



JA FINANCIAL LITERACY®

Student Guide

UNIT 4: PLANNING FOR THE FUTURE & FINANCIAL INDEPENDENCE

Topic 1: Investing vs. Saving

NAME: _____

DATE: _____

PRE-QUIZ

Investing vs. Saving

What + Why: A quick, ungraded check on what you already know—your answers help shape the learning ahead. It's okay not to know— just give it your best shot.

Instructions:

1. Answer each question as best you can.
 2. Circle the best answer for each question.
 3. Submit it when you're done.
-
1. How does compound interest grow money over time?
 - ☐ a. Compound interest pays interest only on the original amount deposited.
 - ☐ b. Compound interest increases the interest rate each year.
 - ☐ c. Compound interest earns interest on both the original amount and previously earned interest.
 - ☐ d. Compound interest guarantees a fixed return regardless of market conditions.
 2. Marquis plans to buy a car in six months and cannot risk losing money needed for the purchase. Which option is most appropriate?
 - ☐ a. invest the money in individual stocks
 - ☐ b. place the money in a savings account
 - ☐ c. purchase long-term bonds
 - ☐ d. invest in a stock mutual fund

3. Which investment type represents ownership in a company?

- ☐ a. bond
- ☐ b. stock
- ☐ c. certificate of deposit
- ☐ d. savings account

4. What is the typical relationship between risk and return?

- ☐ a. Higher potential returns always come with lower risk and lower uncertainty.
- ☐ b. Higher potential returns usually involve greater uncertainty and possibility of loss.
- ☐ c. Lower-risk investments always earn more over time and have lower possibility of loss.
- ☐ d. Risk and return are unrelated.

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ACTIVITY

When to Start Saving?

What + Why: Starting earlier can change your financial future in ways that are bigger than you expect.

Early adulthood is full of competing priorities, and saving often gets pushed aside. Before assuming it won't matter, examine how timing alone can reshape long-term outcomes.

Instructions:

1. With your group, review the table showing investment outcomes for the three different starting ages.
2. Compare the final values at age 65.
3. Answer the reflection questions using evidence from the table.



Evaluate the outcomes of three investors under identical conditions:

- \$100 invested each month
- 7% annual interest rate
- Compounded monthly
- Investing through age 65

Starting Age	Years Invested	Total Contributed	Value at 65 (7%)
18	47	\$56,400	\$424,968
25	40	\$48,000	\$262,976
32	33	\$39,600	\$161,412

Reflection Questions

1. Which starting age produced the biggest difference in outcome?
(Provide evidence from the table in your answer.)
2. What does that tell you about time, and what might explain how time affects the outcome?

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CASE STUDY

Fast-Forward: Financial Pathways Over Time Kickoff

What + Why: Three pieces of advice, three different financial paths—how you plan today can shape your future stability, protection, and opportunities.

Supporting Materials:

Unit 4 Case Study: Fast-Forward: Financial Pathways Over Time (Case Brief)

Topic 1: Introduction (Case Study)

Instructions:

1. Read the **Case Brief** and **Topic 1: Introduction**.
2. As you read, pay close attention to the three pieces of advice Amara receives.
3. After reading, discuss the following with a partner:
 - Which piece of advice sounds most convincing to you right now?
 - Why?

NAME: _____

DATE: _____

ACTIVITY

Save or Invest?

What + Why: How you handle your money depends on what you need it to do and when you need it to do it. Knowing when to save and when to invest can protect your goals and grow your future.

Instructions:

1. With your group, read each of the following scenarios and decide how the money in that situation would best be handled:
 - **Save:** Keep the money in a savings account where it earns steady interest and is available when you need it.
 - **Invest:** Put the money into an investment account where it may grow more over time, but the value can rise or fall before the money is needed.
 - **It Depends:** The right choice changes based on timing, access needs, and comfort with value changes.
2. Before selecting an action, discuss these three guiding questions:
 - How soon will this money be needed?
 - If something unexpected happens, how quickly would this money need to be available?
 - Would it be okay if the value changes (up or down) before the money is used?
3. In the chart provided, select an action for each scenario (save, invest, or it depends).
4. In the space provided, explain your reasoning using details from the scenario.



