

## CLASSROOM ACTIVITY

# Supply and Demand: What Happens When Things Change Rapidly?

## Objectives

Students will:

- Discuss ways in which the COVID-19 pandemic impacted supply and demand in the United States.
- Research the impact of events in history and present day that impact supply, demand, and pricing.
- Examine ways the government and others respond to significant changes in prices.

## Grade Range

9–12

## Duration

1–3 class periods, depending on the amount of in-class time given for research and the number of groups presenting

## Overview

Using provided information and their own research, students will work in small groups to examine instances of rapid changes in the supply and/or demand for specific products. Students will explore the economic concepts illustrated in the examples, including how changes in supply and demand curves impact prices, equilibrium points, scarcity, and the role of government.

## Background

When the COVID-19 pandemic reached the United States, the impacts were far-reaching. In addition to physical and emotional health problems, consumers experienced changes in the supply of products. As they rushed to purchase items, producers struggled to keep up with the demand. This lesson uses this recent experience to introduce students to the impact of supply and demand in the real world. Students then research various events that exhibit similar changes in supply and/or demand. Depending on your students, some of the examples may resonate more than others. If possible, consider local examples that might connect with students and add these to the lesson.

## Standards Correlation

Voluntary National Content Standards in Economics, Council for Economic Education

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  - Standard 1: Scarcity
    - 1. Choices made by individuals, firms, or government officials are constrained by the resources to which they have access.
    - 2. Choices made by individuals, firms, or government officials often have long-run unintended consequences that can partially or entirely offset or supplement the initial effects of the decision.
  - Standard 7: Markets and Prices
    - 1. Market outcomes depend on the resources available to buyers and sellers, and on government policies.
    - 2. A shortage occurs when buyers want to purchase more than producers want to sell at the prevailing price.
    - 4. Shortages of a product usually result in price increases in a market economy; surpluses usually result in price decreases.
  - Standard 8: Role of Prices
    - 1. Demand for a product changes when there is a change in consumers' incomes, preferences, the prices of related products, or in the number of consumers in a market.
    - 2. Supply of a product changes when there are changes in either the prices of the productive resources used to make the product, the technology used to make the product, the profit opportunities available to producers from selling other products, or the number of sellers in a market.
    - 3. Changes in supply or demand cause relative prices to change; in turn, buyers and sellers adjust their purchase and sales decisions.
  - Standard 16: Role of Government and Market Failure
    - 4. Externalities exist when some of the costs or benefits associated with production and consumption fall on someone other than the producers or consumers of the product.
  - Standard 18: Economic Fluctuations
    - 4. Price controls, occupational licensing, and reductions in antitrust enforcement are often advocated by special interest groups. Price controls can reduce the quantity of goods and services produced, thus depriving consumers of some goods and services whose value would exceed their cost.

National Standards for Personal Financial Education, Council for Economic Education and the Jump\$tart Coalition for Personal Financial Literacy

- 2. Spending
  - 2. Consumer decisions are influenced by the price of products or services, the price of alternatives, the consumer's budget and preferences, and potential impact on the environment, society, and economy.

- 8. Federal and state laws, regulations, and consumer protection agencies (e.g., Federal Trade Commission, Consumer Affairs office, and Consumer Financial Protection Bureau) can help individuals avoid unsafe products, unfair practices, and marketplace fraud.

Correlations to additional national standards, including C3 Framework for Social Studies State Standards, National Standards for Family and Consumer Sciences Education, National Standards for Business Education, and Common Career Technical Core, can be found at <https://www.econessentialsinschool.com/standards>.

## Materials

- **A to Z Impact Brainstorming Session Student Handout**—one copy per small group of students
- **Rapid Response Group Research Topics Student Handout**—one copy cut into cards
- **Impact of Rapid Changes Student Handout**—one copy per student

## Essential Question

What happens when there is a rapid change in the supply of or demand for a product?

## Teacher Preparation

In advance of the lesson, take extra time to familiarize yourself with the six topics students will research. These can be found on the **Rapid Response Group Research Topics Student Handout**. Depending on your students, region of the country, or other circumstances, you may wish to add, subtract, or edit the topics in advance. In addition, determine whether or not students will self-select their groups and topics or if you will assign these. Decide how much time students will be given to research and what tools and/or format they should use to present their findings to the class.

*Note:* If students are learning remotely, assign each student an individual topic with the understanding that more than one student will present on each topic. Alternatively, students can be paired in “virtual groups” and collaborate on live, shared documents.

