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Saving and Investing

Building Wealth for Financially-Secure Futures

PwC's *Earn Your Future*™ Curriculum

pwc

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Introduction

"The reality is that all children don't know the basics of saving and investing. It's a skill they need to be successful in our economy."

-Education Secretary Arne Duncan, April 2011.

Recent history underscores the immediate need for youth to develop skills in math and financial literacy, and yet, current data shows there is a lack of access to curricula for students to learn:

- A 2011 survey conducted by American Express found that a majority of parents with children in high school or college gave schools below-average or failing grades in teaching responsible spending.
- A 2012 survey by Junior Achievement and Allstate Foundation showed 23 percent of teens are uncertain about their ability to budget successfully.
- Despite the fact that 13 states mandate personal finance coursework as a high school graduation requirement, there is no national legislation mandating that it be a requirement in schools.*

The enclosed lesson plan about financial literacy is designed to increase students' proficiency in financial literacy. Your expert knowledge and real-life examples, coupled with this one- hour lesson plan aligned to national standards in personal finance education, will fill a critical gap in our current education system, and better prepare the next generation of leaders to make sound financial decisions and be productive citizens.

We applaud your efforts to bolster students' understanding of concepts critical to the health of our economy and stability of our nation. Furthermore, we thank you for serving as an ambassador for PwC, reinforcing our commitment to helping students improve their skills in financial literacy and to youth education overall.

Lesson description

Students will identify and compare strategies for investing, including participating in a company retirement plan. Students will explain the relative importance of the following sources of income in retirement: Social Security, employer retirement plans, and personal investments. Students will identify an investment plan based on a scenario and present to the class reasons for selecting this strategy.

Grade(s)

9-12

Lesson time

55-65 min

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Pre-visit prep

- Review the 5-minute prep to familiarize yourself with the lesson topic and vocabulary
- Review handouts to familiarize yourself with their structure and requirements
- Obtain lesson materials listed under "Materials" section below

Student learning objectives

Students will:

- Define key terms: investment, principal, interest
- Compare strategies for investing
- Choose an investment plan based on a scenario

Materials

For up to 30 students, obtain ahead of time:

Class/group

- Chart paper OR blackboard/whiteboard/overhead projector
- Markers
- Start Saving PowerPoint (with computer and projector – or printed out if technology is not available)
- Handout B – Patrick Answer Key
- Handout B – Lynne Answer Key
- Handout B – Tracey Answer Key
- Handout D – Facilitator's Guide (one copy for the facilitator)

Student (one per student~30 copies)

- Handout A – Popular Investment Options
- Handout B – Patrick (1/3 of students)
- Handout B – Lynne (1/3 of students)
- Handout B – Tracey (1/3 of students)
- Handout C – Investment Options

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5 Minute Prep

Background

Investing our money to secure our financial future takes diligent planning and commitment. While many people look forward to retirement, few people actually take the time to calculate what their financial needs will be during retirement. Experts estimate that to maintain one's standard of living will require approximately 70% of your preretirement income. Considering that the average American spends 20 years in retirement, this becomes a very expensive reality. The best way to secure our financial futures is to research options for growing our money over time. It is best to start thinking about these realities sooner rather than later.

Vocabulary

- **Investment**: money put aside for profit
- **Interest**: the profit on money that is invested, which is usually a percentage of the invested amount
- **Compound Interest**: interest paid or to be paid both on the principal and on accumulated unpaid interest
- **Simple Interest**: interest paid or figured on the original amount of a loan or on the amount of an account
- **Principal**: a sum of money that is placed to earn interest, is owed as a debt, or is used as a fund
- **Social Security**: a mandated retirement system in the United States; originally a part of Roosevelt's New Deal
- **Saving**: money saved over a period of time

Sources

Background information and vocabulary adaptations based on information from:

- *Council for Economic Education 2011 Survey of the States
- Background facts gathered from The Department of Labor: www.dol.gov/ebsa/Publications/10_ways_to_prepare.html
- Vocabulary adapted from Merriam Webster Dictionary for Kids (www.wordcentral.com) and Investopedia (www.investopedia.com)
- Social Security definition adapted from: www.wisegeek.com/what-is-social-security.htm

Pre and Post Assessments

Before beginning the lesson, facilitators should introduce themselves and **distribute** the Pre-Assessment to the students. If time allows, consider conducting a mini icebreaker before the Pre-Assessment.