Scenario	Action	Reasoning
Scenario 1: Car Replacement Your car won't last much longer. You will likely need to buy a used car within the next 18 months and estimate needing about \$3,000 for a down payment and fees.	☐ save ☐ invest ☐ it depends	
Scenario 2: Study Abroad Program You hope to participate in a study abroad program in about three years and will need around \$6,000 to cover travel and program costs.	☐ save ☐ invest ☐ it depends	
Scenario 3: Retirement Savings You're 22 and want to begin setting money aside now so you can retire comfortably at age 65.	☐ save ☐ invest ☐ it depends	
Scenario 4: Professional Certification Exam To qualify for a promotion, you must pay \$900 for a certification exam within the next 9 months.	☐ save ☐ invest ☐ it depends	
Scenario 5: Building Wealth You have extra income and no specific short-term goal. You simply want to grow your money over time.	☐ save ☐ invest ☐ it depends	

NAME: _____

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CASE STUDY

Amara's First Three Pathways

What + Why: Examine Amara's three potential pathways and predict how each one might behave. Using what you know about access, stability, and growth, decide where each pathway fits.

Supporting Materials:

Saving vs. Investing Pathways (Ages 18-22) (Case Study)

Instructions:

1. Review the **Saving vs. Investing Pathways (Ages 18-22)** case study chart.
2. Fill in the Amara's First Three Pathways chart.

Be prepared to explain which details from the case study chart influenced your answers.

Amara's First Three Pathways

	Pathway A (HYSA 4.5%)	Pathway B (Broad Index Fund 7%)	Pathway C (Blended 50/50)
What might happen to the money if Amara needed it before age 22?			
How easy would it be to access quickly?			
How much could the value go up or down?			

NAME: _____

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VIDEO

Compound Interest & the Rule of 72

What + Why: Learn how compound interest accelerates money growth and how to quickly estimate when investments double.

Understanding Growth Over Time

Money doesn't just grow because you add to it. Over time, growth can begin to build on itself. Understanding how that happens, and how long it takes, can change the way financial goals are planned.

Let's Meet Asha

Asha works part-time at a clothing store while she is in school studying fashion design. On the side, she creates original clothing designs and sells them locally at a shared boutique. In three years, she wants to launch her first full online collection. Based on her calculations, she needs \$15,000 to cover startup costs and to have enough products ready for her online launch. Asha currently has \$1,000 saved. She decides to invest it and add \$350 each month for the next three years.



Goal: \$15,000 in 3 Years

Initial Savings: \$1,000

Monthly Investment:
\$350

ASHA: I considered leaving my money in my savings account to earn 3% interest each year. Because my money isn't invested and tied to the stock market, it would be protected and the balance wouldn't go down. I could also withdraw it anytime I needed to. But the growth would be slow. Because I have only three years to reach my goal of \$15,000, I decided to invest in a stock market fund that has historically averaged about 8% growth per year. That doesn't mean I'll earn 8% every year. Some years could be higher. Some years could be lower, or even negative! But with only three years, I need my money to have a chance to grow faster.

**Savings Account:**

- 3% interest
- Balance won't decrease
- Easy access
- Slower growth

Stock Market Fund:

- 8% average growth per year
- Growth can vary
- Can lose money
- Potential for faster growth

NARRATOR: After Asha's first investment year, she is surprised to find that her money earned more interest than she expected.

ASHA: I knew I would earn interest on the principal, which is the amount of money I originally invested. I also factored in earning interest on the money I added each month. But I didn't realize that once interest is added to my account, it starts earning interest too. That's compound interest. With compound interest, the next month's interest is calculated on my new, higher balance. That means I'm earning interest on my money AND on the interest I've already earned.



