



**Money
Smart**

for Grades 9-12



Educator Guide

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TABLE OF CONTENTS

Welcome to Money Smart.....	4
Getting Started	5
Lesson 15: Road to Retirement (Retirement Planning)	8
Answer Key.....	13
Glossary.....	15

WELCOME TO MONEY SMART

Welcome to **Money Smart**, an exciting interactive exploration of the concepts of money. This standards-aligned, cross-curricular program is designed to promote personal financial education in grades 9 through 12 students and young adults aged 18 to 20. You can use **Money Smart** to add engaging and enriching activities to financial literacy and economics instruction. Extension activities support English Language Arts, Math, Social Studies and Economics, and Technology, while also helping your students build the foundation to become financially responsible adults.

In **Money Smart** you will find:

- **Twenty-Two Lessons** with hands-on, cross-curricular activities that engage ninth- through twelfth-grade students and young adults aged 18 to 20 in discussing and exploring key financial concepts
- **Teacher Presentation Slides**, which provide helpful visuals, as well as challenge exercises and reflective prompts to support the activities in each lesson
- **A Student Guide** with handouts, worksheets, and resources that let students explore the topics covered in each lesson and apply their new knowledge
- **A Parent/Caregiver Guide** with information about topics being covered in class, conversation starters, online and literary sources, along with conversation starters and family activities to try together

Developing positive financial habits equips students with 21st-century skills and tools that last a lifetime. We hope you and your students enjoy learning about money and its many uses.

We are eager to hear from you about how you use this curriculum. We would like to know what works well and what could be improved to make **Money Smart** even better. If you have any questions, we would like to help. Please contact us with your comments and questions via e-mail at communityaffairs@fdic.gov.

GETTING STARTED

Money Smart provides a comprehensive, developmentally appropriate program for teens and young adults to build an understanding of key financial concepts.

There are many features that help make the **Money Smart** curriculum engaging, motivating, and easy to use. Each lesson includes learning objectives, essential questions, supplies needed, and preparation required, as well as the following features and components to support easy integration of **Money Smart** activities into your instructional day.

STANDARDS

Each lesson promotes real-world connections through student-centered learning experiences and aligns to the following education standards, including Common Core State Standards in mathematics and English Language Arts. The **Education Standards Chart** identifies which standards are met in each lesson.

- Financial Literacy Jump\$tart Standards
- English Language Arts Common Core State Standards
- Mathematics Common Core State Standards
- National Standards in Economics by Council for Economic Education
- Partnership for 21st-Century Skills

GRADE-LEVEL MODIFICATIONS

Please note the modifications identified throughout the lessons to differentiate learning experiences for beginners and advanced learners. Modifications provide developmentally appropriate activity recommendations and extension opportunities for a wide range of learning levels.

PRESENTATION TIME

Each lesson plan includes an estimated time needed to teach the lesson. Actual time required will vary classroom to classroom. The estimation includes time spent on the **Warm Up, Guided Exploration, Independent Exploration, and Wrap Up**. Activities may also be taught as several short lessons over a period of days or weeks. **Extended Exploration** activities are included to extend financial literacy learning opportunities throughout the year and provide easy ways to integrate the topics into various content areas.

ASSESSMENTS

A variety of assessments will be integrated throughout each of the twenty-two lessons. Assessments are designed to build value, meaning, and context around a topic, while providing teachers with opportunities to evaluate prior student knowledge, and collect evidence of their new understandings of lesson concepts and skills. Pre- (formative) and post- (summative) assessments are noted on the first page of each lesson. Assessments include discussions, reflections, questions and answers, reading, writing, and problem-solving exercises. Student handouts are an especially useful form of written assessment.

LESSON STRUCTURE

Each lesson is designed to include the following:

- **Warm Up** introduces students to the topic and sparks inquiry.
- **Guided Exploration** integrates key financial literacy learning objectives with teacher support and guidance. Through whole-class discussions and activities, students discuss key topics and begin connecting the concepts to the context of their own lives.
- **Money Smart Tips** are provided throughout lessons to offer additional guidance, interesting and relevant financial facts, and additional ideas to help make **Money Smart** a success in your classroom.
- **Independent Exploration** activities are designed to engage students in the process of learning through individual discovery, research, and interpretation. These activities are more independent than the Guided Exploration activities and may also be used as homework assignments, for collaborative group work, or independent study.
- **Wrap Up** provides a reflection question or activity to review lesson concepts and allow students to demonstrate their understanding.
- **Extended Exploration** provides teachers with additional opportunities to extend financial literacy concepts throughout the school year within core content areas including English Language Arts and Math. Activities can be completed as a class, in small groups, or by students individually. Useful resources (such as books, web links, games, or videos) are also included to promote even more student engagement. The books and online resources suggested in this guide are just a few of the many available resources that explore these topics, and are not endorsed by the FDIC.
- **Student Handouts** (found in the **Student Guide**) and **Teacher Presentation Slides** provide dynamic instructional support. Student handouts create an opportunity for students to apply their knowledge and for teachers to assess their understanding. Teacher presentation slides offer visuals and interactive activities corresponding with lessons.
- The **Answer Key**, **Glossary**, and **Standards Chart** house all of the information needed to check for understanding, define key terms, and check which activities meet specific education standards. Vocabulary words are **bolded** in each lesson as they are introduced. It may be helpful to distribute copies of the entire glossary to students as a reference.

