10.82	1.833%	\$5.67	\$5.15	\$303.87
6	5	\$303.87	\$10.64	1.833%	\$5.57	\$5.06	\$298.80
7	6	\$298.80	\$10.46	1.833%	\$5.48	\$4.98	\$293.82
8	7	\$293.82	\$10.28	1.833%	\$5.39	\$4.90	\$288.93
9	8	\$288.93	\$10.11	1.833%	\$5.30	\$4.82	\$284.11
10	9	\$284.11	\$10.00	1.833%	\$5.21	\$4.79	\$279.32
11	10	\$279.32	\$10.00	1.833%	\$5.12	\$4.88	\$274.44
12	11	\$274.44	\$10.00	1.833%	\$5.03	\$4.97	\$269.47
13	12	\$269.47	\$10.00	1.833%	\$4.94	\$5.06	\$264.41
14	13	\$264.41	\$10.00	1.833%	\$4.85	\$5.15	\$259.26
15	14	\$259.26	\$10.00	1.833%	\$4.75	\$5.25	\$254.01
16	15	\$254.01	\$10.00	1.833%	\$4.66	\$5.34	\$248.67
17	16	\$248.67	\$10.00	1.833%	\$4.56	\$5.44	\$243.23
18	17	\$243.23	\$10.00	1.833%	\$4.46	\$5.54	\$237.69
19	18	\$237.69	\$10.00	1.833%	\$4.36	\$5.64	\$232.04
20	19	\$232.04	\$10.00	1.833%	\$4.25	\$5.75	\$226.30
21	20	\$226.30	\$10.00	1.833%	\$4.15	\$5.85	\$220.45
22	21	\$220.45	\$10.00	1.833%	\$4.04	\$5.96	\$214.49
23	22	\$214.49	\$10.00	1.833%	\$3.93	\$6.07	\$208.42
24	23	\$208.42	\$10.00	1.833%	\$3.82	\$6.18	\$202.24
25	24	\$202.24	\$10.00	1.833%	\$3.71	\$6.29	\$195.95
26	25	\$195.95	\$10.00	1.833%	\$3.59	\$6.41	\$189.54
27	26	\$189.54	\$10.00	1.833%	\$3.47	\$6.53	\$183.02
28	27	\$183.02	\$10.00	1.833%	\$3.36	\$6.64	\$176.37
29	28	\$176.37	\$10.00	1.833%	\$3.23	\$6.77	\$169.61
30	29	\$169.61	\$10.00	1.833%	\$3.11	\$6.89	\$162.72
31	30	\$162.72	\$10.00	1.833%	\$2.98	\$7.02	\$155.70
32	31	\$155.70	\$10.00	1.833%	\$2.85	\$7.15	\$148.55

Credit Cards: Independent Practice Answer Key

Credit Card Repayment at Minimum Payment Levels (continued)

	A	B	C	D	E	F	G
1	Month	Beginning Balance	Minimum Payment	Interest Rate	Interest Paid	Principal Paid	Ending Balance
33	32	\$148.55	\$10.00	1.833%	\$2.72	\$7.28	\$141.28
34	33	\$141.28	\$10.00	1.833%	\$2.59	\$7.41	\$133.87
35	34	\$133.87	\$10.00	1.833%	\$2.45	\$7.55	\$126.32
36	35	\$126.32	\$10.00	1.833%	\$2.32	\$7.68	\$118.64
37	36	\$118.64	\$10.00	1.833%	\$2.17	\$7.83	\$110.81
38	37	\$110.81	\$10.00	1.833%	\$2.03	\$7.97	\$102.84
39	38	\$102.84	\$10.00	1.833%	\$1.89	\$8.11	\$94.73
40	39	\$94.73	\$10.00	1.833%	\$1.74	\$8.26	\$86.46
41	40	\$86.46	\$10.00	1.833%	\$1.59	\$8.41	\$78.05
42	41	\$78.05	\$10.00	1.833%	\$1.43	\$8.57	\$69.48
43	42	\$69.48	\$10.00	1.833%	\$1.27	\$8.73	\$60.75
44	43	\$60.75	\$10.00	1.833%	\$1.11	\$8.89	\$51.87
45	44	\$51.87	\$10.00	1.833%	\$0.95	\$9.05	\$42.82
46	45	\$42.82	\$10.00	1.833%	\$0.79	\$9.21	\$33.60
47	46	\$33.60	\$10.00	1.833%	\$0.62	\$9.38	\$24.22
48	47	\$24.22	\$10.00	1.833%	\$0.44	\$9.56	\$14.66
49	48	\$14.66	\$10.00	1.833%	\$0.27	\$9.73	\$4.93
50	49	\$4.93	\$5.02	1.833%	\$0.09	\$4.93	\$0.00

