

## **Demand and Supply—It's What Economics Is About!**

### **Lesson Plan**

#### ***Objectives***

**Upon completion of this lesson, students will be able to:**

1. list the determinants of demand and supply;
2. recognize which factors will cause demand curves or supply curves to shift; and
3. determine equilibrium using a demand/supply graph, and show the effects on price and quantity when equilibrium changes.

#### ***Economic Standards Addressed***

▪ **STANDARD 7**

**Description:** Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

**Content Keywords:** markets; prices; producers; consumers; relative prices; equilibrium price; quantity demanded; quantity supplied; exchange rate; shortage; surplus

▪ **STANDARD 8**

**Description:** Prices send signals and provide incentives to buyers and sellers. When supply or demand changes, market prices adjust, affecting incentives.

**Content Keywords:** prices; law of demand; law of supply; substitute goods; determinants of demand; determinants of supply; price ceilings; price floors

▪ **STANDARD 9**

**Description:** Competition among sellers lowers costs and prices and encourages producers to produce more of 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.

**Content Keywords:** competition; levels of competition

### ***Student Activities***

- Students will begin by reading the article “What is Driving Oil Prices?” in the spring 2005 issue of *Inside the Vault*.
- The teacher can use the “Teacher Notes” hand-out to explain how the forces of demand and supply set prices in a market economy.
  - Students will use the examples in the article to see how demand and supply set the price and output.
  - The teacher will display the overhead transparency masters or draw the graphs with the students to demonstrate graphical analysis of demand and supply.
- Students will complete the “Demand/Supply Activity Page” individually or in groups.
- Use attached “Answer Key” to check the students’ work.

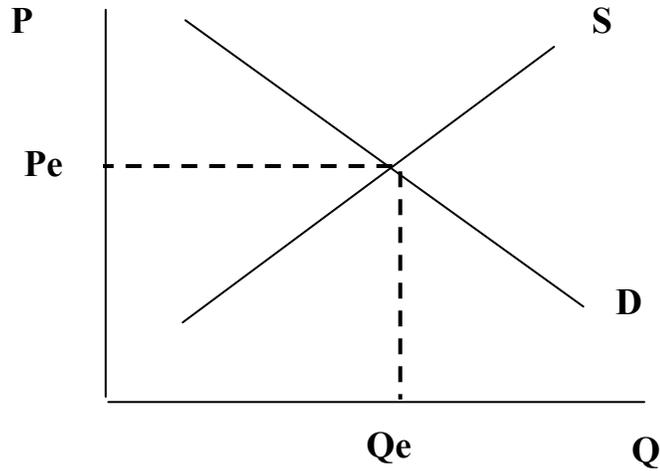
### ***Materials***

- Teacher notes on demand and supply
- Overhead transparency masters—for examples from the article
- Demand/supply activity page
- Answer key for activity page

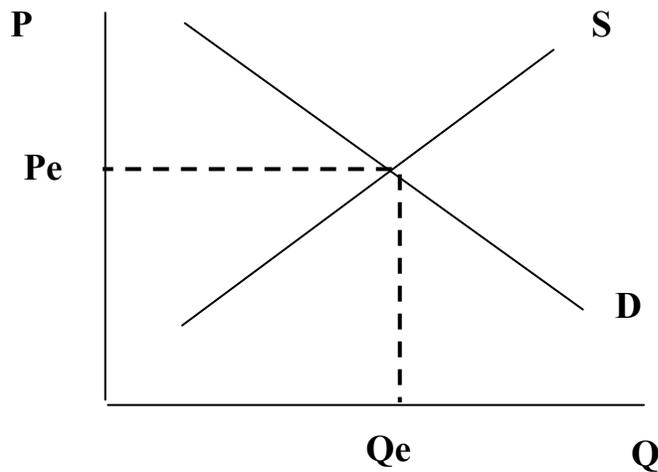
## Demand and Supply Activity Worksheet

On each of the demand/supply graphs provided, move the demand or supply curve to indicate the influence of these statements on the market for oil. Indicate the effect on price and quantity.