Note: It is highly recommended that facilitators read the questions aloud to the students and encourage students to select answers as they move through the questions. Reassure the students that the assessments are not graded tests or quizzes, and they do **not** need to put their names on the assessments. The assessments are a tool to measure classroom comprehension of a given module and gauge effectiveness of instructor delivery.

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Collect the Pre-Assessments once completed.

Facilitators should teach the lesson to the students and administer and collect the Post-Assessment at the end of class**, keeping in mind the same considerations outlined above**. Again, students do **not** need to put their names on Post-Assessments.

Lesson activities

Greeting

Say: Good morning/afternoon everyone. My name is _____. Thank you for inviting me to spend time with you today. Today we are going to discuss something that might seem like it is a long way away. We are going to talk about ways to save and invest your money so that you are able to live a comfortable lifestyle even after you retire.

Activity A – Understanding investments and interest (10-15 minutes)

Materials

Class/Group

- Chart paper OR blackboard/whiteboard/overhead projector
- Markers
- Start Saving Scenario PowerPoint (with computer and projector – or printed out if technology is not available)

Ask: How many of you know people who are retired?

Count the number of hands.

Ask: Have any of you ever heard them talk about how they still manage to pay bills or handle daily activities even though they are no longer bringing in a paycheck?

Scan room for hands.

Ask: Who thinks they know how retired people manage to handle their financial obligations?

Select 1-2 students to share ideas.

Say: Social Security is probably a term that you hear many people talk about when they discuss retirement.

Ask: How many of you have jobs?

Scan the room for hands.

Ask: For those of you have jobs, have you ever noticed a deduction for Social Security on your paychecks?

Say: Everyone who earns a paycheck has a certain amount deducted from their paycheck to help pay for Social Security. The money that is taken out of your check is used to pay Social Security for someone now. People get a Social Security check when they reach a certain age or are no longer able to work.

Say: When you are old enough to collect Social Security, then you will get a check each month and that money will be taken out of the paychecks of people who are currently working.

Say: Other ways we mentioned adults have enough money at retirement are from saving and investing.

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Ask: How many of you know what the term "investment" means?

Count the raised hands.

Ask: Would one of you like to explain what investment means?

Select one student to share ideas.

Say: Thank you. An investment can be thought of as money that you put aside to earn a profit. When you save money, it doesn't necessarily earn you any money. But if you invest money, you are trying to earn additional money on top of what you already have.

Say: Many people find options to save their money such as in bank accounts that will earn a profit but also allows that money to remain liquid. Liquid means that the money can be easily accessed when needed. Cash is very liquid and can be easily accessed right away from the bank. Owning a house, for example, is not as liquid since you would have to sell it and it may take a while to get the money you would sell your house for.

Ask: Do you know how money that you invest earns a profit?

Select students to share ideas.

Say: One way invested money earns a profit is based on interest. [Under the heading "Ways investments earn money" write "Interest" on the board]

Ask: What do I mean by interest?

Select one student to share ideas.

Say: Interest is the amount of money that gets added to the money you invest. The interest is usually a percentage of the money that you invest. So if you put your money in an account with a 5% interest rate, calculate 5% of the money you invest and add that amount to the money you put in.

Say: Dividends are another way my investment earns money. [Under the heading "Ways investments earn money" write "Dividends" on the board]

Ask: What do I mean by dividends?

Select one student to share ideas.