Original Investment: \$1,000

Monthly Investment: \$350

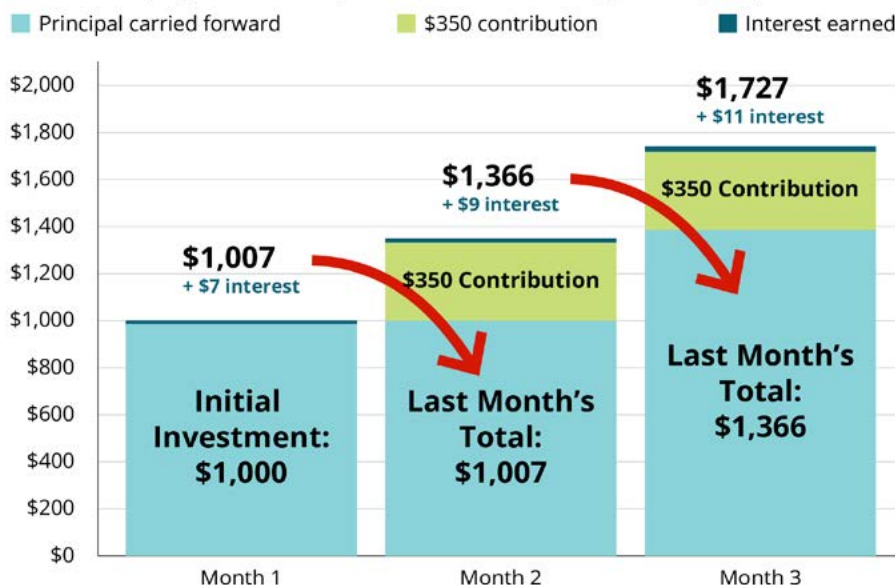


NARRATOR: Here's a quick look at her compound interest. In month one, Asha contributes the \$1,000 she's saved. She earns \$7 in interest, bringing her new balance to \$1,007. That \$1,007 becomes the starting balance for the next month. In month two, Asha makes her first \$350 contribution. Her balance continues to grow. She earns \$9 of interest and her total is now \$1,366.

By month three, the balance has grown even more. Asha makes her \$350 contribution again, and she earns \$11 in interest for a total of \$1,727. Notice the pattern. The interest amount increases each month. That's because each time interest is added, the balance grows, and the next interest calculation is based on that larger balance. This is compound interest in action.

Compound Interest

\$1,000 starting balance, \$350 contribution per month
(begins Month 2), 8% Annual Percentage Rate (APR).



Over the first two years, Asha's investment has averaged an 8% annual growth. Seeing how compound interest accelerates over time makes her wonder: If she left her money invested even longer, how much more could it grow? Could it eventually help her open a small storefront?

ASHA: Two years into my investing plan I have \$10,300! Wow! This is going great. Maybe I should think bigger than an online boutique. If I could double my money, I would have enough to open my own small retail location. I wonder how long that will take?



NARRATOR: To estimate how long her investment would take to double in size, Asha can use a shortcut called the Rule of 72. The Rule of 72 works by dividing 72 by the annual interest rate. If Asha's investment averages 8% growth per year, 72 divided by 8 equals 9. That means her money would take about 9 years to double. Keep in mind that this calculation doesn't include Asha's \$350 contribution per month. Asha would reach her goal much faster if she continues to contribute to her investments each month.

The Rule of 72

- $72 \div \text{Interest Rate} = \text{Years to Double}$
- $72 \div 8 = 9$
- About 9 years to double

ASHA: Nine years is longer than I want to wait to launch a small storefront. But it helps me see that if I keep investing, even after I launch an online boutique, my money could eventually double. That means opening a small storefront doesn't have to happen right away. It could be my next goal.



NARRATOR: Although year three of Asha's investment brought in only a 4% return, she was still able to reach her \$15,000 goal on time!

Asha's Balance Over 3 Years

\$350 contribution per month, 8% APR years 1-2, 4% APR year 3.

