Delaware Recommended Curriculum

This unit has been created as an exemplary model for teachers in (re)design of course curricula. An exemplary model unit has undergone a rigorous peer review and jurying process to ensure alignment to selected Delaware Content Standards.

Unit Title: **How Markets Work**

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Content Area: **Economics**
Grade Levels: **6-8**

Summary of Unit

In a market economy, prices of **goods and services** along with quantities demanded and produced continually change. Changes in supply and demand occur because of many factors. Understanding the market forces and situations that cause supply and/or demand to change is essential to understanding how prices are determined.

Numerous factors cause supply to change. Advances in technology lower production costs and increase supply. For example, robots replacing workers on assembly lines will reduce a manufacturer's labor costs, causing prices of goods and services to decrease. Another factor that affects supply is a change in the costs and availability of **productive resources** caused, for example, by such unexpected or natural events as drought, flood, war, and labor strikes. An increase in costs results in a decrease in available supply. Suppliers are willing and able to supply less at every price. A decrease in productive resources costs results in an increase in supply. Suppliers are willing and able to supply more at every price. Taxes, such as sales and excise taxes, also affect supply. An increase in taxes results in a decrease in supply, while **subsidies** will cause supply to increase. Another factor that affects supply is the number of sellers.

Changes in demand can be attributed to a number of factors. For grades 6–8, the factors or determinants include those from prior grades and changes in the price and availability of **substitute and complementary goods**. An increase in the market equilibrium price of a good will cause an increase in the demand for its substitute. A decrease in the market equilibrium price of a good will cause a decrease in the demand for its substitute. For example, consider the substitute goods chicken and fish. If the price of chicken increases and the price of fish remains the same, the demand for fish is likely to increase. If the price of chicken decreases and the price of fish remains the same, the demand for fish is likely to decrease. Complementary goods interact differently. For example, if the price of DVD players increases, the demand for DVDs will probably decrease. If the price of DVD players decreases, the demand for DVDs will probably increase.

By the end of 8th grade, students should be able to **graph supply and demand** curves from **supply and demand schedules** and predict how the curves will shift when any of the determinants or forces change and the impact that will have on equilibrium price and quantity.

This unit consists of 6 lessons. The unit scaffolds the understanding of how markets work.

Lesson 1 – Demand – This lesson begins with a simulation to 'hook' students. The unit has students working with vocabulary and examining how demand for a product is created.

Lesson 2 – Supply – This lesson looks at how a business makes decisions about production by looking at a T-Shirt Factory.

Lesson 3 – Demand and Supply – In this lesson the simulation that was conducted in Lesson 1 is repeated. The results from the simulation are graphed from data in a chart. The concept of market equilibrium and situations of surplus and shortage are introduced.

Lesson 4 – Determinants of Demand – Five determinants of demand are introduced and students analyze different scenarios to determine the impact of changes upon demand.

Lesson 5 – Determinants of Supply - Four determinants of supply are introduced and students analyze different scenarios to determine the impact of changes upon supply.

Lesson 6 – Changes in Markets and Prices – In this final lesson, students look at the Market for Chocolate and analyze the impact changes in determinants have on that market.

The transfer task has students look at a real court case, where the laws of supply and demand were used by the defendant to "win" the case. Students will look at both sides of the argument and show how economics is used to prove the case.

This unit is based on a series of lessons from the National Council for Economic Education which will provide students with the tools necessary to understand how prices of goods and services in a market economy are determined and how prices change.

The lessons of this unit were adapted from:

- "Focus: Middle School Economics," – published by the National Council on Economic Education, 1996
- "Mad Cattlemen Sue Oprah", EconEdLink online lesson, http://www.econedlink.org/lessons/index.php?lesson=15&page=teacher
- "Master Curriculum Guides in Economics: Teaching Strategies—5–6," published by the National Council on Economic Education
- "Strategies for Teaching Economics: Junior High School Level (Grades 7-9)," published by the Joint Council on Economic Education, 1991

Stage 1 – Desired Results

What students will know, do, and understand

Delaware Content Standards

- **Economics Standard One 6-8a:** Students will analyze how changes in technology, costs, and demand interact in competitive markets to determine or change the price of goods and services.

Big Ideas

- Market Economy
- Supply and Demand

Enduring Understandings K–12

Students will understand that:

- Due to scarcity, individuals, families, communities, and societies as a whole must make choices in their activities and consumption of goods and services.
- Goods, services, and resources in a market economy are allocated based on the choices of consumers and producers.
- Effective decision making requires comparing the additional costs of alternatives relative to the additional benefits received.

Essential Questions

- Under what market conditions does price change?
  - How is demand changed when income, taste, number of buyers, and prices of other goods change?
  - How does supply influence prices of goods and services in a market economy?
  - How is supply affected when input costs, number of producers, and taxes change?

Knowledge and Skills

Students will know…

- Concept vocabulary: demand, supply, price, quantity, increase, decrease, surplus, shortage equilibrium price, input costs, productive resources, intermediate goods, stockholder, market clearing price.
- Prices are determined by an interaction of supply and demand.
- Prices change in a market economy because of changes in resource availability, technology, demand, and markets for other goods.

Students will be able to…

- Graph supply and demand curves.
- Predict how prices in a market economy change given a specific market change.
- Explain how prices change using content-appropriate vocabulary.

Stage 2 – Assessment Evidence

Evidence that will be collected to determine whether or not Desired Results are achieved

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This summative assessment is a transfer task that requires students to use knowledge and understandings to perform a task in a new setting or context. The assessment and scoring guide should be reviewed with students prior to any instruction. Students should do the assessment after the lessons conclude.

Essential Question

- Under what market conditions does price change?

Prior Knowledge	Now that you have learned how prices in a market system are determined and how prices change, you will apply that knowledge to a real situation that occurred in 1996.
Problem	Oprah Winfrey is a successful television talk show host. In 1996, her guest was Howard Lyman, who talked about the beef industry. After the show, cattle prices decreased to near 10-year lows causing cattle ranchers to lose money. Price of beef (per 100 pounds) went from $61.90 to mid-$50. Cattle ranchers blamed their losses on the statements made by both Oprah Winfrey and Howard Lyman on the show and sued Winfrey and Lyman for $12 million dollars. Winfrey and her lawyers believed there were other reasons behind the price decrease. (Civil Case # 2:97-CV-147-J, United States Federal District Court, Northern District, Amarillo Division – Texas Beef Group, etc. v. Winfrey and Lyman)
Role	Your role will be to help create a defense for Winfrey and Lyman. You will evaluate and explain how factors, other than the television show, might have caused the price of beef to decrease. Be sure to consider supply and demand factors.
Product	Your defense might be a poster with graphs and explanations, a PowerPoint presentation, a deposition from an "expert" witness, or closing statement to the judge and jury, an editorial or letter that explains the market changes, or another format if your teacher approves of your idea.
Criteria for an Exemplary Response	Your defense should include: • A list of factors that would affect the market for beef. • An explanation on how each factor would change the price .of beef. • Summary of your findings based on your explanations.
Resources	• Official Transcript of Oprah Winfrey Show, April 15, 1996 http://vegsource.com/lyman/oprah_transcript.htm • News Article, "Texas Cattlemen v. Howard Lyman and Oprah" http://vegsource.com/lyman/lawsuit.htm • See Addendum T-1 for Task • Selected News Articles from EconEdLink Online Lessons http://www.econedlink.org/lessons/index.cfm?lesson=EM15 • See Addendum T-2 for Task

Rubric

Scoring Category This defense provides …	Score Point 3	Score Point 2	Score Point 1
an identification of factors that would affect the market for beef.	**Full or comprehensive list** of all factors: including technology, markets, other goods, and costs.	**Most factors included** with only one or two factors not mentioned.	**Few factors included** in defense.
an explanation of each factor that would change the price for beef.	**Valid and relevant** explanation given for the factors identified.	**Valid** explanation of how factors change the market price **but may not be relevant** to the situation.	**Few or missing explanations.**
a summary of findings based on your explanations.	Complete summary **with a strong and convincing conclusion**.	**Complete summary.**	Summary is **vague without appropriate explanation**.
use of content-appropriate vocabulary in order to demonstrate understanding.	Content-appropriate vocabulary is **well developed and evident**.	**Some evidence** of content-appropriate vocabulary.	**Minimal evidence** of content-appropriate vocabulary.

10 to 12 points = Above the standard
7 to 9 points = Meets the standard
4 to 6 points = Below the standard

Student Self-Assessment and Reflection

> When students are required to think about their own learning, to articulate what they understand and what they still need to learn, achievement improves.
> – Black and William, 1998; Sternberg, 1996; Young, 2000.

How a teacher uses the information from assessments determines whether that assessment is formative or summative. Formative assessments should be used to direct learning and instruction and are not intended to be graded.

