

# BUILDING YOUR FUTURE



## Paving the Road to Success



A Student and Teacher Resource for Financial Literacy Education



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 essential financial principles for establishing a foundation in Book 1, paving the road to success in Book 2, expanding responsibilities in Book 3, and accumulating wealth in Book 4. The series also addresses the mathematical skills that students need to live a financially healthy life. They will be able to see the real-world consequences of mastering your finances, which should help them understand the relevance of good mathematical skills. We hope you and your students enjoy this *Building Your Future* book series.

## About The Actuarial Foundation

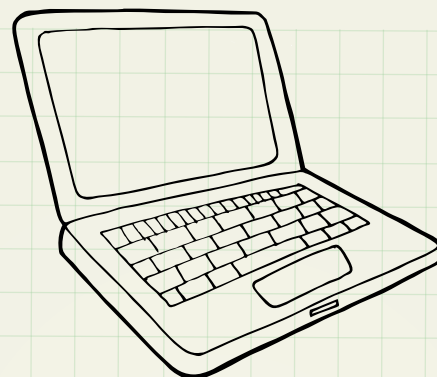
The Actuarial Foundation is a 501(c)(3) nonprofit organization. The mission of The Actuarial Foundation is to enhance math education and financial literacy through the talents and resources of actuaries. Please visit the Foundation's website at [www.actuarialfoundation.org](http://www.actuarialfoundation.org) for additional educational materials.



## Table of Contents



Chapter 1: Paths to Employment	2
Chapter 2: Paying for Post-secondary Education	6
Chapter 3: Entering the Workforce	11
Chapter 4: Taxes	15
Chapter 5: Retirement Readiness	18
Answer Key: Final Assessment Quiz	22
Appendix: Online Resources	23



## 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. *US News and World Report*, the *Jobs Rated Almanac*, *CNN Money*, and others all agree: few other occupations offer the combination of benefits that an actuarial career can offer. To learn more about the profession, go to [www.BeAnActuary.org](http://www.BeAnActuary.org).

Please Note: Students who read this book in PDF on a computer can click on **highlighted links** to access online resources and can mouseover **bolded terms** for a pop-up definition. All bolded terms are also defined at the start of each chapter in this teacher's guide.

It is possible that some of the online resource links provided here may be renamed or removed by their hosts in the future. A quick internet search should lead to similar online resources that can be used to complete the activities.

Facts and opinions contained on referenced web pages 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: Paths to Employment



## Overview

Knowing their interests, strengths, skills, and aptitudes can help students identify a number of different career options as they move toward adulthood. In choosing a career, students should also be aware of the various types of education needed for different occupations and the cost of completing an educational program. Finally, when selecting the right profession and the path for achieving it, they should consider their return on investment — how much they will gain from a certain career path — if they invest in the required training.

## Getting Organized

- Students will need one to three class periods to complete the activities for this chapter.
- Activities are designed for students to complete independently using an internet-connected computer/tablet. Alternatively, the activities can be completed as a class using a projector or digital whiteboard, or they can be printed out for completion as worksheets.
- For Activities 1 and 3, students will need access to the Internet to look up data. Activity 2 can be completed using only a calculator.
- The graphic organizer in Activity 3, Planning It Out, can be completed as a take-home exercise. Make extra copies for students to fill out with multiple career paths.

## Learning Objectives

Focusing on the selection of employment options, students will:

- Review definitions of key terms associated with selecting a career path and additional training options.
- Select potential occupations and study wage and employment trends, median salary, and rate of income change in various career paths.
- Analyze wage and job growth data.

## Key Terms

- **Apprenticeship:** a combination of on-the-job training and related instruction where workers learn the practical and theoretical aspects of a highly skilled occupation
- **Associate's Degree:** a two-year academic degree awarded by community colleges, junior colleges, technical

colleges, and four-year colleges and universities after the completion of a course of study that typically includes at least 60 credit hours

- **Bachelor's Degree:** a four-year academic degree awarded by a college or university after the completion of a course of study that typically includes at least 120 credit hours
- **Benefits:** compensation beyond a salary or hourly wage such as insurance, paid vacation time, retirement plan, or free parking
- **Career Aptitude:** an individual's innate ability, suitability, readiness, disposition, capacity, or potential for a particular occupation
- **Career Clusters:** groupings of occupations in the same field of work that require similar skills
- **Career Path:** a set of steps from an entry level position toward a specific job that progresses as you acquires more education and experience
- **Diploma:** a document issued by an educational institution certifying that the recipient has successfully completed a particular course of study
- **Doctorate:** the highest level of a university degree offered in a range of studies
- **Earning Potential:** the amount of money a person should be able to earn in his/her profession
- **Employability:** a set of achievements, skills, knowledge, and personal attributes that mark a person as competent in a specific type of work
- **Hourly Wage:** the amount an employee is paid by an employer for completing an hour of work
- **Industries:** broad groups of businesses or organizations with similar activities, products, or services
- **Internship:** working, usually for free or a small wage, in your expected career field with supervision from more experienced professionals as a means of gaining the experience needed for an entry-level position
- **Job Shadowing:** accompanying an experienced worker on the job to learn the specific skills and responsibilities associated with the successful performance of a specific career



- **Lifestyle:** a set of work and leisure behavior patterns, attitudes, opinions, and values that reflects a person's self-image or self concept
- **Lifetime Earnings:** the total amount of money one can expect to be paid for work done in a specific career field
- **Master's Degree:** an advanced university degree offered in a range of studies, beyond a bachelor's but not to the doctorate level
- **On-the-job Training:** hands-on training by an experienced employee or trainer in the workplace to teach an employee the specific skills needed for the position over the course of their working years
- **Return on Investment (ROI):** measures what is gained from an investment after subtracting the cost(s), usually in money and/or time, of the investment
- **Salary:** wages an employee receives from the employer on a regular basis, usually weekly, bi-weekly, or monthly
- **Skills:** the ability to do something with competence
- **Vocational Education:** training for a specific industry or trade

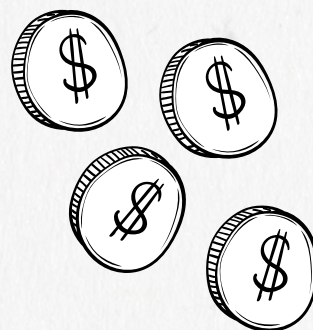
## Teaching Strategies

1. Focus student attention by discussing the "Did You Know?" factoids and working as a class to calculate the percentage difference in potential earnings based on the level of education attained.
2. Prior to starting the lesson, discuss the importance of investigating various career paths and researching employability factors, using questions such as:
  - How can learning about career clusters and evaluating your occupational interests help you take full advantage of the education offered at the high school level?
  - What are some of the occupations that you believe offer the greatest potential in terms of employability? Why?
  - All jobs require some sort of investment. What are some ways people invest in their occupations and prepare to work in specific career fields?
3. Use techniques such as student pair/share to discuss chapter content, vocabulary terms, and major concepts found in the chapter.
4. At the end of the chapter, ask students to consider which occupation they would be most likely to pursue based on their findings and explain why.

5. The activities help students consider the financial aspects of pursuing a career, including the cost of post-secondary training as well as financial returns. You may ask students whether there are other considerations as well, such as personal interests and abilities. Should you pursue a career in sales if you're shy? Should your interest in math be a factor in considering a career in accounting?

## Follow-up Activities

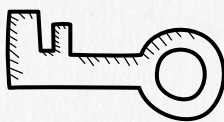
- After students have completed Activity 2, analyzing the return on investment for the various careers, expand the discussion by further examining the progression of each career along a path from when they first start out until retirement. Have students work in pairs or small groups to draw a flow chart showing what they think the career progression could be for a person in each of the five jobs listed. Then discuss how progressing through each career path might affect lifetime earnings, as well as the emotional investment required to endure and succeed at each step.
- Extend student learning by having them research the career they were most likely to pursue and create a flow chart of the career path progression for that occupation. Encourage them to track any additional educational investment that could be required along with how this investment could increase potential lifetime earnings and improve their employability outlook.
- Have students collect articles about how certain jobs and industries are impacted by economic changes like recessions, modernization, and global expansion. Discuss jobs that are more/less affected by these factors and what it is about those types of jobs that determines their resistance to changes.
- Have students make a list of local companies or careers that they would like to learn more about. Guide them in narrowing their lists down to three places, and then have them reach out to set up an opportunity to interview or shadow someone. Work with students to prepare thoughtful questions, such as the pros and cons of the job and suggestions for the best path to break into the industry.





