



Video Viewpoints Series

Introduction

Welcome to Econ Essentials' [Video Viewpoints Series](#). This series offers educators three compelling and thought-provoking videos that reinforce fundamental economic concepts in real-world contexts—agriculture and food, energy and fuel, and finance. The three 5-minute videos feature compelling stories from individuals who are confronting various economic issues. The videos are appropriate for students in grades 6–12.

This educator guide provides background information about the topics covered in each video and guidance on how to use the videos in a variety of academic contexts including economics, business, social studies, science, and writing. A correlation of the videos to the Council for Economic Education's Voluntary National Content Standards in Economics (2nd edition) is included at the end of this guide.

These videos and the accompanying educator's guide are provided by [Futures Fundamentals](#) and Discovery Education through a partnership aimed at improving student understanding about core economic principles and the role they play in everyday life, as well as how people around the world are managing their businesses and overcoming challenges in the areas of agriculture, energy, and finance.

Video Overviews

FOCUS

VIDEO TITLE AND OVERVIEW

Finance

The Impact of Supply Chain Disruption

The COVID-19 pandemic caused significant disruptions to supply chains worldwide. In this video, students discover how both large and small businesses were impacted. The accompanying discussion questions encourage students to reflect on these events and make connections to a range of topics, from economics to technology to careers. (Duration 06:01)

Agriculture & Food

Why the U.S. Needs a New Generation of Farmers

With only six percent of U.S. farmers under the age of 35, what can be done to encourage young people take up agriculture? In this video, students meet a hard-working new farmer and discover the challenges she faces. The accompanying questions can be used with students in social studies, personal finance, or science classes. (Duration 05:11)

Energy & Fuel

How Algae Could Change the Fossil Fuel Industry

Most people don't think about algae as a source of diesel or jet fuel, but that could change. In this video, students learn about emerging technology and businesses that could change the landscape of food and oil production. The video and accompanying discussion questions can be used to spur conversations ranging from dependence on fossil fuels to the risks of entrepreneurship to environmental impacts. (Duration 05:07)

The Impact of Supply Chain Disruption

ABOUT

In this video, students meet Angela Hawkins, owner and founder of Bamblu; Joe White, global automotive editor for Reuters; and Vinay Patel, President and CEO of Fairbrook Hotels. Each provides a different perspective on how supply chains were interrupted by the global pandemic and the impact this had on their respective businesses. Both challenges and opportunities are highlighted along with potential lessons for the future. (Duration 06:01)



DISCUSS

BEFORE VIEWING

1. How many items have you used in the past 24 hours that were made completely in America? Can you think of any?
2. What is meant by the saying, "we live in a global economy"?
3. Thinking about a local restaurant, what items must it purchase in order to serve the food on its menu? Are all of those suppliers local?
4. What do you think of when you hear the term "supply chain"?
5. How does global supply and demand impact prices for a small business?

AFTER VIEWING

1. A common thread throughout the video was the impact of supply chain disruptions on various businesses. What is a supply chain? What examples of supply chain issues did you hear about in the video?
2. Vinay discusses the impact of increased lead times—the amount of time it takes from ordering a product to having it delivered. How could longer lead times impact a business? Why is this important?
3. One reason for supply chain disruptions during the pandemic was a shortage of workers. Which workers are mentioned in the video and how did it impact supply chains?
4. Could a business prevent supply chain issues by getting all of its goods and/or services domestically (i.e. from the same country)? What could the implications of this approach be for a business and its customers?
5. When people talk about being an entrepreneur or owning a business, they often mention the need to be comfortable taking risks and being able to adapt quickly. What evidence do you see of this in the video?
6. What lessons have businesses and consumers learned from the impacts of the global pandemic on supply chains and the availability of goods and services?

CONNECT to Economics/Social Studies

- A supply chain includes each of the activities, people, companies, and resources between a company and its suppliers. Select a good or service from a specific company and create a list of the steps needed to produce it.
- Specialization occurs when production is concentrated on a limited number of goods or services. Explain why the process of specialization generally results in increased productivity.
- Trade between individuals, companies, and nations relies on transportation. Discuss how transportation has changed over time and the impact this has on trade.
- The COVID-19 pandemic began in China in 2019 and quickly spread across the globe. As demonstrated in the video, it impacted businesses in many sectors for a variety of reasons. Discuss why many businesses and/or nations rely on international trade. Consider the advantages and disadvantages of producing goods domestically versus relying on international trade.
- Before the pandemic, carmaker Tesla was often criticized for making many of its own parts and keeping computer programming “in-house.” When the supply of computer chips was impacted by the pandemic, however, Tesla was able to rewrite software and use available chips. They saw record sales while other manufacturers struggled. Debate whether the automobile industry should rely on other companies to supply critical components or produce these themselves.