Say: Dividends are money from the earnings of a company that is distributed to people who have an ownership by holding stock in that company. [If needed, incorporate an example using a company that students may be familiar with to clarify, i.e. If I own stock in XYZ Company and they did really well last year and made a lot of money, they might send me a dollar for each unit of stock that I own.]

Say: Gains from investments are another way people earn money on investments. [Under the heading "Ways investments earn money" write "Gains" on the board]

Ask: What do I mean by gains?

Select one student to share ideas.

Say: People can make money from stocks, mutual funds, and bonds, which we'll talk further later on, from selling them at a higher price than they purchased them for, which is called a gain. However, they can also lose money if they buy an investment and sell it later for less than they purchased it for, which is called a loss.

Say: Let's go back to interest for a minute and look at an example of how interest is calculated. Suppose you made an investment of $100 dollars that promised a 5% interest rate to be added at the end of the year. That means you would have $105 when the year was over.

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Write: 100 x .05 = 5
100 + 5 = 105

Say: The $100 is your principal. "Principal" is the original amount of money that you invested. The $5 is your interest. So principal plus interest makes up your new investment amount.

Ask: Who has heard the term compound interest before?

Allow students a moment to respond.

Say: Compound interest is money that is paid on the amount of the original investment and any interest that has been earned. For example, if you have $100 and the account pays 5% compound interest every year, your total balance after 3 years would be

Write:
(already on the board) Year One: 100 x .05 = 5.00
100 + 5.00 = **105.00**

Year Two: 105 x .05 = 5.25
105 + 5.25 = **110.25**

Year Three: 110.25 x .05 = 5.51
110.25 + 5.51 = **115.76**

Say: See, you are earning interest on the interest you earned the previous year!

Ask: Do you think you would want to find an investment that has a high interest rate or a low interest rate?

Listen to student responses.

Say: Right, you would want an investment that has a high interest rate. This is a little different than the way we normally talk about interest rates. When we think about interest rates on money we borrow, like car loans and credit cards, we want a low interest rate. When we think about money we are saving or investing, we want to find a high interest rate or rate of return.

Say: Let's examine a hypothetical situation and determine the impact of interest rates on investment money.

Do: Display "Start Saving" PowerPoint on the overhead projector (or pass out the presentation slide if technology is not available). Stop at the second slide.

Say: Can I have a volunteer to read this slide aloud please?

Do: Select a student to read "Start Saving at 55" slide.

Say: (after the student reads the scenario) A 55 year old that starts saving $25 per week at an interest rate of 5% will have saved $17,000 by age 65.

Say: Let's see how those numbers would change if we started saving at an earlier age.

Say: Let's see how much a 45 year old can save with a $25 per week investment.

Say: Can I have a volunteer to read this next slide aloud please?

Do: Select a student to read "Start Saving at 45" slide.

Say: (after the student reads the scenario) A 45 year old that starts saving $25 per week will save $45,000 by age 65.

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Say: Let's see what happens if we start even earlier.

Say: Let's see how much a 35 year old can save with the same $25 per week investment.

Say: Can I have a volunteer to read this next slide aloud please?

Do: Select a student to read "Start Saving at 35" slide.

Say: (after the student reads the scenario) A 35 year old that starts saving $25 per week can save over $90,000 by age 65.

Say: Let's look at one more. Can I have a volunteer to read this next slide.

Do: Select a student to read "Start Saving at 25" slide.

Say: (after the student reads the scenario) By saving $25 per week at an interest rate of 5%, you can save over $150,000 by age 65.

Say: How much more money will the 25 year old have saved than the 35 year old?

Do: Select a student to respond.

Say: (after the student provides a correct response of over $60,000) By starting your savings plan 10 years earlier, your total savings amount is increased by over $60,000.

Do: Display the "Savings Tips" PowerPoint slide.

Say: In summary, there is a bit of science to savings.

Ask what tips would you provide a friend or classmate about saving based on what you just saw?

Allow a couple of students to respond.