MONEY SMART AT HOME

The **Money Smart** curriculum includes a helpful **Parent/Caregiver Guide** that corresponds to the classroom materials. Families may also use it independently of the curriculum. It contains resources, activities, games, and conversation starters on financial literacy topics covered in each lesson. Use the following ideas to encourage parents to use the guide at home:

- Introduce parents to the **Money Smart** program and share the **Parent/Caregiver Guide** at the start of the school year.
- Discuss the **Money Smart** program during parent/teacher conferences, or in monthly parent newsletters home, and the importance of building healthy financial habits early on in life.

- Hold a **Money Smart** family night. Play games and have students share short skits about financial concepts they have learned.
- Send student handouts from each lesson home in homework folders for parents to review and sign.

MONEY SMART PORTFOLIO

To promote positive financial behaviors and demonstrate the compounding knowledge of financial literacy skills developed throughout the **Money Smart** curriculum program, introduce the **Money Smart Portfolio** into your classroom. The **Money Smart Portfolio** is a semester-long project that collects student handouts and activities from each lesson to be presented as a final portfolio.

The portfolio creation recognizes students' financial growth throughout each phase of the learning process. The portfolio also enables students to walk away with a comprehensive resource that may be referred back to anytime a financial question arises in their futures. Using the **Money Smart Portfolio** as a semester-long project also gives students a long-term goal to work toward, while enabling an excellent opportunity for final assessment.

Money Smart Portfolio is designed for the following purposes:

- Assess student understanding from each phase of the program
- Create opportunities for final student self-reflection and personal assessment
- Reaffirm for students the intrinsic nature of financial skills and how one skill and strategy leads to another
- Build long-term vision for students to invest in the program from beginning to end

FINANCIAL LITERACY ALL YEAR LONG

Highlight financial literacy at your school all year long, especially in April, during National Financial Literacy Month and School Library Month.

- Create bulletin boards or posters with students about financial literacy themes learned in **Money Smart**
- Create a class or school newsletter with students to distribute to the school community about money skills and financial concepts covered in class.
- Publish student handouts and activities from the **Money Smart** lessons by sharing them on a classroom blog, website, or through social media.
- Display student work in the classroom, library, and hallways to spread financial literacy throughout the school community.
- Connect with other teachers to integrate real-world applications of financial literacy across all disciplines and classrooms, from Math to English Language Arts and Technology courses.

The more that students are exposed to financial literacy, and the more opportunity they have to practice applying their new knowledge and understanding of concepts, at school and at home, the more prepared they will be to live **Money Smart** lives.



LESSON 15: ROAD TO RETIREMENT

GRADES
9 - 12
AND AGES
18 - 20

LESSON OVERVIEW

Although **retirement** may seem a distant future for many high school students, this lesson demonstrates why thinking about retirement now means building retirement savings and securing one's future. Students research and compare different retirement plans, and assess how retirement savings are built through different retirement options, such as **Traditional** and **Roth IRAs** and **401ks** and **403bs**.

TOPIC: Retirement Planning

SUBJECT CONNECTIONS: Math, English
Language Arts, Social Studies

TIME REQUIRED: 70 minutes (*excluding
Extended Exploration activities*)

LEARNING OBJECTIVES:

Students will be able to...

- Explain how long-term retirement savings through investing builds wealth
- Identify differences in retirement planning strategies
- Create a retirement plan
- Understand Social Security benefits

SUPPLIES:

- Projector (for teacher presentation slides)
- Access to the Internet (**optional**)

PREPARATION:

- Make copies of student handouts
- Set up projector with presentation slides

STUDENT HANDOUTS:

(*found in Student Guide*)

- **Retirement Trivia**
- **On the Road to Retirement**
- **Plan It!**

Answer Key 13
Glossary with key vocabulary 15

TEACHER PRESENTATION SLIDES:

- **Money Grows**
- **Retirement Vehicles: Where to Save?**
- **Retirement Vehicles: Where to Save if Self-Employed?**

ESSENTIAL QUESTIONS:

- *Why do I need to think about retirement now?*
- *How do I make sure I have enough for my future?*
- *How does someone become a millionaire?*

ASSESSMENT ACTIVITIES:

PRE-ASSESSMENT:

- **Money Grows** slide

POST-ASSESSMENT:

- **Retirement Trivia** handout
- **On the Road to Retirement** handout
- **Plan It!** handout

MONEY SMART PORTFOLIO:

- **Plan It!** handout



INSTRUCTION STEPS

WARM UP

A DAY IN THE LIFE OF A MILLIONAIRE [10 MINUTES]

Begin the lesson by asking students to imagine what it would be like to be a millionaire when they retire: *What would you do? What would you buy? Where would you go?* Invite volunteers to share their responses. Explain that it may seem like an unattainable goal, but many people become millionaires over time by saving and investing wisely. Help students understand that it is a misconception that you have to start out rich or become famous to be a millionaire. With a well-developed financial plan and self-discipline to save and invest regularly over the course of your life, your money has the chance to grow in big ways.

MONEY SMART TIP!

Share with students “everyday” millionaires, those individuals who are not famous actors, businesspeople, or athletes, but rather average citizens working hard and saving hard. For example: share with students an article in the news or watch a short video compilation of “everyday” millionaires, such as *How These Average Joes Retired Millionaires* (3.5 minutes) at <http://finance.yahoo.com/blogs/daily-ticker/how-these-average-joes-retired-millionaires-142631833.html>.