Principal carried forward Annual contribution (\$4,200) Interest earned



Question 1

Which statement best explains compound interest?

- ☐ a. Interest is earned only on the original amount deposited.
- ☐ b. Interest is calculated on the current balance, including previously earned interest.
- ☐ c. Interest is added only when new money is deposited.
- ☐ d. Interest stays the same amount every month.

Answer: b. Compound interest is interest earned on the principal and on previously earned interest. As interest is added to the balance, the amount used to calculate the next interest payment increases.

Question 2

What does the Rule of 72 help you estimate?

- ☐ a. The dollar amount your investment will earn in interest
- ☐ b. The level of risk in an investment
- ☐ c. The amount you should deposit each month
- ☐ d. The number of years it will take for an investment to double

Answer: d. The Rule of 72 is a formula used to estimate how many years it will take for an investment to double.

Question 3

Dylan wants to know how long it will take to double his \$15,000 investment, which earns a 5% annual return. Which expression correctly applies the Rule of 72?

- ☐ a. $72 \div 5$
- ☐ b. 72×5
- ☐ c. $15,000 \div 72$
- ☐ d. $15,000 \times 72$

Answer: a. The formula for the Rule of 72 is 72 divided by the interest rate. The result is the number of years it will take Dylan's investment to double. 72 divided by 5 means that Dylan's investment would double in approximately 14 and a half years.

Key Terms

- **principal:** the amount of money originally invested
- **compound interest:** the interest a person earns on today's money that will compound (add to) the amount of money that will earn interest later

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ACTIVITY

Double Your Money

What + Why: Calculate how long money takes to double and uncover patterns that impact long-term financial decisions.

Instructions:

1. With your partner, use the Rule of 72 formula to answer the questions.

$$72 \div \text{interest rate} = \text{years to double}$$

Part 1

Calculate the approximate doubling time for:

- 3%
- 6.5%
- 10%

Part 2

You want to double your money in 8 years. What annual return do you need?

Part 3

Apply the Rule of 72 to Amara's pathways. How long would each of Amara's three pathways take to double?

- Pathway A Saver-First (HYSA, 4.5%)
- Pathway B Early Investor (Broad Index Fund, 7%)
- Pathway C Blended Approach (Split 50/50, 5.75%)
- Does any pathway double within Amara's first time jump (4 years)?
Explain your answer.

NAME: _____

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INSTRUCTION

Saving & Investing Products

What + Why: Crack the code on how investments actually make money, and why bigger rewards usually come with bigger risks.

How Investments Work

Investing isn't just about choosing the option with the highest return. Different investments work in different ways, and those differences affect how much risk you take on. Use this note-taking guide to help break down how common investment types function and why they behave differently over time.

-
- A loan to a government or company
 - Earns interest payments
 - Moderate risk
 - Average annual return: _____%

-
- Money locked in at a bank for a set time
 - Earns a fixed interest rate
 - Low risk
 - Average annual return: _____%

-
- Ownership in a company
 - May generate returns through price increases and, in some cases, dividend payments
 - Higher risk
 - Average annual return: _____%

-
- A fund that tracks the overall market
 - Value generally rises and falls with the overall stock market
 - Higher risk
 - Average annual return: _____%

-
- Money kept at a bank or credit union
 - Earns interest
 - Very low risk
 - Average annual return: _____%