DIVE DEEPER

Interested in exploring even more about supply chains, including what they are and how they can be interrupted? Check out Supply Chain Disruptions: What They Are and Why They Matter. This hands-on Econ Essentials Hot Topic Activity helps students to understand what happens when a disruption occurs and how business can navigate risks associated with these disruptions through futures contracts.

CONNECT to Finance, Entrepreneurship, and Career Exploration

- When Angela’s business—like many others—experienced increased costs it responded by raising prices on products. They often combined these prices with the introduction of new products. Consider methods companies use to introduce price changes and the impact these have on consumers. For example, some companies reduce the amount of the product they provide while keeping the price the same—what has come to be called “shrinkflation.”
- The supply chain disruptions that began in 2020 led to many businesses raising prices for goods and services. Discuss the impact of these price changes on individuals and families.
- Entrepreneurs face many risks when they start a business. Discuss the impact of the global pandemic on people who choose to become entrepreneurs.
- Labor shortages during the pandemic led to many businesses increasing the wages they pay. Explore the impact of these increases on both businesses and individuals.
- Joe shares the importance of trucking and ports in keeping goods moving through the supply chain. Investigate careers related to transportation and the projected demand for these jobs in the future.
- Many colleges and universities offer degrees in supply chain management. These programs bring together concepts from finance, economics, logistics, and communications. Research supply chain management programs and the jobs their graduates secure upon completion.

CONNECT to Science and Technology

- Discuss the role of technology in overcoming challenges associated with supply chain issues. Consider how businesses communicated with both suppliers and consumers throughout the COVID-19 pandemic.
- The transportation and shipping industries have evolved over time. Imagine what the supply chain of the future could look like. What innovations will be required to make this future a reality?
- Many jobs that used to be performed by people are now completed by robots or automated processes. Should businesses try to increase reliance on automation or decrease it? Debate the costs and benefits of these changes.

EXPLORE

Rapid Response: What Happens When Supply or Demand Changes Quickly?

<http://www.econessentialsinschool.com>

The global pandemic is just one example of an extreme change in supply or demand. In this activity, students use the pandemic as a springboard for exploring both historic examples such as the Avian Flu and everyday occurrences like celebrity endorsements. Students learn more about the interaction of supply and demand and the impact on prices consumers pay.

Supply and Demand

<https://www.futuresfundamentals.org>

Review the relationship between supply, demand, and price using this 2-minute video on Futures Fundamentals.

Why the U.S. Needs a New Generation of Farmers

ABOUT

In this video, students are introduced to Leanna Mulvihill, owner of Four Legs Farm. A young college graduate, Leanna traded a desk job in engineering for a career in agriculture. While owning and operating her own farm fulfills her desire to responsibly provide meat for members of her community, it doesn't come without a cost. Challenges associated with food production including the fact that so few young people are choosing to farm are presented. (Duration 05:11)



DISCUSS

BEFORE VIEWING

1. Have you ever visited a working farm, lived on a farm, or had family members who work on/own farms? (Have students raise hands and keep them held until all three groups have self-identified to determine how many students are (or are not) familiar with farming.)
2. Where does your family buy food? Do you ever think about the source of your food when selecting it?
3. Do you know any of the farmers who produce your food? Do you produce any of your own food? What kind?
4. Given the choice of buying less-expensive food from far away and more expensive food that is grown locally, which would you choose? Why?
5. Would you consider a career in farming? Why or why not?

AFTER VIEWING

1. When Leanna introduces her 6-month-old pigs, she says, "They are getting close to being bacon." (0:27). Does seeing the young pigs and associating them with bacon bother you in any way? When eating meat, do you think about the source or how it was raised? How does the method in which your food is produced matter?
2. The movement for people to "buy local" is gaining momentum. What do you think it means to "buy local"? Why do you think more people are embracing this concept? Would you be willing to spend more for products that are produced locally?
3. The video presents a compelling argument for young people to consider farming, but it also documents the challenges of becoming a farmer. Are you interested in farming as a career after watching it?

