Financial Literacy Lesson: Investing Basics

Grade Levels: 9 - 12th

Lesson Purpose:

Students will gain a basic understanding of investing, the importance of starting early, and calculate the potential amount of money they will need to invest over the next 50-60 years.

Objective:

For students to understand the importance of investing and why it is important to begin as early as possible. Additionally, investing has its own risk, and the consumer must decide whether the risk is worth the reward.

Teacher Lesson Outline:

- **Planned to A.T. Introduction Video - 1.5 min**
- **Essential Questions (Teacher led) - 5 min**
- **Compound Interest Benefits (Teacher Led)- (10 min)**
  Read the positive and negative effects of compound interest out loud to the class. Afterwards display the chart to the class. You can print copies for students to share in a small group if necessary. Discuss the differences in benefits of starting early can have on a person financially.
- **Future You Pt. 1 Who Wants Free Money** (Individual Student Activity) - (15 min)
  Students will calculate the estimated amount of money they will need in order to retire at a desired age.
- **Future You Pt. 2** (Individual Student Activity) - (15 min)
  Students will calculate the estimated amount of money they will need in order to retire at a desired age.
- **Exit Ticket (10 min)** Students will calculate the different amounts they will warm over different year increments by started with an initial invest of $100.

START : Essential Question(s)

Q: When you think about retirement what does that look like to you or for you?

A: Answers will vary

Q: Do you think you have to be a certain age to retire?

A: Retirement is not an age. It's an accumulation of money that allows someone not to work yet still be able to live their desired lifestyle.

Q:

QUICK Check in:

Q:

Education Standards Addressed:

SS.912.FL.6.13

Describe the purpose of the following accounts that hold investments: various retirement accounts (e.g., 401(k), 403(b), Traditional IRA, Roth IRA), education accounts (e.g., 529 savings plan, Coverdell Education Savings Account (ESA)), and taxable investment brokerage accounts.

Additional Lesson Materials:

- Organization approved search engine
- https://www.investor.gov/financial-tools-calculators/calculators/compound-interest-calculator

Compound interest (Teacher Handout)

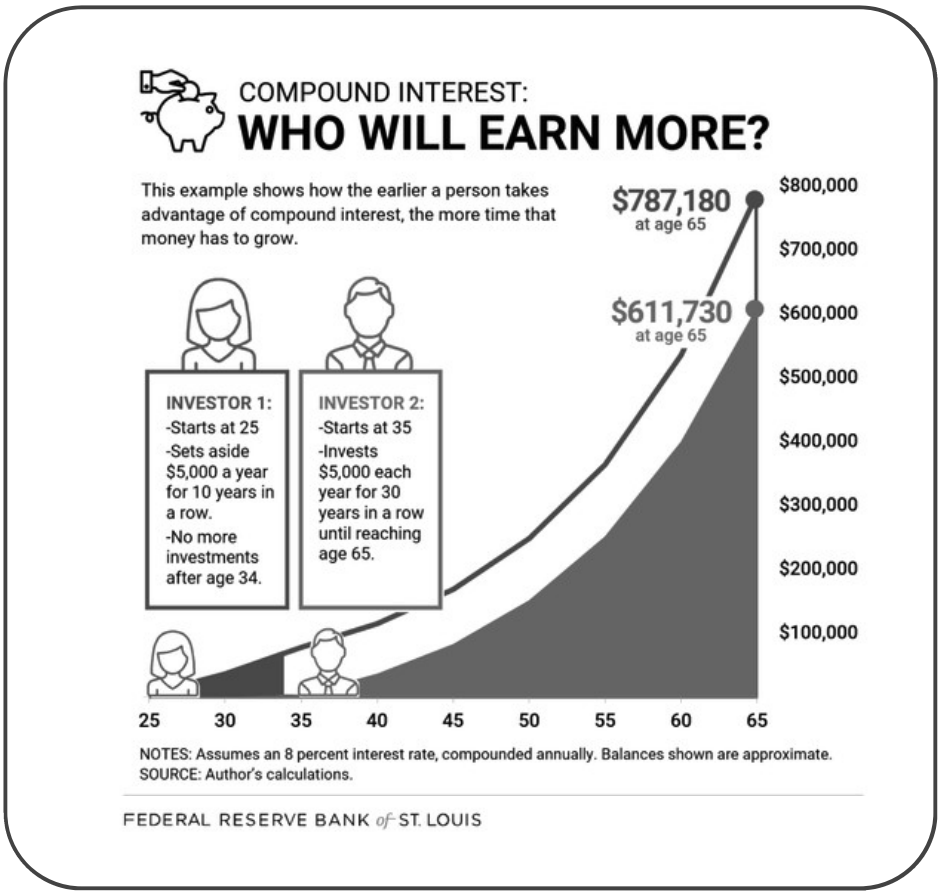
Compound Interest- is sometimes described as “interest on interest” because it’s interest earned on an original amount of money that you deposit. The interest is earned over time.