The Checks for Understanding at the end of each instructional strategy should be used as formative assessment and may be used as writing prompts or as small group or whole class discussion. Students should respond to feedback and be given opportunities to improve their work. The rubrics will help teachers frame that feedback.

An interactive notebook or writing log could be used to organize student work and exhibit student growth and reflection.

Stage 3 – Learning Plan

Design learning activities to align with Stage 1 and Stage 2 expectations

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Lesson 1

Essential Question

- How does price affect demand?

Background

Demand is defined as the different quantities of a resource, good, or service that consumers are willing and able to purchase at various prices during a specific time period. Decisions by consumers depend on their income, tastes and fads, number of buyers, and the price of other goods. Generally, the lower the price of something, more of it will be purchased. Conversely, the higher the price of something, less of it will be purchased.

Instructional Strategies

Strategy 1 – Gathering Information/Building Background
Simulation

Students will participate in a market simulation in which they are the consumers (buyers) and producers (sellers) in a market economy for oil. Explain that this unit will focus on the forces of buyer's demand and seller's supply and that the unit will refer to this simulation throughout.

Note to Teacher: There are many market simulation lessons and any one of those lessons can be substituted for the oil market simulation. This activity will be repeated later in the unit (Lesson 3), but with an extended application of graphing. This activity helps to "hook" students to the concept of markets.

Create oil and money cards per instructions on Addendum 1–1A. Make seller and buyer cards different colors for easier sorting.

Explain to students that they will be learning about markets and the best way to learn about markets is to experience how a market works. Explain that this is an activity that will simulate a real market with buyers and sellers.

Distribute one oil card to one-half of the students in the class and a money card to the other half. Explain the market procedure as follows:

> Some of you are buyers and some of you are sellers. Each of you has instructions on the card you were given. Buyers are told how much they can spend, and sellers are told the minimum value of their oils for sale. In this simulation, you will seek out either a buyer or seller with whom to make a deal. Try to get the best deal that you can. Once two of you have agreed on a price, bring your cards to the teacher, and state the amount you agreed upon. The teacher will give you each a new card and you should return to the market to try to make another deal.

Record student agreements on a chart, such as in Addendum 1-1B. Facilitate several rounds of 5 minutes each. At the end of each round, show students the results of the round. Students will begin to realize that there is an equilibrium price or a price at which most deals are made. At the end of three rounds ask:

Check for Understanding

- Who are the participants in a market? [Buyers and sellers.]
- What do buyers try to do? [Buy at the lowest price.]
- What do sellers try to do? [Sell at the greatest price.]
- At which price are buyers and sellers most often in agreement? [Refer to frequency chart created during the simulation.]

Strategy 2 – Gathering Information/Building Background
Vocabulary Continuum and Sort

Have students work in pairs to learn about the vocabulary necessary to understand the Interaction of Supply and Demand. The following vocabulary will be the focus for this unit:

- Demand
- Supply
- Price
- Quantity
- Increase
- Decrease
- Shortage
- Surplus
- Market Equilibrium

Have each pair of students identify where they would place each vocabulary word on the continuum (see Addendum 1-2A).

Vocabulary Word or Concept	I have never heard this word.	I have heard this word but not sure what it means.	I know the definition of this word.	I know this word and can give an example.

Review the terms with students. Sample responses include:

- Demand – The amount consumers are willing and able to buy at various prices.
- Supply – The amount producers are willing and able to provide at various prices.
- Price – The sum or amount of money.
- Quantity – The amount of a good or service.
- Increase – To make or become greater.
- Decrease – To make or cause to become less.
- Shortage – When demand is greater than supply, less than expected.
- Surplus – When supply is greater than demand, excess.
- Market Equilibrium (both Equilibrium Price and Equilibrium Quantity) – The price* and quantity at which the quantity demanded equals the quantity supplied.
  *Equilibrium Price is also called Market Clearing Price.

Note to Teacher: Students should be familiar with the vocabulary associated with demand as the term is first introduced in Grades 4–5 in Economic Standard 1.

Vocabulary Sort - Make one copy of Addendum 1-2B and Addendum 1-2C for each pair of students. Working in pairs, have students cut/separate the definitions on Addendum 1-2C and match each definition to each vocabulary word.

Check for Understanding

Display a headline of a recent economic event involving a change in demand, supply, price etc., or use the following:

Decrease in Demand Forces Local Hardware Store to Close

Explain to students that economists analyze consumer behavior, including demand for goods and services. Ask students to think about the headline using the terms from Strategy 2 above, and then write a sentence using the content-appropriate vocabulary from Strategy 2 that describes in economic terms what is happening. For example, using the headline above, a student might write, "*The hardware store had a surplus because demand decreased*."

Strategy 3 – Application
Simulation

Note: In order to examine how changes in technology, costs, and demand interact in markets to determine or change the price of goods and services, only one change at a time is examined. For example, if the price of one brand of soda changes, then we examine that single change in terms of price and quantity. Prices of other brands may change, but for instructional purposes, only the single change is examined. This is the law of *ceteris paribus*, which is a Latin term meaning that other factors remain unchanged. *Ceteris paribus* is commonly used as an assumption when conducting a wide variety of economic analyses. By holding everything else constant, the *ceteris paribus* assumption makes it possible to identify the cause-and-effect relation between two factors.

Introduce the following activity by explaining that students will participate in a demonstration that will show how demand for a product is determined.

For this activity you will need 4 different types of chewing gum of similar flavor and size.

Distribute 4 different packs of chewing gum (or alternative good) to 4 student volunteers. Ask each of the 4 volunteers to come up with a short (one-minute) commercial for the gum that they were given. Allow each student to present their "pitch" for the gum. Direct each student that will share a commercial to stand in a separate area in the classroom. Different corners work well.

After the 4 students have shared their commercial, tell the rest of the students in the class that they are to assume that the 4 sellers have additional packs to sell and that they now are going to simulate buying the gum. Tell students that they each are to pretend they have $3 to spend on gum, and that each pack of gum can be bought for $1 a pack. Reinforce that each student only has $3 to spend. Allow students to travel to the different corners in the room and place "orders" for the gum of their choice. Students that shared the commercial record the number of packages of gum that are requested or demanded by the class.

After all students have made their choices, have the 4 volunteer gum sellers reveal the total number of their packs demanded. Announce which package of gum was in the greatest demand or most popular.

Ask the student with the most popular gum what he/she would do if he/she found out how popular the gum was. Prompt the student to say, "Increase the price of the gum." Then explain that everyone who purchased the popular gum now has a choice:

1. Purchase the same gum for $1.50 per package; purchase another gum for $1.
2. Do nothing.

Record the number of packages demanded at $1.50 in the chart (Addendum 1-2D). Repeat the scenario using prices of $2, $2.50, and $3. Record student responses on Addendum 1-2D.

Pair students together. Ask one student to turn to his or her partner and respond to the question:

- As the price of the gum increased, what happened? [Demand decreased or fewer packages of gum were demanded.]

Now have students graph the demand curve using the data from the activity. A blank graph is attached as Addendum 1-2E. Teachers may want to pre-label the price and quantity axis. Show a model to help students acquire this skill.

Debrief: Ask students:

- How did personal tastes affect demand?
- How did the number of buyers affect demand?

Check for Understanding

- ❖ How does consumer behavior change when prices change? Explain your answer with an example.

Rubric

2 – This response gives a valid change with an accurate and relevant explanation.

1 – This response gives a valid change with an inaccurate, irrelevant, or no explanation.

Examples might include:

- When I wanted gum, I tried to pay less for it so that I could buy more.
- When the price was too high, I did not pay it.

Lesson 2

Essential Question

- How does price affect supply?

Background

Supply is defined as the different quantities of a resource, good, or service that producers are willing and able to offer for sale at various prices during a specific time period. Decisions by suppliers of how much to produce reflect the cost of producing the product. As price increases, the amount of products or services producers are willing and able to make is likely to increase. Conversely, as price decreases, the amount producers are willing and able to make is likely to decrease.

Instructional Strategies

Strategy 1 – Gathering Information/Building Background
Round Robin

Have students work in groups of three to quickly list the productive resources needed to make a school T-Shirt. Once an adequate number of productive resources has been determined by each group, have students separate the resources into categories: natural resources, human resources, capital goods, and intermediate goods.

Note to Teacher: The concept of productive resources is first introduced through the K–3 benchmarks, and students should require minimal review of terms. Students may refer to intermediate goods or goods that are pre-manufactured and used as an input. For a T-Shirt, intermediate goods include thread, cloth, etc. If students do suggest intermediate goods, it is important to recognize the productive resources that go into making the intermediate goods, such as cotton.

Debrief: Ask students to share their category lists and correct any errors.