# Answer Key:

## Activity 1



### PART 1: CAREER RESEARCH

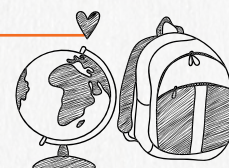
Answers will vary for student calculations of median wage difference and employment growth/decline percentage.

### PART 2: WEIGHING YOUR OPTIONS

1. Based on what you learned about wages in your state, would you still be interested in any or all of these careers? Why or why not? *Answers will vary based on career and state selected by each student.*
2. Why do you think there is a difference between the national median wages and the median wages for your state? *Each state has specific economic needs based on population, common industries, climate, cost of living, and many other variables.*
3. Based on what you learned about the employment trends for these careers, both in your state and nationally, would you still be interested in any of them? Why or why not? *Answers will vary based on career and state selected by each student.*
4. Are there any states where the median wage is higher and/or the employment trend more promising? Why do you think that is? *Answers will vary.*
5. Would you be open to relocating for a job? Do you think it's more important to choose a career path or decide where you want to live first? Why? *Answers will vary; this is a personal choice based on each person's priorities.*

## Activity 2

### EDUCATIONAL ROI (RETURN ON INVESTMENT)



#### LIFETIME EARNINGS — COST OF EDUCATION = ROI

Occupation	Required Education	Cost of Education	Average Annual Income	Lifetime Earnings (over 40 years)	Total ROI
Construction Carpenter	1 year apprenticeship	\$0	\$45,170	\$1,806,800	\$1,806,800
Civil Drafter	Associate's degree	\$7,140	\$52,870	\$2,114,800	\$2,107,660
Civil Engineer	Bachelor's degree	\$52,792	\$89,070	\$3,562,800	\$3,510,008
Urban Planner	Master's degree	\$90,000	\$71,490	\$2,859,600	\$2,769,600
Lawyer	Doctorate degree	\$167,076	\$125,250	\$5,010,000	\$4,842,924

1. How important do you think Return on Investment is when choosing a career? Why? *Answers will vary, but emphasize that this should be a key consideration once students determine what kind of investment they are able to make.*
2. Based on this chart, does more education always mean a greater return on investment? *No, the urban planner has a lower median salary than the civil engineer despite a higher education requirement. Urge students to keep in mind that this salary information is based on an average and does not consider that within a career, salaries will differ based on education.*
3. Taking into consideration the cost and time invested in education, and the expected lifetime earnings for each occupation, which career would you select if you were making a decision today? Explain why. *Answers will vary based on student opinions.*
4. In addition to income, many careers also offer benefits. These can include health insurance and dental coverage, retirement plans and pensions, profit-sharing plans, stock options, and even gym membership. For many people, benefits like these are as important as income. How about you? Would you choose a lower paying job with great benefits over a higher paying job without benefits? Why or why not? *Answers will vary, but students should understand that it is important to consider the overall value of the benefits and compare the total package.*



## Activity 3

### PLANNING IT OUT

This activity should be approached as a personal guide for each student.

Guide the students in completing the lesson by providing the following direction:

- Have students review the lists of Fastest Growing Occupations at [www.bls.gov/ooh/fastest-growing.htm](http://www.bls.gov/ooh/fastest-growing.htm) and the Most New Jobs at [www.bls.gov/ooh/most-new-jobs.htm](http://www.bls.gov/ooh/most-new-jobs.htm).
- Students can base their research on the state where they currently live or a city where they'd like to attend college or relocate.
- Students can calculate items such as lifetime earnings and return on investment using the formulas in Activities 1 and 2.
- For a thorough projection of costs and earnings, students should research licensing fees, equipment, industry dues, etc., in each career.
- For an accurate estimate of education costs, direct students to use the calculator provided at [www.collegesavings.org/college-cost-calculator](http://www.collegesavings.org/college-cost-calculator). Have them make the following assumptions when calculating.
  - College tuition has a typical annual inflation rate of 6-7%.
  - They will need to decide if they will live at home with their parents (they will pay tuition and fees only) or in campus/off-campus housing (they will pay tuition, fees, room, and board).
  - They will complete their education within the typical amount of time allotted (i.e., Associate's = two years, etc.).
- The income estimate also does not consider that education levels may vary within a profession — for example, architects with Bachelor's degrees typically have lower median incomes than architects with a Master's degree. Encourage students to research this information and decide which education level to include based on their own goals.
- Students who download the spreadsheet can add columns as needed to incorporate their own priorities and questions.





# CHAPTER 2: Paying for Post-secondary Education

## Overview

Many careers require additional instruction or training after high school. Some training takes weeks or months; other preparation takes years. Regardless of the duration of the training, it must be paid for. Knowing how to determine approximate post-secondary education expenses, how to save for these education expenses, and how to combine savings with financial aid, student loans, scholarships, and work to finance post-secondary education can make career goals more attainable.

## Getting Organized

- Students will need two to four class periods to complete the activities in this chapter.
- Activities are designed for students to complete independently using an internet-connected computer/tablet. Alternatively, the activities can be completed as a class using a projector or digital whiteboard, or they can be printed out for completion as worksheets.

## Learning Objectives

Focusing on the selection of post-secondary education funding options, students will:

- Review definitions of key terms associated with post-secondary education.
- Learn about various options for saving for post-secondary education.
- Calculate the total cost of attendance for college.

## Key Terms

- **529 Account (ESA):** a college savings plan where the funds can be withdrawn tax-free when they are used for educational purposes
- **ACT:** a standardized achievement examination for college admissions
- **Deferred Payment:** loan arrangement in which the borrower is allowed to start making payments at some specified time in the future
- **Education IRA:** an education savings plan that offers tax advantages
- **Estimated Family Contribution (EFC):** the amount of money that a student's family is expected to contribute to college costs for one year

- **FAFSA:** Free Application for Federal Student Aid, a form that must be completed in order to qualify for any type of governmental financial aid for higher education



- **Financial Aid:** grant or scholarship, loan, or paid employment offered to help a student meet his/her college expenses
- **Grace Period:** time in which a debt may be paid without accruing further interest or penalty
- **Grant:** monetary award given by the federal, state, or local government to an eligible student for educational expenses and without the expectation of repayment
- **Interest Rate:** the percentage you pay on the money you have borrowed, or the percentage you earn on an investment
- **Parent Loan for Undergraduate Students (PLUS):** federal loans for parents of undergraduate students to help pay for college or trade school
- **Pell Grant:** money for post-secondary education that does not have to be repaid and is awarded to eligible students based on financial need
- **Promise Program:** government program designed to make college accessible for all responsible students, these are typically grants offered by states once all other financial aid options are exhausted
- **Reserve Officers' Training Corps (ROTC):** a college-based program for training commissioned officers of the U.S. armed forces by providing competitive, merit-based scholarships for tuition in return for an obligation of active military service after graduation
- **SAT:** a standardized achievement examination for college admissions
- **Scholarship:** an award of financial aid for a student to further their education, often based on merit such as academic achievement or athletic skill
- **Stafford Loan:** common name for federal student loans, especially subsidized student loans
- **Student Loan:** loan offered to students which is used to pay education-related expenses including college tuition, room and board, or textbooks
- **Subsidized Loan:** a loan on which the government pays the interest while the student is enrolled in a qualified college/university, essentially erasing the interest that would have been added to the loan during the time of study.