Compound interest can be both positive and negative.

For people who are depositing money into accounts like a high yield savings account, means earning interest (or extra money) on your original principal—plus on the interest your investment generates.

For people who borrow money and have to pay it back, like a credit card, means you owe interest (or extra money) on your unpaid balance, plus on previous interest charges left unpaid.

Teacher directions: Guide students to answer the questions below using the chart. Display the chart or print copies for students/small groups.



Compound Interest Answer Key:

1. What age did the first investor begin investing? ___**25**_____ The second investor? ____**35**_____
2. How long did investor one invest their money? __**10**____ years. How long did investor two invest their money? _____**30**_____ years.
3. What is the actual amount investor 1 contributed? $____**50,000**_____. What is the actual amount investor 2 contributed? $____**150,000**_____.
4. Circle who invested more dollars into their account? Investor 1 or Investor 2
5. Circle who invested longer with their time? Investor 1 or Investor 2
6. Who made the most money at the age of 65? Investor 1 or Investor 2
7. Is the person you circled above the same person that invested the most money? Yes or no

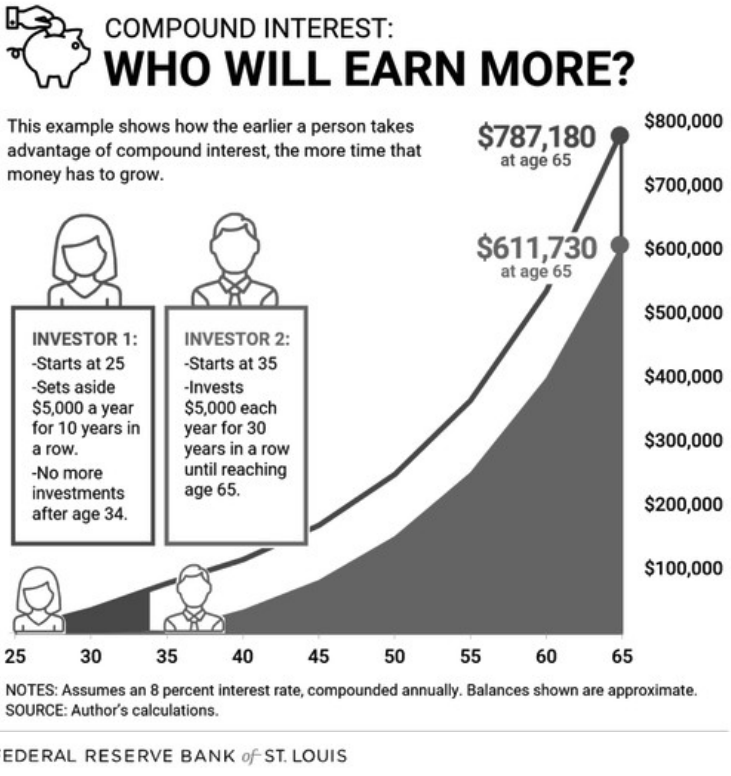
Compound interest

(Teacher Led, Student Handout)

Directions:

Look at the chart and answer the following questions

1. What age did the first investor begin investing? _____ The second investor? _____
2. How long did investor one invest their money? _____ years. How long did investor two invest their money? _____ years.
3. What is the actual amount investor 1 contributed? $_____. What is the actual amount investor 2 contributed? $_____.
4. Circle who invested more dollars into their account? Investor 1 or Investor 2
5. Circle who invested longer with their time? Investor 1 or Investor 2
6. Who made the most money at the age of 65? Investor 1 or Investor 2
7. Is the person you circled above the same person that invested the most money? Yes or no ?