Say: First, start saving early. As this savings table confirms, someone who starts saving at 25 years old benefits more from interest than someone who starts saving later. For example, a person who begins investing at 25 years old eventually earns over $100,000 solely from earned interest. A person who doesn't begin investing until 45 years old only earns $19,000 from earned interest by the time they are 65.

Say: Beginning to save earlier provides a person with more time to invest money toward savings. For example, a 25 year old has 40 years to contribute to their savings versus a 35 year old, who only has 30 years. 10 years can make a big difference in saving for the future.

Say: As demonstrated in the table, a 35 year old saves $70,000 less than a 25 year old. A 45 year old saves 50% less than a 35 year old. And a 55 year old saves 60% less than a 45 year old. Time is a difference-maker in the world of investment and savings.

Say: A second savings tip is that interest rates help your investments grow. The larger the interest rate, the faster your money will grow.

Say: Finally, with time, even a small investment will grow. As we've seen in this scenario - $25 per week or $100 per month – can grow to over $100,000. All it takes is time, interest and more time.

Activity B – Introduction to investment options (10-15 minutes)

Materials

Class/Group

- Chart paper OR blackboard/whiteboard/overhead projector
- Markers

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Students (one per student)

- Handout A – Popular Investment Options

Say: Let's move from discussing interest rates to looking at specific options you have for investing your money. Now remember we said that when we invest money, we want to put it into investments that have high interest rates or returns. The activity we are about to do will give you an introduction to some of the types of investments you may consider.

Write on the board Certificates of Deposits (CDs), Bonds, Stocks, Mutual Funds, Savings Accounts

Ask: Who can tell me what they know about one of these investment types?

Allow multiple students to respond. As students are responding, record information from their answers on the board. Once all investment types have been covered provide students with Handout A.

Say: The handout I am giving you lists these five different investment options with additional information about each.

Distribute Handout A.

Review any additional information on the handout that wasn't covered during class conversation.

Say: When people talk about investing, they'll often use the word "risk" or "risky". Different investments have different levels of risk, just like they have different potential reward or returns. Risk can be defined as the chance that an investment's actual return will differ from expected, this includes the possibility of losing some or all of the original investment.

Say: For example, if I buy shares of stock in a company for $10/share, I may buy them because I expect the company to release an awesome new product and the share price to increase to $20/share. However, instead the company's new product could be defective and the price per share could fall to $2. I took on risk in hopes of big return, but it doesn't always pay out.

Say: Generally, the more risky an investment is, the higher the potential return. Savings accounts and CDs are low risk but they also have fairly low interest rates as compared to potential gains on stocks or interest on corporate bonds.

Ask: Who has heard of the concept of diversifying when it comes to investments?

Allow students a moment to respond.

Ask: What does diversification mean?

Allow students a moment to respond.

Say: Great. Many people like to have a diverse investment portfolio (collection of investments) which entails investing in not only a variety of investment types (stocks, bonds, and mutual funds) but also different companies, industries, countries, etc. For example, it could be very risky to place all of your money in stocks and bonds of the same company or industry, because if something changed in that company or industry you could lose your money.

Say: Now that you have a beginning understanding of investing considerations and the different options available to you, let's put it all together to talk about investment plans.

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Activity C – Comparing investment options to devise an investment plan (30 minutes)

Materials

Class/Group

- Chart paper for each group
- Markers
- Handout D –Facilitator's Guide (one copy for the facilitator)
- Handout B – Patrick Answer Key
- Handout B – Lynne Answer Key
- Handout B – Tracey Answer Key

Students (one per student)

- Handout B – Patrick (1/3 of students), Handout B – Lynne (1/3 of students), and Handout B – Tracey (1/3 of students)
- Handout C – Sample Investment Options

Say: There are many, many ways to invest your money. If you choose to work for an established company, many of you will invest in a retirement plan. When you are part of a company-sponsored retirement plan, the company takes money out of your paycheck and invests it for you. When you retire, that money is paid back to you to help you with your living expenses. You have the option of asking your company to take more money out of your check if you want to build up your retirement savings.