- **Supplemental Educational Opportunity Grant (SEOG):** need-based grants awarded to low-income undergraduate students to finance the costs of post-secondary education
- **Total Cost of Attendance:** the price to attend college for a year including tuition, room and board, books, and fees
- **Tuition Pre-payment:** state program in which families can purchase tuition credits at their present price and use the credits in the future, when tuition costs will have most likely increased
- **Unsubsidized Loan:** a college loan usually taken by students who do not meet financial need standards and still need to fund their post-secondary education. These loans accrue interest while the student is in school and can result in significantly higher debt because of the interest added to the loan over time. The PLUS loan is an example of an unsubsidized loan.
- **Work-study:** program that provides students with part-time jobs while in school in order to subsidize the cost of education

## Teaching Strategies

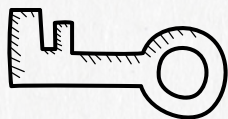
1. Use techniques such as student pair/share to discuss chapter content, vocabulary terms, and major concepts found in the chapter.
2. Begin by polling students about how many plan to get some additional education after completing high school; work as a class to determine the percentage of the class this represents.
3. Focus student attention by discussing the “Did You Know?” factoids and facilitating a short discussion including questions such as:
  - Have you considered how much your post-secondary education will cost?
  - Do you know how you might pay for post-secondary education?
  - What will you do if you cannot afford to get the education you desire?
4. Discuss options for creating savings, even if students will be moving toward post-secondary education within the year. Brainstorm ways that students can decrease expenses and increase income.

## Follow-up Activities

- Extend student learning by inviting a high school or college guidance counselor to the class to talk with students about specific things they can do right now to start saving money, applying for scholarships, and looking into various other funding options (for example, the A+ Program, [dhe.mo.gov/ppc/grants/aplusscholarship.php](http://dhe.mo.gov/ppc/grants/aplusscholarship.php)) for their post-secondary education.
- Invite a Military Recruiter into the classroom to discuss the role that military service can play in helping students achieve their career goals.
- As a class, visit either [www.finaid.org/scholarships](http://www.finaid.org/scholarships) or [studentaid.ed.gov/types/grants-scholarships/finding-scholarships](http://studentaid.ed.gov/types/grants-scholarships/finding-scholarships) to learn about ways that students can apply for and access information related to scholarships. Discuss various criteria for earning scholarships and review tips for things students can do to begin searching for scholarships now or in the near future.
- Direct students to visit [fafsa.ed.gov](http://fafsa.ed.gov) and review the financial aid information. They should pay special attention to the student section and the information they will need to supply in order to be considered for financial aid. Discuss the Estimated Family Contribution as well so students understand that the income earned by their parents is considered as part of the financial aid process. Ask students to write down any questions they have to review with you or a guidance counselor. You can discuss the information as a class, but be careful to avoid sharing personal finances.
- Direct students to [collegecost.ed.gov/shopping\\_sheet.pdf](http://collegecost.ed.gov/shopping_sheet.pdf). Or print and hand out the sample financial aid award letter at [www.mefa.org/wp-content/uploads/2015/01/AwardLetterSample.pdf](http://www.mefa.org/wp-content/uploads/2015/01/AwardLetterSample.pdf). Discuss each of the following points so students clearly understand how to read the letter and interpret what is being offered in terms of “free” money vs. loan options:
  - The total cost of attendance at the particular institution
  - Grants and scholarships that are being offered
  - The cost you will have to pay out of pocket to attend the institution
  - Work options available (i.e., work-study)
  - Loan options including the type of loan and recommended amount based on the total cost of attendance



# Answer Key:



## Activity 1

### PART 1: CALCULATING EDUCATION COSTS

#### Scenario 1

Calculate basic costs of attending college for one year.

Tuition	Cost per credit hour	x Number of credit hours/ semester	x Number of semesters/ year	= Yearly tuition cost
	\$275.00	15	2	\$8,250.00
Books	Cost per course	x Number of courses/ semester	x Number of semesters/ year	= Yearly book costs
	\$125.00	5	2	\$1,250.00
Student Fees	Cost per semester		x Number of semesters/ year	= Yearly fees
	\$375.00		2	\$750.00
Housing	Cost per month		x Number of months/ year	= Yearly housing cost
	\$400.00		9	\$3,600.00
Living Expenses	Cost per month		x Number of months/ year	= Yearly living expenses
	\$200.00		9	\$1,800.00
<b>ANNUAL COST</b>				<b>\$15,650.00</b>

1. How does your annual cost for attendance compare to the national averages in the "Did You Know?" factoid at the beginning of this chapter? *It is lower. (The averages in the factoid are \$18,000 per year for public institutions, \$38,400 for private non-profit institutions, and \$26,800 for private for-profit institutions.)*
2. How could you lower the cost of attending school without changing the number of classes you take or the quality of the education? *Answers will vary, but suggestions might include living with family or additional roommates, working part-time, or purchasing used books.*
3. What would be your total cost of attending for four years?  $\$15,650 \times 4 = \$62,600$
4. Assume that you could live with your family, saving the cost of rent and utilities, and reducing the cost of food and other living expenses to \$150 per month. What would be your total savings for the school year? \$4,050

### PART 2: MAKING ADJUSTMENTS

#### Scenario 2

1. What will be the annual cost of attendance? \$12,400
2. How much of this annual cost will be covered by your earnings during the school year? \$6,480
3. Subtracting your earnings, what is the total amount you would need to borrow for your college education? \$5,920
4. Assuming full-time students graduate in 4 years, how long will it take you to finish going part-time? 6 years
5. What will be your total cost of attendance over that period of time before you subtract any earnings? \$74,400
6. How does this compare to the cost of attending full-time for four years?  
*It is higher by \$11,800, but the opportunity to maintain a part-time job lowers the potential for debt.*
7. Do you think this is a reasonable strategy? Why or why not? *Answers will vary, but students should weigh the cost of extending their schooling for 2 years and incurring a higher total cost against the possibility of having less debt upon graduation. Also, keep in mind that room and board costs don't disappear for students who graduate in 4 years, so the difference in costs is not as clear cut as this illustration implies.*

#### Scenario 3

1. Instead of State College, you decide to attend a 2-year vocational school. Assume that the costs are the same as for State College. What would be your total education cost over two years? \$31,300
2. After graduating from vocational school, you land a job earning \$34,500 per year. Two years later, a friend who went to State College for four years gets a job earning \$42,000 per year. Use the chart below to compare your and your friend's educational ROI after 10 years, assuming that you both keep the same salary for that period.  
Vocational school: \$313,700  
4-year college: \$357,400



# Activity 1

## PART 3: CHOOSING A LOAN

How does the interest rate affect the minimum monthly payment? *The lower interest rate requires a lower minimum monthly payment while still allowing the borrower to pay back the debt within 10 years.*

How does it affect the total amount paid for the loan? *The lower the interest rate, the lower the total amount of interest paid for the loan.*

Item	Loan A: Subsidized	Loan B: Unsubsidized	Loan C: Unsubsidized
Cumulative payments	\$7,000.80	\$7,594.80	\$8,305.20
Total interest paid	\$1,500.80	\$2,094.80	\$2,805.20

# Activity 2

## PART 1: FINANCIAL AID ANALYSIS

COLLEGE COMPARISON CHART						
COLLEGE COSTS (FOR ONE YEAR)						
College	Tuition (15 credit hrs/semester)	Books (5 courses/semester)	Fees	Housing (9 months)	Food & Living Expenses (9 months)	Total Cost
<b>A</b>	\$9,750	\$2,500	\$800	\$3,600	\$1,800	\$18,450
<b>B</b>	\$8,250	\$2,500	\$750	\$3,600	\$1,800	\$16,900
<b>C</b>	\$13,500	\$2,500	\$1,000	\$3,600	\$1,800	\$22,400
COLLEGE FUNDING (FOR ONE YEAR)						
College	Your Savings	Scholarship	Pell Grant	Work/Study	EFC	Total Funding
<b>A</b>	\$3,000	\$500	\$3,200	\$4,800	\$2,700	\$14,200
<b>B</b>	\$3,000		\$2,800	\$4,200	\$2,700	\$12,700
<b>C</b>	\$3,000	\$1,000	\$4,500	\$6,000	\$2,700	\$17,200
College	TOTAL COST		TOTAL FUNDING		COLLEGE DEBT (FOR ONE YEAR)	
<b>A</b>	\$18,450		\$14,200		\$4,250	
<b>B</b>	\$16,900		\$12,700		\$4,200	
<b>C</b>	\$22,400		\$17,200		\$5,200	

