

# What Is a Stock?

## Suggested Grade

Grades 4-5

## Suggested Time

50 minutes

## Teacher Background

When you buy stock, you become part owner of a company. It doesn't matter if you own one share or thousands, you are considered an owner of the company and entitled to vote at annual meetings. Those with more shares have a more voting power.

As a stockholder you risk only the money you invest. If the stock price exceeds what you paid for it, your investment increases in value. If the stock price falls below what you paid for it, your investment decreases in value. You are entitled to collect a portion of the company's profits or dividend, if the company's board of directors declares dividends

Not all companies issue stock for the public to buy. An individual family or small group of investors owns privately held companies. In the book, *Charlie and the Chocolate Factory*, Willy Wonka's candy company is a privately held company. This familiar story brings the idea of stocks to life for your students. A story synopsis is available in the materials section to refresh your students' memories of the most important parts. Feel free summarize the story.

Stocks are bought and sold in marketplaces called exchanges. The Stock Market Game will allow your students to buy and sell simulated shares on the New York Stock Exchange (NYSE) and NASDAQ. Each exchange has listing guidelines companies must follow to become and stay listed on the exchange.

## Vocabulary

**Dividend:** Portion of a company's profits (earnings) that may be paid to stockholders.

**Liquidity:** The ease of converting an asset—in this case stock—into money in a timely fashion with little or no loss in value.

**Private Company:** A company owned by a person, family, or small group of investors that does not sell stock to the company.

**Profit/Earnings:** The amount of money that remains after subtracting the company's expenses from its revenue.



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**Public Company:** A company owned by investors who buy shares of stock, usually through a stock exchange.

**Risk:** The chance of losing all or part of the value of an investment.

**Stock:** Ownership of shares in a business. Companies issue stock to raise money for a variety of reasons, including expanding or modernizing their operations.

**Stockholders (also shareholders):** One who owns shares in a business.

## Performance Objectives

Students will be able to:

- Define stock, public company and private company.
- Calculate gain and loss of sample stock sales.
- Understand why some companies are public and others are privately held.

## Subject Areas

English Language Arts, Mathematics, Economics, Technology/Research, Social Studies

## Materials

Teacher Fact Sheet: A Synopsis of Charlie and the Chocolate Factory

Fact Sheet: The Benefits and Obligations of Going Public

Activity Sheet 1: Buying Stock

Activity Sheet 2: Buying and Selling stock

Activity Sheet 3: Two Real Candy Companies

Activity Sheet 4: Taking the Chocolate Factory Public

## Springboard Activity

Share this scenario with your students:

A group of 5 friends want to chip in to purchase a new video game console. They have agreed to keep it in one friend's basement and play it together every day. It cost \$300.00. If they each pay an equal share how much would each friend pay?

Ask your students:

1. What rights and responsibilities should each friend have as part owners of this game system?
2. How can they each prove they are part owners in the game system?



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Explain to your students that stock ownership allows an investor to be part owner in a company they believe is going to be successful. Just like the friends, a stock owner has rights and responsibilities when they buy share or a piece of a public company.

## Procedure

Read the synopsis or tell your students the general plot of *Charlie and Chocolate Factory*.

Tell your students that a private company is owned by a person, family, or small group of investors that does not sell stock to the company. They make all the decisions for the company.

Ask you students: What evidence in the story is there that allows you to know Willy Wonka's company is owned privately?

Responses may include but are not limited to such ideas as:

- Willy Wonka is going to give it to Charlie so it must be his.
- It states Willy Wonka makes all the decisions.
- There are no other owners discussed in the book.

Explain to your students that the Wonka Chocolate Factory is a "private company" because it is owned solely by Willy Wonka. Public companies are companies that sell shares of company ownership called stock to people called investors. Stock allows investors to share ownership in a company with others. An investor chooses to buy stock in a particular company because he or she thinks the company will make money, the stock price will increase, and the investor will make money on his or her investment. There is always a risk, that they will lose money.

