

Economics/American Government
Lesson Plan



Lesson Plans

“Analyzing How Demand, Supply, and Prices Work Together in Markets”

Subject:

- **History-Social Science:** Economics

Level:

- Grade 12

Abstract:

- In this unit students will understand and be able to explain how prices reflect the relative scarcity of goods.
- Price determines how much of a good or service is demanded and how much of a good or service is supplied. Price therefore has an allocating function in a market economy.
- Students will gain an understanding how markets work by studying graphs of demand and supply. Using Microsoft Excel, students will graph a demand curve, a supply curve, and then find the market equilibrium where the two curves intersect. Students will then study the effect of changes in the market. They will see how changes in demand or supply will change the relative scarcity of the good or service. The change in the demand or supply will result in a change in the price, reflecting the change in the scarcity of the good or service. Students will see by studying the graph that if a good or service becomes relatively more scarce, the price will rise, and if the good or service becomes relatively less scarce, the price will fall.
- Students will demonstrate an understanding of how the price reflects relative scarcity in the market and therefore the allocation of goods and services. Using Microsoft Word and Microsoft Excel, with an option to also use Microsoft PowerPoint, students will complete a worksheet and their responses will be shared with the rest of the class.
- The learning steps above will be repeated in two additional learning cycles. In the second cycle, students will study a demand curve and the competition among buyers, a supply curve and the competition among sellers, and the market equilibrium where the two curves intersect. They will understand that this process of competition determines a market price, where the quantity demanded is equal to the quantity supplied.

- In the third cycle, students will study price controls and be able to describe the effect of a price ceiling or a price floor on buyers and sellers.
- This unit is in alignment with 12.2, Sections 4,5 and 6 of the Economics in the California History/Social Studies Standards.

Invitation:

Using a “Directed Conversation” with students, the teacher will ask students to think about and respond to a series of situations.

When you go to the store to buy an economic good, say a pair of shoes, you want to buy at the lowest price. What do you do if you find the store is more expensive than the store where your friend went and purchased the exact same type of shoes? Would you buy the shoes, go to the store your friend went to, or would you buy a completely different pair of shoes as a substitute?

On the other hand, if you apply for a job, you want the highest wage possible for the work you are going to do. What happens if you are offered a job with what you think is too low a wage? Would you take the job? Or, would you apply elsewhere? In both cases, prices helped you determine what you buy, such as shoes, and what you sell, such as your labor?

Do you think the government should regulate prices? Should the government set a minimum wage rate? Some people believe the minimum wage should be higher. Others argue that the minimum wage increases the number of people not employed because employers can’t afford the higher minimum wage and therefore hire fewer people.

What about gasoline? The price of a gallon is considerably higher than it was just a year ago. Do you think the government should pass a law on how much the gas companies can charge? Why do you think this is a good idea or a bad idea?

In this unit you will explore how market work, and how prices help to allocate what goods and services people get.

Situations:

- **Where:** This unit will occur in the economics classroom and a computer lab, with students being responsible outside of class for reading the text.
- **When:** This unit typically occurs one-third of the way into the course, after students have learned the concept of scarcity, decision-making, opportunity cost, trade-offs, the basis for trade, and the basic concepts of supply and demand.
- **How Long:** This is a two-week unit.

Tasks:

- **Task 1:**

The teacher discusses with the students that buyers and sellers come together in a market. When a buyer and a seller agree on a price, the exchange occurs. This can be modeled with a supply and demand graph. The teacher draws the supply and demand graph on the board and points out that the demand curve and the supply curve intersect in one point called the market equilibrium. The teacher solicits from students what other information that can be gained from the graph. Students suggest the amount of quantity demanded, the amount of quantity supplied, and the equilibrium price where the quantity demanded equals the quantity supplied.
- **Task 2:**

The teacher acknowledges the student responses and guides the discussion back to the supply and demand graph on the board. Using the graph as a model, the teacher explains how prices act as signals. Prices are used as a way of allocating goods. (One of the determinants of a good is price and movement along the supply curve and movement along the demand curve illustrates this.)

