

## ***Dynamic Markets: How Prices and Quantities Are Determined***

by

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**Lesson Description:** Students will apply demand and supply analysis to news headlines. By analyzing the headline through graphing the shift and discussing the determinants that change demand and supply, students will understand the impact on prices and amounts exchanged in the market for specific goods.

**Grade Level:** Ninth - Eleventh

**Essential Question:** Why do prices change?

**End of Cluster Expectations (Benchmarks):** Students will demonstrate how markets for various goods and services influence each other and the production and distribution of goods and services.

**Assessment - Constructed Response:**

**“US GOVERNMENT REDUCES SUGAR IMPORTS”**

A newspaper headline reports a government decision to limit sugar imports to the United States. Explain the effect this event would have on the market for soft drinks in the United States.

**Desired Response:**

Soft drinks will be more more expensive. The decision to lower imports of sugar to the United States would reduce the supply of sugar in the U.S. The price of sugar which is an ingredient in soft drinks will increase. Consumers will buy fewer soft drinks.

**Scoring Rubric:**

2 = This response gives a valid effect on price with an accurate and relevant explanation.

1 = This response gives a valid effect on price with an inaccurate, irrelevant, or no explanation.

0= Inaccurate or no response.

**Assessment - Multiple Choice:**

The United States government decides to restrict sugar imports to the U.S. What impact will this have on the market for sugar?

- a. Consumers will buy more sugar.
- b. Foreign producers profits increase
- c. US producers can charge more.
- d. Demand for artificial sweetener will decline.

Correct answer: d

**Objectives:**

Students will be able to:

- Analyze changes in supply and demand graphs.
- Explain the effect changes in supply and demand have on market price.
- Understand a change in one market can have an effect on another market.

**Prior Knowledge and Skills:** Students need to understand the following economic concepts prior to performing this lesson: demand, supply, quantity demanded, quantity supplied. They must know how to do supply and demand graphs. The students must also know the factors (determinants) that cause supply and demand to change.

**Time to complete:** 90 minutes

**Materials:**

Visual 1 - Demand Review Sheet

Visual 2 - Supply Review Sheet

Newsprint paper or 10 stations at the blackboard

Product cards (Prepare these by putting the written description on the back of the picture, then laminate if possible.)

Visual 3 - Base Supply and Demand Graph

Visual 4 - Group Directions

Markers

Handout 1 - News Event Cards

Handout 2 - Headline Analysis Sheet for group, one copy per student

Handout 3 - On Your Own with Market Movements

**Procedures:**

1. Place 10 pieces of newsprint around the classroom. Using Visuals 1 & 2, review the differences between a change in quantity demanded or quantity supplied and a change in supply and/or demand. Then review the factors that cause demand and supply to shift, which then affect prices and amounts exchanged in that market.
2. Discuss how one changing market can impact related markets. For instance, if the cost of harvesting Maryland Crabs increases, the supply of crabs will decrease, this will push the price of crabs up and reduce the amount exchanged in the market. When the price of crabs increases, the market for shrimp will be affected. The demand for shrimp will increase because of a higher price for a substitute good. Therefore, the price of shrimp rises also and the quantity of shrimp exchanged will increase.
3. Give each member of the class a product card. Tell the class that they each have products that are complements of other students' cards. They are to find the students that have a complement to their product. This will put them into groups of three. (See Handout 1)

4. When students are in their groups, ask each group to go to one of the newsprints posted around the room. Have them draw a large (whole page) basic supply and demand graph exactly like Visual 3.
5. Distribute the News Event Cards, one to each group. (See Handout 2)
6. After each group has drawn the base graph, display the Group Directions (Visual 4). Explain to them that the news events on the cards illustrate what could happen in the market for that product. Tell **each** group to:
  - a) Identify the market.
  - b) Decide whether supply or demand has changed.
  - c) Explain why it has changed (the determinant).
  - d) Graph the change on the graph.
  - e) Indicate with arrows (or words) the impact on price and quantity.

As the groups work, be available for questions.

When all groups have completed their analysis, have each group rotate around the room to check the work of the other groups. Have each group choose a spokesperson to present their market analysis.

7. Discuss how these news events can have a ripple effect on other markets. (Choose a good such as oil. Using the same steps from the group activity, analyze what happens to the markets for other goods and services as a result of an oil supply decrease. (Markets such as: airlines, textiles, drugs, plastic products, cars, delivery businesses, etc. Have a student(s) come to the board and do a graph for one or two of the examples.) This discussion will help them with their homework in step 9.
8. Homework: Each member of the groups will take their news event and identify the effect it will have on other markets. For example: the destroyed coffee crop may impact the market for sugar, milk, tea, and soda (the substitutes and complements of coffee). Tell students to identify the substitutes and complements for their products. Have them analyze the impact on the markets for the substitutes and/or complements. (Handout 3)

**Tips for the Teacher (Complete after field test):**

This lesson can be used to analyze how markets are changing and their effects. By using this process, one can have students predict what changes and their consequences will have an effect on how people live.