Check for Understanding

- ❖ As a T-Shirt producer, you have just purchased large quantities of cotton at a price considerably less than before. How might this cotton purchase affect your production of T-Shirts? Explain your answer.

Rubric

2 – This response gives a valid effect with an accurate and relevant explanation.
1 – This response gives a valid effect with an inaccurate, irrelevant, or no explanation.

Strategy 2 – Extending and Refining
Think – Pair - Share

Distribute Addendum 2-2A to students. Ask students to read the handout then work with a partner to complete the chart of production options.

Answer Key

Option Number	Number of shirts per hour	Total labor per hour	Total labor per shirt (Divide Total Labor per hour by Number of shirts per hour)	Material cost per shirt	Other costs per shirt	Cost per shirt	Price per shirt
A	10	$100.00	$10.00	$4.00	$3.00	$17.00	$20.00
B	32	$400.00	$12.50	$4.00	$3.00	$19.50	$20.00
C	50	$80.00	$1.60	$4.00	$9.00	$14.60	$20.00

Debrief or Summarize: It is important for students to identify what input costs or variable changes with each option. Option A has no changes to the current production. With Option B, the number of laborers or human resources has increased which increases the output. With Option C, the number of laborers has decreased, and the number of machines increased (change in capital goods). When faced with a production decision, a producer will analyze the input costs and make changes. Each option is further evaluated from different perspectives in the strategy that follows, Lesson 2, Strategy 3 – Application.

Check for Understanding

- Which option do you think Tamira should follow? Explain your answer.

Any option will earn a profit. Each option has merit. The validity of a student's response hinges upon his or her explanation.

- Option A – More employees than option C and a profit.
- Option B – Greatest number of employees but small profit amount.
- Option C – Few employees and greatest profit.

Rubric

2 – This response gives a valid option with an accurate and relevant explanation.
1 – This response gives a valid option with an inaccurate or irrelevant explanation.
Note: Because all three options are valid, do not score a response with only an option and no attempt at an explanation as a score of 1.

Strategy 3 – Application
Jigsaw Activity

Divide the class into 3 (2 groups per role), equally sized groups to work on Addendum 2-3A. Distribute one role to each group. Have each group then share with the class which option that role would prefer and why.

Roles/options:

- Tamira – more than likely would want the greatest profit
- Current workers – want to keep their jobs
- Consumers – want to pay the lowest price

Addendum 2-3A Answer Cues:

- Tamira Ramirez/any option, but Option 3 gives the greatest profit
- Current workers/Option 1 or 2 – jobs intact
- Consumers/any option – the market price of the T-Shirt has not changed

Check for Understanding

- ❖ Why would Tamira's production decision change if the market price of T-Shirts decreased to $15? Explain your answer.

Rubric

2- This response includes a valid reason with a relevant and an accurate explanation.
1- This response includes a valid reason with an irrelevant or inaccurate explanation.

Sample response: If the market price of T-Shirts decreases, Tamira will produce fewer T-Shirts or in this case choose Option C.

Lesson 3

Essential Question

- How are prices of goods and services determined in a market economy?

Background

The market (price) system answers the basic economic questions of what, how, and for whom to produce in the marketplace. The demand decisions of consumers and the supply decisions of producers interact to establish prices and quantities exchanged. Demand and supply analysis is useful to explain how a price system guides these decisions.

Market prices and the quantities exchanged are determined by the forces of demand and supply. At prices where the quantity supplied exceeds the quantity demanded, a **surplus** will result. Barring outside interference in the market mechanism, prices will drop so consumer and producer decisions align with one another. As prices fall, the quantity demanded will increase and the quantity supplied will decrease, thereby eliminating the surplus. At prices where the quantity demanded is greater than the quantity supplied, a **shortage** will exist.

Barring outside interference in the market mechanism, prices will tend to increase so that consumer and producer decisions align with one another. As prices rise, the quantity demanded will decrease and quantity supplied will increase, thereby eliminating the shortage.

Surpluses and shortages seldom remain in a freely operating market since market prices tend to change automatically to eliminate them. The market is driven toward a price where the quantity demanded is equal to the quantity supplied. At this price, a market equilibrium is achieved. There are no surpluses or shortages. The quantity bought is identical to the quantity produced and offered for sale, so the market has been cleared. This price can persist in the market since there are no reasons for the price to rise or fall. Economists refer to the price where quantity demanded equals quantity supplied as the **equilibrium price or the market-clearing price**. Graphically, this point is represented by the intersection of the demand and supply curves.

From, "Market Madness," Master Curriculum Guides in Economics: Teaching Strategies 5-6, pages 57-62.

Instructional Strategies

Strategy 1 – Gathering Information/Building Background
Think – Pair – Share

Note to Teacher: This strategy has been previously introduced to students with Lesson 1. This strategy should be repeated but with additional graphing and questioning. Students participate in a market simulation in which they are the consumers (buyers) and producers (sellers) in a market economy for oil.

Have students recall the Oil Market simulation from Lesson 1. Ask students the following questions and think-pair-share with a partner:

- What were the roles in the Oil Market simulation? [Buyers and Sellers]
- What was the goal of buyers? [Buy at the lowest price]
- What was the goal of sellers? [Seller at the greatest price]

Tell students, "We looked at the price where most buyers and sellers agreed on a price. This point where buyers and sellers most often agree is known as 'Market Equilibrium'."

Write or display the term "Market Equilibrium" and explain that the next lessons in this unit will focus on how prices of goods and services are determined in a market economy.

Have students recall the chewing gum simulation in Lesson 1. Ask, "What happened to the price of most demanded gum in the simulation?" [It increased] "How did consumers react when the price of gum changed?" [They wanted fewer packs at the increased price; they bought a different kind of gum, etc.]

Ask students to recall the T-Shirt activity in Lesson 2. Ask, "What should Tamira do if T-shirts now can be sold for $25 a shirt instead of $20?"

Using a thumbs-up (increase), thumbs-down (decrease), or thumbs-horizontal (no change/equal) technique, have students respond to the following:

- As price decreases, the quantity demanded (increases – thumbs up).
- As price decreases, the quantity supplied (decreases – thumbs down).
- As price increases, the quantity demanded (decreases – thumbs down).
- As price increases, the quantity supplied (increases – thumbs up).

Tell students that they will learn more about when there is market equilibrium and when there is not market equilibrium (surplus or shortages).

Check for Understanding

- ❖ Describe a time when you waited in line to purchase a product. Explain the market situation surrounding the purchase.

Rubric
1 – This response includes a valid explanation of a market.

Strategy 2 – Extending and Refining
Simulation

Repeat Lesson 1-1 (Oil Market with students). Have students graph the Oil Market using the data on Addendum 3-2A and answer questions on Addendum 3-2B.

Reinforce the terms "surplus" and "shortage" by having students analyze the Oil Market graph at prices other than the market equilibrium price.

Have students find the price of $70 on the graph. Ask which is greater, quantity demanded or quantity supplied?

Next, have students locate the price of $50 on the graph. Ask which is greater, quantity demanded or quantity supplied?

Ask students to explain the concepts of shortage and surplus using the terms demand and supply.

- Shortage – When the quantity demanded is greater than quantity supplied.
- Surplus – When the quantity supplied is greater than the quantity demanded.

Ask students to describe a time when they experienced a shortage or surplus. Shortages often occur when a new product is introduced, like a new game system. When surpluses exist, stores will hold sales and decrease the price of goods.

Check for Understanding

- Complete Addendum 3-2B

Answer cues:

1. Buyer or seller
2. Buyer – when they did not have much money
3. Seller – when the oil were expensive
4. Price – approximately $58, quantity-24
5. shortage, increase
6. equilibrium, remain the same
7. surplus, decrease
8. shortage, increase
9. surplus, decrease

Strategy 3 – Application

Use an online lesson, *Those Golden Jeans* at
http://www.econedlink.org/lessons/index.php?lesson=557&page=teacher

Many opportunities for students to graph market data can be found in the online lesson, *Those Golden Jeans*. Addendum 3-3A is a reproduction of the assessment for the lesson. Students should analyze information about the market for DVD players without graphing the data. If necessary, students can graph the data using Addendum 1-2E.

Check for Understanding (found on **Addendum 3-3A**)

- At what price should ACE Electronics sell one DVD? Use what you know about markets to explain your answer.

Rubric
2- This response gives a valid price with an accurate and relevant explanation.
1- This response gives a valid price with an accurate, relevant or no explanation.

Sample Cue: ACE should sell the DVD for $279. At this price, the quantity demanded equals the quantity supplied.

- Have students read Zezima, Katie, "Demand and Price Are Falling for Lobster," *New York Times*, September 1, 2008, and answer the questions on Addendum 3-3B. Article is reproduced on Addendum 3-3B.
  http://www.nytimes.com2008/09/02/us/02lobster.html?ref=us#

Lesson 4 – Determinants of Demand

Essential Questions

- What causes demand to change?
- When demand changes, what are the effects on price and quantity?