GUIDED EXPLORATION

RETIREMENT VEHICLES [25 MINUTES]

Next, display the *Money Grows* slide and review the power of **compound interest** observed in each example. Encourage students to reflect on the difference between starting at age 25 versus 45. Ask students: *Why has the money grown so much more in the first example?* Help students understand that, even though both scenarios contribute \$200 a month, the ability to start at a younger age means that you maximize the opportunity to compound interest over a longer period of time, resulting in a higher balance than if you contribute the same monthly amount later in life.

Grade Level Modifications:

Beginner: Spend time circling back to Lesson 4, *Boost Your Savings*, and Lesson 14, *Increasing the Value of Your Money*, to review the power of compounding interest over time.

Advanced: Challenge students to do their own calculations on how money can grow. Have students use the compound interest calculator at <http://www.investor.gov/tools/calculators/compound-interest-calculator> and experiment with different interest rates and years. For example: how much does a principal of \$2,000 grow over 30 years with an interest rate of 2 percent, 4 percent, 6 percent, and 8 percent?

Display the *Retirement Vehicles: Where to Save?* slide and highlight the similarities and differences among different retirement accounts (definitions for each are also included in the glossary).



Next, share the *Retirement Vehicles: Where to Save if Self-Employed?* slide and discuss how options are slightly different if you own a business or earn freelance income.

MONEY SMART TIP!

In addition to discussing retirement vehicles, discuss Social Security and how it plays a role in retirement planning. Connect back to Lesson 6, *Bread-and-Butter*, to discuss taxation, or have students explore the Social Security website at <http://www.ssa.gov/>.

Distribute the *Retirement Trivia* handout and challenge students to work independently or in small groups to answer which retirement account each person has. Review the answers together as a class and close the discussion by helping students understand that, your job, income, and retirement goals may determine the type of retirement account you establish. Explain that many people consider age 65 to be the ideal retirement age, but retiring at that age may not be possible if one does not save enough. While there is no right way to plan for retirement, since different people use different retirement vehicles, it is important to start young and save diligently throughout the course of your life so that you are able to retire at the age of your choosing.

INDEPENDENT EXPLORATION

Note: These activities are more independent than the Guided Exploration activities and may be used as homework assignments, collaborative group work, or independent study.

ON THE ROAD TO RETIREMENT [25 MINUTES]

Distribute the *On the Road to Retirement* handout and allow students time to work through both scenarios either with a partner or in small groups.

MONEY SMART TIP!

Provide students with an online compound interest calculator to complete the *On the Road to Retirement* handout, such as the one found at [Investor.gov](http://www.investor.gov).
<http://www.investor.gov/tools/calculators/compound-interest-calculator#.VBsXuyiNZdQ>

When students are finished, discuss their results and explain that Jessica's decision to borrow \$20,000 from her 401k ended up costing her almost \$300,000 in lost income over the course of her life! She also paid immediate fees from early withdrawal and tax payments. Help students understand that a decision she made at age 30 had a lasting impact on her financial future. Even though she still continued to contribute \$250 to her 401k each month, her contributions would have grown dramatically if she chose to leave the \$20,000 in her account.

MONEY SMART TIP!

Extend the *On the Road to Retirement* activity by having students write a cause and effect essay based on Jessica's retirement choices.



WRAP UP

PLAN IT! [10 MINUTES]

End the lesson by distributing the *Plan It!* handout and allow students time to reflect and write their answers. Invite students to share their plans with the class and use student responses as an opportunity to reiterate the importance of starting early with retirement savings.

MONEY SMART TIP!

In addition to the *Plan It!* activity, have students visit the U.S. Treasury's myRA website to learn more about the myRA program, a simple, safe, and affordable way to start saving for retirement. <http://www.treasurydirect.gov/readysavegrow/>

EXTENDED EXPLORATION

Note: Use the following ideas to extend financial literacy concepts throughout the school year within core content areas through English Language Arts, Math, Social Studies and Economics, and Technology activities, projects, and discussions. Duration of activities will vary.

ENGLISH LANGUAGE ARTS

- **Writing Prompts:**
 - At what age do you want to retire? What do you think retirement will be like? What would you like to do when you're retired?
 - How much money do you think you will need in five years? Ten years? Twenty years? Forty years? What actions can you take now to start saving so that you have enough money when you are ready to retire?
- **Suggested Readings:**
 - *Borrowing Against a 401k: Why You Should or Should Not*. An overview of outcomes when you borrow against a 401k.
<http://www.fool.com/retirement/401k/2014/09/13/borrowing-against-a-401k-why-you-should-and-should.aspx>
 - *The Secret to Saving for Retirement When You Have Nothing Saved at All* by Time magazine: A question-and-answer column on how to start saving for retirement.
<http://time.com/money/3222252/retirement-strategy-when-nothing-saved/>



MATHEMATICS

- **Activity/Project Ideas:**
 - Challenge students to calculate long-term savings with retirement accounts, including variables such as early withdrawal fees, spikes and dips in the market, and frequency and amount of contributions.

SOCIAL STUDIES AND ECONOMICS

- **Discussion Topics:**
 - Discuss well-known investors such as Warren Buffet and how their personal philosophies on managing money have shaped their long-term investments. Explore, for instance, how Buffet has lived in the same home for more than 50 years despite having an estimated net worth of over \$60 billion. How do choices such as spending less than what you have help support long-term savings goals?
- **Activity/Project Ideas:**
 - Have students research retirement practices around the world. How do people living in other nations plan for retirement? What similarities and differences exist between the United States and other countries in terms of retirement saving?