Ask your students:

1. If an investor wanted to purchase 50 shares of the Chocolate Company at \$20 a share how much would that cost in total?
2. If the price of one share of stock went to \$10 a share a month later, would the investor make or lose money? Prove your answer mathematically.
3. If the price of one share of stock went to \$30 a share two month later, would the investor make or lose money? Prove your answer mathematically.

## Novice & Apprentice Level

Distribute *Activity Sheet 1: Buying Stock* for SMG teams to complete. Review answers with the class.



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## Master & Grand Master Levels

Distribute *Activity Sheet 2: Buying and Selling Stock* for SMG teams to complete.  
Review answers with the class

### Assessment

You purchased 100 shares of Willy Wonka Chocolates for \$10.00 per share. A year later you sell your 100 shares for \$20 per share.

Did you make a profit or lose money?  
How much money did you make or lose? Explain your results mathematically

You purchased 100 shares of Willy Wonka Chocolates for \$12 per share. Two years later you sell your 155 shares for \$23 per share.

Did you make or lose money?  
How much did you make or lose? Explain your results mathematically.

You purchased 200 shares of Willy Wonka Chocolates for \$20.76 per share. Six months later you sell half your shares for \$23.67 per share. A year later you sell the other half for \$19.21.

Did you make a profit or lose money?  
How much did you make or lose? Explain your results mathematically.

### Application

Distribute *Activity Sheet 3: Two Real Candy Companies*. Complete it and review answers with the class.

### Enrichment Activities

Distribute *Fact Sheet 1: The Benefits and Obligations of Going Public*. Each point has been summarized in the beginning to help students understand it more easily.

Ask your students: What are the advantages and disadvantages of taking the chocolate factory public? Have students complete *Activity Sheet 4: Taking the Chocolate Factory Public*.



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## Answer Keys

### Activity Sheet 2

#### Novice Level

You purchased 100 shares of Willy Wonka Chocolates for \$10 per share. A year later you sell your 100 shares for \$20 per share. Did you make a profit or lose money? How much money did you make or lose? Explain your results mathematically.

You gained \$1,000 for the year  
Bought 100 shares x \$10.00 = 1,000  
Sold 100 shares x \$20.00 = 2,000  
 $\$2,000$  (sold) -  $\$1,000$  (bought) = 1,000

#### Apprentice Level

You purchased 155 shares of Willy Wonka Chocolates for \$12 per share. Two years later you sell your 155 shares for \$23 per share. Did you make or lose money? How much did you make or lose? Explain your results mathematically.

You gained \$1,705  
Bought 155 shares x \$12.00 = 1,860  
Sold 155 shares x \$23.00 = 3,565  
 $\$3,565$  (sold) -  $\$1,860$  (bought) = 1,705

#### Master Level

You purchased 2,200 shares of Willy Wonka Chocolates for \$20 per share. Six months later you sell your shares for \$18 per share. Did you make a profit or lose money? How much did you make or lose? Explain your results mathematically.

You lost \$4,400  
Bought 2,200 shares x \$20.00 = 44,000  
Sold 2,200 shares x \$18.00 = 39,600  
 $\$39,600$  (sold) -  $\$44,000$  (bought) = -4,400

#### Grand Master Level

You purchased 200 shares of Willy Wonka Chocolates for \$20.76 per share. Six months later you sell half your shares for \$23.67 per share. A year later you sell the other half for \$19.21. Did you make a profit or lose money? How much did you make or lose? Explain your results mathematically.

You gained \$136  
Bought 200 shares x \$20.76 = 4,152  
Sold 100 shares x \$23.67 = 2,367  
Sold 100 shares x \$19.21 = 1,921  
 $2,367$  (sold) +  $1,921$  (sold) -  $4,152$  (bought) = 136



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### Activity Sheet 3

1. Why do you think Forrest Mars kept his company private and never sold stock to the public?

Keeping the company private gives him and a select group of people in charge of the company. Because it limits the number of people who have input on company decisions, those decisions can be made faster.