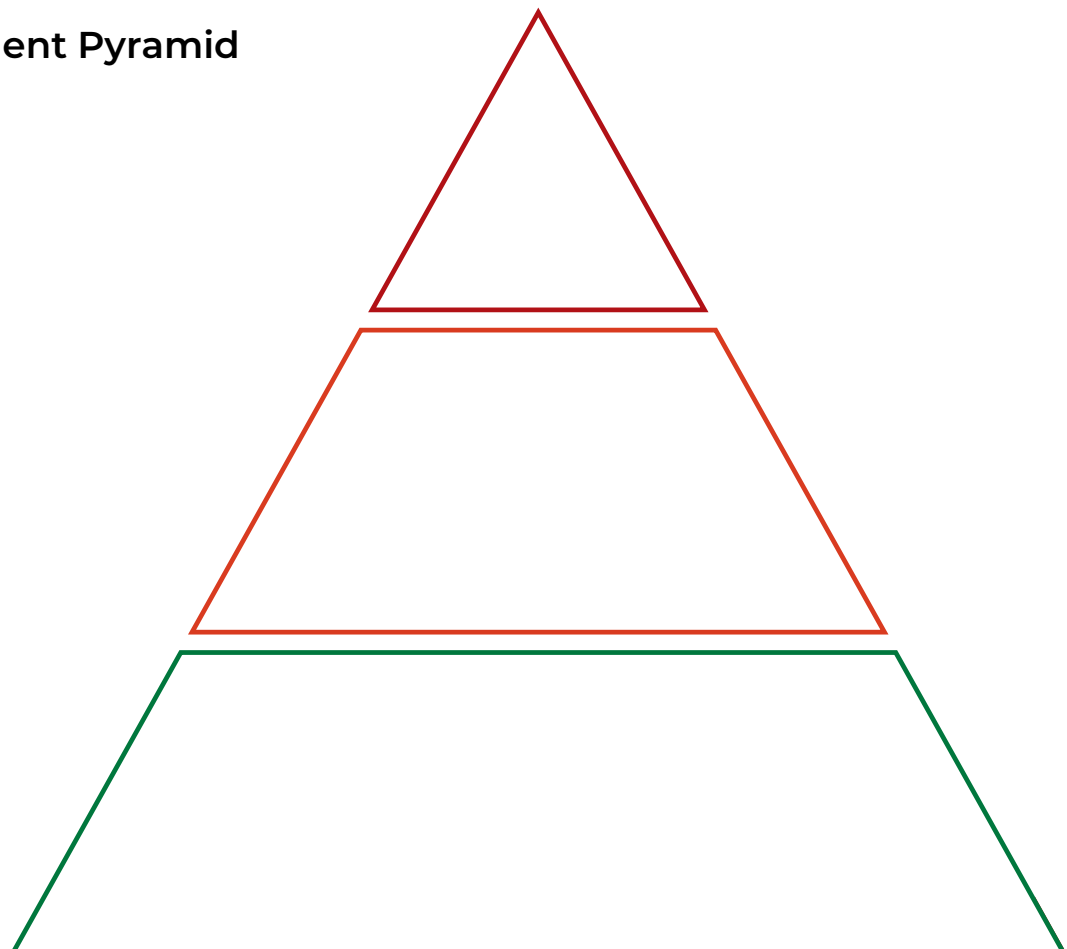
-
- A collection of investments traded like a stock
 - Risk depends on the types of investments included in the fund
 - Moderate to high risk
 - Average annual return: _____%

-
- A collection of stocks and/or bonds
 - Risk is spread across many investments
 - Moderate to high risk
 - Average annual return: _____%

-
- A collection of bonds (sometimes in the thousands) from multiple issuers
 - Earns regular income through interest payments across the fund (unlike individual bonds, they never mature)
 - Moderate risk: Diversification reduces default risk, but value may decrease when interest rates rise.
 - Average annual return: _____%

-
- A type of savings account that earns a significantly higher interest rate than a standard savings account
 - Earns interest; funds remain accessible and FDIC or NCUA insured
 - Very low risk
 - Average annual return: _____%

The Investment Pyramid



Key Terms

- **diversification:** an investment strategy that spreads money across a variety of assets, industries, investment types, or geographical areas to reduce the impact of poor performance in any single investment
- **liquidity:** how easily an asset can be converted to cash without significant loss of value
- **maturity:** the date when a bond, certificate of deposit, or similar financial product becomes due and the original amount invested is returned, often along with any interest earned
- **time horizon:** the length of time an investor expects to hold an investment before needing the money, guiding risk tolerance and asset choices
- **risk tolerance:** the amount of uncertainty or potential financial loss an investor is willing to accept

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CASE STUDY

Time Jump: Ages 18–22 Analysis

What + Why: Identify patterns in growth, liquidity, risk, and time horizon, and support your conclusions with evidence from the Amara's three pathways.