- Which college best fits your budget? Why?  
*College B. Costs for all three options exceed available funding, but College B will impose a slightly lower burden of debt.*
- In your opinion, which college offers the best value? Why?  
*Answers will vary. Some students may see the prestige of College C and the opportunity to live in a different part of the country as worth the higher cost of that option. Others may see the small size and hometown location of College A as worth its slightly higher cost compared to Option B.*
- All three colleges will cost more than your available funding for the first year. Are you willing to take a loan to cover the extra cost? Why or why not?  
*Answers will vary. Many students will see taking a loan as a normal part of going to college, while others may prefer to delay college and take a job so they can save the money they will need.*
- What else could you do to reduce your unfunded college costs for the first year?  
*Answers will vary. For example, students might choose College A and plan to live at home, saving \$5,400 per year in housing and living expenses. Some other options would be to purchase used textbooks, to take a part-time job during the school year, to work full-time during summer vacations, and to use part of the remaining \$9,000 in college savings.*
- Based on your comparison and your personal goals, which college would you choose? Why?  
*Answers will vary.*



## Activity 2

### PART 2: THINKING LONG-TERM

1. How much will the college you selected cost over four years? *College A: \$73,800; College B: \$67,600; College C: \$89,600*
2. Assuming that your financial aid package remains the same each year, and that your family continues to make its annual EFC contribution, how much debt will you have accumulated after four years? *College A: \$17,000; College B: \$16,800; College C: \$20,800*
3. How does your anticipated total debt compare to the national average cited in the factoid at the beginning of this chapter? What might account for the difference? *Accumulated debt for all three colleges is below the \$37,172 average cited in the factoid. The \$12,000 in college savings and the \$2,700 annual EFC provided in this scenario are the factors most responsible for the lower accumulated debt.*
4. Does this amount of potential debt make you want to reconsider your college choice? Why or why not? *Answers will vary.*
5. Now think about this option. Instead of going to college, you could attend a one-year vocational school, followed by working 2 years as an apprentice. Your \$12,000 savings will cover all but \$1,000 of your vocational school costs, including tuition, fees, books, and all expenses. Plus, after a year at school, you will earn \$1,280 per month for two years as an apprentice. Given what you know about lifetime earnings, and what you've learned about your three college options, would you take this opportunity or go to college? Why? *Answers will vary. With this option, a student would accumulate approximately \$29,720 in income after three years, compared to accumulating thousands in debt after four years of college. On the other hand, as noted in the factoid for Chapter 1, a college graduate can be projected to earn \$1,173 per week compared to only \$712 per week for a worker with only a high school degree. This difference of \$461 per week makes the college option a good investment, despite the high costs.*





# CHAPTER 3: Entering the Workforce



## Overview

When searching for the right job, it is important to consider the entire compensation package offered by potential employers. By understanding the various types of compensation and how to calculate the total value of that compensation, students can ensure they are getting the most from the job they choose.

## Getting Organized

- Students will need one or two class periods to complete the activities for this chapter.
- Activities are designed for students to complete independently using an internet-connected computer/tablet. Alternatively, the activities can be completed as a class using a projector or digital whiteboard, or they can be printed out for completion as worksheets.

## Learning Objectives

Focusing on understanding job offers and earnings, students will:

- Review definitions of key terms associated with employment offers, paychecks, and annual taxes.
- Analyze exempt and non-exempt employment opportunities and calculate earning potential for various employment offers.
- Analyze potential income based on bonuses and commissions.
- Analyze the value of various compensation packages offered by competing employers.
- Study a sample pay stub and answer questions about earnings.

## Key Terms

- **401(k):** a retirement plan that allows an employee to invest a percentage of their wages into a tax-deferred account chosen by the employer.
- **Base Pay:** the basic rate of pay for a particular job not including overtime, bonuses, or commissions
- **Bonus:** a sum of money (not guaranteed by the employer) given to an employee in addition to the employee's usual wages

- **Commission:** money, in addition to regular wages, that is paid for work done or products sold
- **Compensation Package:** all of the wages (salary, bonus, commission) and benefits provided by an employer
- **Exempt:** classification of an employee who is paid a salary rather than hourly wages and is not eligible for overtime pay
- **FICA:** stands for Federal Insurance Contributions Act, a federal payroll tax paid by employers and employees to fund government programs that provide benefits to retirees
- **Freelance:** to perform work for a company and receive compensation as an independent contractor, instead of as an employee
- **Gross Pay:** regular pay, overtime pay, and other taxable earnings paid to an employee during a pay period before any obligations, such as taxes, are deducted
- **Hourly Wage:** the amount an employee is paid by an employer for completing an hour of work
- **Income Taxes:** percentage of your income, including wages, salaries, commissions, and bonuses, paid to the government each year
- **Insurance:** promised payment for specific, potential, and/or future losses in exchange for a periodic payment
- **Labor Union:** an organized association of workers, often in a trade or profession, formed to protect and further their rights and interests
- **Net Pay:** remaining amount of pay after taxes, retirement contributions, and other deductions are made
- **Non-exempt:** classification of an employee who is paid on an hourly basis and is entitled to overtime pay generally at a rate of 1½ times the hourly wage
- **Paid Time Off (PTO):** time not worked by an employee for which regular pay, or a fixed prorated amount of pay, is accrued and paid to the employee; may include sick leave but typically separate from corporate holidays
- **Pension:** a type of retirement fund that is typically managed by an employer or labor group and provides a steady monthly income to the worker while in retirement



- **Profit Sharing:** a program in which the employer shares some of its profits with employees through stocks, bonds, or cash
- **Retirement Matching:** when an employer contributes to an employee's retirement account an amount that equals a percentage of how much the employee contributes
- **Salary:** wages an employee receives from the employer on a regular basis, usually weekly, bi-weekly, or monthly
- **Sick Leave:** paid or unpaid time off from work for an employee temporarily unable to perform duties due to illness or disability; caring for a loved one may also qualify
- **Variable Pay:** compensation that must be earned (such as commission) each time in order to be paid to the employee
- **Vested:** some employer benefit programs require that employees stay with the company for a certain amount of time before receiving the full amount of the benefit, such as a contribution to their retirement fund, stock options, or profit sharing
- **Wages:** money paid or received for work or services completed, usually by the hour, day, or week
- **Withholding Taxes:** part of an employee's wages or salary that is withheld by the employer and sent to the government as partial payment of the employee's income taxes

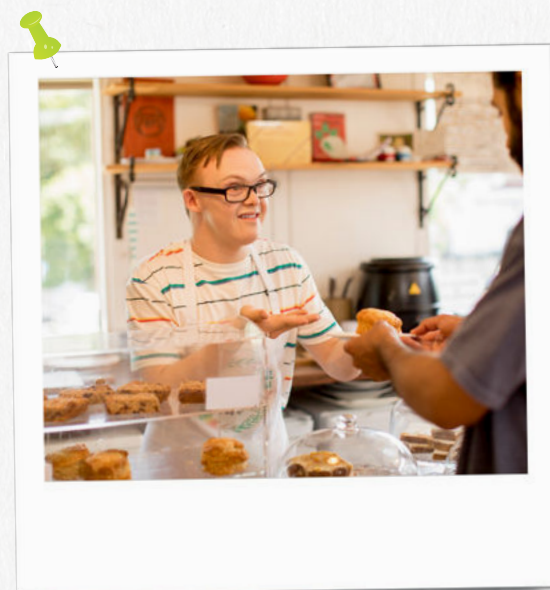
## Teaching Strategies

1. Focus student attention by discussing the "Did You Know?" factoids and brainstorming answers to the question: Besides taxes, are there any other things that can affect take-home pay?
2. Use techniques such as student pair/share to discuss chapter content, vocabulary terms, and major concepts found in the chapter.
3. Discuss the difference between exempt and non-exempt employees and ask students whether they think one type of employment (exempt or non-exempt) is better than the other, and if so, why?
4. Introduce Activity 2 by showing students a sample W-4 form, available at [www.irs.gov/pub/irs-pdf/fw4.pdf](http://www.irs.gov/pub/irs-pdf/fw4.pdf). Review the form as a class and discuss how it is completed when one is hired for a job.