Say: So far, we have talked about Social Security and retirement plans. There is one other aspect for you to consider when you are planning for your long-term financial future. That final aspect is your personal investment strategy.

Ask: Who thinks they know what I mean by personal investment strategy?

Select 1-2 students to share ideas.

Say: Your personal investment plan has to do with the decisions you make to invest your money. In other words, it is not money taken out by the government, like Social Security. And it is not money taken out by your employer, like your retirement plan. Instead, this is money that you decide to take out and invest on your own.

Say: Remember, before you start investing, it's important to have established a savings account and continued savings plan for unexpected items that may arise in your life. Additionally, it's wise to understand the risks of investment types, as we have been discussing today, and continue to look into different options before you set a personal investment strategy that includes stocks, bonds, or mutual funds.

Say: You already saw on Handout A different types of investment options.

Say: Each option has its pros and cons as we discussed earlier. Consider these pros and cons in the next exercise along with risk, liquidity, and diversification.

Say: The next activity is going to be done in groups.

Allow students to form in groups of 3-5.

Say: Groups are going to receive profiles of different people. I want you to read the personal profile for you group and all of the other information on the sheet. Then, using the information provided and the descriptions of all of the

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investment options, I would like for you to work with your group to choose which investment option makes sense for this individual and calculate growth of the investment portfolio.

Say: I am also going to distribute a handout which gives you three different investment strategies to choose from.

Distribute a couple of copies of Handout B & Handout C to the groups.

Say: Afterwards, you will be presenting as a group the information about the person and the strategy you have chosen for them.

Allow students to read over the sheet.

Ask: Does everyone understand the assignment?

Answer any remaining questions.

Say: I will give you 15-20 minutes to work in your groups and then each group will have two minutes to present to the class what you came up with.

Circulate the room while students are working.

Allow students 10-15 minutes to work. By this point all groups should've finished through part 2 of Handout B. Provide Handout B-Answer Keys to the groups as they complete the compound interest/return calculations.

Say: You have 5 more minutes before we stop to share ideas.

Allow students 5 more minutes to work.

Say: Time's up. Let's see what you came up with.

Ask: Who would like to share first? Tell us about the investment option you thought would be best and why.

Select groups depending on time constraints. Use the Handout D to guide the conversation as needed.

Say: I think you all can see that there are many different ways to invest our money to reach our future financial goals. No matter what you decide, it is important to do your research and be informed about the investment decisions that you make for yourself.

Say: Remember that the more time you have to save and invest, the more you can achieve.

Closing reflections (5 minutes)

Say: We have processed a lot of information today. Before we leave, I would like you to think about everything we discussed and write a one sentence summary statement for today's lesson. In other words, create one sentence that sums up the key point or points from today. When you finish, we will share some of your sentences.

Allow students 2 minutes to write their sentences.

Say: Let's have a couple people share their sentences.

Select 2 volunteers to read their sentences (or more, depending on the time remaining).

Say: Thank you all for your hard work. I want you to remember what we talked about and start taking steps today to start preparing for your future financial security.

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Evaluation/assessment of student learning

During lesson/in-class

- Students explain the importance of interest rates when investing
- Students evaluate investment options
- Students use personal information and knowledge of investment options to choose an investment plan

Ideas for post-lesson assessments

- Students take a test on key terms and investment options.
- Students calculate investment growth based on interest rates and initial investment.
- Students create informational brochures about retirement plans and investment options.

Extensions/enrichment

- Students can collect newspaper articles about Social Security issues in their state and across the country.
- Students can visit an interactive website to learn more about saving and investing (www.italladdsup.org) and then write a financial plan for their future.
- Students can learn more about bonds, stocks, and mutual funds by visiting various websites:
  - Bonds: www.savingsbonds.gov/
  - Stocks: http://library.thinkquest.org/3088/stockmarket/introduction.html
  - Mutual Funds: www.sec.gov/investor/pubs/inwsmf.htm

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