Credit Card Repayment at \$50 per month

	A	B	C	D	E	F	G
1	Month	Beginning Balance	Payment	Interest Rate	Interest Paid	Principal Paid	Ending Balance
2	1	\$325.00	\$50.00	1.833%	\$5.96	\$44.04	\$280.96
3	2	\$280.96	\$50.00	1.833%	\$5.15	\$44.85	\$236.11
4	3	\$236.11	\$50.00	1.833%	\$4.33	\$45.67	\$190.44
5	4	\$190.44	\$50.00	1.833%	\$3.49	\$46.51	\$143.93
6	5	\$143.93	\$50.00	1.833%	\$2.64	\$47.36	\$96.57
7	6	\$96.57	\$50.00	1.833%	\$1.77	\$48.23	\$48.34
8	7	\$48.34	\$49.22	1.833%	\$0.89	\$48.34	\$0.00

Teacher's Guide

Chapter 4: Taxes

Looking Ahead

Virtually everyone who spends or earns money pays some sort of tax. However, many people do not have a thorough understanding of the taxes they pay, particularly when it comes to income taxes. Most of your students will be wage earners in the near future if they are not already. Part of good financial health is understanding why workers are taxed, what the taxes are used for and how taxes can affect earnings and spending habits.

Getting Organized

- Students will need approximately one class period to complete the activities for this lesson.
- Print a copy of the 1040 federal tax return form for each student. If you wish to complete the extension activity for this chapter, you will also need a copy of the 1040EZ form. Both forms are available at the IRS website: <http://www.irs.gov>.
- Make a copy of the **Taxes: Independent Practice Handout** for each student.
- Make an overhead of the 1040 federal tax return form to display during the class discussion.

Learning Objectives

As students learn about various types of taxes, they will:

- Discuss key terms associated with sales, property, income and withholding taxes
- Calculate sales, property, income and withholding taxes using formulas provided
- Draw conclusions about the fairness of and need for taxes
- Complete a 1040 form
- Discuss how tax revenue is used
- Examine the role of the U.S. Treasury and the IRS in tax collection
- Review a tax return for possible deductions and refunds

Standards

JumpStart:

- Apply reliable information and systematic decision making to personal financial decisions
Standard 2: Find and evaluate financial information from a variety of sources
- Use a career plan to develop personal income potential
Standard 2: Identify sources of personal income
- Organize personal finances and use a budget to manage cash flow
Standard 5: Consider charitable giving

NCTM:

- Understand meanings of operations and how they relate to one another
- Compute fluently and make reasonable estimates
- Use mathematical models to represent and understand quantitative relationships
- Analyze change in various contexts
- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them
- Develop and evaluate inferences and predictions that are based on data

Key Terms

- **Taxes:** fees charged by the government on products, activities or income
- **Sales tax:** tax imposed by many states, counties and cities on purchases
- **Excise tax:** a state or federal tax placed on non-essential consumer goods
- **Property tax:** tax paid by people who own items such as homes, land, and vehicles pay taxes to the city and/or county where the property is located
- **Assessed value:** the amount the property is worth determined by city or county assessors
- **Market value:** what you would get if you sold the property
- **Income tax:** tax paid on the money one earns from working
- **Exemptions:** items that can be deducted from one's total income before taxes are assessed
- **Personal exemption:** exemption for someone who cannot be claimed as a dependent by another taxpayer
- **Dependent exemption:** exemption for someone who relies on the taxpayer for support including food, clothing and shelter
- **Deduction:** amount subtracted from taxable income
- **Charitable contributions:** money that was contributed to charities
- **Itemized deductions:** a list of items than can be deducted from the total income
- **Taxable income:** the amount of income subject to income tax
- **Progressive:** tax rates increase as the amount of taxable income increases
- **U.S. Treasury:** department within the U.S. government
- **Internal Revenue Service (IRS):** government agency that collects taxes for the U.S. government
- **Payroll taxes:** deducted from the wage earner's gross pay by the employer and used to fund federal government programs such as Social Security and Medicare
- **Social Security:** a federal government program funded through payroll taxes; designed to provide retirement and disability income for those meeting the specified criteria
- **Medicare:** a federal government program funded through payroll taxes; pays for health care expenses for citizens over age 65, or who meet other special criteria
- **Credit:** an amount of money applied directly to the amount of taxes owed to the government
- **Child tax credit:** a special credit given to joint taxpayers earning less than \$110,000 annually in the amount of \$1,000 for each child under age 17 (also available to single taxpayers who meet a different income requirement; based on 2008 information)
- **Refund:** a check or automatic deposit for the amount by which taxes were overpaid