5. After students complete Activity 3, have them pair up to practice negotiating for higher compensation in the three areas they select.

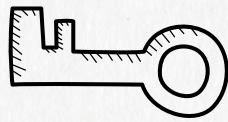
## Follow-Up Activities

- Extend student learning by working as a class to complete a W-2 form (available at [www.irs.gov/forms-pubs/about-form-w-2](http://www.irs.gov/forms-pubs/about-form-w-2)) based on the data for the job they selected as the better opportunity in Activity 3. Discuss the accuracy of the form and use [www.irs.gov](http://www.irs.gov) to learn more about the percentage of federal taxes that would be due based on the taxable income for the year and the federal taxes that were already paid through payroll deductions.
- In 2017, the Freelancers Union and Upwork completed a comprehensive study of the freelance workforce. Review the results of that study with your class using this slideshow: [www.slideshare.net/upwork/freelancing-in-america-2017/1](http://www.slideshare.net/upwork/freelancing-in-america-2017/1). Ask students to consider the pros and cons of freelance work and what industries they think might utilize this type of employment now and in the future.
- Share articles on salary negotiations with your class, and help them construct arguments for additional compensation. Some articles to start with: [www.businessinsider.com/how-to-negotiate-salary-earn-more-2017-9](http://www.businessinsider.com/how-to-negotiate-salary-earn-more-2017-9) and [www.learnvest.com/2017/01/5-perks-you-should-negotiate-in-a-job-offer](http://www.learnvest.com/2017/01/5-perks-you-should-negotiate-in-a-job-offer).





# Answer Key:



## Activity 1

### PART 1: COMPENSATION BASICS

#### Scenario 1: Hourly vs. Salary Pay

- What is the weekly pay for Job 1? \$576.92
- What formula did you use for this calculation?  
 $\text{Weekly Pay} = \text{Base Pay} \times 12/52 \text{ weeks}$
- What is the weekly pay for Job 2? \$517.63
- What formula did you use for this calculation?  $(40 \times \text{Base Pay}) + (7 \times [1.5 \times \text{Base Pay}]) = \text{Weekly Pay}$
- Which of the two jobs would you rather have? Why?  
*Answers will vary. Point out that after working the same number of hours, Job 1 pays more money per week. As a bonus, ask students to calculate how many hours they would need to work in order for Job 2 to pay more money.*

#### Scenario 2: Bonus & Commission

- Job 1: Assume you meet the goal of obtaining five new customers per month for 10 of the 12 months of the year. How much would you earn in bonus money for the year? \$2,000
- Job 2: Assume you sell an average of \$700 worth of product each week. How much would you earn in commission for the month? \$84
- Job 2: How much would that amount to over the course of one year? \$1,092
- Based on your calculations, and assuming identical base pay, which of these is a better paying job? Why?  
*Answers will vary. Job 1 appears to be the better job, because the bonus is nearly double the commission; however, if an employee is not a good salesperson (shy, untrained, etc.), the bonus may not be attainable.*

## Activity 1

### PART 2: BENEFIT BASICS

#### Scenario 1: Insurance Benefits

- For Job 1, how much would you have to pay for your half of the medical, dental, and vision insurance and all the other benefits listed? \$235
- For Job 2, how much would you have to pay for your portion of the medical, dental, and vision insurance and all the other benefits listed? \$165

- All other things being equal, which job would you rather have? Why? *Job 2 offers a better benefits package because you get presumably equal benefits (medical, dental, vision, and disability) for less money and the life insurance policy offers 50% more coverage.*

#### Scenario 2: Paid Time Off

- What is the total value of your paid time off for the year for each job? **Job 1:**  $\$672 + 480 = \$1,152$ ; **Job 2:** \$1,248
- Which of these is the better financial offer? Explain why.  
*Job 2 because it provides \$96 more in paid time off.*

## Activity 1

### PART 3: MORE COMPENSATION OPTIONS

#### Scenario 1: Retirement Matching

- If you are able to contribute \$2,000 each year to your retirement, how much will each employer match?  
**Job 1:** \$1,000; **Job 2:** \$1,500
- How much would you have to contribute to maximize your employer's contribution at Job 1? \$6,400
- How much money in total will have been contributed? \$9,600
- How much would you have to contribute to maximize your employer's contribution at Job 2? \$4,000
- How much money in total will have been contributed? \$7,000
- Assuming all other benefits are the same, which package would you prefer? Explain why. *Answers will vary. Students should consider vesting — whether they expect to stay at one company for 3 years, as well as whether they would be able to maximize their employer's match. If they are able to maximize the benefit, Job 1 will contribute a larger total amount. But, if the employee can't contribute enough, Job 2 offers a larger benefit.*

#### Scenario 2: Freelance Compensation

- Which package has a higher total value? Show the math to explain why. *Job 1 has a higher total value.*  
 $\text{Job 1: } \$30,000 + \$1,154 + \$3,600 = \$34,754$   
 $- \$2,400 - \$2,295 = \$30,059$   
 $\text{Job 2: } \$40,000 - \$6,000 - \$4,590 = \$29,410$



## Activity 2

### UNDERSTANDING YOUR PAYCHECK

- How many hours did Mary Smith work last week, including overtime? 41
- What benefits does this employer offer? 401(k), life insurance, dental, healthcare, tuition assistance, paid holidays, and a loan
- What deductions are non-taxable and subtracted from the gross pay before taxes are calculated? *All the items marked with an asterisk: 401(k), life insurance, dental, healthcare, and tuition reimbursement.*
- Does Mary Smith pay taxes on the tuition reimbursement? How can you tell? *No; excluded from taxable gross income*
- How much did Mary Smith put into the 401(k)? \$27.15
- How much did she pay for dental, healthcare, and life insurance? *A total of \$24.00.*
- Using the data from the current pay period, how much will be withheld for this employee's annual federal income and FICA taxes?  $(\$37.29 + \$24.83) \text{ per week} \times 52 \text{ weeks} = \$3,230.24$
- What percentage of the money earned was actually paid to the employee?  $\$289.37 \div \$415.00 = 69.73\%$

4. Aside from salary, which job offers a better benefits package? Explain why. *Job 2 offers the better package; Job 1 pays more towards health and dental insurance, but Job 2 also offers vision, and the employer pays for disability and life insurance. Additionally, Job 2 pays for 120 hours of time off, versus 100 hours for Job 1.*
5. Based on your calculations, which job makes better financial sense, your current job or the job offer? Explain why. *Answers may vary based on importance of net pay, variable pay, and benefits.*



## Activity 3

### PUTTING IT ALL TOGETHER

1. What is the annual net pay for your current job?  $(\$14.25 \times 40) + (\$21.38 \times 4) - \$165 \times 52 = \$25,507.04$ , before commissions
2. What would be the annual net pay for the job being offered?  $\$30,000 - (\$620 \times 12) = \$22,560$ , before bonus
3. At which job could you earn more variable pay? How much more? *Job 1 offers  $(\$570.00 + \$85.52) \times 5\% \times 52 \text{ weeks} = \text{up to } \$1,704.35 \text{ per year}$ ; Job 2 offers  $\$150 \times 12 = \text{up to } \$1,800 \text{ per year}$ .*



# CHAPTER 4: Taxes



## Overview

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 one to two class periods to complete the activities for this chapter.
- Activities are designed for students to complete independently using an internet-connected computer/tablet. Alternatively, the activities can be completed as a class using a projector or digital whiteboard, or they can be printed out for completion as worksheets.

## 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.
- Discuss how tax revenue is used.
- Examine the role of the U.S. Treasury and the Internal Revenue Service in tax collection.
- Review a tax return for possible deductions and refunds.