## Procedure

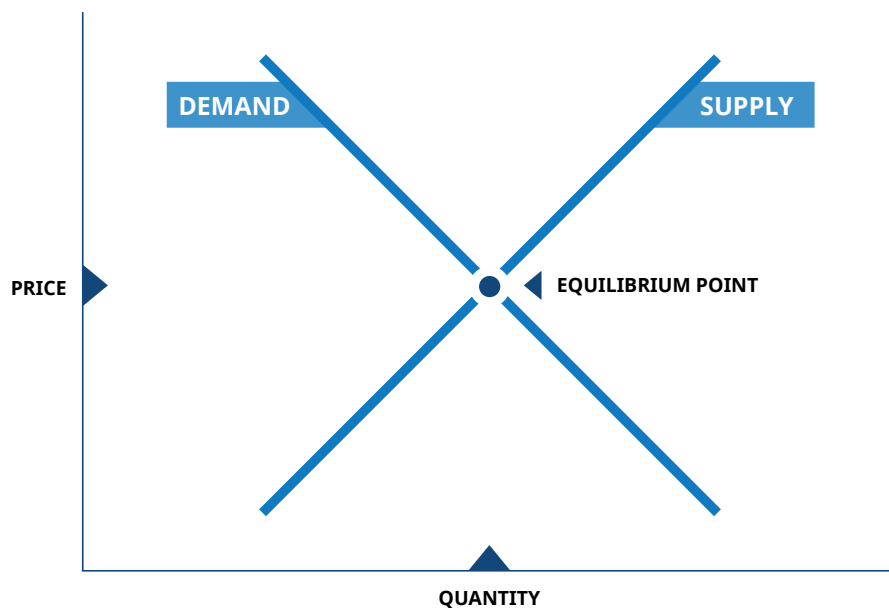
### Engage

- Let students know you will be kicking off the lesson by discussing ways in which the COVID-19 pandemic impacted individuals and families—with a specific emphasis on those living in the United States. If necessary, briefly review some of the major events that took place, including: travel bans, business closures, quarantines, event cancellations, school closings, etc.
- Share with students that the pandemic led to rapid changes in the supply of certain products and services—both increases and decreases. Similarly, demand for certain products changed rapidly, too.
  - *Note:* If needed, remind students that **supply** describes the total amount of a specific product or service that is available to consumers. Supply can relate to the amount available at a specific price or the amount available across a range of prices if displayed on a graph. Similarly, **demand** refers to the amount of a product or service that a consumer is willing and able to purchase at each price.
- Discuss the following examples:
  - Flights: Ask students if they recall hearing any news stories about the cost of flying to travel when the COVID-19 pandemic began to impact the United States. Remind students that airline fares began to drop due to excess supply, because people were not travelling, and travel bans had been put in place. Many airlines made lasting changes to what services they offered due to the lack of demand, such as having fewer planes in the air, reducing their labor force, and increasing restrictions and procedures aimed at slowing the spread of viruses. There was also concern as to whether the demand from businesses would increase after the pandemic since they had learned to operate virtually.

- Meat: Students may not have been going to the grocery store when the pandemic began. Let students know that in many places the meat displays at grocery stores were nearly empty for a period of time. Ask students if they think this was due to a change in demand or supply. Discuss how this particular situation was a result of both an increase in demand from customers fearful of shortages as well as issues with the supply of meat as workers in packing houses became sick.
- Divide students into groups of four to five students and provide each group with an **A to Z Impact Brainstorming Session Student Handout**.
- Tell students they will have five minutes to name as many products and services they can think of that experienced a change in supply or demand during the pandemic and that start with each letter of the alphabet. Inform them that they are welcome to be creative by using adjectives or phrases, especially to come up with ideas for some of the “harder” letters of the alphabet.
- Let students know that you will be awarding points for each unique impact they include on their list. Duplicates will not score any points. Compare this method of scoring to what is used in Boggle and Scattegories for those students who might make that connection.
- Set a timer for five minutes and let students work in groups to brainstorm.
- When the timer sounds, invite one team to read their list. Direct the other teams to announce if they had a duplicate. If so, both teams cross it off their list. Repeat this process with each team reading products or services that have not yet been mentioned.
- Pause periodically to discuss student responses and whether or not it exhibited a change in supply, demand, or both. Use your judgment to disqualify anything that was not truly impacted by the pandemic.
- As each team reads their lists, keep a running tally of how many unique products or services are mentioned in all, or ask a trustworthy student to do so for you.
- Ask each team to tally their own scores and announce which team won.
- Announce the total number of unique products or services the class was able to mention.