Background

In a market economy, prices of **goods and services** along with quantities demanded and produced continually change. Changes in supply and demand occur because of many factors. Understanding the market forces and situations that cause supply and/or demand to change is essential to understanding how prices are determined.

For grades 4–5, the factors or determinants that cause a change in demand are changes in consumers' income, taste and fads, and a change in the number of consumers in a market (from Clarifications Document for grades 4–5).

Changes in demand can be attributed to a number of factors. For grades 6–8, the factors or determinants include those from prior grades and changes in the price and availability of **substitute and complementary goods**. An increase in the market equilibrium price of a good will cause an increase in the demand for its substitute. A decrease in the market equilibrium price of a good will cause a decrease in the demand for its substitute. For example, consider the substitute goods chicken and fish. If the price of chicken increases and the price of fish remains the same, the demand for fish is likely to increase. If the price of chicken decreases and the price of fish remains the same, the demand for fish is likely to decrease. Complementary goods interact differently. For example, if the price of DVD players increases, the demand for DVDs is likely to decrease. If the price of DVD players decreases, the demand for DVDs is likely to increase.

Note to Teacher: An interactive online version of this lesson can be accessed at *Bubble-Up Soda – Online Interactive Lesson*
http://econedlink.org/lessons/index.cfm?lesson=EM550 student version
http://econedlink.org/lessons/index.cfm?lesson=EM550&page=teacher teacher version

Instructional Strategies

Strategy 1 – Gathering Information/Building Background
Journal Writing

Share the following headline with students. Ask students "How will this new discovery affect the market for soda?"

SCIENTISTS PROVE THAT PEOPLE WHO DRINK AT LEAST 4 CANS OF SODA PER DAY LIVE LONGER

Once students have shared their explanations, explain that students will learn about the ways that demand for goods and services can change.

Distribute copies of Reading 4-1 Determinants of Demand to each student. Have students write one example for each determinant of demand in their journal.

Check for Understanding

- How is the market price and quantity affected if people demand less of a product? Support your answer with an example.

Rubric
3 - This response gives a valid effect for both price and quantity with an accurate and relevant example.
2 - This response gives a valid effect for either price or quantity with an accurate and relevant example.
1 – This response gives a valid effect for either price or quantity with an inaccurate, irrelevant, or no example.

Answer Cue: When people demand less of a product, both the price and quantity demanded will decrease.

Strategy 2 – Extending and Refining Graphing

Students will graph the demand curve for Bubble-Up Soda and changes in demand and label the curve as **D_1**. Reproduce Addendum 4-2A for students.

Have students plot prices in $.05 increments and quantity by 2s.

- What does quantity demanded mean? (The amount of a good or service people are willing and able to buy at a particular price, other things being equal.)
- What is the quantity demanded at a price of $1 (5) and $.25 (20)?
- As price decreases, what happens to the quantity demanded? (increases)
- As price increases, what happens to the quantity demanded? (decreases)
- What does the demand curve look like? (It is downward sloping.)
- Why is the curve downward sloping? (Because as the price goes down the quantity demanded goes up and as price goes up the quantity demanded goes down.)

Next have students graph additional Bubble-Up Soda demand curves, labeling **D_2** and **D_3** (see Addendum 4-2B).

Share with students Addendum 4-2C (a very important activity for purposes of this standard), and have students use the spaces in Columns 2 and 3 to explain changes in each of the Demand Determinants (column 1) that might Increase (Column 2) and Decrease (Column 3) demand. Write scenarios to support both increases and decreases given a change in factors of demand.

Differentiation Strategy – Give students the scenarios in the Answer Key and have students identify where in the chart the scenarios belong. Students should jigsaw or work in pairs or small groups to complete the task.

Note to Teacher:
Share with students the following mnemonic device: **IRDL** the Turtle Knows How to Shift Curves

- **I**ncrease to the **R**ight
- **D**ecrease to the **L**eft

An **I**ncrease in demand for a product will shift the curve **R**ight. A **D**ecrease in demand will shift the curve to the **L**eft. Memorizing this device may be very helpful to students and the mnemonic device holds for changes in supply as well.

Checks for Understanding

Students should complete the following in writing. Then as a class ask students to give a "thumbs up" if demand would increase or a "thumbs down" if demand would decrease.

- Schools across the country stop using textbooks. What will happen in the market for textbooks? What determinant of demand caused this change? (Demand will decrease because there will be fewer consumers in the market.)
- Doctors have excellent results using vitamin E to cure acne. What will happen in the market for vitamin E? What determinant of demand caused this change? (Demand will increase because there is a change in consumer tastes and preferences.)
- A law is passed guaranteeing students ages 10 and older a minimum allowance of $10 per week. What will happen in the market for compact discs? What determinant of demand caused this change? (Demand will increase because consumer income increases.)
- The price of Bola Cola (a substitute for Bubble Soda) decreases. What will happen in the market for Bubble Soda? What determinant of demand caused this change? (Demand for Bubble Soda will decrease because the price of a substitute good decreases.)

Strategy 3 – Application
Collaborative Partners

Have students work in pairs to complete one or more of the tasks below. A demand graph should be used to support responses.

1. Ask students to write headlines illustrating each of the five demand shifters. Write the best examples with markers on colored paper to create a newspaper front-page bulletin board. Write short news stories to fit under each headline.
2. The current group of adolescents represent the "Baby Bounce." As attention moves away from the Baby Boomers, many manufacturers are recognizing the buying power of teens. Ask students to share a good or service that teens purchase with their partners. Instruct them to describe the product, and graph it illustrating the determinants of demand.
3. Instruct students to look through newspapers and magazines for articles and ads related to the determinants of demand. Students should describe which determinant of demand would impact the market for the product. (Famous athlete advertising a product: change in tastes and preference; article about need for more skilled nursing care: change in the number of consumers in the market; article about cancer-causing agent: change in consumer tastes and preferences; article about increase in taxes: change in consumer incomes.)
4. Have students design a mall of the future that caters to the tastes and preferences of teens. Their drawing or floor plan should be labeled to reflect any trends they anticipate.

Check for Understanding

- In a market economy, how do prices and quantities of goods and services change as demand changes? Support your answer with an example.

Rubric

2-This response gives a valid explanation with an accurate and relevant example.
1-This response gives a valid explanation with an inaccurate, irrelevant or no example.

Sample Cue: Accept reference and examples of any of the determinants of demand.

- ❖ When income, taste, number of buyers, and prices of other goods change, how is demand affected?

Sample Answer Matrix: (**Note to Teacher**: in most cases when a factor of demand increases, then demand increases. Changes in the price of complements will be the exception to the rule. Ask students to provide examples of when a change in each factor affected the price and quantity of a good.)

Factor	**Increase**	**Decrease**	**Student Examples**
Income	Demand Increases	Demand Decreases	
Taste/Fads	Demand Increases	Demand Decreases	
Number of Buyers	Demand Increases	Demand Decreases	
Price of Complements	Demand Decreases	Demand Increases	
Price of Substitutes	Demand Increases	Demand Decreases	

Lesson 5 – Determinants of Supply

Essential Questions

- What causes supply to change?
- When supply changes, what are the effects on price and quantity?

Background

In a market economy, prices of **goods and services** along with quantities demanded and supplied continually change. Changes in supply and demand occur because of many factors. Understanding the market forces and situations that cause supply and/or demand to change is essential to understanding how prices are determined.

For grades 4–5, the factors or determinants that cause a change in supply are change in the cost of production (natural, human, and capital resources), the change in number of sellers in the market, or government actions (from Clarifications Document for grades 4–5).

Teacher Tip: A common misconception among students is that when a factor causes supply to change, the result is a change in price. That is false. When a factor causes supply to change, the result is a change in supply.

Numerous factors cause supply to change. Advances in technology lower production costs and increases supply. For example, robots replacing workers on assembly lines will reduce a manufacturer's labor costs, causing prices of goods and services to decrease. Another factor that affects supply is a change in the costs and availability of **productive resources**, caused, for example, by such unexpected or natural events as drought, flood, war, and labor strikes. An increase in costs results in a decrease in available supply. Suppliers are willing and able to supply less at every price. A decrease in productive resources costs results in an increase in supply. Suppliers are willing and able to supply more at every price. Taxes such as sales and excise taxes also affect supply. An increase in taxes results in a decrease in supply, while **subsidies** will cause supply to increase. Another factor that affects supply is the number of sellers.

Instructional Strategies

Strategy 1 – Gathering Information/Building Background
Journal Writing

Share the following headline with students. Pair students together to graph how price and quantity of soda would change based on the headline.

NEW INVENTION CAN MAKE TWICE AS MANY T-SHIRTS IN ONE HOUR AS OLD MACHINES

Ask: Does this event affect demand or supply? [This is a change in supply.]