2. Why do you think Milton S. Hershey brought his company public and sold stock to the public?

Hershey needed a secure and fast way to raise funds for his company's growth. Selling shares of stock is the best way to do this.

3. Explain which company you think is better protected in the ultra-secret world of candy making?

Answers will vary.

4. What other interesting information about Mars Company and Hershey Company did you learn by visiting their web sites? Make a Venn Diagram and compare your results.

Answers will vary.

### Activity Sheet 4

1. Explain the benefits Willy Wonka would have for taking his company public.
  - He can raise money to open another factory.
  - He can take out some funding for his own retirement after he gives the chocolate company to Charlie.
  - More people will know about the company due to the publicity of going public.
  - He may get better employees if they get stocks as well as a salary.
2. Explain the new obligations Willy Wonka will have, if he takes his company public.
  - He can't be secretive anymore – all new disclosure laws.
  - It's expensive to take company public.
  - He has to be nice to the shareholders.
3. Now, weigh the two sides and come up with a creamy, rich opinion on whether Willy Wonka should take his company public. Please support your opinion with at least three reasons. You may have a different opinion from your teammates and Mr. Wonka wants to see this too.

Answers will vary.

# Activity Sheet 1: Buying Stock

In The Stock Market Game™ you can buy at least 10 shares of any stock valued at \$3.00 or more. Use a stock quote and ticker lookup site like **Yahoo! Finance** or **NASDAQ** to look up the price per share of the stocks listed below.

Company	Today's Date	Price per share	Cost for 100 shares
Hershey (HSY)*	7/31/19	151.74	15174.00
Disney (DIS)			
General Mills (GIS)			
McDonald's (MCD)			
Hasbro (HAS)			
The Gap (GPS)			

*\*The date, price per share, and cost for 100 shares are provided for demonstration purposes and do not represent actual data.*



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# Activity Sheet 2: Buying & Selling Stock

Below are four stock buy and sell problems. In some problems, the shareholder makes money, and in others the shareholder loses money. Please figure out how much was gained or lost.

## Example

If you bought 100 shares of IBM at \$70 per share and sold all 100 shares six months later for \$80 per share, you have made \$10 per share. You would multiply \$10 by the 100 shares you owned to find out how much money you made.

**ANSWER:** Your gain would be \$1,000 for the six months you held IBM.

## Novice Level

You purchased 100 shares of Willy Wonka Chocolates for \$10 per share. A year later you sell your 100 shares for \$20 per share. Did you make a profit or lose money? How much money did you make or lose? Explain your results mathematically.

## Apprentice Level

You purchased 155 shares of Willy Wonka Chocolates for \$12 per share. Two years later you sell your 155 shares for \$23 per share. Did you make or lose money? How much did you make or lose? Explain your results mathematically.

## Master Level

You purchased 2,200 shares of Willy Wonka Chocolates for \$20 per share. Six months later you sell your shares for \$18 per share. Did you make a profit or lose money? How much did you make or lose? Explain your results mathematically.

## Grandmaster Level

You purchased 200 shares of Willy Wonka Chocolates for \$20.76 per share. Six months later you sell half your shares for \$23.67 per share. A year later you sell the other half for \$19.21. Did you make a profit or lose money? How much did you make or lose? Explain your results mathematically.

## Enrichment

Create your own buy and sell stock problems below or on the back. The more you practice these kinds of problems, the better you will become at understanding if you made and lost money in The Stock Market Game.



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# Activity Sheet 3: Two Real Candy Companies

## Mars, Incorporated

It all began in 1911 in the kitchen of Frank and Ethel Mars in Tacoma, Washington, where they made and sold a variety of butter-cream candies. In 1920, after visiting a local drugstore with his son Forrest, Frank was inspired to produce a version of chocolate and malted milk that could be enjoyed anywhere. The result was the Milky Way bar. It was an immediate success!