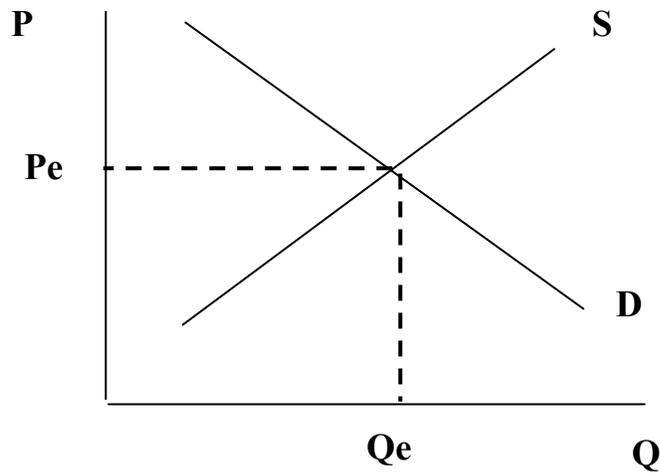
I. The rising popularity of hybrid vehicles.



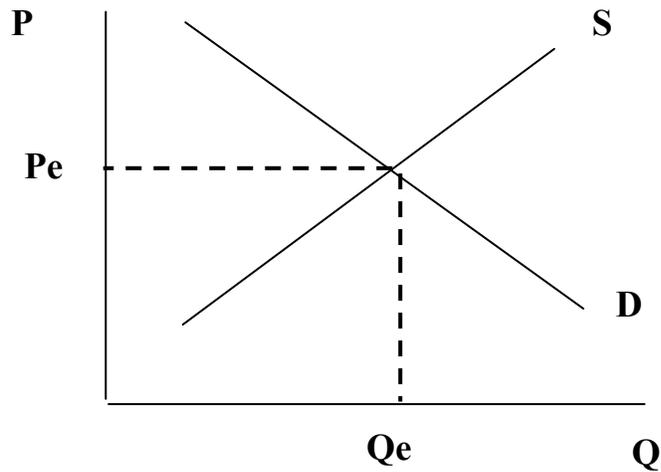
II. The increasing use of plastics to produce a wide range of products.



III. A slowdown in the production of crude oil worldwide.



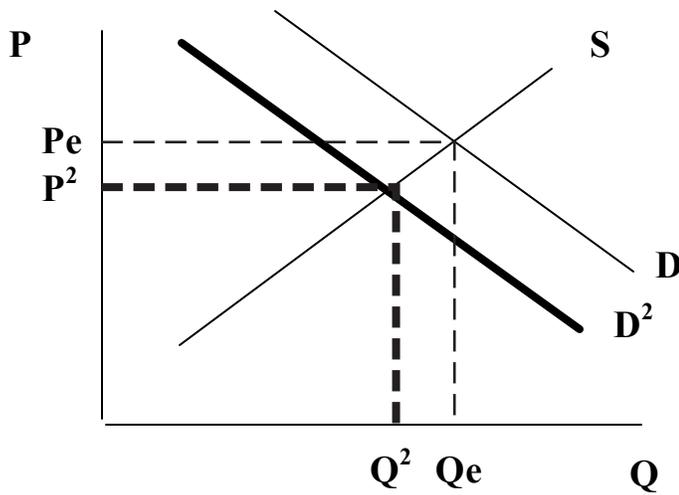
IV. Congressional action that allows oil-drilling operations in more areas of the Alaska preserve.



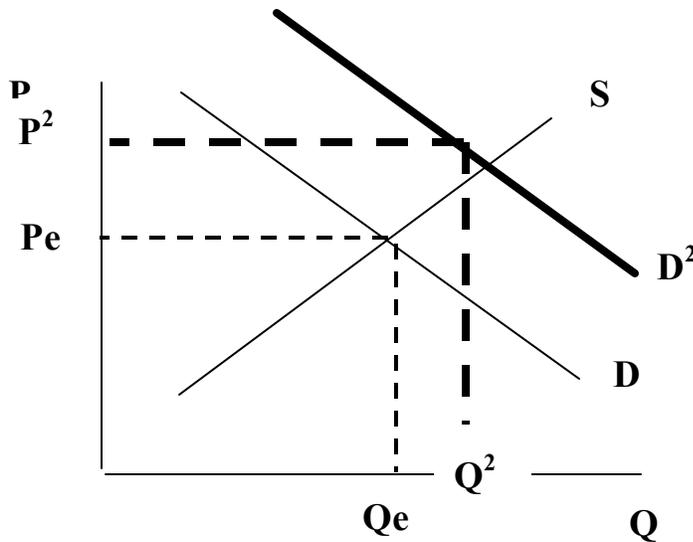
**Answer Key for Demand and Supply Activity Worksheet**

On each demand/supply graph provided, shift the demand or supply curve to indicate the influence of these statements on the market for oil. Indicate the effect on price and quantity.