Follow-up questions should include: How does this event affect demand or supply? How does the graph help explain that effect?

Tell students they will learn about the ways that the supply for goods and services can change.

Distribute copies of Reading 5-1 Determinants of Supply to each student. Have students write one example for each determinant of supply in their journal.

Check for Understanding

- When suppliers react to a decrease in the costs of inputs, what is the expected effect on market equilibrium (price and quantity)?

Rubric
2- This response gives a valid effect for both price and quantity. [Price increases; quantity decreases.]
1- This response gives a valid effect for either price or quantity.

Strategy 2 – Gathering Information and Building Background
Scenario Completion

Have students recall Lesson 2 and Tamira's T-Shirts. Tell students that in Lesson 2, students evaluated different production methods and subsequent profits. This lesson will focus on production costs and inputs.

Ask students to name the major categories of factors of production—natural resources, intermediate goods, human resources, and capital goods.

A change in price of factors of production will cause a change in the quantity supplied. Other factors, called determinants, also affect supply. This activity will introduce those determinants to students.

Have students complete Addendum 5-2A in groups or pairs. Students should read each scenario and predict how a supplier would react. Have students share headlines with other students in the group for group approval or correction.

Check for Understanding

- Students will complete Addendum 5-2B with examples of headlines. In groups, students should write newspaper headlines that reflect changes in the supply of homes. For example:

> Hurricane Damages Forests That Produce Building Lumber

Strategy 3 – Extending and Refining
Graphing Supply and Demand

Like changes in demand, changes in supply can also be graphed. Tell students that they will graph supply and changes in supply for a DVD player manufacturing company.

Give each student Addendum 5-3A and have them read the scenario in order to graph the supply curve.

Note to Teacher: Explain to students that, in the chart, a **change in Capital Goods is viewed as a Change in Technology**. This can be reviewed as separate changes. For example, a specific change in Capital Goods might be that a machine is no longer being produced because of safety issues. A specific change in Technology might be the replacement of one capital good for another such as hand-held scissors versus a machine that stamps out pieces.

In Addendum 5-3A, each determinant of supply is presented so students see various ways that supply is affected. For example:

- Scenario 1 – Increase in productive resources
- Scenario 2 – Decrease in number of producers
- Scenario 3 – Increase productive resources
- Scenario 4 – Decrease productive resources
- Scenario 5 – Increase in cost via increase in taxes

Have students refer to the graph when responding to the following questions:

- At what price would the DVD company no longer be willing to produce DVDs? [$10]
- What production change would you suggest if the price changed from $15 to $20? [Double production]
- What is the relationship of price and quantity supplied? (Law of Supply) [As price increases, the quantity that producers are willing and able to produce increases.]
- Would the DVD company be willing to produce 10,000 DVDs per day? Why or why not? [The DVD company would be willing to produce 10,000 DVDs per day if the price were $40 or more.]

Check for Understanding

❖ How is supply affected when input costs, number of producers, and taxes change?

Rubric

3 – This response gives a valid effect for input costs, number of producers, and taxes.
2 – This response gives a valid effect for two of the three factors (input costs, number of producers, and taxes).
1 – This response gives a valid effect for only one of the three factors (input costs, number of producers, and taxes).

Sample Answer Matrix: (**Note to Teacher** – in most cases when a factor of supply increases, then supply decreases. An exception is with the number of producers—as more and more producers enter the market, the quantity supplied will increase. Taxes are considered a cost to the producer and will add to the production costs.

Factor	Increase	Decrease
Input Costs	Supply Decreases	Supply Decreases
Number of Producers	Supply Increases	Supply Decreases
Taxes	Supply Decreases	Supply Increases

Strategy 4 – Application Simulations

Remind students of **IRDL*** to help students make the proper shift in supply on the graphs.

Distribute Addendum 5-4A to students. Have students read each of the six situations described on the handout, and then write a response to the question and make a graph:

- Assuming that everything else remains the same, how would the following situations affect supplies at the DVD manufacturing company?

Differentiation Strategies: students can jigsaw or work in pairs to complete the task.

Answer Cues –

SITUATION 1:

The workers in your factory have negotiated a new contract that requires the company to pay the cost of health care insurance. [Cost of production increases, so supply will decrease.]

SITUATION 2:

Several companies that manufactured movies on VHS tape are now starting to manufacture DVDs instead. [Increase in the number of sellers will cause supply to increase.]

SITUATION 3:

The price of plastic cases has gone up considerably. [Cost of inputs or production costs increases, so supply will decrease.]

SITUATION 4:

You have purchased a new printer that uses less ink and electricity than your old printer. [Cost of inputs (Capital Goods) or production costs decreases, so supply will increase.]

SITUATION 5:

The federal government has placed an Entertainment Tax on all movies, including DVDs. [Taxes are a government action that acts like a cost of inputs. In this case supply will decrease.]

Check for Understanding

- Identify a determinant of supply and give an example of the market impact.

Rubric

2-This response gives a valid determinant with an accurate and relevant example.
1-This response gives a valid determinant with an inaccurate, irrelevant, or no example.

Lesson 6 – Changes in Markets and Prices

Essential Question

- Under what conditions do prices and quantities change?

Background

In a market economy, prices of **goods and services** along with quantities demanded and produced continually change as a result of the interaction of supply and demand. These changes occur because of many factors. Understanding the market forces and situations that cause supply and/or demand to change is essential to understanding how prices are determined.

In this lesson, students analyze different situations of market and price changes. The focus of this lesson is to reinforce the determinants of supply and the determinants of demand and the impact on markets when these changes occur.

Instructional Strategies

Strategy 1 – Gathering Information/Building Background
Learning Circles

Tell students that they have explored many changes in markets that cause price and quantity to change.

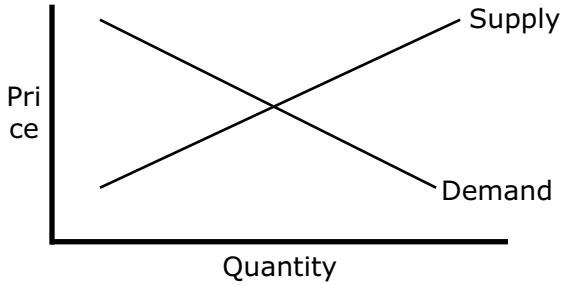
Have pairs of students prepare a graphic representation of the different factors that can influence demand and supply in a market economy. On paper or with a software program, have students include in their representation the following:

- **Demand Factors:** income, taste/fads, number of buyers, price of complements, and price of substitutes
- **Supply Factors:** cost of productive resources, technology, taxes/subsidies, and number of sellers

Have students include examples for each of the changes. The most effective representations will include examples of when a factor causes an increase and a decrease.

Ask students to think about what a graph of the market for chocolate bars would look like. You may want to share a graph of the market for chocolate bars as follows:

Chocolate Bar Market



Make one copy of Addendum 6-1A and separate into individual cards. Assign one situation to one-half of the students. These students will form a circle in the middle of the room or some other place that has enough room for students to move. (You may want to complete this part of the lesson by creating two separate circles if the class is very large.) Have the remaining students pick a partner in the inner circle and form an "outside" circle of students facing their partners in the "inside" circle.

Have the students with the situation cards begin by reading the situation card. Their partner will make a prediction about what will happen when this occurs. Responses should include:

1. Identification of which curve shifts – supply or demand
2. Impact upon price – increase or decrease
3. Impact upon quantity – increase or decrease

The student from the "inside" circle that reads the card now gives the card to the partner in the "outside." The inside circle moves either clockwise or counter clockwise, so that the students have a new partner. Using the information on their "new" cards, the "outside" circle will read the question, and the "inside" circle will respond to the topic with their partner. The exchanging of cards and circle rotation continues until each student has had an opportunity to respond to each situation.

Check for Understanding

In the summer of 2008, the price for a gallon of gasoline was over $4 per gallon. By November 2008, the price of gasoline fell to under $2 per gallon.

- ❖ Why might the price of gasoline have changed? Explain your answer.

Rubric

2 – This response gives a valid change with an accurate and relevant explanation.
1 – This response gives a valid change with an inaccurate, irrelevant, or no explanation.

Sample Cues:

Supply – Supply would have to increase in order for price to decrease. This may have been due to:

- Increase in technology – better methods for drilling, refining, distribution
- Decrease in input costs – lower wages of workers, decrease in price of crude oil
- Increase in the number of sellers – price wars with additional producers
- New oil fields discovered – November 9, 2008, new discovery of Bakken Shale Formation in North Dakota believed to contain 4.3 billion barrels of oil to be extracted

Demand – Demand would have to decrease in order for price to decrease. This may have been due to:

- Change in substitutes – increase sales of gasohol or other substitute fuel
- Change in complements – increase use of hybrid cars that use less fuel
- Change in use (taste) – drivers decrease use by carpooling, planning trips more efficiently, reducing the number of miles driven on trips, or eliminating pleasure trips

- Decrease of income – workers taking pay cuts, workers becoming unemployed, consumers with fixed incomes have less income due to stock market prices falling

Check for Understanding

❖ Have students complete Addendum 6-2.