CONNECT to Economics/Social Studies

- When people make choices about the foods they purchase, there are both present and future consequences. Identify some of these choices and discuss their implications for both the short- and long-term.
- Food security is the state of having reliable access to a sufficient quantity of affordable, nutritious food. As fewer young people have pursued careers in agriculture, America’s food security has decreased. Discuss whether or not Americans need to be concerned with food security and the national implications of not having a secure, domestic source of food.
- Laws in the United States have an impact on food production, including the wages paid to workers, conditions in which people work, and the manner in which food can be produced and stored. Countries from which the U.S. imports food have different laws. Discuss the impact these laws have on the price of American food and the human welfare of those who produce it.
- Food production, like the production of other goods, is often influenced by comparative advantage. Florida, for example, is known for its production of citrus because the soil, terrain, and climate make it an ideal location to grow these products. Describe how the United States could develop a sufficient comparative advantage to drive the world’s food supply.
- Leanna operates her business by selling meat shares. This is a form of Community Supported Agriculture or CSA in which people pay a predetermined amount in advance and then receive the food when it becomes available. The exact type and amount of food can vary. Discuss the costs and benefits of CSAs both for consumers and producers.
- The video discusses a loan forgiveness program that allowed Leanna to pay down her student debt and open her business. Government programs such as these and others (crop insurance, tax incentives, etc.) help farmers start and maintain their businesses. Compare the marginal benefits and marginal costs of providing a little more or a little less of these programs.
- Some people are willing to pay more for locally produced food, especially when the production practices meet their ethical standards. Discuss how supply and demand for this food impact the price. Explain how increases in price encourage consumers to look for substitutes and producers to supply more.
- There are a variety of programs for the agriculture industry including tax incentives, food policies for schools, grants, loans, and technical assistance. Research these programs and examine how they help, hurt, or hinder the farming industry.

CONNECT to Finance, Entrepreneurship, and Career Exploration

- The video identifies several financial challenges people face when pursuing farming: access to capital, credit, and student loan debt. Discuss how each factor impacts a young person’s decisions and what can be done about each. Identify the steps one might take to become a farmer.
- Leanna qualified for a loan forgiveness program that helped reduce her student loan debt and allowed her to start her business. Conduct research to find out who can benefit from loan forgiveness programs—both those related to agriculture and others. Discuss how loan forgiveness programs might influence people’s education and career choices.

- Entrepreneurship, by its very nature, involves risks. Discuss the risks Leanna faced in making the choice to become a farmer and business owner and those she may face going forward.
- Leanna describes her 12-hour days, inability to take vacation, and the need to have another job in order to support her choice to farm. Nonetheless, she loves what she is doing and is rewarded by knowing that she is providing a service in her community. Discuss the choices young people make when deciding upon a career including the type of work, salary and benefit, work location, social impact, etc.

DIVE DEEPER

Farmers face ongoing risks to their businesses and livelihoods. Introduce students to these risks with Risks on the Ranch from Futures Fundamentals and challenge them to investigate how farmers use futures as a way to navigate the risk of price fluctuations.

CONNECT to Science, Agriculture, and Health

- There are different approaches to farming. Compare and contrast the practices used in factory farming and sustainable farming. Discuss the impact of these practices on land, animals, and people's health.
- Farming involves making many decisions including those related to land use, animal conditions, slaughtering methods, use of herbicides/ pesticides, etc. Discuss the ethical and environmental implications of these choices.
- Leanna, like many farmers, takes great pride in providing her communities with healthy sources of protein. Discuss the role of protein in people's diets and the impact a lack of healthy protein can have on one's health over a long period of time.
- Making connections with local providers of food is an important first step in trying "to buy local." Identify or map areas within the community where one can "buy local." Discuss access and potential barriers to locally grown foods. Create a video or presentation urging individuals to consider the source of their food.

EXPLORE

New Farmers

<https://newfarmers.usda.gov/>

Find out what it takes to get started in farming with this resource from the United States Department of Agriculture.

The Facts About Food

<http://www.econessentialsinschool.com>

Ever wonder why your favorite sandwich costs what it does? Take a journey from farm to wallet and investigate what causes the prices of certain foods to increase and decrease with an interactive module from Futures Fundamentals and Discovery Education.