## Key Terms

- **1099:** a special form that is used to report taxable, non-employee income to the IRS, including payment for services as an independent contractor, distributions from retirement accounts or education funds, and interest earned on certain investment accounts, etc.
- **Assessed Value:** amount a property is worth for tax purposes as determined by city or county assessors
- **Charitable Donations:** money that was contributed to charities/non-profit groups and usually tax deductible

- **Child Tax Credit:** a special credit given to joint taxpayers with taxable income less than \$110,000 annually in the amount of \$2,000 for each child under age 17 (also available to single taxpayers who meet a different income requirement); if taxable income is above \$110,000, the child tax credit is reduced or eliminated
- **Deduction:** amount of money subtracted from taxable income prior to calculating final tax liability
- **Dependent:** someone who relies on the taxpayer for support including food, clothing, and shelter
- **Estate Taxes:** money levied by the government for the transfer of property and assets upon the death of an individual
- **Excise Tax:** a state or federal tax placed on consumer goods such as gasoline
- **Income Tax:** tax paid on the money one earns from working
- **Internal Revenue Service (IRS):** government agency that collects taxes for the U.S. government
- **Itemized Deductions:** a list of expenses and contributions that can be deducted from the total income
- **Market Value:** what you would receive if you sold the property
- **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
- **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
- **Progressive Tax Rate:** a system in which the tax rate rises as the amount of taxable income increases
- **Property Tax:** tax paid by people who own items such as homes, land, and vehicles to the city and/or county where the property is located
- **Refund:** a check or automatic deposit for the amount by which taxes were overpaid



- **Sales Tax:** tax imposed on purchases by many states, counties, and cities
- **Social Security:** a federal government program funded through payroll taxes; designed to provide retirement and disability income for those meeting the specified criteria
- **Tax Credit:** an amount of money subtracted directly from the amount of taxes owed to the government
- **Tax Return:** report that is submitted to the government that outlines tax liabilities and payments, along with relevant income and financial information used to compute the tax
- **Taxable Income:** the amount of income subject to income tax
- **Taxes:** fees charged by the government on products, activities, or income
- **U.S. Treasury:** department within the U.S. government
- **W-2:** a form that the employer sends to the employee and the federal government that reports the employee's annual wages and the amount of taxes withheld during the year
- **W-4:** a form that the employee fills out to let the employer know his or her tax situation, allowing the employer to figure out the correct amount of tax to withhold from the employee's paycheck

## Teaching Strategies

1. Focus student attention by selecting a volunteer to read the "Did You Know?" factoid and the opening quote from Benjamin Franklin.
2. Discuss the factoid using questions such as: When you think of taxes, what feelings come to mind? Why?
3. Brainstorm a short list of the types of taxes students already know about and record these on the board.

## Discussion Questions

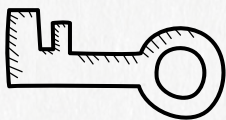
- Ask students why they think individuals and married couples are taxed at different rates. Do they think it is fair? What about credits for children and childcare? What is the impact on society to offer tax breaks to families?
- Some people prefer to have their employer withhold more taxes throughout the year so they are guaranteed a refund when they file at the end of the year. Some people would rather have more money per paycheck. Which do you think makes more financial sense? Which do you think fits your spending habits better?

## Follow-Up Activities

- Extend student learning by working as a class to complete a W-4 form (available at [www.irs.gov/pub/irs-pdf/fw4.pdf](http://www.irs.gov/pub/irs-pdf/fw4.pdf)) based on the data for the job they selected as the better opportunity in Chapter 3, Activity 3. Discuss the accuracy of the form and use [www.irs.gov](http://www.irs.gov) to learn more about the percentage of federal taxes that would be due based on the taxable income for the year and the federal taxes that were already paid through payroll deductions.
- View a sample W-2 form (available at [www.irs.gov/forms-pubs/about-form-w-2](http://www.irs.gov/forms-pubs/about-form-w-2)) and discuss the information in each box. Refer back to the sample pay stub in Chapter 3 to tell students which information would go in each box so students can see how the data from the pay stub eventually transfers to the year-end W-2. You may wish to note that W-2 forms are required by federal law to be mailed to employees no later than January 31.
- Distribute a copy of the most recent 1040 tax form (available at [www.irs.gov/forms-pubs/about-form-1040](http://www.irs.gov/forms-pubs/about-form-1040)) and complete the tax form and answer the questions. Using an overhead of the 1040 tax form, complete the form as a class after completing Activity 1. 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.
- Using information from their own pay stubs, have students with jobs calculate their annual earnings and complete a 1040EZ form (available at [www.irs.gov/forms-pubs/about-form-1040-ez](http://www.irs.gov/forms-pubs/about-form-1040-ez)) to determine their tax due or the amount of the refund they should receive.
- In 2017, the U.S. government adopted a major overhaul to the federal tax code; it went into effect for 2018 taxes. Have students gather information and articles about the tax system, and discuss the various points of view about the role and structure of taxation. Present several different scenarios, such as a single person earning \$45,000, a family with combined income of \$80,000, and a family with combined income of \$200,000, and have them calculate the difference in the income taxes owed from 2017 to 2018.



# Answer Key:



## Activity 1

### TACKLING TAXES

#### Property and Other Taxes

**Scenario 1:** Your parents own a home with an assessed value of \$175,000. The annual property tax rate in your county is 1.2%. Calculate the annual property taxes for the house:

*Assessed value \$175,000 x Tax Rate .012 = Annual Taxes \$2,100*

**Scenario 2:** You live in a home with an assessed value of \$115,000. Last year, you paid \$1,500 in taxes. This year, the property tax rate is going up to 1.75%. How much more will you pay in annual property taxes for the house?

*Taxes at new rate \$2,012.50 - \$1,500 = \$512.50*

**Scenario 3:** You own two vehicles, one with an assessed value of \$1,500 and another with an assessed value of \$9,250. The vehicle tax rate in your county is 2%. How much tax will be due for both vehicles together? \$215

#### Income Taxes

1. What are the Robinsons' total deductible expenses?

\$19,700

How did you calculate this number?

*Students should note that medical expenses were less than 7.5% of income and the maximum deduction for property, state, and city taxes is \$10,000. They add the rest (excluding childcare).*

2. Are the Robinsons' expenses higher or lower than the standard deduction? Calculate their taxable income accordingly:

*They are lower. \$125,000 - \$24,000 = \$101,000*

3. Use the tax bracket chart to calculate the amount of tax due on the Robinsons' taxable income before credits are taken.

$10\% \times \$19,050 = \$1,905$

$+12\% \times (\$77,400 - \$19,050) = \$7,002$

$+22\% \times (\$101,000 - \$77,400) = \$5,192$

*TOTAL = \$14,099*

4. The family discovers that they are eligible for several credits — a \$2,000 child tax credit for each of their three children, and 25% of childcare costs up to a total of \$6,000. What is the total amount of annual tax they now owe? \$5,599



5. Assume that one of the parents earns an income of \$69,000 annually, and receives a paycheck every two weeks. The employer deducts \$299 for federal taxes and \$109 for state taxes from each paycheck. The employer also deducts \$75 for health insurance.

- Determine the amount of each paycheck before taxes are withheld:

$\$69,000 \div 26 = \$2,653.85$

- Calculate the total deductions made from each paycheck, including payroll taxes.

$(.0765 \times \$2,653.85) + \$299 + \$109 + \$75 = \$686.02$

- Subtract this number from the gross paycheck amount to find the take-home pay.

$\$1,967.83$

- Calculate the amount of federal tax that has been withheld from this parent's paychecks for the year.

$\$7,774$

6. Suppose that the other parent had \$180 withheld for federal taxes from each of 26 paychecks throughout the year. How much total federal tax has already been withheld for the second parent?

$\$4,680$

7. Add the total federal tax that has been withheld for both parents. Is it more or less than the family owes for annual federal taxes?