Teaching Strategies

1. Focus student attention by selecting a volunteer to read the "Did You Know" factoid and the opening quote in the "What are Taxes?" section.
 - Discuss the factoid using questions such as: *The factoid and the quote give you two varying points of view about taxes. When you think of taxes, what feelings come to mind? Why?*
 - Brainstorm a short list of the types of taxes students already know about and record these on the board/overhead.
2. Practice activities throughout the chapter are cumulative and will assist students with the completion of the Independent Practice assignment. You can facilitate these activities using a computer and projector, with students at individual computers, or longhand on the board or overhead.

3. Distribute the **Taxes: Independent Practice Handout** to each student. Review the Part 1 directions. Instruct students to read the remaining content in the chapter and work with a partner (optional) to complete Part 1 of the worksheet. Students should show their calculations and be prepared to explain them to classmates.

NOTE: The questions shown in Part 1 are the same as those included in the chapter's "Examples and Practice" sections relating to income taxes, as they represent an extended income tax activity. (The "Examples and Practice" sections relating to sales and income tax are not included in the worksheet.)

4. Discuss the answers to Part 1 of the **Taxes: Independent Practice Handout** as a class. When discussing each answer, be sure volunteers describe the process they used for calculating the information. Students should correct their work as necessary. See the **Taxes: Independent Practice Answer Key**.
5. Distribute a copy of the most recent 1040 tax form and direct students to use content from Part 1 of the worksheet to complete the tax form and answer the questions in Part 2 of the worksheet.
6. Using an overhead of the 1040 tax form, complete the form as a class. As discrepancies arise in relation to what should be recorded on the tax form, discuss these items so students get a clear understanding of how the form should be completed.
7. Close with a discussion of the questions in Part 2 of the **Taxes: Independent Practice Handout**. See **Taxes: Independent Practice Answer Key**.

Assessment Recommendation

Students could be assigned participation/completion grades for all discussion and group activities.

Extension Activity

Using information from their own pay stubs, have students with jobs calculate their annual earnings and complete a 1040EZ form to determine their tax due or the amount of the refund they should receive.

Taxes: Independent Practice Handout

Name _____ Date _____

Part 1

Directions: Answer the following questions, being sure to show your calculations. Refer back to the formulas and information found in the chapter as needed when answering each question. Be prepared to discuss and explain your answers in class.

Scenario

Who: Family of five, both parents working, three children ages 2-14

Income: Total family income for the previous calendar year was \$90,000

Property: Home with a \$100,000 mortgage

Mortgage Interest Paid: \$8,000

Property Taxes Paid: \$1,500

State/City Taxes Paid: \$3,800

Charitable Contributions: \$700

- Using what you have learned from your reading and the data above, record the total amount that can be deducted from the \$90,000 income for each category. Show your calculations.
 - Personal exemptions =
 - Dependent exemptions =
 - Total exemptions =
 - State/City taxes =
 - Property taxes =
 - Mortgage interest =
 - Total itemized deductions =
- Subtract the total itemized deductions from the family's total income to find their taxable income.
- Using the taxable income you just calculated, determine how much the family's total income tax will be using the sample tax rates listed above. HINT: The family's taxable income exceeded a total of \$42,350; therefore, you will need to use two different tax rates to find the total income tax due.