Together the Mars family created their own company that later produced many other world-famous confections, including Snickers and M&M's. These candies were the foundation of what became a global snack food business. Their business was further strengthened when, while working in Europe during the 1930's, Forrest Mars created a protective candy coat to stop chocolate from melting. Soon after M&M's were born; their success was ensured when they were adopted as a staple ration for US forces. Today, M&M's are famous all around the world.

By the 1970's, Mars was known for a variety of businesses classified into four distinct areas: snack food, food, pet care, drink vending, and electronics. When a company has many different businesses like Mars it is called a conglomerate. Over the years Mars has grown from a small kitchen production line to a multibillion dollar business. Mars' products bear a variety of well-recognized names including Twix, Snickers, M&M's, Pedigree, Whiskas, Cesar, Sheba in pet care, and Uncle Ben's in foods. Mars remains a privately held, family company.

Forrest Mars ran his company very strictly. He demanded absolute loyalty from his employees and paid his executives big bonuses for their loyalty. Forrest Mars also demanded punctuality. He had everyone in the company punch a time clock and carry a time-card. He was also very exacting. If each Snicker's did not have 15 peanuts on top, an executive would be in trouble. The lettering on each M&M's had to be perfect. He only gave two public interviews in his entire life. One in 1930, and one before his death sixty years later. In his later years, he became a very reclusive billionaire. He liked to observe his staff through two-way mirrors and was known by them as "the phantom of the candy company."

Learn more about Mars, Incorporated by visiting their home page at [www.mars.com](http://www.mars.com). You will find more reasons at their official website why they remain a privately held company.

## The Hershey Company

Raised in rural Pennsylvania, Milton S. Hershey had little formal education and was nearly bankrupt by the time he was thirty. Nonetheless, Milton created the multibillion dollar company known today as Hershey Foods.



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The company began as a part of Milton's Lancaster Caramel Company. Milton became the first American to develop a formula for manufacturing milk chocolate. It was affordable, tasted good and remained fresh for a long time. No wonder it was an immediate sensation!

Milton went on to become one of America's wealthiest individuals and a successful businessman whose products are known the world over. He was a visionary builder of the town, which bears his name and, a philanthropist whose generosity continues to touch the lives of tens of thousands of people.

The Hershey Company has grown spectacularly through the years. Today, the Hershey Company, like Mars Inc., is a leading snack food company and the largest North American manufacturer of chocolate and non-chocolate candies, as well as other related grocery products. Unlike Mars, Hershey Foods is publicly traded. This means the public can become part owners of the company by purchasing its stock.

Learn more about The Hershey Company by visiting their home page at [www.hershey.com](http://www.hershey.com). You will learn a lot about Hershey, Pennsylvania. A fascinating city set up by Milton Hershey for the benefit of his employees and the public.



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## Questions

Use what you read to answer the following questions:

1. Why do you think Forrest Mars kept his company private and never sold stock to the public?
2. Why do you think Milton S. Hershey brought his company public and sold stock to the public?
3. Explain which company you think is better protected in the ultra-secret world of candy making?
4. What other interesting information about Mars Company and Hershey Company did you learn by visiting their web sites? Make a Venn Diagram and compare your results.



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# Activity Sheet 4: Taking the Chocolate Factory Public

Willy Wonka needs you, his stock experts, to write a report for him on the benefits and new obligations he will face going public. He values everyone's opinion. Therefore, he wants to see the ideas you and your teammates have on paper before making a decision.

1. Explain the benefits Willy Wonka would have for taking his company public.

2. Explain the new obligations Willy Wonka will have, if he takes his company public.

3. Now, weigh the two sides and come up with a creamy, rich opinion on whether Willy Wonka should take his company public. Please support your opinion with at least three reasons. You may have a different opinion from your teammates and Mr. Wonka wants to see this too.