## Learn

- Return to the example of meat in the grocery stores to review with students what happens when demand for a product increases. Ask students if they would expect the price of the meat to increase or decrease and why. If desired, discuss other examples that students provided during the brainstorming activity.
- Show students the Future Fundamentals [video on supply and demand](#) (approx. 2 minutes in duration).
- Draw a supply and demand graph such as the one shown below and use it to demonstrate the concept of an **equilibrium point** to students—the point at which the demand curve and supply curve intersect, which determines the price of a product or service.



- Discuss what happens when the supply of a product changes and demonstrate how either the supply or demand curve **shifts** in one direction or the other and the impact of that shift on the equilibrium point.
- Recalling the pandemic again, ask students what happened to the availability of personal protective equipment such as masks. Demand increased substantially and prices increased. Let students know that in some places, government agencies stepped in to prevent what could be called **price gouging**—a sharp rise in prices to a level much higher than is considered reasonable or fair.
- Many states have laws against price gouging which are enforced by the state’s attorney general. For example, it is legally considered price gouging in Pennsylvania when the price of the same or similar product exceeds an amount equal to or greater than 20 percent of its price seven days prior to an emergency declaration by the Governor. Challenge students to consider whether it is fair for governments to intercede in these cases. For example, some students might think it is fair because it protects consumers. Others might believe the companies should be able to charge whatever people are willing to pay.

## Futures Spotlight

How can businesses manage the risks associated with changes in supply and demand—especially when they are often difficult to predict? One method is through **futures**. Futures exchanges like those operated by CME Group offer businesses and investors a way to reduce these risks. For example, farmers can't predict when a drought or flooding might impact their crops. Futures contracts give farmers the ability to “lock in” a specific price for a future harvest. Called hedging, this eliminates the possibility that the crop's selling price will drop in the future. Explore more about the futures marketplace and these concepts with [Econ Essentials](#) and [Futures Fundamentals](#).

- Let students know that the global pandemic is just one example of a time when circumstances led consumers to demand more or less of products and services and/or producers to make more or less.
- Share with students that they will be working in the same groups to research specific ways in which historical events impacted personal finances. In doing their research, students will need to collect data, examine news articles, and synthesize their results in a brief presentation to be shared with the rest of the class.
- Inform students that each group will be assigned a specific event that influenced supply or demand. Explain that students should first develop a hypothesis about what they think happened as a result of the event with regards to supply or demand. Then, students will conduct research and gather data to support or disprove their hypothesis. Finally, students should research actions taken by the government, if any, to address the situation.
- Share that each group will be expected to give a 5-minute presentation to the class in which they:
  - a. Share their hypothesis.
  - b. Summarize their findings, including whether or not their initial assumption was accurate or disproven.
  - c. List actions taken by the government, if any.
- Tell students which tools or methods, if any, they should or should not expect to use when presenting their information to the class.
- Assign one topic from the **Rapid Response Group Research Topics Student Handout** to each group.
- Allow time for students to conduct research and prepare their presentations.
- Invite each group to share what they discovered.
- As students in other groups present, challenge the remaining students to take notes using the **Impact of Rapid Changes Student Handout**.

## Reflect

- Conclude the activity with a discussion on what lessons people and businesses might learn (both positive and negative) from events that dramatically impact the price and/or availability of items. Topics to consider include: not hoarding items, trying to predict needs and purchases accordingly, looking for substitute products, etc.
- Challenge students to summarize what they learned by writing what is called a “Six Word Story.” Tell them they can only use six words to summarize what happened. Call on volunteers to share their six-word stories.

## Extend (OPTIONAL)

- Invite students to watch the [Risk on the Ranch](#) video on Futures Fundamentals. The video will help the students to learn about risks ranchers must navigate and how they can try to reduce their risk through the use of futures. Discuss how other businesses can reduce their risks associated with rapid supply or demand fluctuations and other uncertainty by using futures.
- Invite students to complete the self-paced module, [The Facts about Food](#). Students will take a journey from farm to wallet and investigate what causes the prices of certain foods to increase and decrease. Use the [Educator Companion Guide](#) to support the module’s use in the classroom.



# A to Z Impact Brainstorming Session

Work with your group to brainstorm ways the COVID-19 pandemic impacted the supply and/or demand for various products or services. Each product or service must start with a different letter of the alphabet. Two examples are provided.