Taxes: Independent Practice Handout

4. In our family, one of the parents earns an income of \$39,000 annually, and receives a paycheck every two weeks (26 paychecks per year). Based on what the employee expects to pay in income taxes, the employer deducts \$209 for federal taxes and \$68 for state taxes from each paycheck. In addition, the employer also deducts another \$37 for health insurance. (Note: All withholding amounts shown in this paragraph are sample amounts only.)
- *Determine the amount of the parent's paycheck before withholding taxes by dividing the parent's annual salary by the number of paychecks received in one year.*
 - *Find out the total deductions made from each paycheck by adding together what the employer will withhold from the check for federal taxes, state taxes, and payroll taxes.*
 - *Subtract the total amount of deductions from the amount of each paycheck to find the take-home amount.*
 - *Find out how much this parent pays in taxes by taking the amount of federal tax withheld from each paycheck and multiplying it by the number of paychecks.*
 - *Suppose that the other parent had \$237 withheld from each of the 26 paychecks s/he earned. How much total federal tax has already been withheld for the second parent?*
 - *Determine the total amount of federal tax that has been withheld for both parents.*
 - *Will this amount be enough to pay the taxes the family owes? Explain.*
5. The family has three children and each is eligible for a \$1,000 child tax credit.
- *How much will the family's total child tax credit be?*
 - *Will the family now need to pay taxes or will they receive a refund?*
 - *What will the amount of their tax payment OR refund be?*

Taxes: Independent Practice Handout

Part 2

Directions: Now that you have collected all of your data, complete the Federal 1040 tax form to the best of your ability. Ask questions as they arise and get clarification from your teacher as needed. When you have finished the tax return, answer the following questions.

1. What percentage of the family's total income was paid out in taxes?
2. How do you think paying taxes affects spending habits?
3. Is there anything positive about paying taxes?
4. Do you think this family paid a fair amount of taxes? Why?

Taxes: Independent Practice Answer Key

Part 1

Directions: Answer the following questions, being sure to show your calculations. Refer back to the formulas and information found in the chapter as needed when answering each question. Be prepared to discuss and explain your answers in class.

Scenario

Who: Family of five, both parents working, three children ages 2-14

Income: Total family income for the previous calendar year was \$90,000

Property: Home with a \$100,000 mortgage

Mortgage Interest Paid: \$8,000

Property Taxes Paid: \$1,500

State/City Taxes Paid: \$3,800

Charitable Contributions: \$700

1. Using what you have learned from your reading and the data above, record the total amount that can be deducted from the \$90,000 income for each category. Show your calculations.

- Personal exemptions = $\$2,700 \times 2 = \$5,400$
- Dependent exemptions = $\$2,700 \times 3 = \$8,100$
- Total exemptions = $\$5,400 + \$8,100 = \$13,500$
- State/City taxes = $\$3,800$
- Property taxes = $\$1,500$
- Mortgage interest = $\$8,000$
- Total itemized deductions = $\$13,500 + \$3,800 + \$1,500 + \$8,000 = \$26,800$

2. Subtract the total itemized deductions from the family's total income to find their taxable income.
 $\$90,000 - \$26,800 = \$63,200$

3. Using the taxable income you calculated earlier, determine how much the family's total income tax will be using the sample tax rates listed above. HINT: The family's taxable income exceeded a total of \$42,350, therefore you will need to use two different tax rates to find the total income tax due.

$$\text{Total income tax due} = (\$42,350 \times .15) + (\$20,850 \times .28) = \$6,352.50 + \$5,838.00 = \$12,190.50$$

Taxes: Independent Practice Answer Key

4. In our family, one of the parents earns an income of \$39,000 annually, and receives a paycheck every two weeks (26 paychecks per year). Based on what the employee expects to pay in income taxes, the employer deducts \$209 for federal taxes and \$68 for state taxes from each paycheck. In addition, the employer also deducts another \$37 for health insurance. (Note: All withholding amounts shown in this paragraph are sample amounts only.)
- Determine the amount of the parent's paycheck before withholding taxes by dividing the parent's annual salary by the number of paychecks received in one year.
$$\$39,000 / 26 = \$1,500$$
 - Find out the total deductions made from each paycheck by adding together what the employer will withhold from the check for federal taxes, state taxes, health insurance and payroll taxes.
$$\text{Payroll taxes} = 7.65\% \text{ of } \$39,000 = \$114.75$$