TECHNOLOGY

- **Online Resources:**
 - *Compound Interest Calculator* by Investor.gov: An online calculator that calculates compound interest. <http://www.investor.gov/tools/calculators/compound-interest-calculator#.VBsXuyiNZdQ>
 - *Retirement Calculator* by the Financial Industry Regulatory Authority (FINRA): An online calculator used to plan investment strategies. http://apps.finra.org/Investor_Information/Calculators/1/RetirementCalc.aspx
 - *Practical Money Skills Countdown to Retirement* by Visa: An online game that walks students through their first job through retirement, and the choices they will make along the way. <http://www.practicalmoneyskills.com/games/>
 - *Make My Plan* by Feed the Pig: A planning simulation that lets students pick three life goals, such as careers, education, or buying a car. A detailed checklist and related articles are presented based on selected goals to guide students in planning for their future. http://www.feedthepig.org/what-do-you-want-to-do#.U_d7gCiNZdQ
 - *The Truth About Millionaires* by The Mint: An online quiz testing students' knowledge of what millionaires are really like. <http://www.themint.org/teens/the-truth-about-millionaires.html>
- **Activity/Project Ideas:**
 - Have students build their own compound interest calculator using spreadsheet software.

ANSWER KEY

for Student Handouts

LESSON 15: ROAD TO RETIREMENT

Student Handout: *Retirement Trivia*

Meet Lindsey

“I’m a teacher and my retirement strategy is to have a mix of after-tax and pretax contributions so I save my money in two different accounts. One account is offered by my employer and I started the other account on my own. Which accounts do I have?” Roth IRA and 401b

Meet Kushal

“I’m a manufacturing engineer, and when I first started my job I set up my retirement account so it would automatically put 7 percent of my income away each pay period. Plus, my company gives me 4 percent on top of that. What type of account do I have?” 401k

Meet Alisha

“I’m a freelance graphic designer and I love what I do! I try to max out my retirement savings at 25 percent of my net earnings each year. I don’t have the benefits of an employer match like I would if I worked for someone else so I work hard to max out my contributions whenever I can. What type of account do I have?” SEP IRA

Student Handout: *On the Road to Retirement*

Jessica is 30 years old now and she has been contributing \$250 to her 401k each month since she started at age 23. How much is in her 401k at age 30? \$35,337.53

No!:

Jessica is 40 now; she decided not to borrow money from her 401k and instead continued on saving \$250 diligently each month for all of her 30s. How much is her account worth now at 40? \$119,750.77

Jessica is 50 now and has kept up her savings goal of \$250 a month. How much is her 401k worth today? \$301,992.61

Jessica is 65 now and ready for retirement. She was a diligent saver her whole life and continued to contribute \$250 each month. What is the final balance of her account? \$1,039,427.98

Yes!:

Jessica is 40 now and she went ahead and borrowed \$20,000 from her 401k to buy a new car when she was 30. What she didn’t realize was that she would have to pay an early withdrawal penalty of 10 percent (\$2,000) because she was under age 59½, federal tax of 15 percent (\$4,000), and state income tax of 4percent (\$800). The \$20,000 cost her \$6,800 at the time of withdrawal from taxes and penalties! Even though she borrowed money, she maintained the automatic \$250 monthly deposit into her 401k. What is her balance at age 40? \$76,572.26

Jessica is 50 now and has kept up her savings goal of \$250 a month. How much is her 401k worth today? \$208,773.45

Jessica is 65 now and ready for retirement. She was able to keep up with her \$250 monthly contributions. What is the final balance of her account? \$743,721.03

Which path yielded Jessica a higher return? Why is this? Not borrowing money from her retirement account

yielded Jessica a much higher return because the money she would have borrowed had a longer period of time to earn interest and grow.

GLOSSARY

401k: A plan offered through an employer that gives employees a choice of investment options, typically mutual funds, to save a portion of their salary for retirement.

403b: A plan offered by to employees of public schools, certain non-profits, and some members of the clergy to set aside money for retirement.

Annual Percentage Rate (APR): The cost of borrowing money on a yearly basis, expressed as a percentage rate. For example: a \$100 loan repaid in its entirety after one year with a \$10 finance charge has an APR of 10%.

Annual Percentage Yield (APY): A percentage rate reflecting the total amount of interest paid on a deposit account based on the interest rate and the frequency of compounding for a year. For example: a \$1,000 investment that earns 6% per year pays \$60 at year-end and has an APY of 6%.

Asset: An item with economic value, such as stock or real estate.

Auto Insurance: A contract between you and an insurance company in which you agree to pay a fee (premium) and in return, the insurance company agrees to pay for certain expenses associated with an accident or other covered losses on your vehicle. (See also **Insurance**.)

Automated Teller Machine (ATM): A machine, activated by a magnetically encoded card or other medium that can process a variety of banking transactions. These include accepting deposits and loan payments, providing withdrawals, and transferring funds between accounts.

Balance Sheet: A summary of a company's assets, liabilities, and shareholders' equity.

Bank: A financial institution and business that accepts deposits, makes loans, and handles other financial transactions.

Bank Teller: A bank employee who handles routine transactions, such as deposits or withdraws into a bank account.

Beneficiary: Someone who is designated to receive certain benefits after the death of another individual.

Bonds: A debt security, similar to an "IOU". When you buy a bond, you are lending money to the issuer in exchange for the issuer's promise to pay you a specified rate of interest and to repay the principal when it "matures," or comes due.

Branch Manager: A bank employee that supervises bank operations at a branch location.