**Extensions or Reinforcement Ideas:**

Provide the students with news articles that demonstrate a change in a market for a good or service. Have the students do the same analysis for those articles. Tell students to look for articles in the newspaper or on the internet that discuss changes in supply or demand. Have them construct the supply and demand graphs for the articles.

**Citations:**

The graphics in this lesson were developed by the author and editor.

## Visual 1

### ECONOMIC DEFINITIONS FOR DEMAND

- A. **Demand:** the total amount consumers are willing and able to buy at all prices at a specific point in time.  
(whole curve)
- B. **Quantity demanded:** the total amount consumers are willing and able to buy at one price at a specific point in time.  
(one point on the curve)
- C. **Demand schedule:** the list of the total amount consumers are willing and able to buy at all prices at a specific point in time.
- D. **Demand curve:** the graphical representation of the total amount consumers are willing and able to buy at all prices at a specific point in time.
- E. **Law of Demand:** As price increases (decreases), quantity demanded decreases (increases).

#### **Factors (determinants) that cause demand to change (shift):**

- A. Tastes and fads
- B. Income
- C. Number of buyers (not to be confused with the number of units exchanged in the market)
- D. Future price expectations
- E. Price and availability of:
  - 1. Substitutes
  - 2. Complements

## Visual 2

### ECONOMIC DEFINITIONS FOR SUPPLY

- A. **Supply:** The total amount of a good or service producers are willing and able to make at all prices at a specific point in time.  
(whole curve)
- B. **Quantity Supplied:** The total amount of a good or service producers are willing and able to make at one price at a specific point in time.  
(one point on the curve)
- C. **Supply Schedule:** the list of the total amount of a good or service producers are willing and able to make at all prices at a specific point in time.
- D. **Supply Curve:** the graphical representation of the total amount of a good or service producers are willing and able to make at all prices at a specific point in time.
- E. **Law of Supply:** As price increases (decreases), quantity supplied increases (decreases)

#### **Factors (determinants) that cause a change in supply:**

- A. Price and availability of land, labor, or capital. (productive resources)
- B. Technology
- C. Number of other sellers
- D. Price of other goods I could produce
- E. Tax policy (investment credits, tariffs, depreciation allowances, etc.)

**Handout 1**

Bread	Peanut Butter	Jelly
Camera	Batteries	Film
French Fries	Salt	Ketchup
Sneakers	Shoelaces	Shoe Polish
Television	Video	VCR
Toothbrush	Toothpaste	Dental Floss
Spaghetti	Parmesan Cheese	Garlic
Computer	Disc	Mouse

# Handout 1 (Side 2)



## Handout 1 (Continued)

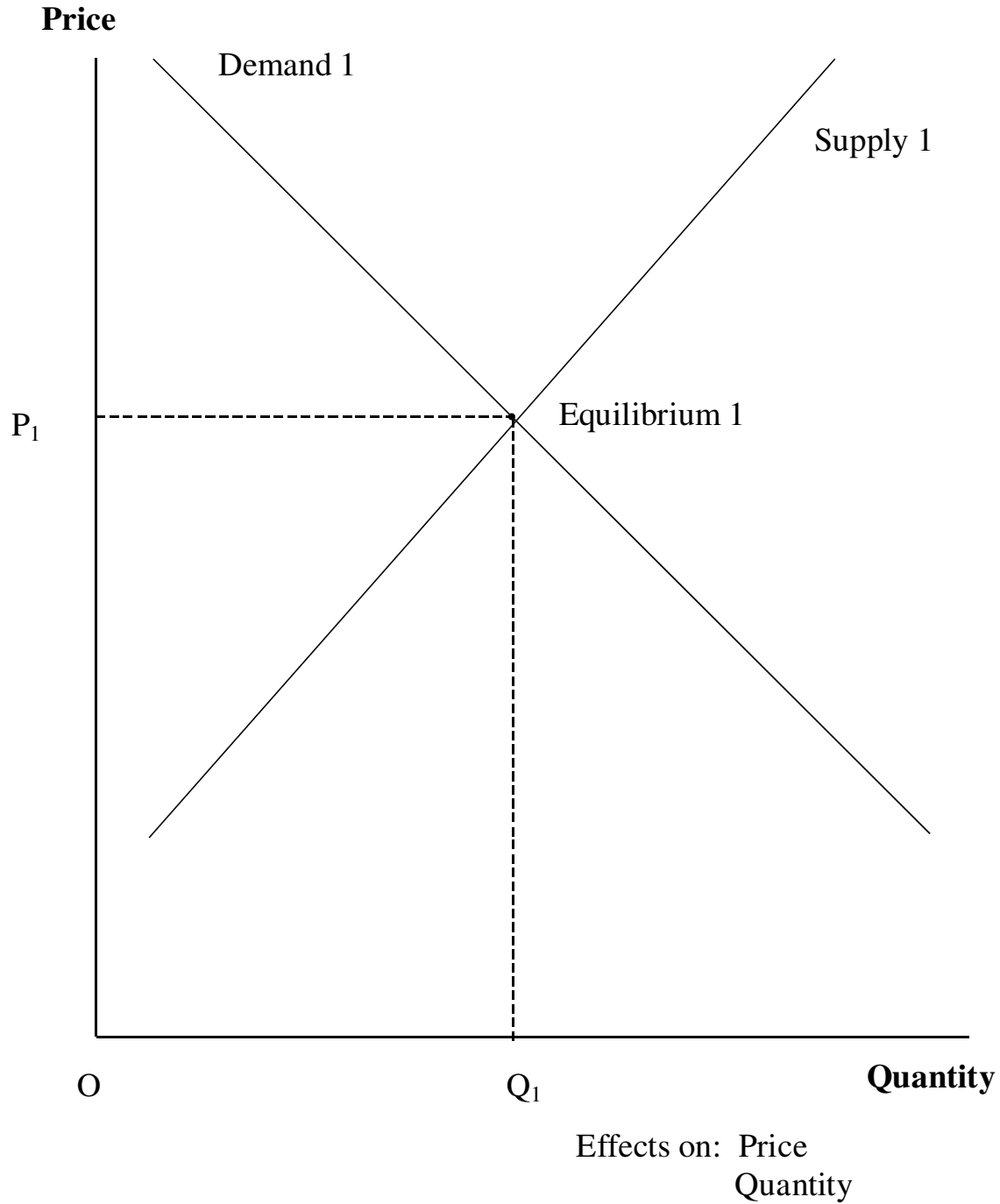
Water	Lemons	Sugar
Headphones	C.D. Player	C.D.