Answer Cues:

1. A
2. B
3. B
4. D
5. A
6. D
7. D
8. **Score Point 2 -** This response gives a valid reason with an accurate and relevant explanation.
   Score Point 1 - This response gives a valid reason with an inaccurate, irrelevant, or no explanation.
9. **Score Point 2** – This response gives a valid cause with an accurate and relevant explanation.
   Score Point 1 – This response gives a valid cause with an inaccurate, irrelevant or no explanation.

Tip for the Teacher:

- Free online games in which students use their knowledge of supply and demand: Lemonade Stand: http://www.ae4rv.com/games/lemonade.htm
- A three-part lesson centered on Henry Ford and productivity can serve as a complement to this lesson. http://www.econedlink.org/lessons/index.php?lesson=EM668&page=teacher
- A lesson that is available online from the Federal Reserve can be accessed at: http://stlouisfed.org/education_resources/assets/lesson_plans/05ITV_OilPrices.pdf. This lesson is published by the Federal Reserve for grades 9-12, but meets Delaware Economics Standard 1 for 6-8.

Resources

- EconEdLink – Website sponsored by the National Council on Economic Education. Online lessons and teacher tips. http://www.econedlink.org
- "Focus: Middle School Economics," published by the National Council on Economic Education, 1996
- "Master Curriculum Guides in Economics: Teaching Strategies - 5-6," published by the National Council on Economic Education.
- "Strategies for Teaching Economics: Junior High School Level (Grades 7-9)," published by the Joint Council on Economic Education, 1991
- "VIRTUALeconomics," CD-Rom with over 1,200 economics lessons. Each Delaware school district has at least one copy of this resource. Copyright 2005 by the National Council on Economic Education.

The following websites are grade-level appropriate for understanding Supply and Demand:

- Lemonade Stand – http://www.ae4rv.com/games/lemonade.htm
- Drawing Supply and Demand Graphs – http://www.producingohio.org/lesson/draw.html
- Simple Supply and Demand Explanation – http://socialstudiesforkids.com/articles/economics/supplyanddemand1.htm
- Bubble-Up Soda – Online Interactive Lesson
  - Student version: http://econedlink.org/lessons/index.cfm?lesson=EM550
  - Teacher version: http://econedlink.org/lessons/index.cfm?lesson=EM550&page=teacher

Differentiation

- Students are encouraged to work with others in pairs and groups. Students will connect and respond to market situations based on their own experiences and interests. Check for Understanding and other activities are often open ended.
- Research-based instructional strategies are used throughout the unit.
- The Stage 2 task allows students to select the method of presentation according to their individual comfort level and learning styles.
- Lesson 6, Strategy 1 – Students may wish to use graphic representation software to complete part 2 of Lesson 6, Strategy 1.

Content Connections

Content Standards integrated within instructional strategies

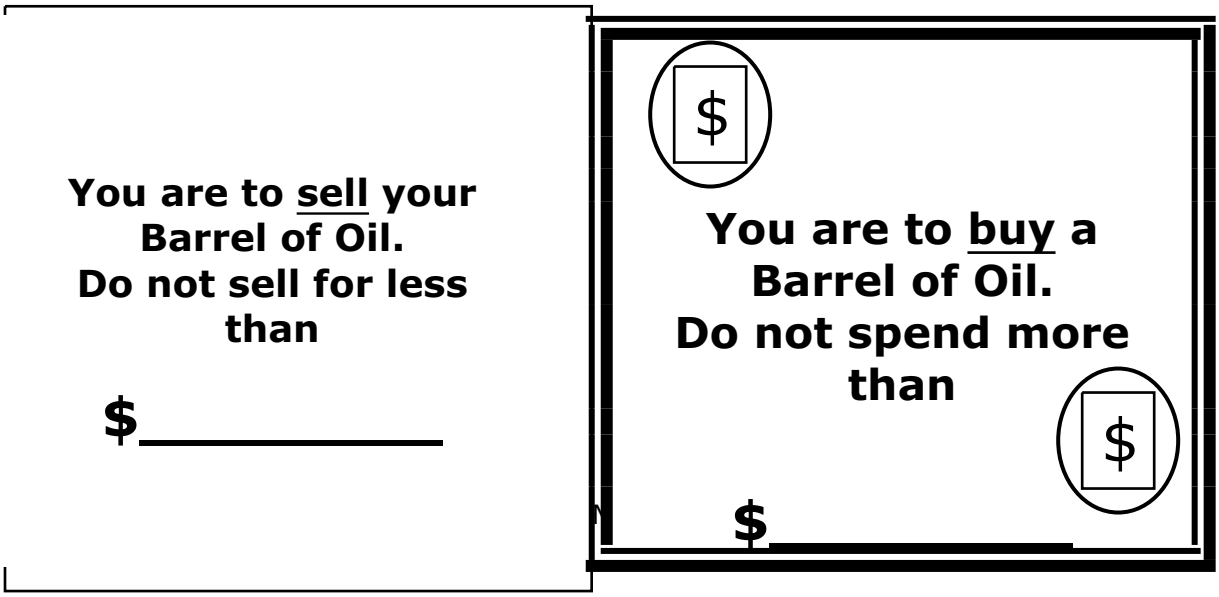
Social Studies – Economics Standard Two 6-8a: Students will analyze the role of money and banking in the economy, and the ways in which government taxes and spending affect the functioning of market economies.

English Language Arts –Standard 1: Students will use written and oral English appropriate for various purposes and audiences.

English Language Arts - Standard 3: Students will access, organize, and evaluate information gained by listening, reading, and viewing.

Mathematics - Standard 2 (5–8) – Algebraic Reasoning: Students will develop Algebraic Reasoning and an understanding of Patterns and Functions by solving problems in which there is a need to recognize and extend a variety of patterns; to progress from the concrete to the abstract using physical models, equations, and graphs; to describe, represent, and analyze relationships among variable quantities; and to analyze, represent, model, and describe real-world functional relationships.

Addendum 1-1A



Sell Cards (Oil)		Buy Cards (Money)	
Number of Cards	Amount	Number of Cards	Amount
4	$ 35	4	$ 80
6	40	4	75
6	45	4	70
4	50	4	65
4	55	4	60
2	60	4	55
2	65	2	50
2	70	2	45
2	75	2	40
--	--	2	35

Addendum 1-1B

Oil Market Frequency Chart

Oil Market			
Price	**Round 1**	**Round 2**	**Round 3**
$80			
$75			
$70			
$65			
$60			
$55			
$50			
$45			
$40			
$35			

Addendum 1-2A
Introducing Vocabulary

Vocabulary Word or Concept	I have never heard this word.	I have heard this word but not sure what it means.	I know the definition of this word.	I know this word and can give an example.
Demand				
Price				
Quantity				
Increase				
Decrease				
Shortage				
Surplus				
Market Equilibrium				

Addendum 1-2B

Vocabulary Word or Concept	Definition
Demand	
Supply	
Price	
Quantity	
Increase	
Decrease	
Shortage	
Surplus	
Market Equilibrium	

Addendum 1-2C

The amount consumers are willing and able to buy at various prices.
The amount producers are willing and able to provide at various prices.
The sum or amount of money.
The amount of a good or service.
To make or become greater.
To make or cause to become less.
When demand is greater than supply, less than expected.
When supply is greater than demand, excess.
When quantity demanded equals quantity supplied.

Addendum 1-2D
Gum Purchasing Simulation

Round	Price	Number of Packages Demanded
1	$1.00	
2	$1.50	
3	$2.00	
4	$2.50	
5	$3.00	

Addendum 1-2E
Graphing

Addendum 2-2A
Tamira's T-Shirts

Tamira Ramirez is president and founder Tamira's T-Shirts. The T-shirts Tamira produces are very popular. The T-shirts are hand painted and very colorful.

Because Tamira's T-shirts are in high demand, she has made some production changes in the last year. Tamira has:

- Hired a few more workers
- Moved to a larger warehouse

Currently:

- The T-Shirts sell for $20 each
- There are 9 employees – 1 designer, 6 painters, and 2 warehouse workers
- Each worker works 40 hours a week
- With these resources, 10 shirts per hour are produced

Tamira has just received an order for 20,000 shirts that must be shipped in 16 weeks (about 31 shirts a hour). If they can fill this order, they have a commitment from the customer for additional orders of 20,000 every 16 weeks.