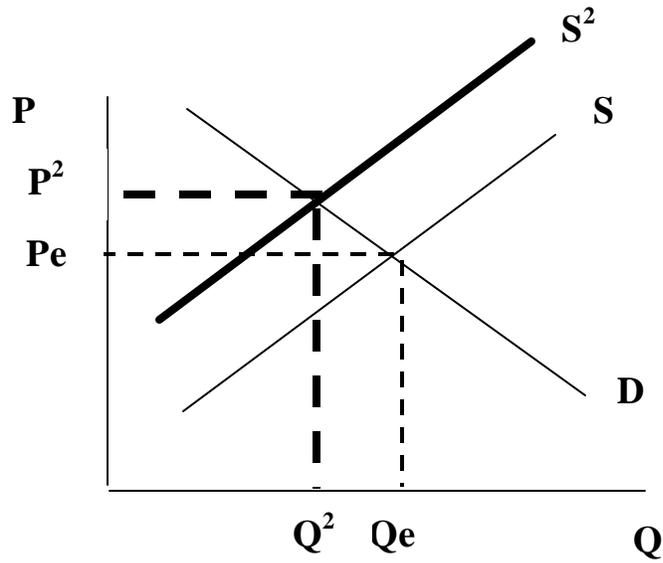
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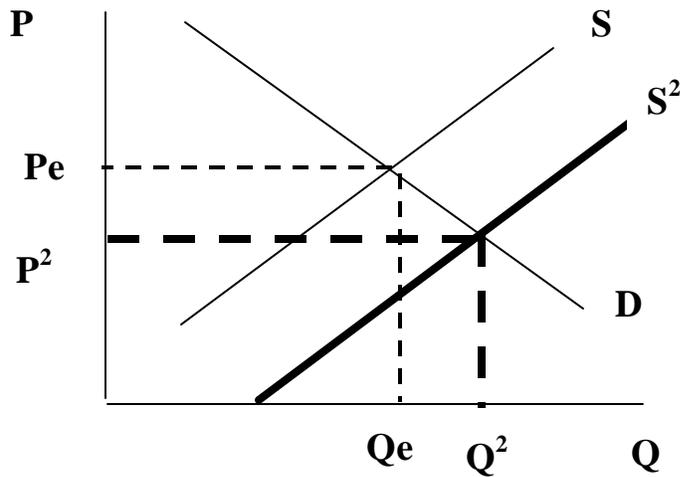
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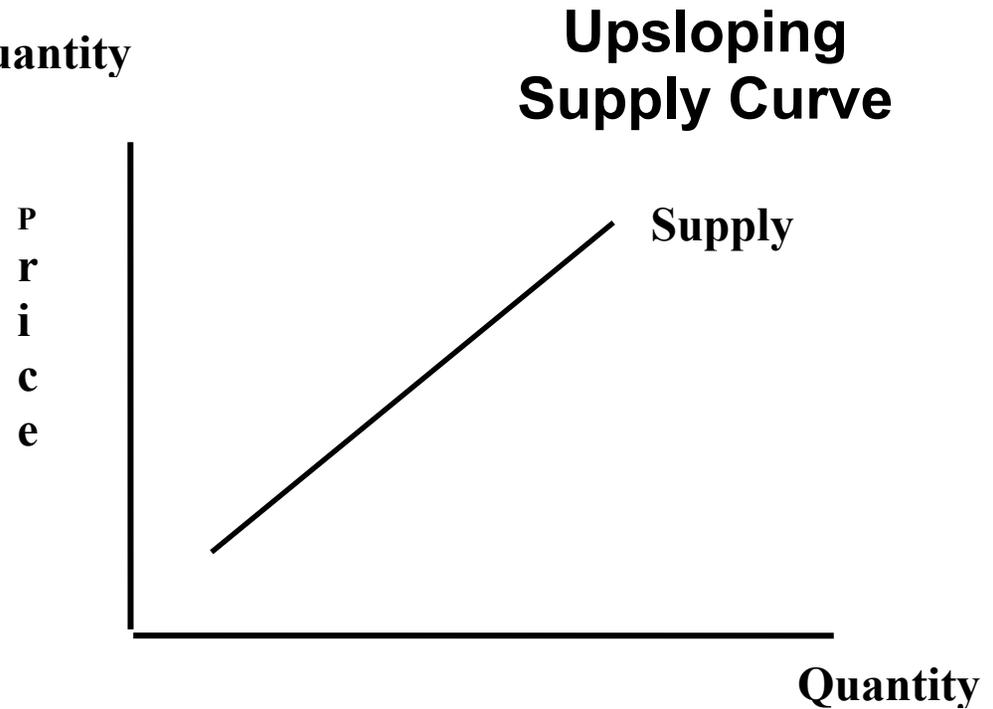
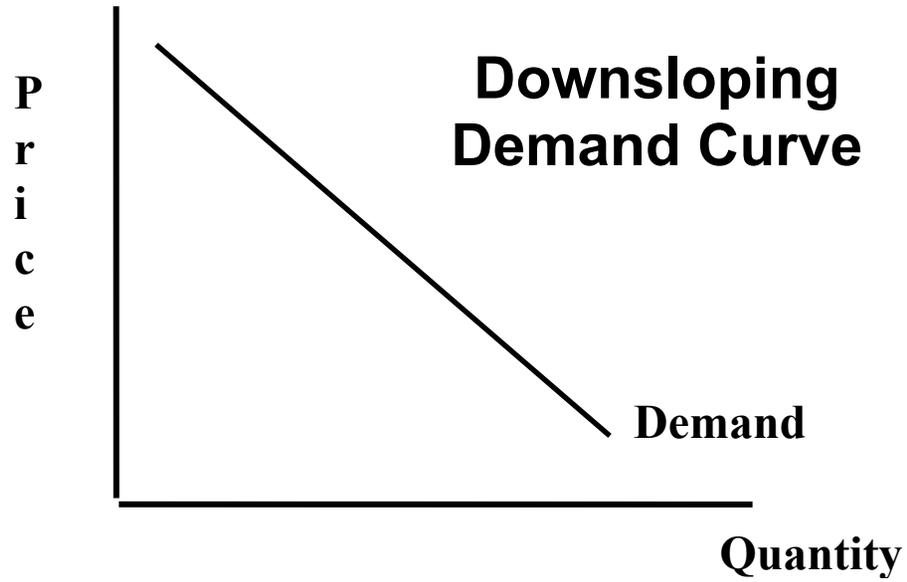