*It is more than the family owes after credits are accounted for.*

What will happen to the difference? *They will get a refund of \$5,855. (\$12,454 - \$6,599).*





# CHAPTER 5: Retirement Readiness



## Overview

While it is still many years in the future, it is never too early for students to start thinking about and educating themselves on the costs of retirement and various ways to fund their retirement. By considering options early and planning a savings strategy, they will be able to enjoy a retirement lifestyle that allows them to do the things they want to do. Learning about ways to save and how to use the power of compounding interest to build wealth can lead to a retirement free from financial stress.

## Getting Organized

- Students will need approximately one to two class periods to complete the activities for this chapter.
- Activities are designed for students to complete independently using an internet-connected computer/tablet. Alternatively, the activities can be completed as a class using a projector or digital whiteboard, or they can be printed out for completion as worksheets.

## Learning Objectives

Focusing on planning for retirement, students will:

- Discuss key terms associated with retirement savings.
- Review compound interest and learn about common retirement investment strategies.

## Key Terms

- **401(k):** a retirement plan that allows an employee to invest a percentage of their wages into a tax-deferred account chosen by the employer
- **403(b):** a retirement plan available to employees of certain non-profit organizations that allows them to invest a percentage of their wages in a tax-deferred account
- **Compound 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
- **Consumer Price Index (CPI):** a measurement of inflation, based on the change in cost of a particular group of consumer goods, compared today with their cost in previous years

- **Cost of Living Adjustment (COLA):** a raise in salary or retirement payout that is based on inflation and used to ensure recipients can maintain spending power
- **Individual Retirement Account (IRA):** a retirement investment account that allows a person to save a specified amount of income each year in a tax-deferred account
- **Inflation:** the annual percentage increase in the prices of goods and services; it is measured based on a group of essentials included in the Consumer Price Index
- **Pension:** a type of retirement fund that is typically managed by an employer or labor group and provides a steady monthly income to the worker while in retirement
- **Retirement:** the point in time when a person chooses to leave the workforce permanently, usually at age 65 or older
- **Risk:** likelihood of suffering losses or earning less than expected on financial investments
- **Roth IRA:** a retirement investment account that allows a person to save a specified amount of income each year. In a Roth IRA, the person pays the taxes on the contribution, but qualified distributions are made tax-free.
- **Tax-deferred:** an investment in which taxes are not paid immediately when interest is earned; instead, they are paid as funds are distributed or withdrawn

## Teaching Strategies

1. The goal of this lesson is to drive home the urgent need for students to invest in their own retirement as early as possible.
2. Use techniques such as student pair/share to discuss chapter content, vocabulary terms, and major concepts found in the chapter.
3. Focus student attention by discussing the “Did You Know?” factoids and calculating the amount of money that should be saved by the average American, who earned approximately \$57,617 in 2016 (based on U.S. Census report, *Household Income: 2016*, at [www.census.gov/content/dam/Census/library/publications/2017/acs/acsbr16-02.pdf](http://www.census.gov/content/dam/Census/library/publications/2017/acs/acsbr16-02.pdf)). Use questions such as:



- According to the factoid, what is the minimum amount of money that should be saved for retirement? *Answer: 8 times the annual salary*
- If only the minimum were saved, how much should this person have in savings at retirement?

*Answer: \$460,936*

4. To provide students with an idea of how inflation affects the prices of common items, share these comparisons from 1960, when a gallon of gas cost 25¢, a pack of gum cost 5¢, and a fast food hamburger cost 20¢. How much do those items cost today?

*Answers will vary based on market.*

5. Take time to review the sample Social Security statement at [www.ssa.gov/myaccount/materials/pdfs/SSA-7005-SM-SI%20Wanda%20Worker%20Near%20retirement.pdf](http://www.ssa.gov/myaccount/materials/pdfs/SSA-7005-SM-SI%20Wanda%20Worker%20Near%20retirement.pdf). Pay special attention to:

- Page 2 benefit eligibility for Social Security and Medicare
- Page 3 earnings record
- Defining COLA and explaining how these are designed to help retirees combat inflation

6. Before students begin the activities, review the basics of compound interest (see Book 1, Chapter 2).

## Discussion Questions

- Ask students what they think it costs to live in retirement. Do retirees have any increased expenses over working-age people? Any expenses they can eliminate?
- Ask students to come up with some strategies for saving money now to invest in retirement and for saving money during retirement to decrease their investment needs.

- Ask students to consider whether, in most cases, the income provided by Social Security benefits will allow them to meet all of their budget needs.

*Answers will vary, but most students will not be able to meet their budgeted needs.*

What about their budget wants?

*Answers will vary, but students most likely will have to eliminate many of their budget wants.*

- Remind students that even though they have their whole work lives ahead of them, without planning for retirement, they may not ever be able to stop working. Address questions such as:

- If you were not able to retire, what kinds of things

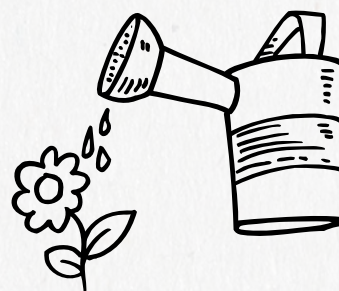
could you potentially miss out on in your later years?

- If you do not save enough for retirement, how might your lifestyle change if you do stop working at retirement age?

## Follow-Up Activities

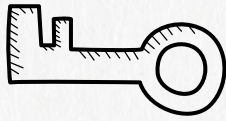
There are many possibilities for extending the lessons in this chapter. For example:

- Help students examine what happens to retirement accounts once they start withdrawing money. While the balance will continue to earn interest, the principal will gradually go down. Assume that during retirement, they will withdraw 4% per year. Ask them to consider things like how much money they will have available to live on each year and how old they will be when the money runs out.
- Tax-deferment is a big consideration when choosing between a traditional and a Roth IRA, among other options. Extend Activity 2 by asking students to assume that their income is taxed at a rate of 12% (it's best to keep things simple for this exercise) and have them calculate how much tax they have paid on the money deposited into the Roth IRA. Then ask them to assume their distributions (withdrawals) are taxed at the same rate, and have them calculate how much tax they will pay on the money they take out of the 401(k), assuming they take out 4% of the balance each year.





# Answer Key:



## Activity 1

### PART 1: STARTING EARLY

- Three high school friends each put \$200 a month into their retirement investment accounts. Assume that each account has an annual interest rate of 7%, compounded annually, and that each of the friends plans to retire at age 65. Friend A starts investing at age 25. Friend B starts at age 35. Friend C starts at age 45. How much will each of the friends have saved when they are ready to retire at age 65?

A – \$479,124.27    B – \$226,705.89    C – \$98,389.18

- How much would C have to invest each month in order to have the same ending balance as A?  
\$973.94 per month, or \$11,687.28 per year
- Assuming C has an after-tax salary of \$75,450 per year with monthly fixed expenses totaling \$3,000, how much would this high level of retirement saving leave him/her for variable expenses and spending money?  
 $\$75,450 \div 12 = \$6,287.50$  per month - \$3,000 expenses - \$973.94 retirement investment = \$2,313.56 for food and other variable expenses, plus spending on wants
- Imagine that B falls ill at age 60 and decides to retire early. Would he/she have enough in retirement savings to live comfortably? Use the compound interest calculator to find out how much B will have saved up by age 60. Then assume that B will receive an income of \$1,300 per month from Social Security and plans to withdraw 4% of the retirement account balance each year.

B's retirement savings at age 60: \$151,797.69

B's annual income after retirement at age 60:  $\$1,300 \times 12 = \$15,600$  Social Security +  $.04 \times \$151,797.69 = \$6,071.91$  from savings = \$21,671.91 annual income

Do you think this is enough income to live comfortably? Why or why not? Answers will vary.

## Activity 1

### PART 2: ADD IT UP

Answers will vary. These calculations assume average Social Security benefit.