Amara is 22 years old. She has been saving and investing for four years, and her three possible pathways have each played out differently; once when everything went as planned, and once when an emergency struck at the wrong moment. Your job is to analyze what happened, identify the patterns, and explain what drove the differences using evidence from the data.

Supporting Materials:

Saving vs. Investing Pathways (Ages 18-22) (Case Study)

**Instructions:**

1. With your partner, use the case study chart to evaluate how each of Amara's three pathways performs under both conditions. Fill out the signal analysis chart.
2. Then decide where each of Amara's pathways belongs on the investment pyramid.

Be prepared to justify your placements using specific evidence from the case study materials.

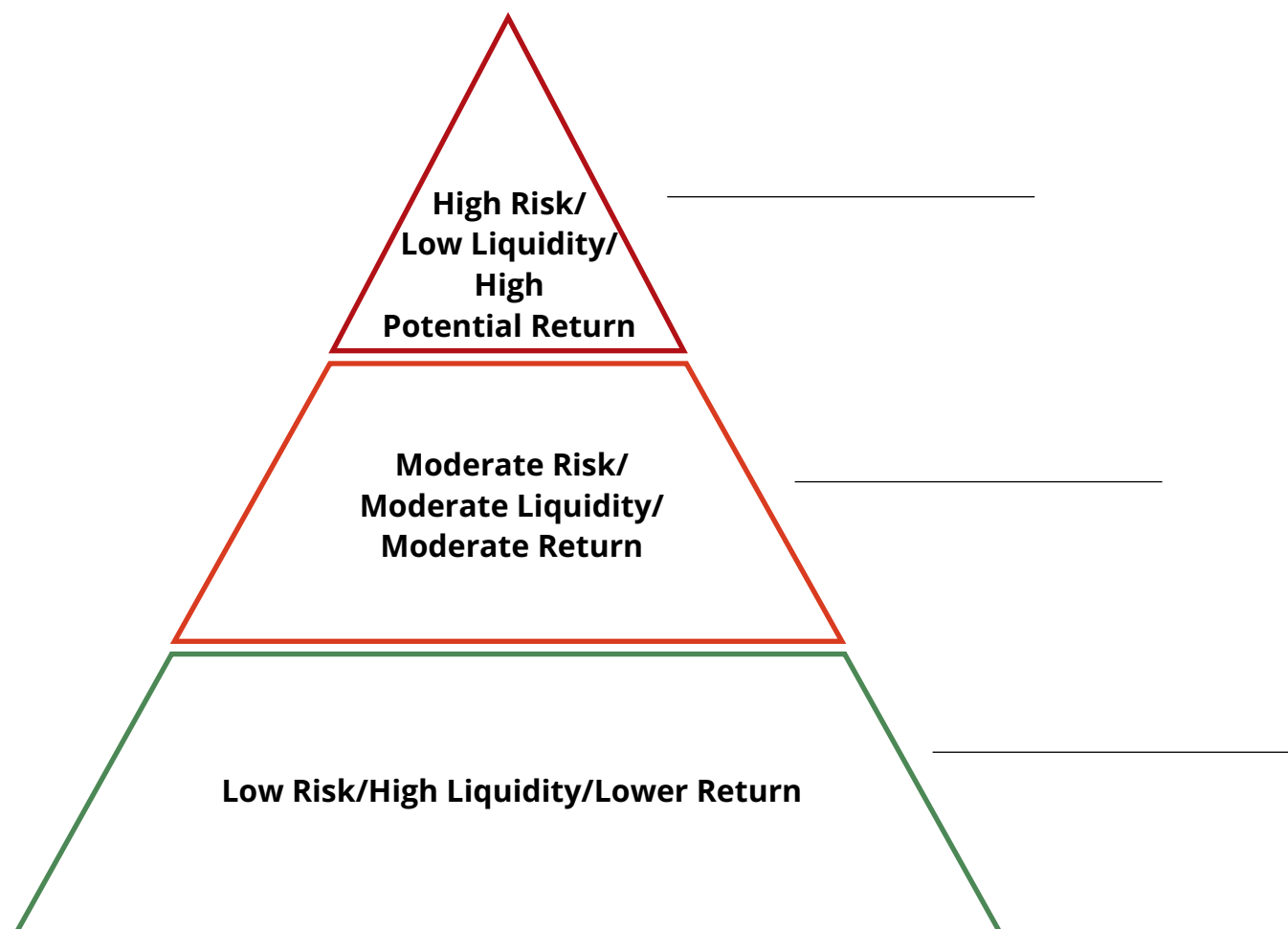
Signal Analysis Chart

	Pathway A Saver-First (HYSA, 4.5%)	Pathway B Early Investor (Index Fund, 7%)	Pathway C Blended Approach (Split 50/50, 5.75%)
Relative Performance* (Condition 1)	☐ High ☐ Medium ☐ Low	☐ High ☐ Medium ☐ Low	☐ High ☐ Medium ☐ Low
Relative Performance* (Condition 2)	☐ High ☐ Medium ☐ Low	☐ High ☐ Medium ☐ Low	☐ High ☐ Medium ☐ Low
Liquidity: How easily can this money be accessed in an emergency?	☐ Easy ☐ Moderate ☐ Difficult	☐ Easy ☐ Moderate ☐ Difficult	☐ Easy ☐ Moderate ☐ Difficult
Time Horizon: How long does this pathway need to work well?	☐ Short ☐ Medium ☐ Long	☐ Short ☐ Medium ☐ Long	☐ Short ☐ Medium ☐ Long
Risk or Trade-Off: Biggest limitation of this pathway			
Biggest advantage of this pathway (consider liquidity, risk, time horizon, and/or diversification in your response)			
Under what condition(s) does this pathway perform best?			

**Relative performance should reflect how each pathway performed compared to the other two pathways under each condition, not compared to its own balance in the other condition.*

Using the investment pyramid given, mark where each of Amara's three pathways belong, and write a sentence explaining your placement for each:

NOTE: The investment pyramid represents differences in stability, growth potential, and volatility—not a ranking from good to bad.



NAME: _____

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CASE STUDY

Which Path Works—And When?

What + Why: Decide which pathway works under each condition, and defend your reasoning with evidence.