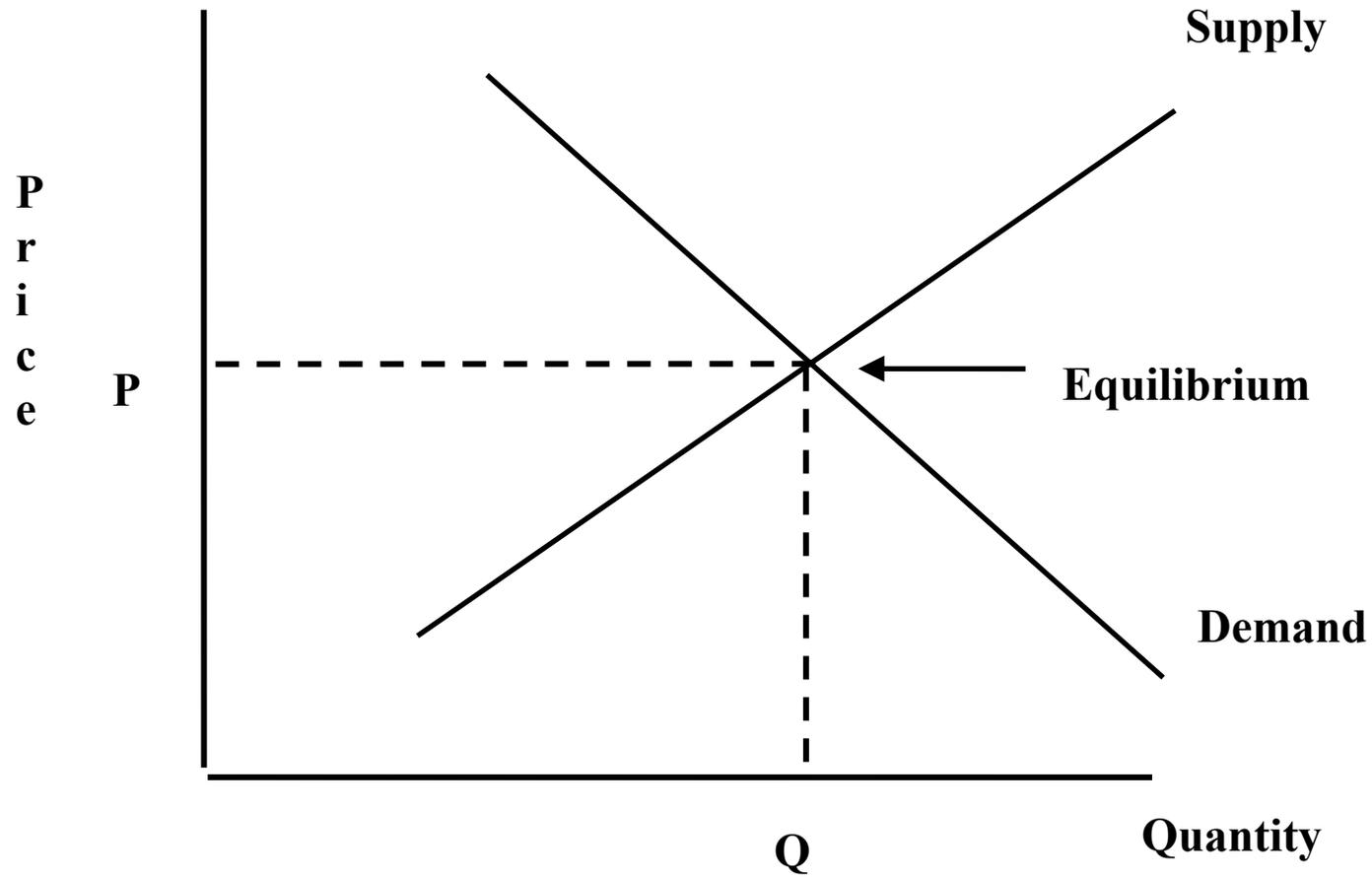
**III. A slowdown in the production of crude oil worldwide.**