$$\$209 + \$68 + \$37 + \$114.75 = \$428.75$$
 - Subtract the total amount of deductions from the amount of each paycheck to find the take-home amount.
$$\$1,500 - \$428.75 = \$1,071.25$$
 - Find out how much this parent pays in taxes by taking the amount of federal tax withheld from each paycheck and multiplying it by the number of paychecks.
$$\$209 \times 26 = \$5,434$$
 - Suppose that the other parent had \$237 withheld from each of the 26 paychecks s/he earned. How much total federal tax has already been withheld for the second parent?
$$\$237 \times 26 = \$6,162$$
 - Determine the total amount of federal tax that has been withheld for both parents.
$$\$5,434 + \$6,162 = \$11,596$$
 - Will this amount be enough to pay the taxes the family owes? Explain.
No; as we saw in question 3, above, the family owes \$12,190.50 in federal taxes.
5. The family has three children and each is eligible for a \$1000 child tax credit.
- How much will the family's total child tax credit be?
$$\$1,000 \times 3 = \$3,000$$
 - Will the family now need to pay taxes or will they receive a refund?
They will receive a refund, because with the child tax credit, they actually will owe $\$12,190.50 - \$3,000 = \$9,190.50$ in taxes, but they've had \$11,596 withheld.
 - What will the amount of their tax payment OR refund be?
Their refund will be $\$11,596 - \$9,190.50 = \$2,405.50$

Taxes: Independent Practice Answer Key

Part 2

Directions: Now that you have collected all of your data, complete the Federal 1040 tax form to the best of your ability. Ask questions as they arise and get clarification from your teacher as needed. When you have finished the tax return, answer the following questions.

1. What percentage of the family's total income was paid out in taxes?

$$\$9,190.50 / \$90,000 = 10.21\%$$

2. How do you think paying taxes affects spending habits?

Answers will vary, but most students will agree that taxes reduce the amount of money people have available to spend.

3. Is there anything positive about paying taxes?

Answers will vary, but most students will agree that taxes provide important community and social services (police, roads, schools, etc.).

4. Do you think this family paid a fair amount of taxes? Why?

Answers will vary.

Building Your Future

Appendix: Online Resources



Below you will find a list of additional resources related to the chapters in this book. These resources can be used to extend your understanding and study of the subjects in each section.

Chapter 1: Savings Accounts

LifeTuner - Save for a Goal

<http://www.lifetuner.org/topics/25-saving/tools/saveforagoal#>

Chapter 2: Checking Accounts

Consumer Action

"Checking Account Check List"

http://www.consumer-action.org/english/articles/banking_basics_checking_account_check_list_english

CAHP Credit Union

"Choosing a Checking Account"

<http://www.cahpcu.org/Checking/ChoosingaCheckingAccount/tabid/90/Default.aspx>

Chapter 3: Credit Cards

Center for Responsible Lending

Provides general information about credit cards along with tools and resources for credit card use.

<http://www.responsiblelending.org/credit-cards/>

Schoolwork

Geared specifically for high school students, the site provides an overview of credit card use, the application process and links to information on personal credit ratings, etc.

<http://www.schoolwork.org/student-credit-cards.html>

Chapter 4: Taxes

Tax Information

Offers users tax tips and basics about taxes as well as an explanation of various tax forms

<http://www.taxinformation.org/>

Internal Revenue Service

The IRS website offers a great deal of information on taxes, withholding, and other subjects, and offers all the forms required to calculate and submit tax payments.

<http://www.irs.gov>

Building Your Future

Appendix: “Did You Know” Sources



Below you will find a list of sources for the “Did You Know” statements at the beginning of each chapter in the student guides.

Chapter 1: Savings Accounts

[Did you know] That over the past 50 years, the personal savings rate in the US has dropped from 8.5% in 1957 to 0.6% in 2007—and that it did not dip below 7% until 1993?

Source: *Bureau of Economic Analysis, 2009*

Chapter 2: Checking Accounts

Forty-three percent of Internet users, or about 63 million American adults, bank online.

Source: *PEW Internet, June 14, 2006* http://www.pewInternet.org/PPF/r/185/report_display.asp

Chapter 3: Credit Cards

Approximately 88 million American households are using credit cards, and the average credit card debt is over \$9,600 per household.

Source: http://www.cardtrak.com/news/2007/6/1/Card_Debt

Chapter 4: Taxes

Three out of four individual taxpayers actually get a refund after filing their annual tax returns.

Source: *AOL Money and Finance, 2009*