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# Teacher Fact Sheet: Charlie and the Chocolate Factory

The following is a brief synopsis of Ronald Dahl's Charlie and the Chocolate Factory:

The secret and reclusive candy maker, Willy Wonka, offers five children the chance to see his world-famous chocolate factory. To have this opportunity the children must each find one of five golden tickets hidden in Willy Wonka's chocolate candy bars.

Charlie Bucket, an earnest boy from a very poor family, finds the final ticket. Once inside the factory, the five children go on a marvelous, yet dangerous tour led by Mr. Wonka. They find that Mr. Wonka makes all the decisions in the factory.

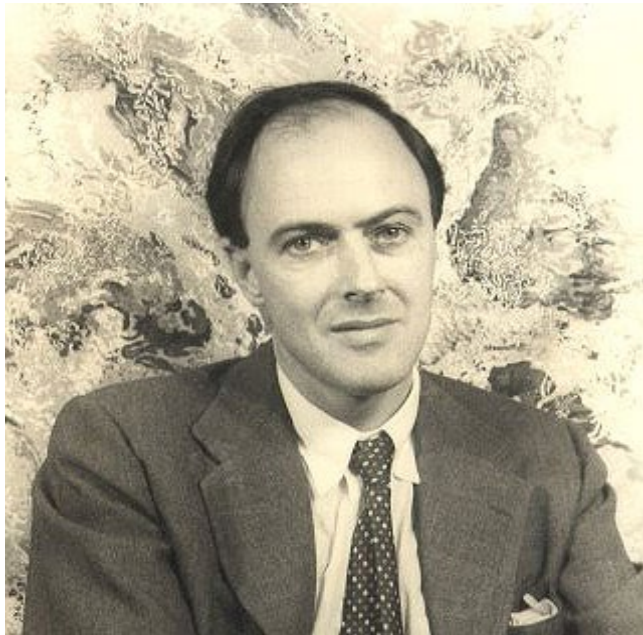
One by one the children break the rules except for Charlie Bucket. Since Charlie is the only child who makes it to the end of the adventure without breaking any serious rules, Willy Wonka decides to give Charlie his chocolate factory.

For a more detailed summary of Charlie and the Chocolate Factory visit:

<http://www.sparknotes.com/lit/charlie/summary.html>

Additional information about Ronald Dahl is available:

<http://www.roalddahl.com/>



Ronald Dahl, 1954. Photo by Carl Van Vechten



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# Fact Sheet: The Benefits and Obligations of Going Public

## Benefits

1. **More Money:** The company can raise money (capital) to expand or renovate, or to purchase another company in a similar industry.
2. **Cash:** The owners can get back their original investment, thus providing liquidity for the current owners. Also, they can easily sell their interests (stock) for retirement or for other family needs.
3. **Publicity:** The company may become more widely known. People buy what they understand, and often presume that public companies are bigger and better than private companies.
4. **Better Employees:** The company may be able to attract and retain more highly qualified workers if the company is well known and respected and if it can offer stock options as a benefit to employees.

## Obligations

1. **More Paperwork:** Much information must be disclosed to the public, including salaries, transactions with management, sales, profits, competitive position, mode of operation and other material information. This means additional costs and new legal obligations.
2. **More Responsibility:** The company officers may be punished by the government if they do not fulfill these new legal obligations. Annual reports must be prepared and filed with a government agency called the Securities and Exchange Commission (SEC.)
3. **Fewer Secrets and More Oversight:** Leaders of the company must tell shareholders when they intend to make major changes—and some actions, such as buying another company, may require the approval of the shareholders.
4. **Earnings:** shareholders expect a fast return on their investment and put great pressure on management to show earnings every quarter.
5. **Investor Relations:** A company must be prepared to answer questions of shareholders and keep them informed about the company's major activities. Remember, shareholders are owners.



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