Tamira knows that the company cannot handle this order with the current resources and has determined the following options:

- Option A – Keep everything the same and turn down the order.
- Option B – Hire 3 new designers, 20 new painters and 2 more warehouse workers. With these additional workers, 32 T-Shirts a hour can be produced.
- Option C – Rent more machines at $200 per hour. Layoff the designer and painters, but add 2 computer designers and 2 more warehouse workers. This new plan will be able to produce 50 T-Shirts a hour.

Complete the chart below:

Option	**Number of shirts per hour**	**Total labor per hour**	**Total Labor per shirt** (Divide Total Labor per hour by Number of shirts per hour)	**Material cost per shirt**	**Other costs per shirt**	**Cost per shirt**	**Price per shirt**
Option A	10	$100		$4	$3		$20
Option B	32	$400		$4	$3		$20
Option C	50	$80		$4	$9		$20

Which option do you think Tamira should follow? Why do you think this is the best option? You may use the chart to help you make a choice.

Addendum 2-3A

Use the chart below to record which option(s) are preferred by each group and give an explanation for the choices.

Group	Option A	Option B	Option C	Explanation
Tamira				
Current workers				
Consumers				

Which option should Tamira follow? Why do you think this is the best option?

_____

_____

_____

_____

_____

_____

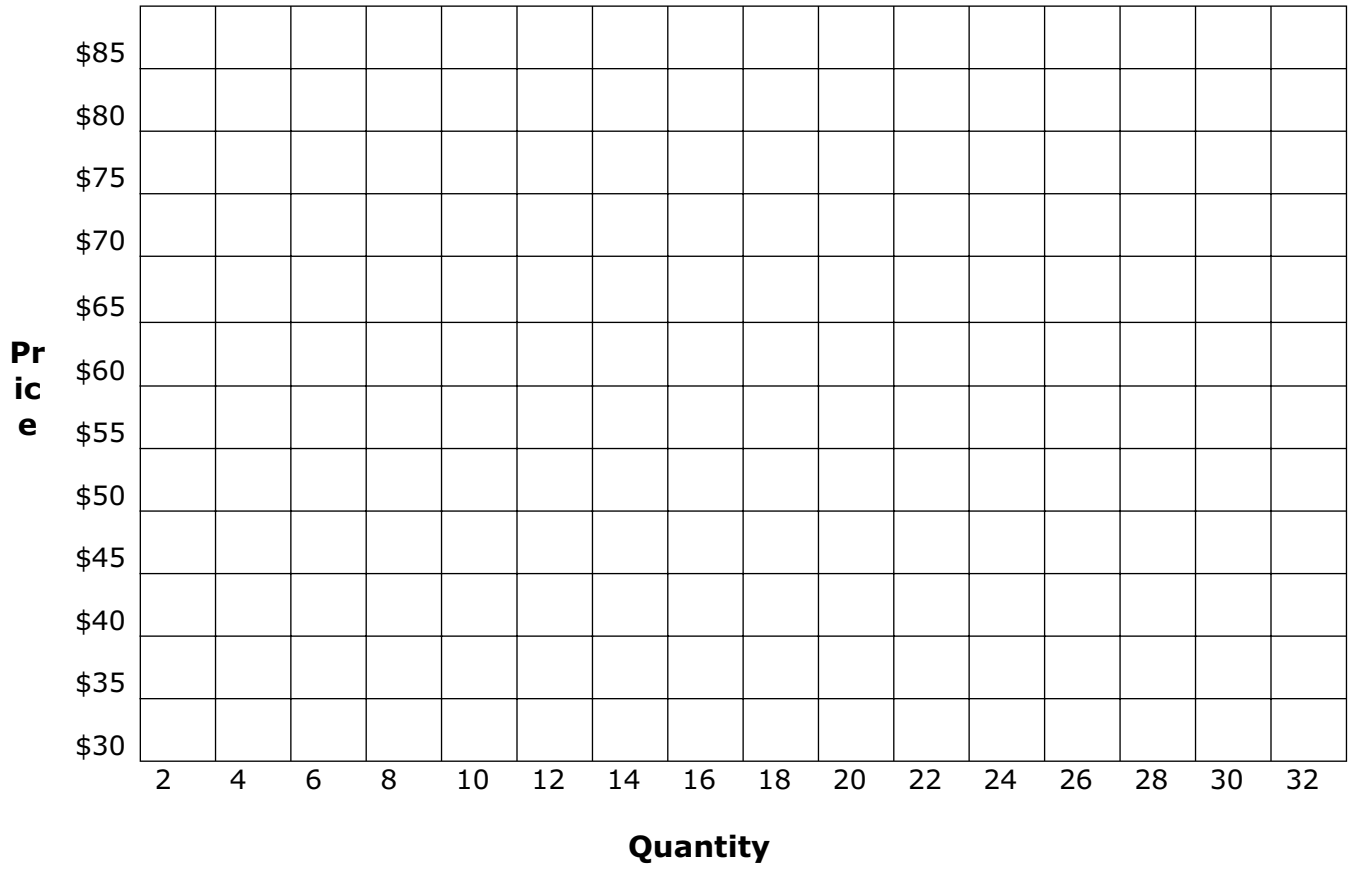
_____

Addendum 3-2A

Below are the demand and supply schedules for the Oil Market. Graph the supply and demand curves below.

Price	Quantity Demanded	Price	Quantity Supplied
$ 80	4	$ 80	32
75	8	75	32
70	12	70	30
65	16	65	28
60	20	60	26
55	24	55	22
50	26	50	18
45	28	45	12
40	30	40	6
35	32	35	2

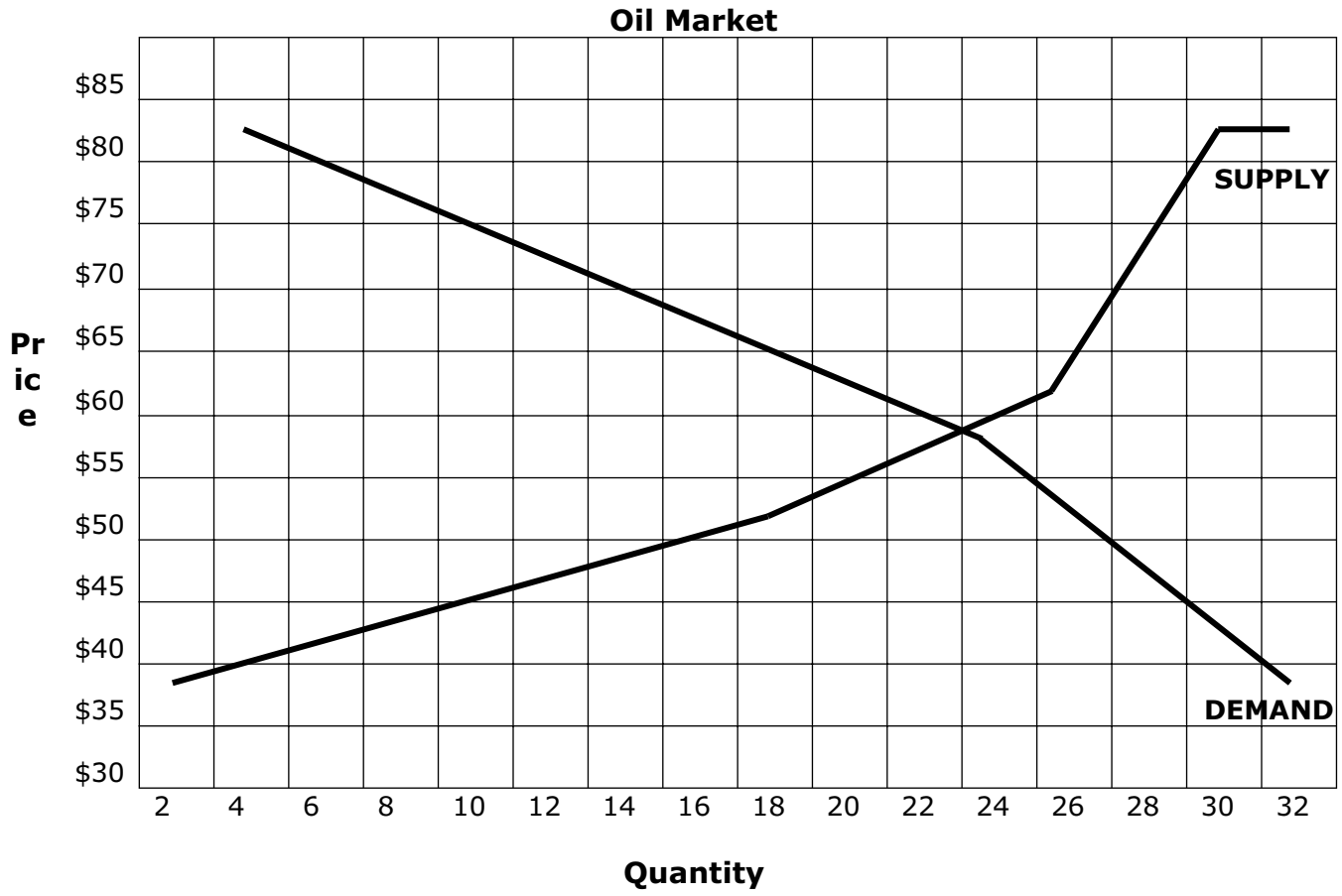
Oil Market



Addendum 3-2A (ANSWER KEY)

Below is the demand and supply schedules for the Oil Market. Graph the supply and demand curves below.