## Handout 1 (Side 2 Continued)



Visual 3

# Supply & Demand Base Graph



## **Visual 4**

### **Analyzing Events Using Supply and Demand Analysis**

#### **Group Directions:**

After the teacher has told you to begin, complete the following steps with your group. On your paper, write the answers to these questions:

1. Identify the market.
2. Decide whether supply or demand has changed.
3. Tell why it has changed. (Use the determinants.)
4. Draw and label the change of supply or demand on the diagram.
5. Identify the change of equilibrium price. (Label the new price)
6. Name any other markets that could be affected by this news event.

## Handout 2

1

**Historic Earthquake  
Destroys South American Coffee Crops**



2

**Wheat Prices Skyrocket  
Consumers Switch to Rice**



3

**Textile Workers Strike for Higher Wages in Asia**



4

**Secretary of Health and Human Services Announces an Increase of Soy in  
American Diets will Decrease Cancer Risks**



## Handout 2 (Continued)

5

**Two Major Computer Manufacturers  
Build 5 New Factories**



6

**Newest Jeans Fashion Craze:  
Lights on Seams and Sides**



7

**More Corn Changed Over  
to Wheat Production**



## Handout 2 (Continued)

8

**Car Manufacturer Announces Plans  
For SUV Price Increase in Two Months**



9

**Interest Rates on Mortgages to Rise**



10

**DVD Manufacturers  
Reduce Prices by 25%**



### Handout 3

### Headline Analysis

News	Market	Supply	Demand	Curve	Price	Reason (Determinants)
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						



**Handout 3 (Answers)****Headline Analysis**

News	Market	Supply	Demand	Curve	Price	Reason (Determinants)
1	coffee	down	=	Left	Up	Availability of land
2	wheat	=	Down	Left	Down	Change in price of substitute/complements
3	Textiles	Down	=	Left	Up	Availability of input (labor)
4	Soy	=	Up	Right	up	Increase in consumer tastes and preferences
5	Computers	Up	=	Right	Down	Availability of input (capital)
6	Jeans	=	Up	Right	Up	Change in consumer tastes and preferences
7	Corn	Down	=	Left	Up	Decrease in the number of sellers
8	crops	Down	=	Left	Down	Decrease in the number of sellers/change in the price of inputs
9	Cars	=	Up	Right	Up	Future price expectations
10	VCRs	=	Down	Left	Down	Prices of substitutes

## Handout 4

### On Your Own with Market Movements

My Group's Headline in Class Was:

\_\_\_\_\_

The product was: \_\_\_\_\_

*Other markets that would be affected by this event would be:  
(Identify three)*

1. \_\_\_\_\_

This would affect the product's:                      supply                      demand

The price of the product would go:                      up                      down

The reason would be: \_\_\_\_\_

2. \_\_\_\_\_

This would affect the product's:                      supply                      demand

The price of the product would go:                      up                      down

The reason would be: \_\_\_\_\_

3. \_\_\_\_\_

This would affect the product's:                      supply                      demand

The price of the product would go:                      up                      down

The reason would be: \_\_\_\_\_