### Retirement Planning Practice

1. Determine your annual budget. Assume you will need \$65,000 per year to live on.	\$65,000
2. Calculate what you expect to get annually from Social Security. Assume you will receive the average benefit, which is \$1,404 per month.	\$16,848
3. Deduct Line 2 from Line 1	\$48,152
4. Many experts suggest that 4% is a reasonable amount to take out of your retirement account per year. Using this guideline, calculate what your account balance needs to be the year you retire. (Line 3 $\div$ .04)	\$1,203,800
5. Use a calculator to find out how much you would need to save per year (excluding interest) to reach that total by age 67, if you start saving:	
40 years before retirement	Approximately \$30,095
30 years before retirement	\$40,127
20 years before retirement	\$60,190



## Activity 2

### RETIREMENT READINESS

**Scenario 1:** You are investing \$4,000 per year in a 401(k) and you have a 30% annual employer match.

- What formula could you use to add up both your deposit and your employer's match?  
 $\$4,000 \times 1.3 = \text{total amount per year}$
- Over the course of 5 years, you invest \$20,000. How much does your employer invest?  
 $.3 \times \$20,000 = \$6,000$
- If your employer offered a match of \$1,000 per year instead of 30%, which would be a better option? Would that always be true?  
*30% of \$4,000 is \$1,200, so 30% is a better option than \$1,000, if the employee is investing \$4,000.*  
*Students should conclude that if this person invested less than \$3,500, the \$1,000 match would be better.*

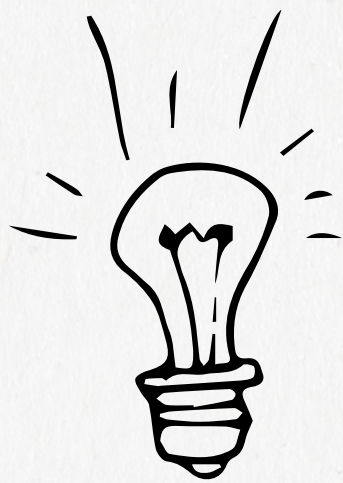
**Scenario 2:** You have accepted a job offer and are excited to take advantage of compound interest by investing immediately in a retirement fund. You are 25, have an annual starting salary of \$31,000, and there are two plans you are considering:

- Your employer offers a 401(k) account that averages 4% annual interest. This account is tax-deferred and your employer will match 50% of your annual contribution to the account.

- You also found an IRA that you really like because the average annual interest rate is 4.25%, but your employer would not match investments in this account. Deposits into this account are taxed, but you would not pay tax on the final distributions.

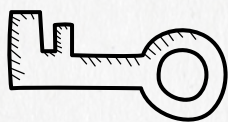
Use the compound interest calculator at [www.investor.gov/additional-resources/free-financial-planning-tools/compound-interest-calculator](http://www.investor.gov/additional-resources/free-financial-planning-tools/compound-interest-calculator) to calculate how much your account will grow if you contribute \$1,200 per year into each of the retirement account options for the next 10 years.

1. What will the total value of each account be at the end of a 10-year period?
  - a. 401(k): \$21,610.99
  - b. IRA: \$14,575.47
2. If you continue depositing this same amount into each account throughout your working years, what will be the total value of each account when you retire at 65?
  - a. 401(k): \$171,045.93
  - b. IRA: \$120,987.39



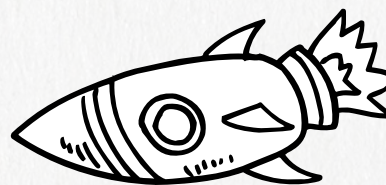


## Answer Key:



### Final Assessment Quiz

1. Educational attainment is directly linked to lifetime earnings and unemployment, but has costs of its own. *True, students should focus on their own goals and aptitudes to find a career path that suits them.*
2. Choosing a career is a decision that should be based exclusively on financial return on investment. *False, it is important to find a profession that is stimulating and fits your skills and aptitudes.*
3. Subsidized federal student loans cost more in the long run than unsubsidized private loans. *False, subsidized loans don't collect interest until students graduate, saving a considerable amount of money.*
4. In addition to completing a Free Application for Federal Student Aid, or FAFSA, college-bound students should look for private grants and scholarships to help pay for their education. *True.*
5. Deductions from a worker's paycheck may include income taxes, payroll taxes for Social Security and Medicare, contributions towards retirement and health, dental, and life insurance. *True.*
6. When you accept a new job, it is important to evaluate the entire benefits package, including base pay, additional compensation like tips and commissions, paid time off, and employer contributions towards insurance and retirement. *True.*
7. A tax deduction is an amount of money that is subtracted from your final tax liability, after credits are subtracted and the tax rate is applied. *False; that is a tax credit. A deduction is subtracted from your income based on expenses like medical bills and property taxes.*
8. When you file your taxes at the end of the year, anything you've paid above what you owe is returned to you as a tax refund. *True.*
9. Social Security and Medicare are funded through a payroll tax that totals 7.65% of your income; Social Security tax is only applied up to an annual max earnings (\$128,400 in 2018). *True.*
10. It is important to start saving early for retirement because compound interest will help you to accumulate enough money to live comfortably in retirement without creating a financial burden during your working years. *True.*





# 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: PATHS TO EMPLOYMENT

### O\*Net OnLine

A career research resource from the U.S. Department of Labor

[www.onetonline.org](http://www.onetonline.org)

### Bureau of Labor Statistics

Articles on U.S. labor market activity, projected growth, salary information, and other data on individual career paths from the U.S. Department of Labor

[www.bls.gov/home.htm](http://www.bls.gov/home.htm)

[www.bls.gov/ooh](http://www.bls.gov/ooh)

## CHAPTER 2: PAYING FOR POST-SECONDARY EDUCATION

### Student Aid

Information on federal financial aid from the U.S. Department of Education

[studentaid.ed.gov/sa/home](http://studentaid.ed.gov/sa/home)

### Big Future

Information on attending and paying for college from The College Board

[bigfuture.collegeboard.org](http://bigfuture.collegeboard.org)

### College Savings Plan Network

Articles and information on states' 529 savings plans and college cost calculator

[www.collegesavings.org](http://www.collegesavings.org)

### FAFSA

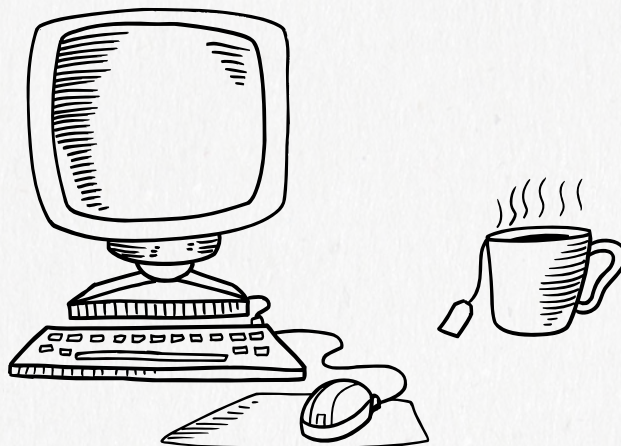
FAFSA Application

[fafsa.ed.gov](http://fafsa.ed.gov)

### College Cost

College Shopping Worksheet

[collegecost.ed.gov/shopping\\_sheet.pdf](http://collegecost.ed.gov/shopping_sheet.pdf)



## CHAPTER 3: ENTERING THE WORKFORCE

### Internal Revenue Service

A wide range of information on federal taxes

[www.irs.gov](http://www.irs.gov)

### Department of Labor

Information and e-tools relating to the Family and Medical Leave Act

[www.dol.gov/WHD/fmla/index.htm](http://www.dol.gov/WHD/fmla/index.htm)

### Freelancers Union

Advocacy group with articles and resources for maintaining financial stability through self-employment

[www.freelancersunion.org/about](http://www.freelancersunion.org/about)

## CHAPTER 4: TAXES

### 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.

[www.irs.gov](http://www.irs.gov)

## CHAPTER 5: RETIREMENT READINESS

### Consumer Information on Retirement Plans

Information on various retirement plan options from the Department of Labor

[www.dol.gov/general/topic/retirement/consumerinf](http://www.dol.gov/general/topic/retirement/consumerinf)

### Benefits Planner: Retirement

The Social Security Administration's guide to planning for retirement

[www.ssa.gov/planners/retire](http://www.ssa.gov/planners/retire)



