Financial Literacy Lesson: Investing Basics

Grade Levels: 9 - 12th

Lesson Purpose:

To introduce students to investing terms: High Yield Savings Accounts, APY, Compound Interest, and The Rule of 72.

Objective:

Students should be able to explain how compound interest works as it relates to high yield savings accounts and The Rule of 72. They should be able to calculate the number of years it takes to double their initial investment.

Teacher Lesson Outline:

- **Planned to A.T. Introduction Video (5 min)**
  Have students watch the introduction video and fill in their notes as they do. Be sure to ask students if they need any answers repeated when the video ends.
- **Class activity: Compound Interest Activity (10 min)**
  Tell students that they are going to complete an activity that shows the power of compound Interest.
- **Rule of 72 Practice (25 min)**
  Walk students through the calculation of the first question: 72/ 1% (0.01) = 72 years to double $1 to $2. Give them time to work through the remaining questions, then go over the answers with students.
- **Myths About Investing (7 min)**
  Read each myth statement aloud and then let students answer the question for themselves. After all questions have been read and answered ask students to share out.
- **Reflection (5min)**
  Let students answer the reflection questions as an exit ticket.

START : Essential Question(s)

Q: What is a high yield savings account?

A high yield savings account is an account that provides a higher interest rate (or return on investment) for keeping your money in the account over a longer period of time.

Q: What is an APY?

Annual Percentage Yield or how much interest will be earned on an investment over a year, including compound interest.

Q: What is Compound Interest?

Interest on top of interest earned.

Q: What is the Rule of 72?

The Rule of 72 is a calculation that uses an interest rate to determine how long it will take an investment to double.

Education Standards Addressed:

SSEPF4 Explain how interest rates affect various consumer decisions.

d. Explain the difference between simple and compound interest and the difference between fixed and variable interest.

Additional Lesson Materials:

To Save or Invest: What's it to you?

Video Note-taking Guide

1. **APY** stands for:

2. Making a slight adjustment to using a high yield savings account typically earns you _____ times higher than the national average on a regular saving account.

3. For example if you deposited $5,000 in a traditional savings with a 0.4% APY you could earn around _____ back in interest per year.

   Putting that same $5,000 in a **high-yield savings account** with a 4% APY could earn you around _____ per year back in interest.

4. **Compound interest** is another way to earn extra money by simply leaving the money invested alone, _____.

5. In other words compound interest is interest that you earn _____ you already earned.

6. For example if you invest $1,000 and your investment earns 12% a year you will only earn interest on your $1,000. At the end of year 1 you will have $1,120 because of the 12% APY which earned you an extra _____, just by letting it sit.

   In year 2 of your investment you will earn interest on your $1,000 plus the extra $120 you earned in year one. The interest compounds or collects on top of itself. If you keep that investment for 30 years you could end up having a value of _____.

7. The **Rule of 72.** It shows you how long it takes to _____ your investment.

8. Using the Rule of 72 is easy. You simply take the number 72 and divide it by the _____ on the account you're putting your money into.

   For example if you put $500 into a compound interest account that has an interest rate of 6%, you can divide 72 by 6 to get 12. This means it would take _____ for your money to grow from $500 to $1000.

   But say you put your money in a different account that has a rate of 9%. Using the Rule of 72, you'd take 72 and divide it by 9 to get 8. So your money would double in _____ instead of 12.

The Rule of 72 = $\frac{72}{\text{Rate of Return (\%)}}$ = of years it takes to double your money

Teacher Resource: Compound Interest Example

Directions: Tell students that they are going to complete an activity that shows the power of compound Interest.

Ask Students "Would you rather start with a penny and double your money daily for 30 days or have $1 million?" Have students raise their hands to cast their vote then allow them time go calculate through the following:

1. Day 1: $0.01
2. Day 2: $0.02
3. Day 3: $ 0.04
4. Day 4: $ 0.08
5. Day 5: $0.16
6. Day 6: $0.32
7. Day 7: $0.64
8. Day 8: $1.28
9. Day 9: $2.56
10. Day 10: $5.12
11. Day 11: $10.24
12. Day 12: $20.48
13. Day 13: $40.96
14. Day 14: $81.92
15. Day 15: $163.84
16. Day 16: #327.68
17. Day 17: $655.36
18. Day 18: $1,310.72
19. Day 19: $2,621.44
20. Day 20: $ 5,242.88
21. Day 21: $10,485.76
22. Day 22: $20,971.52
23. Day 23: $41,943.04
24. Day 24: $83,886.08
25. Day 25: $167,772.16
26. Day 26: $335,544.32
27. Day 27: $671,088.64
28. Day 28: $1,342,177.28
29. Day 29: $2,684,354.56
30. Day 30: $5,368,709.12

*Reiterate that this is how compound interest works and the importance of the Rule of 72. The Rule of 72 will show them how quickly their investment will double. Look at the power of time and doubling with compound interest!

Student Activity #1 Compound Interest Example

Directions: Calculate how much would $0.01 would In 30days if doubled everyday.

1. Day 1: $0.01
2. Day 2: $
3. Day 3: $
4. Day 4: $
5. Day 5: $
6. Day 6: $
7. Day 7: $
8. Day 8: $
9. Day 9: $
10. Day 10: $
11. Day 11: $
12. Day 12: $
13. Day 13: $
14. Day 14: $
15. Day 15: $
16. Day 16: $
17. Day 17: $
18. Day 18: $
19. Day 19: $
20. Day 20: $
21. Day 21: $
22. Day 22: $
23. Day 23: $
24. Day 24: $
25. Day 25: $
26. Day 26: $
27. Day 27: $
28. Day 28: $
29. Day 29: $
30. Day 30: $

How much did you Imagine would have been available on Day 30 starting with $0.01 on Day 1?

Activity #2: Let's Double My Money Quick!

Directions: Now that you've seen the power of doubling, you will se the Rule of 72 to calculate how long it would take to double your money using different APY (Annual Percent Rates).

1. At a 1% rate of return, how many years would it take to turn $1 into $2?

2. At a 1% rate of return, how many years would it take to turn $1 into $2?

3. At a 9% rate of return how many years would it take to turn $20 into $40?

4. Which investment would double your money the fastest?

   a. Under your mattress
   b. An Amazon stock giving 5% rate of return
   c. A mutual fund giving 9% rate of return

5. Based on the Rule of 72 should you put your money in an account with higher or lower rate of return (APY) if you want to double your money more quickly?

Activity #3: Check Your Understanding

Directions: Based on what you learned in the video lesson, answer the following questions.

1. Explain the rule of 72 in your own words.

2. Explain compound interest in your own words.

3. How is a high yield saving account different from a traditional savings account?

Wrap Up Class Discussion Activity

Activity #4: Myths About Investing at a Young Age

Directions: Listen as your teacher reads each statement. Then rewrite the statement so it is true.

Myth #1: You're too young to invest your money.

Fact #1

Myth #2: You can invest just once and become a millionaire.

Fact #2

Reflection and Exit Ticket:

Answer the following questions based on today's lesson.

1. Why should you invest your money, especially in your early years of life?

2. At your age, does it make sense to start investing your money now or should you wait?

   Invest Now | Wait

3. What's one myth and fact about investing at a young age?

4. What's the difference between saving and investing?

5. If you had to share with a family member or friend something you learned today, list the person below and write what you would share.