How Algae Could Change the Fossil Fuel Industry

ABOUT

In this video, students meet Dave Hazlebeck, CEO of Global Algae Innovations. His company is developing new techniques to convert algae into energy. The challenges associated with bringing new and innovative technologies to market and reaching a sufficient scale to make the solutions viable are presented. (Duration 05:07)



DISCUSS

BEFORE VIEWING

1. In what ways are you and your family consumers of energy (electricity, fuel, etc.)?
2. Have you ever tried to reduce your consumption of energy? If so, how?
3. Do you know where the energy you consume comes from? Is it produced in a way that helps or hurts the environment?
4. Would you rather consume energy produced in our country or from a foreign country? Does relying on other countries for energy matter?

AFTER VIEWING

1. What are some of the environmental benefits that could occur if the United States increased production of algae biofuels?
2. Why should young people be concerned about the source of their energy? Are you more or less concerned about this after watching the video?
3. Driving a hybrid vehicle or geothermally heating and cooling one's home can be friendlier for the environment but frequently have higher costs to get started. Would you be willing to pay more in order to help protect the environment?
4. The video presents a compelling argument for biofuels, but it also documents the challenges of scaling their production. Do you think the benefits outweigh the costs?

CONNECT to Economics/Social Studies

- The United States is the world's largest consumer of petroleum but not the largest producer.¹ This causes the U.S. to rely on foreign countries for oil. Research and explore the impacts of this reliance on other nations for oil.
- As liquids, biofuels function in much the same fashion as gasoline and diesel. Explain how this could make them a better substitute for vehicles than electricity.

Algae is far from the first thing most people think of when it comes to diesel and jet fuel. Check out The Story of Oil, a video from Futures Fundamentals that explains where most gas comes from and why gas prices fluctuate.

¹ http://www.eia.gov/energy_in_brief/article/foreign_oil_dependence.cfm
<http://www.globalgae.com/team/>

- Government can provide incentives that spur the production of more sustainable fuel sources as well as more efficient vehicles to use them. Explain the role of incentives for both producers and consumers.
- Entrepreneurial innovation is an important source of economic growth; however, Dave Hazlebeck explains that one reason algae biofuel has not reached scale is that the “costs are too high throughout the entire process” (2:38). Discuss what can be done to lower these costs and spur growth.
- The choices made by individuals, companies, and government agencies can have unintended consequences. Identify and discuss potential unintended consequences of increased biofuel production.

CONNECT to Finance, Entrepreneurship, and Career Exploration

- Entrepreneurship, by its very nature, involves risks. Discuss the risks Dave Hazlebeck faced in making the choice to start his business and those he may face going forward.
- Entrepreneurs come from many backgrounds. Dave Hazlebeck is a scientist with a PhD in chemical engineering². Explore how various interests and career choices hold the possibility for entrepreneurial endeavors.
- One of the reasons Global Algae Innovations has continued to stay in business, unlike some of its competitors, is that it has looked for ways to innovate at every step in the production process. Compare and contrast this form of innovation to those of other entrepreneurs.
- Many individuals consider a company’s environmental impact when investing. Such investors consider how companies obtain their raw goods, the waste they produce, how goods are transported, and more. Discuss whether you think environmental factors would influence your personal investing decisions.
- New technologies often require significant investments before seeing any success or sales. Explain why an investor should (or should not) consider investing in Global Algae Innovations.

CONNECT to Science, Agriculture, and Health

- Each gallon of biofuel produced from algae creates ten pounds of animal feed. Dave Hazlebeck claims that replacing a large percentage of animal feed in this manner could “solve global warming to a great extent” (0:43). Discuss how feed for animals impacts global warming.
- Unlike other energy production methods, fuel from algae does not result in contaminated water. Identify the problems associated with water contamination and discuss why this is an important benefit of producing fuel from algae.
- The video points out that food production is the leading cause of deforestation and that planting 1,000 acres of algae can reduce the number of acres of crops planted by 40,000 acres. Research the amount of crops produced in order to feed animals and discuss the potential impacts that algae fuel production could have.

² <http://www.globalgae.com/team/>

- Locating the biofuel production facility next to a power plant allows for the capture of carbon dioxide (CO₂), the primary greenhouse gas pollutant. Explore the impacts of CO₂ emissions and explain how decreasing these can have an impact on our environment.
- Biofuels are those that are derived from living matter. In addition to algae, research other forms of biofuels and innovations being explored to expand their use.

