

## Risk and Return Grab Bag

### Lesson Author

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### Grade Level

9–12

### Concepts

Investment

Return

Risk

Compound interest

### Objectives

Students will be able to:

- Define the meaning and functions of the following saving and investment options: savings account, money market account, certificate of deposit (CD), US Treasury security, mutual fund, and stock.
- Recognize that there is a trade-off between risk and return when choosing saving and investment options.
- Identify how compound interest allows savings to grow.

### Time required

Quick Pick: Step 1 only (5 minutes)

Power Up: Steps 1 through 6 (10 minutes)

Deep Dive: Steps 1 through 8 (20 minutes)

### Materials

*Six small gift bags*

*Visual 1: “Gift Bag Labels”*

*Visual 2: “Sample Interest Rates”*

*Visual 3: “10-Year Principal and Return”*

*Visual 4: “Historical \$1,000 Bill”*

*Handout 1: “\$1,000 Bill” (one bill for each student)*

### Preparation

1. Prior to the start of class, prepare the six small gift bags.
2. Use Visual 1: “Gift Bag Labels,” and label each bag with one of the following investment options: savings account, money market account, certificate of deposit, government bond, mutual fund, and stock market. Place these labels on the front of the bags so they face the class and can be seen by all students.
3. Use Visual 2: “Sample Interest Rates,” and place the interest rates on the bottom of each bag according to the chart, or research current rates and historical rate of return information at the websites provided and make your own labels. The rates on the bottoms of the bags should not be visible to the students when you start the activity.

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4. Finally, use Visual 3: “10-Year Principal and Return,” and label the back of each bag according to the chart below, or calculate your own 10-year totals using the compound [interest calculator](https://bit.ly/investor-compound-interest-calculator) (<https://bit.ly/investor-compound-interest-calculator>) and make your own labels. Students should not be able to see 10-year totals until later in the activity.

Saving or Investment Option	Sample Rate of Return	10-Year Principal and Return Compounded Annually	Websites for Current Rates or Historical Rate of Return Information
Savings account	0.25%	\$1,025.28	<a href="http://www.bankrate.com">www.bankrate.com</a>
Money market account	1.11%	\$1,116.71	<a href="http://www.bankrate.com">www.bankrate.com</a>
5-year certificate of deposit after 10 years	2.30%	\$1,255.33	<a href="http://www.bankrate.com">www.bankrate.com</a>
10-year US Treasury security	2.39%	\$1,266.41	<a href="https://www.federalreserve.gov/releases/h15/Stock%20Market%20Strategies">https://www.federalreserve.gov/releases/h15/Stock Market Strategies</a>
Mutual fund*	8%	\$2,158.92	<a href="#">Stock Market Strategies</a>
Stock market	10%	\$2,593.74	<a href="#">Stock Market Strategies</a>

\*Mutual fund returns vary widely according to composition and risk, but they are generally less risky than purchasing an individual stock due to diversification. This would generally result in a lower return for investors since they are assuming less risk.

## Procedures

- To begin the activity, show students a copy of Visual 4: “Historical \$1,000 Bill.” You can also view it at <https://bit.ly/currency-world-standard>. Ask students what they could do with \$1,000. (Answers will vary.) You may wish to ask students if they know what the highest bill printed by the Bureau of Engraving and Printing is today. (As of 1969, it is the \$100 bill.) Ask students to identify the president pictured and if this note is still able to purchase goods and services, or legal tender. (The president featured is Grover Cleveland. Although all notes above \$100 were last printed in 1945 and discontinued by the Department of the Treasury in 1969, they are still legal tender.) Let students know that today you are going to give them a chance to test their investment knowledge.
- Using Handout 1: “\$1,000 Bill,” distribute one of the \$1,000 bills to each student.
- Place the bags marked with each type of investment on a table and provide a brief description of each. Line them up from lowest to highest return. (A brief description of each can be found on the Federal Reserve Bank of Atlanta’s [Saving and Investing infographic](https://bit.ly/saving-and-investing-infographic) (<https://bit.ly/saving-and-investing-infographic>). Use “bond” for the US Treasury security.)
- Allow students to choose where they would put their “\$1,000.” Tell them that this money, also known as the principal, will be left in the investment (hypothetically), without any additional deposits, for 10 years. Give students time to place their slips in the bags.