<b>A</b>		<b>N</b>	
<b>B</b>		<b>O</b>	
<b>C</b>		<b>P</b>	
<b>D</b>		<b>Q</b>	
<b>E</b>		<b>R</b>	
<b>F</b>	Flights—the cost of airfare decreased	<b>S</b>	
<b>G</b>		<b>T</b>	
<b>H</b>		<b>U</b>	
<b>I</b>		<b>V</b>	
<b>J</b>		<b>W</b>	
<b>K</b>		<b>X</b>	
<b>L</b>		<b>Y</b>	
<b>M</b>	Meat—Meat was hard to find in grocery stores for a period of time	<b>Z</b>	

## Topic 1: The Avian Flu

**Cause:** The Avian Flu infected thousands of birds and chickens.

**Effect:** What do you think will happen to the price of eggs? Is this a change in supply, demand, or both? What action(s), if any, did government agencies or others take to address the issue (supply, demand, or price)?

**Springboard reading:** [How the Bird Flu Sweeping Through US Flocks Is Different Than Past Outbreaks](#) (ABC News, May 22, 2015)

## Topic 2: Product Use or Endorsement

**Cause:** A celebrity uses or endorses a product or service.

**Effect:** What do you think will happen to the price of the product or service? Is this a change in supply, demand, or both? What action(s), if any, do government agencies or others take to address the issue (supply, demand, or price)?

**Springboard reading:** [Kate Middleton's Greatest Style Moments](#) (Town and Country, October 14, 2020)

## Topic 3: Hurricane Harvey

**Cause:** Hurricane Harvey hit the Texas coast on August 25, 2017. It caused \$125 billion in damage according to the National Hurricane Center.

**Effect:** What happened to the price of lumber and other building supplies? Is this a change in supply, demand, or both? What action(s), if any, did government agencies or others take to address the issue (supply, demand, or price)?

**Springboard reading:** [A Storm to Remember: Hurricane Harvey and the Texas Economy](#) (Texas Comptroller of Public Accounts, February 2018)

## Topic 4: Prohibition and Alcohol

**Cause:** The 18th Amendment to the U.S. Constitution banned the manufacture, transportation, and sale of intoxicating liquors and ushered in a period in American history known as Prohibition.

**Effect:** What happened to the price of alcoholic drinks? Is this a change in supply, demand, or both? What action(s), if any, did government agencies or others take to address the issue (supply, demand, or price)?

**Springboard reading:** [Prohibition](#) (History.com, undated)

## Topic 5: Surge Pricing

**The situation:** Ride sharing services such as Uber and Lyft sometimes charge higher than usual prices—sometimes called surge pricing.

**Question:** What do you think causes the change in price? Is this a change in supply, demand, or both? What action(s), if any, have government agencies or others taken to address the issue (supply, demand, or price)?

**Springboard article:** [Uber's 'surge pricing' surprises some users](#) (C-net, January 2, 2012)

## Topic 6: Flint Water Crisis

**The situation:** The city of Flint, Michigan experienced high levels of lead—a dangerous substance—in the public water system.

**Question:** What do you think happened to the price of bottled water? Is this a change in supply, demand, or both? What action(s), if any, did the government agencies take to address the issue (supply, demand, or price)?

**Springboard article:** [Lead-Laced Water In Flint: A Step-By-Step Look At The Makings Of A Crisis](#) (NPR, April 20, 2016)

<p><b>Topic 1: The Avian Flu</b></p> <p>Hypothesis:</p> <p>Conclusion:</p> <p>Government or Other Responses:</p>	<p><b>Topic 2: Product Use or Endorsement</b></p> <p>Hypothesis:</p> <p>Conclusion:</p> <p>Government or Other Responses:</p>
<p><b>Topic 3: Hurricane Harvey</b></p> <p>Hypothesis:</p> <p>Conclusion:</p> <p>Government or Other Responses:</p>	<p><b>Topic 4: Prohibition and Alcohol</b></p> <p>Hypothesis:</p> <p>Conclusion:</p> <p>Government or Other Responses:</p>
<p><b>Topic 5: Surge Pricing</b></p> <p>Hypothesis:</p> <p>Conclusion:</p> <p>Government or Other Responses:</p>	<p><b>Topic 6: Flint Water Crisis</b></p> <p>Hypothesis:</p> <p>Conclusion:</p> <p>Government or Other Responses:</p>