Budget: A plan that outlines what money you expect to earn or receive (your income) and how you will save it or spend it (your expenses) for a given period of time; also called a spending plan.

Capacity: Refers to your ability to repay a loan and other debts.

Capital: Refers to the value of your assets and your net worth.

Career: The type of work a person pursues for the majority of their life that may involve formal education, special training, or be within a specific industry.

GLOSSARY (continued)

Cash Flow: The amount of money flowing in (income) and flowing out (expenses) of a personal budget.

Cash Flow Statement: A summary of the money that comes in (income) and out (expenses) of a household or business over a period of time.

Certificate of Deposit (CD): A special type of savings account offered by banks or credit unions that typically offers a higher rate of interest than a regular savings account. You generally must keep your funds in the CD for a specified period of time to avoid penalties. The end of that time period is called the “maturity date.”

Certified Public Accountant (CPA): An accountant who has passed an examination and met other requirements and has been granted a certificate by a state agency.

Character: In finance, this refers to how you have paid your bills or debts in the past.

Charitable Giving: Money that you give to a nonprofit organization, charity, or private foundation.

Checking Account: A deposit account at a financial institution that allows consumers to make deposits, pay bills, and make withdrawals. Money that is in a checking account is very liquid, meaning it can be easily accessed.

Claim: Request to an insurance company for payment for a covered loss under an insurance policy.

Closing Costs: The expenses incurred by sellers and buyers in transferring ownership in real property. These costs may include the origination fee, attorneys' fees, loan fees, title search and insurance, and recordation fees.

Collateral: An asset that secures a loan or other debt that a lender can take if you default (don't repay) the money you borrow. For example: if you get a real estate mortgage, the bank's collateral is typically your house.

College Work-Study Program (Federal Work-Study): A program that enables qualifying students to work part time to receive money that helps finance the costs of post-secondary education.

Commercial Property Insurance: Coverage that a business or other entity purchases from an insurer to help cover losses to buildings and contents due to a covered cause of loss, such as a fire. (See also **Insurance**.)

Compound Interest: The interest paid on principal and previously earned interest.

Consumer Installment Loan: Money that a person borrows and agrees to pay back by making a set number of payments over a period of time.

Co-Pay: Also known as a copayment, a fixed amount (for example: \$15) you pay for a covered health care service, usually when you get the service.

Corporation: A legal entity that is distinct from the individual(s) who compose the business yet has rights and abilities similar to those of a natural person.

Credit: The ability to borrow money and pay it back later.

Credit Card: A plastic card that can be used to obtain credit (such as to purchase goods and services).

Credit Card Accountability Responsibility and Disclosure Act: A law that prohibits certain practices that are unfair or abusive. The law also makes the rates and fees on credit cards more transparent so consumers can understand how much they are paying for their credit card and can compare different cards.

GLOSSARY (continued)

Credit Report: A record of your credit - and some bill repayment history - and the status of your credit accounts. This information includes how often you make your payments on time, how much credit you have, how much credit you have available, how much credit you are using, and whether a debt or bill collector is collecting money you owe.

Credit Score: A number, roughly between 300 and 800, that measures an individual's credit worthiness. The most well-known type of credit score is the FICO[®] score. This score represents the answer from a mathematical formula that assigns numerical values to various pieces of information in your credit report.

Credit Union: A not-for-profit financial institution owned by its members and represented by a volunteer board of directors who are elected by the membership. To become a member, you must meet the credit union's field of membership requirements and open a share account.

Creditworthiness: A creditor's measure of a consumer's past and future ability and willingness to repay debts. (See also **Credit Report** and **Credit Score**.)

Crowdfunding: A process of raising money for a cause or purpose, often online, from multiple people.

Customer Service Representative: A person who provides general information, handles complaints or inquiries, and may help consumers open accounts.

Debit Card: A plastic card that can be used to deposit or withdraw cash from a checking or other bank deposit account, such as at automated teller machines or at retail locations that accept cards.

Debt-to-Assets: Measures the ratio of your monies owed (liabilities such as a car loan) to items that are of value (assets such as property). To calculate, you divide your total liabilities by your total assets. For example: if you own a home that is worth \$200,000 (asset), but you have a mortgage of \$50,000 left on the home (liability), your debt-to-asset ratio is 25% ($\$50,000 \div \$200,000 = 0.25$ or 25%).

Debt-to-Equity: A measure of solvency (the ability of a business to pay off its debt if the business were immediately sold) that is calculated by dividing total liabilities by stockholders' equity.

Debt-to-Income: A measure calculated by dividing your monthly debt payments by your gross monthly income. For example: if you pay \$200 each month for a car loan and \$1,000 each month for a home loan, your total debt payment each month is \$1,200 ($\$200 + \$1,000$). If your monthly gross income is \$4,000, then your debt-to-income ratio is 30% ($\$1,200 \div \$4,000$).

Deductible: The dollar amount or percentage of a loss that you have to pay before the insurance policy begins to pay.

Deduction: An amount that reduces the amount of income on which a person pays tax.

Direct Loan: A low-interest loan for students and parents to help pay for the cost of a student's education after high school.

Disability Insurance: Protects a person from loss of income due to a covered illness or injury. (See also **Insurance**.)

Diversification: The approach of spreading your money among various investments with the hope that if one investment loses money, the others will make up for those losses; also referred to by the phrase "don't put all your eggs in one basket."

GLOSSARY (continued)

Entrepreneur: An individual who establishes and operates his or her own business.