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5. Stand in front of the bag marked savings accounts and count or visually assess the number of slips that were put in this bag. (In my experience, this bag was always the one students chose most often.) Ask students to volunteer why they chose to put their money in this bag. (Answers will vary, but many students will be most familiar with this type of investment, and some may know it is the safest and lowest risk.)
6. Turn over the bottom of the bag and reveal the rate of return. Repeat for each of the bags. Students are often surprised to hear that the stock market has the highest returns, as they may have heard it is risky, or heard about stock market fluctuations and crashes. You may also wish to explain that “average returns” are returns that can be expected over many years. Fees are associated with trading stock and the maintenance of mutual funds, so frequent movement in portfolios could result in lower returns due to these fees and commissions to brokers. After revealing the rate of return, show the back of the bag for each option so students can see the difference in return over a 10-year period.
7. Explain to students the risk/return relationship for each of the options.
  - a. Saving your money in a savings account does not expose you to risk, as these accounts are insured by the Federal Deposit Insurance Corporation (FDIC). Your money (plus interest) will be there in 10 years for you to retrieve from your financial institution. Money market deposit accounts and certificates of deposit are also insured, for up to \$250,000, by the FDIC. This lack of risk translates into a lower return.
  - b. Why do money market and CD accounts pay more? These types of accounts restrict access to your money—most money market deposit accounts limit the number of withdrawals you can make per month, and usually also require a higher opening deposit (which must be maintained) than a regular savings account. With a certificate of deposit, your money is “locked in” or inaccessible until the certificate term expires. Early withdrawals result in a penalty. To compensate for a lower rate of liquidity, these accounts will pay a higher interest rate than a regular savings account. (Students may not be familiar with the term liquidity; let them know that it is determined by how easily an asset can be converted into cash, with more liquid assets being the ones most convertible to cash. The [Atlanta Fed’s “Where Do You Bank?” infographic \(https://bit.ly/where-do-you-bank\)](https://bit.ly/where-do-you-bank) has a good visual of the liquidity of various types of assets.)
  - c. A US Treasury security is backed by the US government, and therefore also carries a low risk. Fees apply for selling the securities early (before maturity), and depending on the interest rate, could result in a loss at the time of sale, which translates into a higher interest rate than a savings account that could be accessed at any time.
  - d. Ask students why mutual funds and the stock market have higher average returns. (They have higher risk.) When you put your money in these investments, you do not have a guarantee that you will get your money back. You could make a gain, or you could also lose some or all of your investment.

What would be one way to lower the risk of placing your money in the stock market? (Diversify the funds.) What does diversification mean in terms of investment? (Not putting all your eggs in one basket, or choosing stocks from a number of different companies and industrial sectors. [The Saving and Investing infographic \(https://bit.ly/saving-and-investing-infographic\)](https://bit.ly/saving-and-investing-infographic) includes information on both diversification and compound interest that may be included for this discussion.)

8. You may wish to ask students if they would change their picks, now that they have seen the returns. Ask students to defend their answers.

**Visual 1: Gift Bag Labels**

Savings Account

Money Market  
Account

Certificate  
of Deposit

**Visual 1: Gift Bag Labels (Continued)**

Government  
Bond

Mutual Fund

Stock Market

**Visual 2: Sample Interest Rates**

<b>0.25%</b>	<b>2.39%</b>
<b>1.11%</b>	<b>8%</b>
<b>2.3%</b>	<b>10%</b>

**Visual 3: 10-Year Principal and Return**  
(Compounded Annually)

<b>\$1,025.28</b>	<b>\$1,266.41</b>
<b>\$1,116.71</b>	<b>\$2,158.92</b>
<b>\$1,255.33</b>	<b>\$2,593.74</b>

## Visual 4: Historical \$1,000 Bill



Why does this bill have a star next to the serial number? The star means that these are replacement notes. When a printing error occurs during a press run that results in unusable bills, replacement notes are used instead. Each “star note” has its own special serial number ending with a star in place of the suffix letter that was printed on all currency prior to 1996.



## Handout 1: Historical \$1,000 Bill



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