In real life, financial decisions depend on goals, timing, and unexpected events. Use what you've learned to evaluate how each pathway performs across different conditions.

Supporting Materials:

Saving vs. Investing Pathways (Ages 18-22) (Case Study)

Time Jump: Ages 18-22 Analysis (previously completed)

Instructions:

1. Answer the two reflection questions using evidence from your work on the **Time Jump: Ages 18-22 Analysis** activity.
2. Use the Which Path Works—And When? rubric to help guide your reflection.

Which Path Works—And When? Rubric

Criteria	Strong (4)	Proficient (3)	Developing (2)	Beginning (1)
Claim Student states a clear, specific answer to the question being asked.	States a clear, specific claim that directly addresses the question. Identifies a pathway and condition without ambiguity.	States a claim but it is general or partially addresses the question.	Attempts a claim but it is vague, incomplete, or only implies an answer rather than stating one.	Does not state a claim or the response does not address the question.
Evidence Student supports the claim with specific data from the case study materials (including evidence from the Time Jump Analysis activity).	Cites at least two specific pieces of data from the case study materials by name to support the claim.	Cites one specific piece of data, or references the case study materials in general terms without naming specific figures.	References the case scenario but does not cite specific data from the case study materials.	Does not reference the case study materials or any data.
Conditionality Student recognizes that the strongest pathway depends on circumstances.	Clearly explains that the most appropriate pathway changes depending on the condition and identifies what specific factor drives that difference.	Acknowledges that the answer depends on the condition but does not explain what drives the difference.	Hints at conditionality without directly addressing it.	Treats one pathway as universally strongest without acknowledging conditions.
Trade-Off Reasoning Student explains what is gained and given up across pathways.	Clearly explains the trade-off (what each pathway gains and what it sacrifices) and connects it to why no single pathway can be strongest under all conditions.	Identifies a trade-off but explains only one side (what is gained or what is lost), but not both.	Mentions a trade-off without explaining how it connects to the pathways or conditions.	Does not identify or explain a trade-off.