**IV. Congressional action that allows oil-drilling operations in more areas of the Alaskan Preserve.**

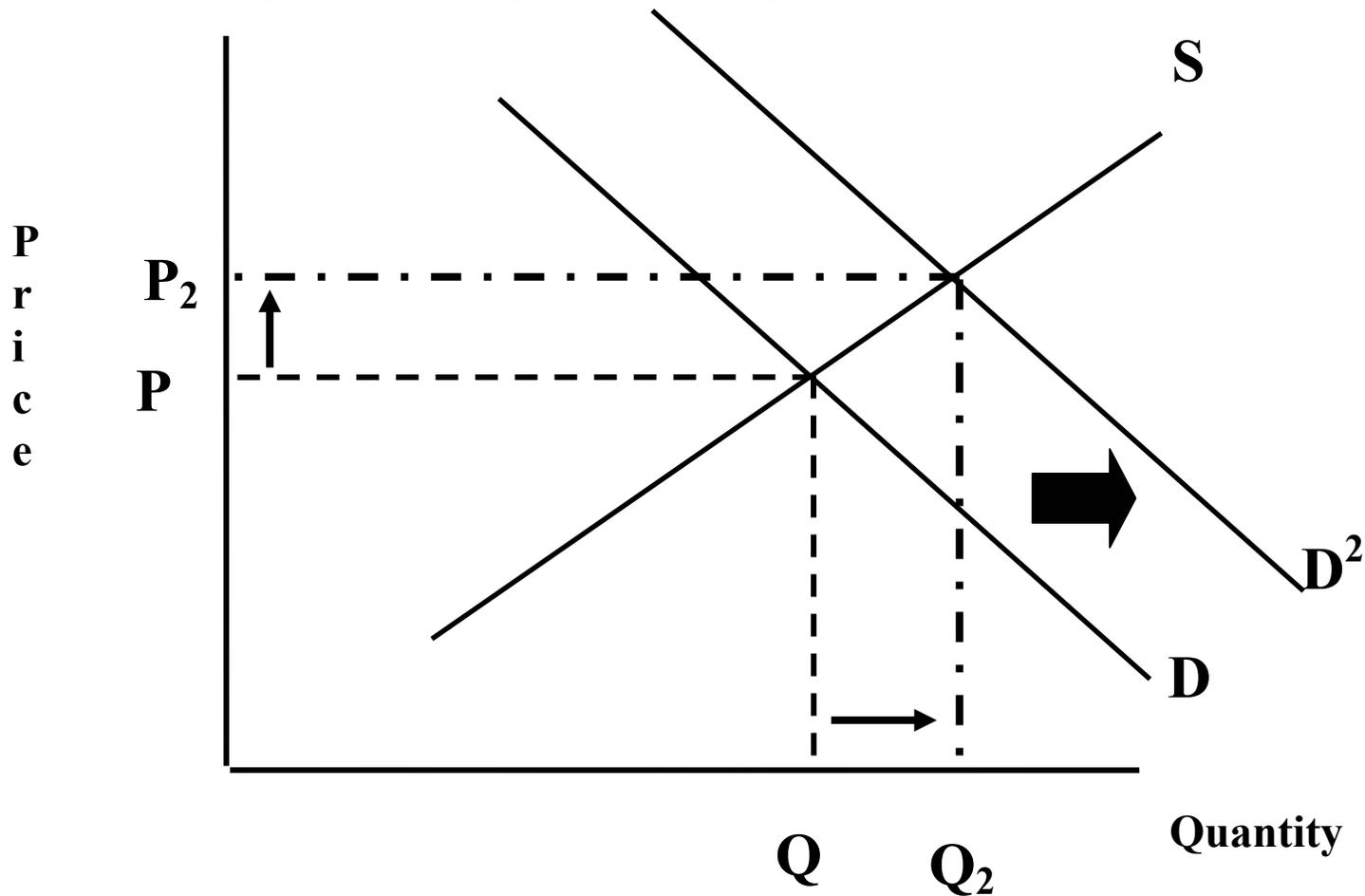






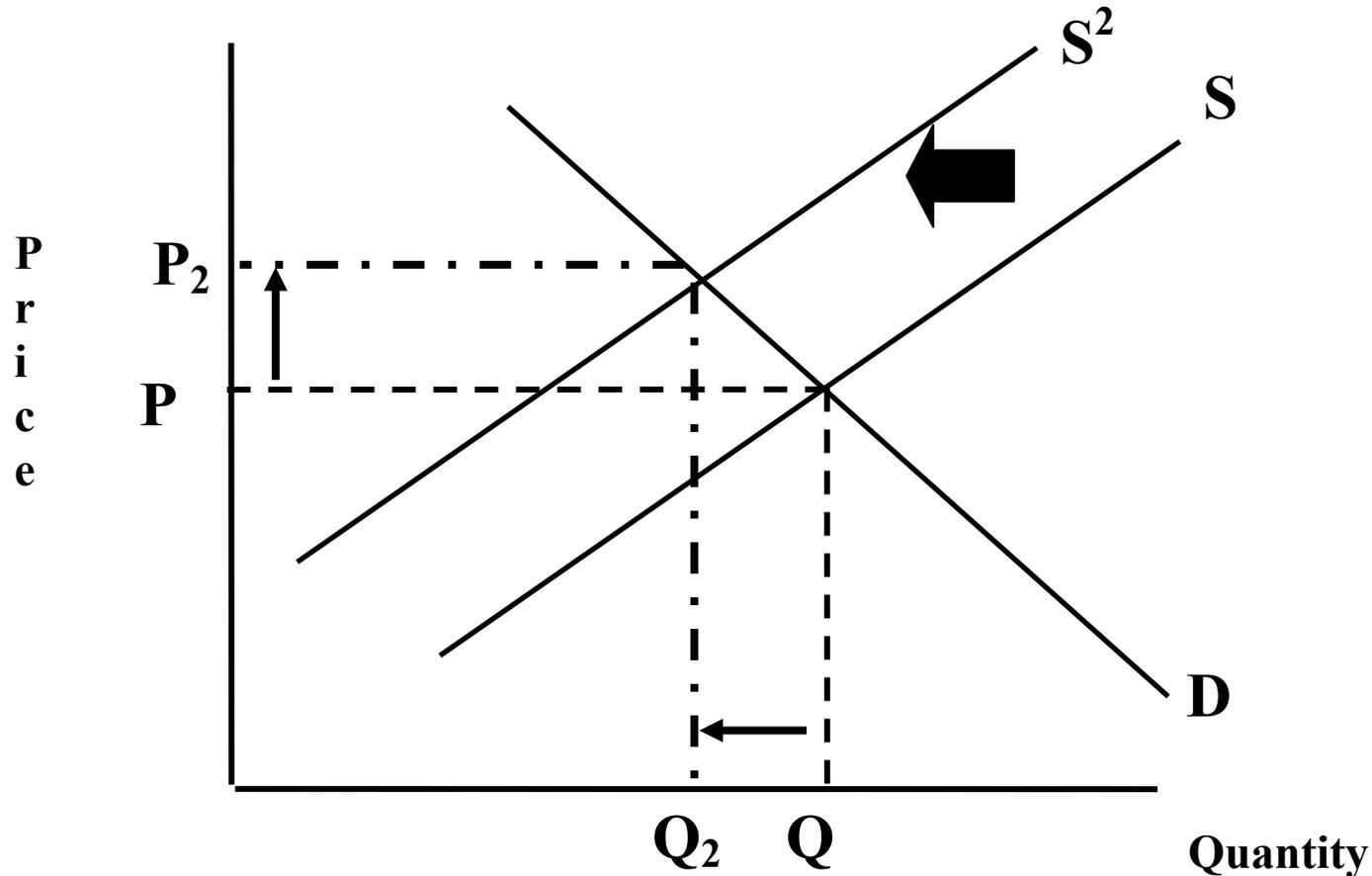
**Equilibrium in the Oil Market**

**Increased demand from China and India moves the demand curve to the right—both price and quantity of oil sold increase.**



**New Equilibrium in the Oil Market**

**Decreased supply** caused by turmoil in the oil-producing countries moves the supply curve to the left—the price increases, but the quantity of oil sold decreases.