Equal Credit Opportunity Act: A federal law that prohibits credit-related discrimination on the basis of gender, race, marital status, religion, national origin, age, or receipt of public assistance.

Equity: The difference between the value of a piece of property (such as a house) and any debts for it (such as the amount of a mortgage).

Estate: The property of a person who has died.

Estate Planning: Planning for what will happen with assets or property after death.

Estate Tax: A tax on your right to transfer property at your death.

Executor: Someone who is selected to administer an estate (for example, make sure that the instructions in the will are properly followed).

Expense: The cost of goods and services.

Federal Deposit Insurance Corporation (FDIC): Preserves and promotes public confidence in the U.S. financial system by insuring deposits in banks and thrift institutions for at least \$250,000. An independent agency of the federal government, the FDIC was created in 1933 in response to the thousands of bank failures that occurred in the 1920s and early 1930s. Since the start of FDIC insurance on January 1, 1934, no depositor has lost a single cent of insured funds as a result of a failure.

Finance Charge: The total dollar amount paid for credit. For example: a \$100 loan repaid with \$9 interest plus a \$1 service fee has a finance charge of \$10.

Financial Advisor: A person who provides financial information and advice.

Financial Aid: Award(s) to individuals to help pay for education expenses.

Financial Planning: Identifying a person's financial goals, needs, and expected earning, saving, investing, insurance, and debt management activities.

Financial Ratios: Useful indicators of financial performance.

Financial Recordkeeping: The documentation of a person's financial affairs, including income earned, taxes paid, and expenses.

Fiscal Policy: A broad term used to refer to the tax and spending policies of the federal government. Fiscal policy decisions are determined by Congress and the governing Administration.

Fixed Expense: An expense that does not change from month to month.

Fixed-Rate Loan: A loan that has an interest rate that does not change.

Free Application for Federal Student Aid (FAFSA): The free application used to apply for federal student aid, such as federal grants, loans, and work-study.

Goal: Something you wish to achieve or accomplish in a specific amount of time.

GLOSSARY (continued)

Grant: A form of financial aid, often based on financial need that does not need to be repaid (unless, for example, you withdraw from school and owe a refund).

Gross Income (Gross Pay): Earnings before deductions (as for taxes or expenses) are subtracted.

Health Insurance: A contract that requires your health insurer to pay some or all of your health care costs in exchange for a premium (money paid).

Home-Based Business Insurance: Protection against certain losses and other risks for those who engage in business activity at their home. (See also **Insurance**.)

Homeowner's Insurance: An insurance policy that covers a homeowner's house, other structures on their property, and personal contents against losses caused by such things as windstorms, fire, and theft. It generally also provides liability coverage (for example: this coverage would be applicable if you are found responsible for the injury of a friend who injures themselves while visiting you). (See also **Insurance**.)

Identity Theft: When someone steals another person's identity to commit fraud, such as by using his or her name or Social Security number to get something. Identity theft is a crime.

Income: Money that you receive from jobs, allowances, gifts, interest, dividends, and other sources.

Income Tax: Taxes on income, both earned (salaries, wages, tips, commissions) and unearned (interest, dividends). Income taxes can be levied on both individuals (personal income taxes) and businesses (business and corporate income taxes).

Individual Retirement Account (IRA): A deposit or investment account that an individual opens and uses to save money for retirement and that has certain tax advantages

Inflation: A rise in the general level of prices of goods and services in an economy over a period of time; the opposite is deflation.

Insurance: A contractual relationship that exists when one party (the Insurer), for a fee (the premium) agrees to reimburse another party (the Insured or third party on behalf of the Insured) for a specific loss.

Insurance Agent: A person who sells insurance policies.

Interest: Money that a bank or other financial institution pays you for keeping money on deposit with them, or the amount of money you pay a bank as a fee when you borrow money. You can earn interest from a bank (such as when you keep money in a saving account) or pay interest (such as when you borrow money).

Inventory Turnover Ratio: A ratio showing how often a company's inventory is sold and replaced during a year or other period of time.

Invest: To put money at risk with the goal of making a profit (return) in the future.

Investment: Using money or time in a way that you expect will bring you a return or increase in value.

Investment Vehicle: The type or methods that a person (or business) can use to invest money.

Investors: People who expect a future financial return from using their money to finance investments.

Job: A specific duty, task, or activity someone completes using his or her time, skills, and energy to earn money.

GLOSSARY (continued)

Joint Tenancy: Equal ownership of property by two or more parties, each of whom has the right of survivorship (for example: when a person dies, their interest in the property is transferred to the other owners).

Lawyer: A person who practices law; also known as an attorney.

Lease: A contract transferring the use of property or occupancy of land, space, structures, or equipment in exchange for rent (generally money).

Lender: An organization or person that lends money with the expectation that it is repaid.

Liability: An amount owed to a person or organization for borrowed funds; responsibility to another for negligence that results in injury or damage.

Liability Insurance: Covers losses that an insured is legally liable, such as for another's personal injury or for property damage. (See also **Insurance**.)

Life Insurance: A form of insurance that will pay money to a beneficiary if the policyholder dies. (See also **Insurance**.)

Limited Liability Company (LLC): An entity formed under state law by filing articles of organization as an LLC. Unlike a partnership, none of the members of an LLC are personally liable for its debts.

Loan: Money borrowed that has to be repaid, generally with interest.

Loan Officer: A bank employee that (depending on the bank) evaluates, authorizes, or recommends approval of loan applications for people and businesses.