- Task 3:**
Using a Microsoft PowerPoint Presentation to illustrate the price adjustment process, the teacher shifts the demand and supply curves (A shift in the demand curve or a shift in the supply curve is a result of a change in a variable other than price.) to illustrate that a change in demand or supply will change the market equilibrium. There will be a new market price and a new market quantity. The new price reflects the change in the relative scarcity of the good. The sample Power Point presentation, "Markets Effects of Changes in Demand or Changes in Supply" can be used as a guide (note: the sample does not include clip art which would enhance the presentation).
- Task 4:**
Students reinforce the concept that price reflects the relative scarcity of a good by completing the worksheet, "Prices Allocate Economic Goods." Using an overhead projector and a copy of the worksheet, the teacher discusses the answers with students.
- Task 5:**
Students divide into groups of two. Each pair of students will be given the computer lab assignment, "How a Change in Demand or Supply will Change the Market Equilibrium." Students are directed to look at the 4 tables given in the assignment. Each table contains data that reflects a change in demand or a change in supply. The students will use this data to create graphs in Microsoft Excel. The teacher gives some examples of recent news headlines that illustrate a change in demand or a change in supply. The teacher walks students through the assignment and then asks students to choose a good that they are familiar with (i.e. video rentals, PlayStation2, cellular phones, bottled water/drinks). They are asked to create 2 fictitious newspaper headlines: one that reflects a change in demand one that reflects a change in supply for that good. Students use Microsoft Excel, the data tables in the assignment sheet, and the step sheet: "Creating a Graph in Microsoft Excel" to create graphs which reflect each of the headlines. The students move their graphs into a Word Document using the Step Sheet, "Importing Graphs from Excel into Word Documents." (There is a Sample Excel Graph with data tables for the teacher included in the unit).
- Task 6:**
Students, in turn, present their headlines and graphs to the rest of the class. Each pair of students selects one headline to share. Students will write their selected headline on the board with a print-out of the accompanying graph they have created. At the completion of the class

presentations, students submit their completed Computer Lab Assignment to the teacher for credit and a grade.

- **Task 7:**

Students are given a Homework Assignment, "Example of Changes in Demand and Changes in Supply." This assignment asks students to find 4 headlines in a recent newspaper or magazine, each of which illustrates a change in demand or a change in supply.

- **Task 8:**

The teacher asks students where their family buys certain goods, such as milk, eggs, laundry soap, etc. Do their families always go to the same store? What would make their family change stores? Acknowledge and discuss student responses. Are there some goods which people shop for based more on price? What are some examples of goods for which people do shop based on price? (Cars are an example). Through examples, the teacher leads the discussion to how competition among buyers and sellers determine a market price.

- **Task 9:**

The teacher demonstrates both how price reflects the relative scarcity of a good and how competition among buyers and sellers determines the market price by holding a class auction on an item desired by students (Coke, candy, etc.) Students bid on the item and the highest bidder pays for and receives the item. (An alternative to money is to use some sort of money substitute for this exercise so that all students have an opportunity to bid.) The teacher discusses with the class the behavior of those students who bid. The teacher records the student responses on the board. The teacher holds a second auction using a second item just like the first item. Once again students bid and the highest bidder pays for and receives the item. A second similar discussion follows. The teacher holds a third auction, but this time has a large quantity of the item to sell. A discussion follows the auction as to how this auction was different from the previous two auctions. In the first auction, buyers want to buy at the lowest price possible, but competition drove the price up. In the third auction, supply increased and there was less competition. The price was lower. The same holds for sellers. Sellers want to sell at the highest price possible. If the seller is the only seller (a monopoly), the seller can have some influence over the price and the price can be higher than if there is competition. Competition results in a lower price. The teacher discusses the importance of competition in markets.