**New Equilibrium in the Oil Market**

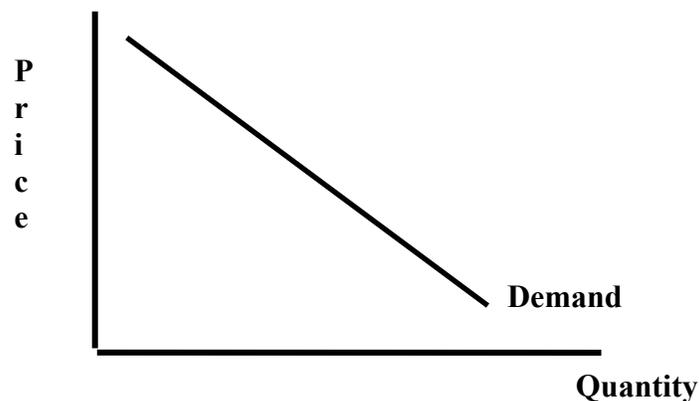
## Teacher Notes on Demand and Supply

### Overview

“How high will the price of gasoline go?” was the leading question on NBC’s Nightly News recently. The reporter talked about the forces of demand and supply that lie in the heart of economics. In a market economy, these forces driven by decisions of buyers and sellers set the price and quantity of a good or service. The interaction between the demanders and suppliers of goods and services creates the equilibrium in the market, where the price and the quantity are mutually acceptable.

### Demand

- Buyers exhibit both willingness and ability to purchase goods and services. Their willingness and ability to purchase may vary in response to price.
- Demand is a record of how people's buying habits change in response to price. It is a whole series of quantities that consumers will buy at the different price levels at which they will make these purchases.
- A demand curve is a device that shows the relationship between price and quantity in the market from the buyers’ viewpoint. The demand curve is downward sloping to the right because as the price increases, the quantity demanded decreases. This is an inverse relationship, which makes sense since buyers cannot buy as much of a good or service when the price increases.



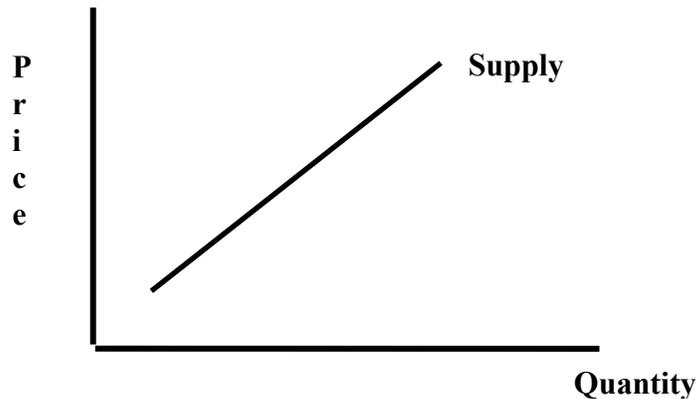
## *Inside the Vault—Oil*

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- The demand curve can shift to the right or left as conditions in the market change. Non-price determinants of demand cause these changes.
  - 1) **Income:** Having more or less to spend affects individual demand schedules. For most goods, an increase in income leads to a rightward shift in the demand curve. For “inferior” goods, an increase in income leads to a leftward shift, since these are usually low-quality items that people will avoid when they have more money to spend.
  - 2) **Taste and preferences:** The use that a good or service provides can easily change and affect demand. What was once perceived as useful or useless, stylish or ugly, healthy or dangerous now can become its opposite.
  - 3) **Complementary goods:** The linkage of products that "work" with each other can affect the demand for each.
  - 4) **Substitutes:** When the prices of or preference for a substitute changes, demand for both products will change.
  - 5) **Number of buyers:** Demand depends on the size of the market.
  - 6) **Price expectations of buyers:** Purchases may be postponed or rushed depending on the expectations of future price changes by the buyer.
  - 7) **Consumer information available:** Information about the product, the price, and the benefits or costs of a good or service may be scarce and may affect the demand for that good or service.