Long-Term Care: Services that include medical and non-medical care provided to people who are unable to perform basic activities of daily living, like dressing or bathing. Medicare and most health insurance plans don't pay for long-term care.

Medicare: A health insurance program for people who are 65 or older, certain younger people with disabilities, and people with permanent kidney failure requiring dialysis or a transplant. This program is financed by deductions from wages and managed by the federal Social Security Administration.

Monetary Policy: What the Federal Reserve, the nation's central bank, does to influence the amount of money and credit in the U.S. economy. What happens to money and credit affects interest rates (the cost of credit) and the performance of the U.S. economy.

Money Market Deposit Account: A savings account that offers a higher rate of interest in exchange for larger than normal deposits.

Mortgage (Home Loan): A contract, signed by a borrower when a home loan is made, that gives the lender the right to take possession of the property if the borrower fails to pay off, or defaults on, the loan.

Mutual Funds: An investment tool that pools the money of many investors and invests it in stocks, bonds, and money market assets, or other securities.

Need: Something you must have to survive, such as clothes, shelter, or food.

Net Income (Take-Home Pay): The gross pay minus deductions (such as for taxes, health care premiums, and retirement savings).

GLOSSARY (continued)

Net Worth: The difference between what you own (assets) and what you owe (debts).

Online Banking: A service that enables an accountholder to obtain account information and manage certain banking transactions through the financial institution's web site on the Internet.

Partnership: Two or more persons who join to carry on a trade or business. Each person contributes money, property, labor or skill, and expects to share in the profits and losses of the business. Partners are liable for the partnership's financial responsibilities.

Paycheck: A check that is used to pay an employee for his or her work.

Pell Grant: Awarded to undergraduate students who have demonstrated financial need.

Perkins Loan: Low-interest federal student loans for undergraduate and graduate students with exceptional financial need.

Personal Exemptions: Reduces the income subject to taxation by the exemption amount.

Pharming: Redirecting Internet requests to false Web sites to collect personal information, which is generally then used to commit fraud and identity theft.

Philanthropy: Giving money or time for the purpose of trying to make life better for others.

Phishing: When fraudsters impersonate a business or government agency to try to get you to give them personal information, such as through an email or text message. Can also be thought of as "fishing for confidential information".

Pi: A Greek letter that reflects the ratio of the circumference of a circle to its diameter.

Predatory Lending: Certain practices that result in a borrower obtaining a loan that is harmful. These include, among other things, charging excessive fees and interest rates, lending without regard to borrowers' ability to repay, refinancing borrowers' loans repeatedly over a short period of time without any economic gain for the borrower, and committing outright fraud or deception (such as falsifying documents).

Premium: The amount of money that has to be paid for an insurance policy.

Profit: The money gained or left over after money spent (expense) is subtracted from money earned (income).

Profit-and-Loss Statement: A financial statement that summarizes the financial performance of a business during a specific period of time, including by outlining the firm's income, expenses, and the resulting profit or loss.

Policy: Contract between the insured and the insurer.

Power of Attorney: A legal instrument authorizing someone to handle the financial or other business affairs of another person.

Principal: The amount of money originally invested or the money that is borrowed.

Property Insurance: Insurance to protect you against damage that may occur to your property. (See also **Insurance**.)

"Rainy Day" Fund (Emergency Fund): Money set aside to pay for unexpected expenses.

GLOSSARY (continued)

Rate of Return: Profit or loss over a one-year period, expressed as a percentage.

Recession: A period of reduced economic activity.

Rent: The amount of money needed to live in or use someone else's property, such as a home, condo, or apartment.

Rent-to-Own: A lease contract that includes an option to buy the product.

Return on Assets: An amount calculated by dividing annual earnings by its total assets.

Return on Investment (ROI): The annual return on an investment, expressed as a percentage of the total amount invested.

Revenue: The total income produced by a given source.

Right of Survivorship: A successor's ability to acquire the property of a deceased individual upon his or her death.

Risk: The possibility that something unplanned or unintended may happen (such as losing money). Uncertainty about outcomes that are not equally desirable. In finance, it refers to the degree of uncertainty about the rate of return and the potential harm that could arise when financial returns are not what the investor expected.

Risk Management: The process of calculating risk and choosing approaches to minimize or manage loss.

Roth IRA: An Individual Retirement Account that you deposit after tax dollars into for accumulation of retirement savings.

Rule of 72: A rough calculation of the time or interest rate needed to double the value of an investment determined by taking the number 72 and dividing it by the interest rate. For example: To figure how many years it will take to double a lump sum invested at an annual rate of 8%, divide 72 by 8, for a result of 9 years.

Salary: Compensation for work paid on a regular basis (bi-weekly/monthly) typically expressed as an annual amount.

Save: To set something, like money, aside to use in the future.

Savings Account: A bank account that you can use to set aside money, and that pays you interest.

Scholarship: Money awarded to students based on academic or other achievements to help pay for education expenses. Scholarships generally do not have to be repaid.

Secured Installment Loan: A loan for which you provide collateral to secure your promise to repay the money you borrow.

Self-Employment Tax: Money that someone who is considered self-employed must pay to the federal government to fund Medicare and Social Security.

Social Security: A federal government program that provides retirement, survivors, and disability benefits, funded by a tax on income.

Sole Proprietorship: A simple structure where there is only one person owning and operating the business.

GLOSSARY (continued)

Spending Plan: Another name for a budget.

Start-Up Capital: Money that is invested to help start a new business.

Stock: An investment that represents a share of ownership in a company.