- **Task 10:**

Students are asked if they have observed any difference in gasoline

prices during the past year. What have the students heard through the media and what have they observed in their own area? What do students do when the price of gasoline rises? If students buy less, what are they doing as a substitute? What would the students do if the gasoline prices fall?

- **Task 11:**

Students go to the computer lab and read online: "A Primer on Gasoline Prices" located on the Energy Information Administration - Department of Energy's website at:

http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/primer_on_gasoline_prices/html/petbro.html

Students are asked to read the article and then are given a Worksheet, "Gasoline Prices – the Supply and Demand of Gasoline" that checks their understanding of what they have read. Students may use Microsoft Word to complete the worksheet, which is turned in for credit and a grade. If time permits, or as an extended homework assignments, students can search the internet for other relevant articles on gasoline prices, record their findings, and present a summary to the class.

- In the classroom, the teacher discusses the article.

- **Task 12:**

The teacher summarizes the lesson by using gasoline prices to demonstrate the first two concepts of this unit: 1) How prices reflect the scarcity of a good, such as gasoline, and prices therefore perform an allocative function as to who gets the gasoline in a market economy, and 2) How competition among buyers and sellers determines a market price.

- **Task 13:**

The teacher asks students whether the government should become involved in setting gas prices. The teacher records student responses on the board. What do students think would be the advantages of the government setting prices? Disadvantages?

- **Task 14:**
Using Microsoft PowerPoint, (Sample PowerPoint, "Price Ceiling" can be used as a guide) the teacher uses a graphic model to illustrate the concept of a Price Ceiling: the government sets a top price and this is the highest price the good can be sold. If the government sets a top price for gasoline, what are some possible outcomes? (shortage, long lines, some people don't get any). If a shortage results, what would students do? What would sellers do? Discuss the practicality of the solutions suggested.
- **Task 15:**
The teacher asks for other examples of goods where the government may want to establish price controls. (e.g. housing rent prices, dairy products, electricity). Why would legislators want to set price controls on goods? What are the advantages? Disadvantages?
- **Task 16:**

The teacher asks whether students support the idea of a minimum wage. Discuss responses. Do they feel the minimum wage should be higher or lower? Discuss reasons for responses.
- **Task 17:**
Using Microsoft PowerPoint, (Sample PowerPoint, "Price Floor" can be used as a guide) the teacher uses a graphic model to illustrate a concept similar to a Price Ceiling called a Price Floor: the government sets a bottom price and this is the lowest price the good can be sold. If the government sets a minimum price on wages, what are some possible outcomes? (surplus, some people, especially younger people don't get jobs). If a surplus results, why would some younger workers may not get jobs? What would sellers do? Discuss the practicality of the solutions suggested.
- **Task 18:**
Students reinforce their understanding of the effect of price controls on buyers and sellers by completing the Worksheet, "Price Ceilings and Price Floors."
- **Task 19:**
Students take a quiz that evaluates their understanding of the role of prices in a market economy.
- **Task 20:**
The teacher discusses the answers of the quiz with students.

Interactions:

- **Full Class:** Students are responsible for participating in full class discussions and activities.
- **Partners:** Students are responsible for working diligently and cooperatively with their partner.
- **Small Group:** Students are responsible for working diligently and cooperatively with other students in their assigned group.
- **Individual:** Students will be individually responsible for participating and contributing to class discussions and activities, completing individual worksheets and assignments and working attentively and diligently.

Standards:

- **Content Area 1:** California History/Social Science Standards, Grade 12, Economics, 12.2 Students analyze the elements of America's market economy in a global setting:
 - Section 4: Explain how prices reflect the relative scarcity of goods and services and perform the allocative function in a market economy.
- **Content Area 2:** California History/Social Science Standards, Grade 12, Economics, 12.2 Students analyze the elements of America's market economy in a global setting:
 - Section 5: Understand the process by which competition among buyers and sellers determines a market price.
- **Content Area 1:** California History/Social Science Standards, Grade 12, Economics, 12.2 Students analyze the elements of America's market economy in a global setting:
 - Section 6: Describe the effect of price controls on buyers and sellers.