Future You Pt.1

(Student activity)

Who Wants Free Money?

Answer the following questions to help you get started thinking about your financial future.

How old are you today? _____ (A)

It what age would you like to no longer have to work? _____ (B)

How many years left do you have to ideally work, save, and invest before you would want to retire? _____ (C)

Did you know: One reason people invest is so that at a certain point in their life they don't have to work, yet still have enough income or money to live their desired lifestyle, which is the definition of retirement.

Lets calculate how much money you would need in order to retire:

On approved search engine, search how much your desired career pays on average annually: _____ (D)

Multiply your desired salary (D) by the years (C) you have left to retire.
_____ (C x D) = Total estimated amount needed for future me.

Do you think that is enough for you to live off of for 20 - 30 years? Yes or No

Do you think you would need more or less money to live off of? _____

How does seeing that amount of money needed to accumulate before you retire make you feel?

Overwhelmed? Attainable? Excited? Ready to start investing?

Future You Pt.2, pg.1

(Student activity)

The next step is to identify how much money you could have by the time you want to retire if you start early!

We've discussed compound interest, but if you need a quick reminder it's extra money you earn on an investment not only from the initial principal amount but also on the accumulated interest earned over time. Meaning you earn interest on your interest, causing your savings to grow exponentially over time. The longer you wait to get started, the more you'll have to invest later. Or in other words, the earlier you have IN the market the better. In other words, the younger you are when starting to invest, the better.

Start:
Go to https://www.investor.gov/financial-tools-calculators/calculators/compound-interest-calculator

- Imagine an amount of money you feel comfortable saving up. It could be $100 - $1,000. What amount do you feel is a reasonable savings goal and start in order for you to begin investing?

  This amount will serve as your initial investment $_____

- **On Step 1: Initial Investment,** Input the number above on the website as your initial (principal) investment.
- Imagine you have a job and after all your bills are paid and you've put away an amount in your savings, you have an extra $200- $500 to spend however you would like. How much would your future self be willing to spend monthly on investing towards retirement? _____
- **On Step 2: Contribute,** Input that number for "Monthly Contribution"
- What age did you want to ideally retire? _____
- What is the difference (subtract) between how old you want to be when you retire and the age you are now? _____
- For Length of Time in Years, input the difference you calculated above.

Future You Pt.2, pg.2

(Student activity)

- **On Step 3:** Interest Rate, input " 9% " for the "Estimated Interest Rate". The average annual return for an investment account is between 7% and 10%, but this depends on the type of investments in the account.
- For "Interest rate variance range", input "0".
- **On Step 4: Compound It,** make sure the toggle is on **"Annually".**
- **Press "Calculate"**

How much money do the results say you will have (red line)? _____

How much did you contribute with your own money (green line) ? _____

Do you feel like this amount is enough for you to retire? _____

Note: the green line on the graph is based on you making your monthly investment amount above, each year. The red part of the graph is the impact of compound interest over time.

Exit Ticket:

It doesn't take a lot of money each month to invest in your future.
The earlier/younger you begin the small the amount can be. Calculate how much you would have if you invested $100 each month.

Directions:

Answer the following questions below using the Compound Interest Calculator:

Step 1: Go to https://www.investor.gov/financial-tools-calculators/calculators/compound-interest-calculator

Step 2: For **"Initial Investment",** input, **$0.**

Step 3: For **"Length of Time in Years",** input 40 years

Step 4: For **"Estimated Interest Rate",** input 9%

Step 5: For **Interest Rate Variance Range",** input 0

Step 6: For **"Compound Frequency",** toggle to "annually"

Step 7: Calculate

Answer the following questions with your above results:

1. If I invested $100 per month for 40 years, how much would I have invested of my own money? _____ total contribution.
2. What amount would my total investment be? _____
3. If I invested $100 per month for 40 years at 9%, how much "free money" would I have earned? _____
4. Did I earn more or less than I invested? _____
5. Change your input to 50. How much would you have after 50 years? _____