

Name:**IN THIS LESSON, YOU WILL:**

- Write exponential functions that model the growth of investments
- Recognize how fees impact the growth rate of an exponential investing model
- Simulate how overall returns vary depending on whether your portfolio contains one, a few, or many investments
- Explain how a mutual fund investment works
- Differentiate between active and passive investing

**INTRO****COMPARE: Jelly Bean Options**

Let's assume you LOVE these JellyBelly flavors: Sour Apple and Juicy Pear. And you HATE these JellyBelly flavors: Buttered Popcorn, Top Banana, Very Cherry, and Sizzling Cinnamon. You're indifferent to the other flavors. I've got a huge jar and make you a deal that you can have some for free, but you have to agree to eat all the ones you grab. Would you rather choose 1, 10, 20, or 50 jelly beans? Why?

1. **Would you rather choose 1, 10, 20, or 50 jelly beans? Why?**
2. **Pretend you select 10 jelly beans and you get one Juicy Pear, nine random jelly beans, and none of the ones you hate. I offer that you can choose again. How many would you select – 0, 1, 10, 20, or 50 jelly beans? Why?**
3. **Given you have to eat all the jelly beans you take, how worried are you about the flavors you hate?**



EXPLORE IT

ACTIVITY: [MOVE: Let's Make a Mutual Fund](#)

We'll come back to the jelly beans in a minute. In the meantime, follow your teacher's instructions to complete this activity about stocks. Then, answer the reflection question.

1. What does choosing a mutual fund have in common with choosing my 50-JellyBelly offer?



LEARN IT

ARTICLE: [Mutual Funds | Napkin Finance](#)

Review the napkin illustration at the top of the page, and then read the article underneath, stopping after the "Drawbacks" portion.

1. Using the provided word bank, fill in the blanks with an appropriate word or phrase for this paragraph:

As an investor, you can buy shares in a mutual fund by using an online [A] or a financial [B]. Your investment is pooled with other investors' money, and the fund buys a [C]. The fund's investments are selected by a [D], who tries to forecast and pick the most profitable stocks, bonds, or other assets for inclusion. You earn money through [E], interest, or gains, and you can either cash-out or [F] those earnings.

advisor	broker	dividends
manager	portfolio of investments	reinvest

- A.
- B.
- C.
- D.
- E.
- F.

2. Now that you've read the benefits and the drawbacks, do you think you would make mutual funds part of your investment strategy? Why or why not?

FINCAP FRIDAY: [When the Mean Is Nice](#)

One type of mutual fund is an index fund. As your teacher progresses through the slides, answer these questions, just writing A, B, C, or D for questions 1-5.

1. Question 1:
2. Question 2:
3. Question 3:
4. Question 4:
5. Question 5:

6. How does an index fund differ from an actively managed mutual fund?

INTERACTIVE: [FinViz S&P 500 Map](#)

This map shows every single company in the S&P 500, a popular index of the US's largest 500 publicly traded companies, divided here into sectors. Hovering over a rectangle will show you the company's name as well as a list of the other companies in that sector.

1. What does the size of each rectangle represent? ***Hint: The answer is ON the interactive's screen near the top.**
2. What does the color and shading of each rectangle represent? ***Hint: The answer is ON the interactive's screen near the bottom.**
3. On the left side of the screen under "MAP FILTER" cycle through each available time frame – 1 Day, 1 Week, 1 Month, and so on. Typically, sound investing advice says you should invest and then hold onto your investments for a long time, rather than buying and selling often. What specific data from this interactive supports that strategy?
4. Sound investing advice also recommends you create a diversified portfolio. Buying an index fund, such as one tracked to the S&P 500, is one way to diversify. What specific data from this interactive supports the idea that a fund with all 500 of these companies is better than selecting just a few?

VIDEO: Active vs. Passive Investing

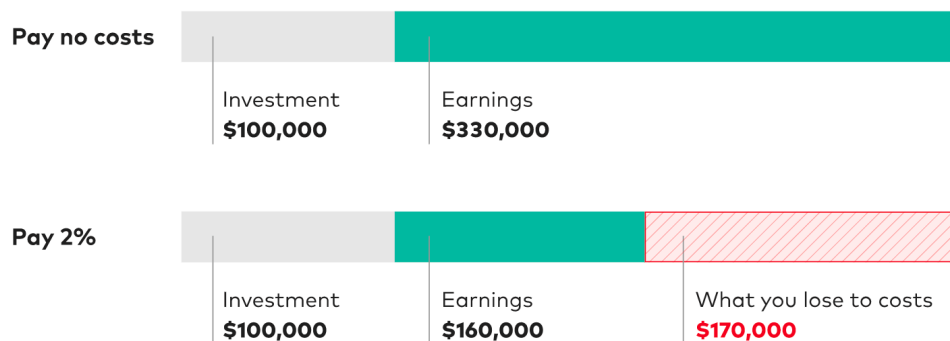
In the investing world, you'll hear about *active* versus *passive* investing. But what do those two terms mean? Watch the video to find out.

1. Complete the table below about passive investing and active investing.

	Passive Investing	Active Investing
Who manages the fund?		
Fees (circle/highlight one)	Lower	Lower
	Higher	Higher
The goal is to... (circle/highlight one)	Outperform the market	Outperform the market
	Match the return of the market	Match the return of the market
Type of fund (circle/highlight one)	Actively managed mutual fund	Actively managed mutual fund
	Index fund	Index fund

This graph shows hypothetical investment in a fund over 25 years.

Costs can eat away at your investments



[Source](#)

2. Form a hypothesis: When using active investing, how does a 2% fee become FAR LARGER than a 2% loss of your earnings?



MATH CONNECTION - COMPARING GROWTH FACTORS

DESMOS: The Impact of Investing Fees on Exponential Growth

Many funds have fees, and it's important to understand those fees before investing. Follow your teacher's instructions to complete this Desmos activity.



EXIT TICKET

Follow your teacher's instructions to complete the Exit Ticket.

Teachers, you can find exit ticket questions on the Lesson Guide.