

The Power of Compound Interest

SUBMITTED BY: Lisa Bender

SUBJECT(S): Personal Finance

GRADE LEVEL(S): 9, 10, 11, 12

≡ OVERVIEW:

In this lesson, students learn the concept of “Pay yourself first” and explore ways to develop this habit to take advantage of the power of compound interest.

≡ NBEA STANDARD(S):

- Personal Finance, I. Personal Decision Making
- Personal Finance, IV. Saving and Investing

≡ RELATED ARTICLES:

- [“Why It Pays to Save: Knowing the Time Value of Money”](#)
- [“The Ins and Outs of Interest — from a Student Loan Survivor”](#)
- [“Jennifer Barrett of Acorns with 5 Facts about Fintech”](#)
- [“Investing with Purpose”](#)
- [“Exploring the Business of Money with a Few ‘Girls Who Invest’”](#)
- [“Educator Toolkit: Learning to Invest”](#)
- [“Educator Toolkit: Impact Investing”](#)
- [“9 Insights About Negative Interest Rates”](#)
- [“5 Truths about Money During the Pandemic”](#)
- [“10 Terms New Investors Should Know”](#)

TOPIC/COMPETENCY: Investing: Starting young to build net worth; automate your savings with “Pay Yourself First” habits

CEE National Standard:

III, Saving, 1 and 3, Grade 12 Benchmark

Jump\$tart National Standard:

Investing: Standard 1: Start young to build your next worth: magic of compounding, make investing automatic

Common Core State Standard:

CCSS.ELA-LITERACY.SL.9-10.5

CCSS.ELA-LITERACY.L.9-10.6

LESSON TITLE: “The Power and Truth about Compound Interest” or “Put Time on Your Side with the Magic of Compounding”

CONTENT STATEMENT: Paying yourself first, building emergency savings, and creating an automatic funds transfer with every paycheck into savings are methods and strategies that can help put you on a solid financial foundation.

LEARNING OBJECTIVE: Students will learn the concept of “Pay yourself first” and explore ways to develop this habit to take advantage of the power of compound interest

ESTIMATED TIME: 50 minutes class time; 50+/- minute assessment at home

MATERIALS NEEDED: Internet access for instructor and/or students; Projector;

Teacher Account for “Kahoot”

KEY VOCABULARY/TERMS: [Behavioral Economics](#), [Compound Interest](#)

WHY THIS MATTERS TO YOU NOW: “Pay yourself first” is a financial strategy that you can learn early in life by making this practice become a habit. If you embrace this behavioral practice, then you are building a strong foundation for financial well being.

Activities: 5-7 minutes

- Motivational hook / activity – Create interest in the material; Answer the question: “Why do I need or want to learn this material?”
 - Play Kahoot game (instructor creates a free account on GetKahoot.com and use this link to play a game of questions about Saving, Interest, <https://goo.gl/GJHrNj> (12 questions). You can also search Public Kahoots on the Teacher Website to find other games already created that relate to the content of this lesson.
 - Students will use a device to play this game: cell phone, laptop, desktop computer, or tablet. They should log in to kahoot.it and type in the game code that the teacher provides when they launch the Kahoot game for this class period.

• Comprehension – 15-20 minutes

- Read this short article aloud to the class: “[Three Reasons You Need an Automatic Savings Plan](#)” from Nerd Wallet (January 2014)
- Lecture and Discussion: The Purpose of Building Emergency Savings
 - Emergency Savings can help prevent financial disaster
 - Savings is money you don’t spend on current consumption; it is set aside to provide for use in emergencies and provides a safety net if you experience an unexpected event (car breaks down; need 4 new winter tires; your son/daughter needs to buy an airline ticket to come home quickly in the event of an emergency)
 - Investing is placing money into an account that is designed to have this money go to work for you over time, and therefore helps to build your net worth
 - Financial experts suggest you keep 6 months’ worth of expenses in your emergency savings account (If your monthly bills total \$2,000 then you should aim to have \$12,000 in your emergency savings account)
 - Emergency Savings provides the liquidity factor that is important to surviving an unexpected event because you can access your money almost instantly
 - Emergency Savings allows you peace of mind to handle unexpected events and therefore provides financial well-being for you and your family

- It is estimated that 60% of Americans can't cover unexpected expenses because they don't have an emergency savings account (CNBC, January 2015).
- Practicing the behavior of “Paying Yourself First” means that you treat yourself like a monthly expense and put money into your liquid savings account with every paycheck
- Money in a Savings Account in a bank is considered a “Monetary Asset” and one that you can access quickly (unlike a “Tangible Asset” which is a piece of personal property that you can sell once you find a buyer, or an “Investment Asset” that you could trade and make money, but once again you have to find a buyer.

• **Practicing – 10 minutes** – Activities to practice what students are learning –

- Guide students through practice activities that help drive home the value of compound interest by having them complete saving and investing scenarios using the www.bankrate.com online calculator website.
- Scenario 1 – Use the Bankrate Compound Interest Calculator
 - You or the students should input values to determine total balance
 - \$1,000 earning 2.25% for 3 years
 - What is the balance after 3 years in your account?
- Scenario 2 – Use the Bankrate “Savings Goal” Calculator
 - You have a savings goal of \$5,000 you want to reach in 4 years
 - You can put away \$50 each month towards that goal
 - Your bank pays you an interest rate of 0.75%
 - How long will it take you to reach your savings goal of \$5,000?
- Scenario 3 – Use the Bankrate “Emergency Savings” Calculator
 - You current have no money in savings
 - Experts suggest you need \$15,000 in emergency savings
 - How long will it take you to save this much money ? Change the monthly amount you put into savings to see how the time horizon changes
 - When will you have \$15,000 saved?

- Scenario 4 – Use the Bankrate “Save a Million Dollars” Calculator
 - Students input their current age (15-18 years of age)
 - Age they want to reach \$1million is 62 years old
 - Current Savings \$0
 - Amount they will put away each month: \$200.00
 - What is the earliest age you can become a millionaire using the magic of compound interest?

• **Assessment – 10-15 minutes**

• **Answers these questions on a piece of paper**

- Do you earn interest or pay interest when you are a Depositor at a bank?
- Should you look for high interest or low interest rates when borrowing?
- How much money do financial experts suggest you keep in an Emergency Savings Account?
- Explain the concept of “Pay Yourself First”. How does this work?
- ♣ What does the term “Liquidity” mean, related to savings accounts?
- Which is more liquid? A share of stock or money in a savings account?
- What are some contributing factors to how much compound interest you earn on your money?
- Explain a strategy for someone who wants to save \$1 million dollars in their lifetime?
- What is one of the steps to automating your savings Nerd Wallet suggested in their article that was read to class ?
- How does emergency savings relate to financial well-being?
- Why do savings and investing strategies differ? Which one is used to build net worth?

• **Apply/Going Further/Homework –**

- Have students read this article from the Knowledge@Wharton Library to better understand personal economic behaviors and habits, like making saving automatic, etc... [“How Good Habits Can Make You Happier”](#)

- Have students read a young person's reflections on the power of compound interest in "The Ins and Outs of Interest from a Student Loan Survivor"
- Have students find an Infographic to share with their classmates that demonstrates the power of compounding
- Have students find an Infographic to share with their classmates that reveals data about the current rate of saving in the U.S.

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