Assessment:

- **Assessment 1:** Worksheet: "Prices Allocate Economic Goods"
- **Assessment 2:** Computer Lab Assignment: "How a Change in Demand or Supply will Change the Market Equilibrium"
- **Assessment 3:** Homework Assignment: "Examples of Changes in Demand and Change in Supply"

- **Assessment 4:** Worksheet: " Gasoline Prices – the Supply and Demand of Gasoline"
- **Assessment 5:** Worksheet: "Price Ceilings and Price Floors"
- **Assessment 6:** Quiz: "Analyzing How Demand, Supply, and Prices Work Together in Markets"
- **Rubric:** Evaluating "Student Worksheets and Homework"
- **Rubric:** Evaluating "Student Presentations to the Class"
- **Rubric:** Evaluating "Quiz"

Tools:

- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Classroom Whiteboard or Blackboard
- Overhead Projector
- LCD Projector
- Paper, pencil.

Project Tips and Alternatives:

- **Tip #1:**
Students can use the Internet to continue to do research on gasoline prices. Another good website is:
<http://www.howstuffworks.com/gas-price3.htm>
- **Tip #2:**
Students can do more research via the Internet on price controls such as the minimum wage, rent control, or agricultural support programs.
- **Tip #3:**
Rather than have students do their graphs in the computer lab with Microsoft Excel, they can use graph paper.
- **Tip #4:**
Rather than have the teacher use Microsoft PowerPoint presentations, the teacher can either draw the graphs on the board or use an overhead projector.

Attachments:

- "Sample: Graphs Created in Excel"
- "Worksheet: Prices Allocate Economic Goods"
- "Worksheet Answers: Prices Allocate Economic Goods"
- "Computer Lab Assignment: How a Change in Demand or Supply Will Change the Market Equilibrium"
- "Computer Lab Assignment Answers: How a Change in Demand or Supply Will Change the Market Equilibrium"
- "Homework Sheet: Examples of Changes in Demand and Changes in Supply"
- "Worksheet: Gasoline Prices – the Supply and Demand of Gasoline"
- "Worksheet Answers: Gasoline Prices – the Supply and Demand of Gasoline"
- "Market Effects of Changes in Demand or Changes in Supply"
- "Price Ceiling"
- "Price Floor"
- "Worksheet: Price Ceilings and Price Floors"
- "Worksheet Answers: Price Ceilings and Price Floors"
- "Quiz: Analyzing How Demand, Supply, and Prices Work Together in Markets"
- "Quiz Answers: Analyzing How Demand, Supply, and Prices Work Together in Markets"
- "Rubric: Student Worksheets and Homework"
- "Rubric: Student Presentations to the Class"
- "Rubric: Quiz"
- "Step Sheet: Importing Graphs from Excel into Word Documents"
- "Step Sheet: Creating a Template in PowerPoint"
- "Step Sheet: Drawing a Graph in PowerPoint"
- "Step Sheet: Gathering and Inserting Electronic Images"
- "Step Sheet: Teacher-Directed Demonstrations"
- "Step Sheet: Creating a Graph in Microsoft Excel"

Web Resources – Content:

- A Primer on Gasoline Prices (July 2001 Update) can be found at:

http://www.eia.doe.gov/pub/oil_gas/petroleum/analysis_publications/primer_on_gasoline_prices/html/petbro.html

Web Resources – Excel:

- A list of linked web resources for Excel and PowerPoint can be found on the [Excel](#) and [PowerPoint](#) Resources page.

Assistive Technology:

- Please refer to the [Assistive Technology](#) section for information on methods and devices to help ensure that all students have access to the curricula in the least restrictive environment.