EXPLORE

Fueling the Future

<http://www.econessentialsinschool.com>

The price of fuel is often a factor that must be considered when a business sets prices for products and services. But how are fuel prices set? In this simulation from Futures Fundamentals and Discovery Education, students must predict future gas prices to help an imaginary business turn a profit. But first they must learn how and why gas prices fluctuate and the impact of those changing gas prices.

Foundations of Finance

<http://www.econessentialsinschool.com>

Understanding interest rates is an important skill for students to understand and appreciate—especially as it relates to the impact rates have on those who borrow money. In this interactive module from Futures Fundamentals and Discovery Education, students learn the impact of interest rates and participate in a Game of Life simulation to apply what they have learned.

EDUCATIONAL STANDARDS

Each video aligns with the Voluntary National Content Standards in Economics (2nd edition), developed by the Council for Economic Education. Specific standards and benchmarks covered by these videos for grades 8 and 12 can be found in the table below. For additional standards correlations, including the National Standards for Personal Financial Education, 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, please visit <https://www.econessentialsinschool.com/standards>.

STANDARD		SUPPLY CHAIN	AGRICULTURE & FOOD	ENERGY & FUEL
1: Scarcity: Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.	Grade 8 Benchmarks	1, 3, 4	1, 2, 3, 4	3, 4
	Grade 12 Benchmarks	1, 2	1, 2	1, 2
2: Decision Making: Effective decision making requires comparing the additional costs of alternatives with the additional benefits. Many choices involve doing a little more or a little less of something: few choices are “all or nothing” decisions.	Grade 8 Benchmarks	—	2, 3	—
	Grade 12 Benchmarks	1, 6	2, 6	6
3: Allocation: Different methods can be used to allocate goods and services. People acting individually or collectively must choose which methods to use to allocate different kinds of goods and services.	Grade 8 Benchmarks	—	2, 4, 5	—
	Grade 12 Benchmarks	1	—	—
4: Incentives: People usually respond predictably to positive and negative incentives.	Grade 8 Benchmarks	—	1, 2, 3	2, 3
	Grade 12 Benchmarks	—	1, 3	1

STANDARD		SUPPLY CHAIN	AGRICULTURE & FOOD	ENERGY & FUEL
<p>5: Trade: Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.</p>				
	Grade 8 Benchmarks	5, 6, 7	1, 4, 5	4, 5
	Grade 12 Benchmarks	—	—	—
<p>6: Specialization: When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.</p>				
	Grade 8 Benchmarks	2, 3	—	2
	Grade 12 Benchmarks	2, 3, 4	—	2, 4
<p>7: Markets and Prices: A market exists when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.</p>				
	Grade 8 Benchmarks	1	1	—
	Grade 12 Benchmarks	1, 2, 4	1, 4	—
<p>8: Role of Prices: Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.</p>				

STANDARD	SUPPLY CHAIN	AGRICULTURE & FOOD	ENERGY & FUEL
Grade 8 Benchmarks	1, 2, 3, 4	1, 2, 3, 4	2, 3, 4
Grade 12 Benchmarks	1, 2, 3	1, 2, 3, 4	1, 2

9: Competition and Market Structure:

Competition among sellers usually lowers costs and prices, and encourages producers to produce what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

Grade 8 Benchmarks	1, 2	—	—
Grade 12 Benchmarks	3, 5	—	2, 5

13: Income: Income for most people is determined by the market value of the productive resources they sell. What workers earn primarily depends on the market value of what they produce.

Grade 8 Benchmarks	—	1, 2, 5	2
Grade 12 Benchmarks	5	1, 5	4

14: Entrepreneurship: Entrepreneurs take on the calculated risk of starting new businesses, either by embarking on new ventures similar to existing ones or by introducing new innovations. Entrepreneurial innovation is an important source of economic growth.

Grade 8 Benchmarks	1	1, 2, 3, 4, 5	1, 2, 3, 4, 5
Grade 12 Benchmarks	—	1, 2	1, 2, 3

15: Economic Growth: Investment in factories, machinery, new technology, and in the health, education, and training of people stimulates economic growth and can raise future standards of living.

Grade 8 Benchmarks	3	—	3, 4
Grade 12 Benchmarks	—	—	1, 3, 5

STANDARD	SUPPLY CHAIN	AGRICULTURE & FOOD	ENERGY & FUEL
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16: Role of Government and Market Failure:

There is an economic role for government in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also have direct or indirect effects on peoples' incomes.

Grade 8 Benchmarks	—	4	—
Grade 12 Benchmarks	—	5, 8, 10	5