Student Loans: A sum of money borrowed by an individual to help pay for college with the intent that it will be repaid at a future date, along with any agreed-upon interest.

Tax: Money that has to be paid to a government to provide public goods and services.

Tenancy in Common: Shared ownership of a property in which more than two people hold the title.

Tenancy in Entirety: Shared ownership of a property between a husband and wife, when one dies, the other still owns the property.

Text Message Spam: Similar to e-mail spam, but on your cell phone. Criminals often text offers of free gifts or low-cost credit offers to try to get you to click on a link so they can install malware on your phone or get you to give them information they can use to commit fraud.

Time Value of Money: The concept that a dollar today is not worth the same as a dollar in the future.

Traditional IRA: A retirement savings program to which yearly tax-deductible contributions up to a specified limit can be made. The amount contributed is not taxed until withdrawn. Withdrawal is not permitted without penalty until the individual reaches age 59 and a half.

Trust: A legal arrangement in which one person holds or manages assets or other property for the benefit of another.

Unsecured Installment Loan: A loan that is not secured by an asset (collateral) that a lender could take if you do not repay the loan.

Variable Annuities: A contract between you and an insurance company, under which you make a lump-sum payment or series of payments. In return, the insurer agrees to make periodic payments to you beginning immediately or at some future date.

Variable Expense: Money that a person spends or gives away that varies from month to month.

Variable-Rate Loan: A loan where the interest rate might change.

Want: Something that you would like to have but that you could live without, such as a TV or tickets to a baseball game.

Will: A legal document in which a person conveys information such as how they want their money and assets to be distributed after their death and who should be the guardian of their children.



Money
Smart

for Grades 9-12 Student Guide



**A fun way to help teens
get smart about money.**



TABLE OF CONTENTS

Lesson 15: Road to Retirement (Retirement Planning)..... 3

- *Student Handout 1: Retirement Trivia*
- *Student Handout 2: On the Road to Retirement*
- *Student Handout 3: Plan It!*



RETIREMENT TRIVIA

Name: _____

Read the scenarios below and determine the appropriate retirement account for each.

MEET LINDSEY

“I’m a teacher, and my retirement strategy is to have a mix of after-tax and pretax contributions, so I save my money in two different accounts. One account is offered by my employer and I started the other account on my own. Which accounts do I have?”

MEET KUSHAL

“I’m a manufacturing engineer, and when I first started my job I set up my retirement account so it would automatically put 7% of my income away each pay period. Plus, my company gives me 4% on top of that. What type of account do I have?”

MEET ALISHA

“I’m a freelance graphic designer, and I love what I do! I try to max out my retirement savings at 25% of my net earnings each year. I don’t have the benefits of an employer match like I would if I worked for someone else, so I work hard to max out my contributions whenever I can. What type of account do I have?”



ON THE ROAD TO RETIREMENT

Name: _____

Meet Jessica, a 23-year-old college graduate who just got her first job as a marketing assistant. While her employer offers a 401k, her company doesn't offer matches. But she heard that you should start saving early for later in life, so she's decided to set up her account so \$250 is automatically deposited into her 401k each month. She's already started contributing and she's starting with a \$5,000 principal. *Help Jessica see her account change through compounding interest annually at a rate of 8%.*



Jessica is 30 years old now, and she has been contributing \$250 to her 401k each month since she started at age 23. *How much is in her 401k at age 30?*

She has been wanting to buy a new car for a while, and since she feels pretty far ahead with her retirement savings, she is considering borrowing money from her 401k to help pay for the car. *Should she do it?*

NO!



Jessica is 40 now; she decided not to borrow money from her 401k, and instead continued on saving \$250 diligently each month for all of her 30s. *How much is her account worth now at 40?*

YES!



Jessica is 40 now, and she went ahead and borrowed \$20,000 from her 401k to buy a new car when she was 30. What she didn't realize was that she would have to pay an early-withdrawal penalty of 10% (\$2,000) because she was under age 59½, federal tax of 15% (\$4,000), and state income tax of 4% (\$800). The \$20,000 cost her \$6,800 at the time of withdrawal from taxes and penalties! Even though she borrowed money, she maintained the automatic \$250 monthly deposit into her 401k. *What is her balance at age 40?*





ON THE ROAD TO RETIREMENT (continued)

Jessica is 50 now, and has kept up her savings goal of \$250 a month. *How much is her 401k worth today?*

Jessica is 50 now, and has kept up her savings goal of \$250 a month. *How much is her 401k worth today?*



Jessica is 65 now, and ready for retirement. She was a diligent saver her whole life and continued to contribute \$250 each month. *What is the final balance of her account?*



Jessica is 65 now, and ready for retirement. She was able to keep up with \$250 monthly contributions. *What is the final balance of her account?*

Which path yielded Jessica a higher return? Why is this?

What amount did Jessica miss out on by withdrawing money at age 30?



PLAN IT!

Name: _____

It's never too early to start planning for retirement. In fact, the earlier you plan, the more time your money has to grow! Answer each of the questions below in detail to help launch your plan today.

Why is it important to plan for retirement now when you won't be retiring until later?

At what age do you think you will start planning for retirement? Why?

What types of retirement vehicles might you use to build your retirement savings, and why? (For example: will you search for a job with 401k benefits? Will you open your own Roth IRA?)

Once you determine which type of retirement account(s) you will open, how much will you be able to contribute monthly or annually?

What can you do today to decrease expenses in order to increase money you can save for your future?