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ACTIVITY

Financially Me: Personal Investment Pyramid

What + Why: Put your financial knowledge to work by designing a \$500 plan that reflects your goals and risk comfort.



You just received \$500 as a graduation gift from a family member! Rather than spend it, you decide to make a thoughtful long-term financial decision instead. How will you use your \$500 to help support your long-term financial goals? Showcase your plans by placing your own allocation on the investment pyramid and reflecting on what those choices reveal about your risk tolerance.

Your **Investment Pyramid** will become the Financially Me component of your FinanceFolio for this topic.

Instructions:**Part 1: Build Your Investment Pyramid**

1. Using the investment pyramid, decide how to use your \$500 to build your financial future.
2. Enter the dollar amount for the levels of the pyramid you choose to fund.
3. For each level you chose to fund, write 1–2 sentences explaining your reasoning. (In your explanation, address at least two of the following: your time horizon, your risk tolerance, your liquidity needs, or how your choices reflect diversification.)

A long-term goal I'd use this \$500 to build toward: _____

The diagram shows an investment pyramid divided into three horizontal sections. The top section is a small triangle with a red border, the middle is a trapezoid with an orange border, and the bottom is a large trapezoid with a green border. Each section contains a dollar sign followed by a blank line for a dollar amount. To the right of each section is a rectangular box of the same color (red, orange, and green respectively) with the text '1-2 sentences for this level:' followed by a blank space for writing.

Pyramid Level	Amount (\$)	Explanation (1-2 sentences)
Top (Red)	\$ _____	1-2 sentences for this level: _____
Middle (Orange)	\$ _____	1-2 sentences for this level: _____
Bottom (Green)	\$ _____	1-2 sentences for this level: _____

Part 2: Apply the Rule of 72

Remember, the Rule of 72 provides an estimate using simplified average growth assumptions.

- Using one of the interest rates provided below, apply the Rule of 72 to estimate how long it will take one of your investments to double.

Interest Rates
High-Growth Investments: 8%
Moderate Investments: 5%
Low-Growth Investment: 2%

Submission:

Turn in your completed work as directed by your teacher.

NAME: _____

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POST-QUIZ

Investing vs. Saving

What + Why: You made it to the end of the topic! This quick, ungraded quiz shows how your thinking has grown since the pre-quiz.

Instructions:

1. Answer each question as best you can.
 2. Circle the best answer for each question.
 3. Submit it when you're done.
-
1. How does compound interest grow money over time?
 - ☐ a. Compound interest pays interest only on the original amount deposited.
 - ☐ b. Compound interest increases the interest rate each year.
 - ☐ c. Compound interest earns interest on both the original amount and previously earned interest.
 - ☐ d. Compound interest guarantees a fixed return regardless of market conditions.
 2. Marquis plans to buy a car in six months and cannot risk losing money needed for the purchase. Which option is most appropriate?
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 - ☐ b. place the money in a savings account
 - ☐ c. purchase long-term bonds
 - ☐ d. invest in a stock mutual fund

3. Which investment type represents ownership in a company?

- ☐ a. bond
- ☐ b. stock
- ☐ c. certificate of deposit
- ☐ d. savings account

4. What is the typical relationship between risk and return?

- ☐ a. Higher potential returns always come with lower risk and lower uncertainty.
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- ☐ c. Lower-risk investments always earn more over time and have lower possibility of loss.
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