### **Supply**

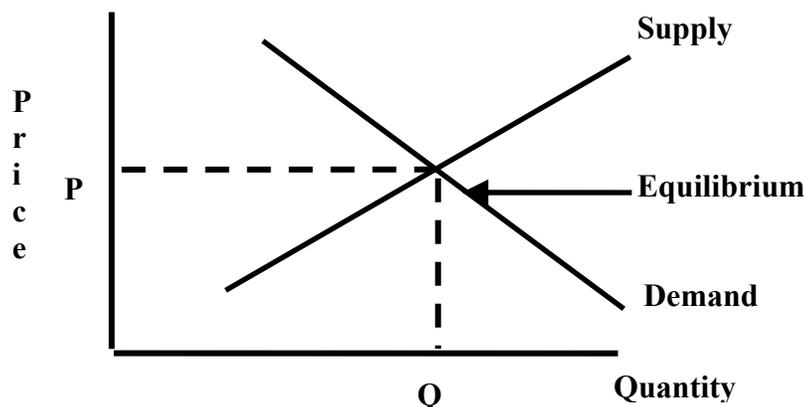
- Suppliers sell finished goods or services.
- Supply is the quantity of goods and services that businesses are willing and able to produce at different prices during a certain period of time.
- Supply is a record of how business's production habits change in response to price.
- A supply curve is a device that shows the relationship between price and quantity in the market from the sellers' viewpoint. The supply curve is upward-sloping, left-to-right, because as the price increases, the quantity supplied increases. This is a direct relationship, which makes sense because sellers will not offer as much for sale at lower prices since profit is their motive.



- The supply curve can shift to the right or left as conditions in the market change. Non-price determinants of supply cause these changes.
- 1) **Production costs:** This is the most important and the most typical reason for change. The price of ingredients, capital goods, rent or labor changes and moves the supply curve. New technology could make productions more or less expensive.
  - 2) **Prices of goods using same resources:** A demand for a specific resource is increased when other producers bid up the price in response to increased demand for their product.
  - 3) **Changes in technology:** New innovations in capital resources can change the average cost of production.
  - 4) **Taxes and subsidies:** Taxes increase costs; subsidies lower costs.
  - 5) **Future price expectations:** Producers' confidence in the future, often difficult to quantify or justify, affect the amount of a good or service that they're willing to produce.
  - 6) **Number of sellers:** Businesses enter and exit a market regularly based on a variety of reasons; so, changes in the number of producers will affect the supply of the product.
  - 7) **Time needed for production:** In a market period, no additional product can be produced quickly. So, in the short run only variable costs can be changed to enable producers to supply more of a product. In the long run, all costs are variable, and any amount of new resources can be added.

### Achieving Equilibrium

Where the demand and supply curves intersect is the equilibrium that determines the point at which price and quantity sold are determined.



- **Equilibrium** is the price toward which market activity moves.
- If the market price is below equilibrium, the individual decisions of buyers and sellers will eventually push it upward. (Scarcity of the good will cause its price to be bid up by those who are willing to buy the good.) If the market price is above equilibrium, the opposite will tend to happen.
- Depending on market conditions, immediately or in the future, price and quantity will move toward equilibrium as buyers and sellers intuitively and logically carry out the laws of demand and supply.
- The ability of the competitive forces of demand and supply to establish a price at which selling and buying decisions are consistent is called the **Rationing Function of Price**.

### ***How to Use the Lead Article***

*(See the overhead master for the graphical analysis).*

The new uses for oil in China and India are related to taste and preference and number of buyers as determinants for the greater demand. The demand curve will shift to the right, and a higher price and a larger quantity of oil sold will be the result.

The turmoil in oil-producing areas reduces the number of barrels of oil extracted over time, and the damage to oil wells in Iraq, as noted in the article, will have a long-run effect on the supply in the oil market. These two factors will move the supply curve to the left and cause the price to increase and the quantity of oil sold to decrease.

Speculation drives many markets, and oil is no exemption. The futures market is appropriately named since various individuals are “guessing” what will happen to the demand and supply for oil in the future. In some markets, speculation can cause havoc, increasing price and lowering output. When this speculative action gets out of control, a market can crash or, as an economist would say, “The bubble is burst.”

Other factors can also affect the oil market. Anything that increases production costs can move the supply curve, while changes that affect demand—such as the hurricanes, or America’s fascination with big trucks and SUVs—can move the demand curve.

For these reasons, there is pressure on the price of oil. Consumers can expect the prices to stay high unless new sources of oil are retrieved and processed and/or the demand for oil by Americans and the rest of the world is reduced.