Price	Quantity Demanded	Price	Quantity Supplied
$ 80	4	$ 80	32
75	8	75	32
70	12	70	30
65	16	65	28
60	20	60	26
55	24	55	22
50	26	50	18
45	28	45	12
40	30	40	6
35	32	35	2



Addendum 3-2B
Oil Market Questions

1. Were you a buyer or a seller?

2. When was it difficult for you to make a transaction?

3. According to the graph, what is the market equilibrium price and quantity?

4. If you knew the **market equilibrium** price before you participated in the game, what might you do differently? Explain your answer.

Use the following terms and your Oil Market graph to complete the sentences below.

Shortage	Equilibrium	Decrease
Surplus	Remain the Same	Increase

5. If the quantity demanded is greater than the quantity supplied, a _____ will occur and price in the market will _____.

6. If the quantity demanded is the same as the quantity supplied, _____ will occur and price in the market will _____.

7. If the quantity demanded is less than the quantity supplied, a _____ will occur and price in the market will _____.

8. If the quantity supplied is less than the quantity demanded, a _____ will occur and price in the market will _____.

9. If the quantity supplied is greater than the quantity demanded, a _____ will occur and price in the market will _____.

Addendum 3-3A
Market Equilibrium Assessment

Use the information from the table, Market for DVD Players, to answer the question that follows.

Market for DVD Players

Price per Player	Quantity Demanded	Quantity Supplied
$599	25	600
$499	75	525
$379	150	400
$279	325	325
$199	500	75

ACE Electronics is a major producer of DVD players.
The cost to produce one DVD player is at least $179.

At what price should ACE Electronics sell one DVD player? Use what you know about markets to explain your answer.

_____

_____

_____

_____

_____

_____

_____

_____

Addendum 3-3B

Demand and Price Are Falling for Lobster

By KATIE ZEZIMA
Published: September 1, 2008, New York Times
BOSTON — For many, summer in New England would not be complete without throwing on a bib and cracking open a freshly boiled lobster.

Lobster fishermen, heading out into Boston Harbor, were already making fewer trips because of fuel costs. Now they face less consumer demand for their catch, which is seen as a luxury item.

As consumers buy less lobster this summer, prices are going down at places like James Hook and Company in Boston.

This year, however, fewer people are ordering the region's signature dish, driving down lobster prices and making times harder for lobster fishermen already reeling from the high cost of fuel and bait.

"Lobster is a luxury item, and when things are tight, people don't buy lobster," said Peter Eaton, a lobsterman from Kennebunkport, Me., who is getting about $3.75 per lobster off the boat, a quarter less than three months ago and about a dollar less than last summer.

While price and demand have hit their lowest point in years, lobster fishermen are hauling in larger catches than ever. Restaurants in New England have been running lobster specials all summer, trying to pass on the lower prices and move lobsters from the tank to the table.

"We can be creative with lobsters, given the fact that demand across the country is off on them a bit," said Roger Berkowitz, the president and chief executive of Legal Sea Foods, a restaurant chain based in Boston. Its restaurants have been running lobster specials this summer, and a lobster is about $4 cheaper this summer than last.

"It's not necessarily a bad thing," Mr. Berkowitz said. "It's becoming a little more affordable, like one of those more affordable luxuries. If you're going to indulge, you might as well indulge at a discount."

Even though the price is down, Jose Soliva, 37, an architect from Wellesley, Mass., is trying to save money and was buying his first lobsters of the summer on Friday for himself and his wife.
"A few years back we had it more often," Mr. Soliva said. "But since the economy is bad we're now a lot more conservative about when we treat ourselves."

Soft-shell lobsters, which are harvested in summer and typically served in restaurants, are the least expensive this year, while hard-shell lobsters, which are usually no smaller than a pound and a half, are slightly more expensive.

While diners like lower lobster prices, lobster fishermen do not. The fishermen have spent much of this year modifying how they set and haul in their traps. Some are allowing traps to sit in the water a day or two longer, which helps save gas and bait prices. Lobster fishermen are absorbing fuel costs twice — for their own boats and for those of the bait fishermen, who have raised prices.

"You have to let your traps set longer," Mr. Eaton said. "If it's a windy, blowy day you don't do a half-day's work anymore. In the end it pays off because you're not wasting fuel. It's not costing you two days' fuel to haul one day's work."

The high price of fuel has forced some lobster fishermen to stop working, said Bob Bayer, executive director of the Lobster Institute at the University of Maine, and low prices will make things even more difficult.

“This means hard times, and it means some are not going to make it,” Professor Bayer said. “The boats have gotten bigger and bigger over the years. They’re diesel engines, and with fuel over $5 a gallon, it’s going to be tough.”

The worst may be ahead, Professor Bayer said, as lobster consumption and prices typically drop in September.

Bernie Feeney, who traps lobsters out of Boston Harbor, said he knew many lobstermen who had taken second jobs in recent years. Mr. Feeney, who has been a lobsterman since 1978, said he had been doing marine surveying for the last five years to help pay the bills.

“In a year where our fuel costs are almost doubled and bait costs have gone up 50 to 60 percent as a result of fuel,” Mr. Feeney said, “it’s a squeeze from both ends.”
Partly as a result, young people are not going into the lobstering business, he said, adding that the average age of a fisherman in Massachusetts is 59.

“There aren’t many young entrants,” said Mr. Feeney, a past president of the Massachusetts Lobstermen’s Association. “The startup costs of this business are astronomical compared to what they used to be.”

At James Hook and Company, a retailer in Boston, lobster was selling at $1 or $2 less a pound than usual: a soft-shell lobster was $6.99 a pound, while a one-pound hard-shell lobster was $8.99.

1. How have fuel costs affected the lobstering business?

_____
_____
_____
_____

2. How do consumers affect the change in price of lobsters? Explain your answer.

_____
_____
_____
_____

3. According to the article, how does the change in supply of lobsters affect the price of lobsters?
   A) The supply has increased and price has increased.
   B) The supply has increased and price has decreased.
   C) The supply has decreased and price has increased.
   D) The supply has decreased and price has decreased.

4. What advice would you give to the lobster fishermen?

_____
_____
_____
_____

5. If fewer people are entering the lobstering business, what affect will this have on the future market for lobsters? Explain your answer.

_____
_____
_____
_____

Reading 4-1 Determinants of Demand

Nonprice determinants of demand influence the demand for a product. A change in any of these factors will change the amount consumers are willing and able to buy at each and every price. This constitutes a change in demand.

1. **Change in the number of buyers** in the market for a product
If the number of buyers in the market for a product increases, the demand for the product will increase. If the number of buyers in the market for a product decreases, the demand for the product will decrease. If a new high school is built in the same block as a fast food restaurant, the demand for the fast food restaurant's products will increase. If an automobile manufacturing plant near the fast food restaurant closes, the demand for the restaurant's products will decrease.

2. **Change in consumer tastes and fads**
If consumer tastes and preferences for a product change, the demand for the product will change. If fashion magazines are showing short skirts as the next fad, the demand for short skirts will increase. If fashion magazines show few pictures of short skirts, the demand for these skirts will decrease.

3. **Change in consumer income**
If consumer income increases (decreases), demand for most goods and services will increase (decrease). For example, if workers at a manufacturing facility sign a new contract that provides a 5% raise, these workers will have more income and their demand for goods and services will increase. If social security taxes increase for employees, consumers will have less take-home pay, and as a result, their demand for goods and services will decrease.

4. **Change in the price of related goods (complement)**
A change in the price of one good can change the demand for another good. One type of related goods are complements—goods that are purchased together. A decrease in the price of strawberries will cause an increase in the demand for whipped cream. An increase in the price of hamburger will cause a decrease in the demand for hamburger buns.

5. **Change in the price of related goods (substitute)** Another type of related goods are substitutes—goods that are bought in place of one another. If the price of movie tickets increases, the demand for video rentals may increase. If the price of Lisa's hamburgers decreases, the demand for Tim's hamburgers may decrease.

Addendum 4-2A
Changes in Demand

Graph the following data:

Demand for Bubble-Up Soda=D_1

Price	Quantity Demanded (in thousands)
$1.00	5
.75	10
.50	15
.25	20

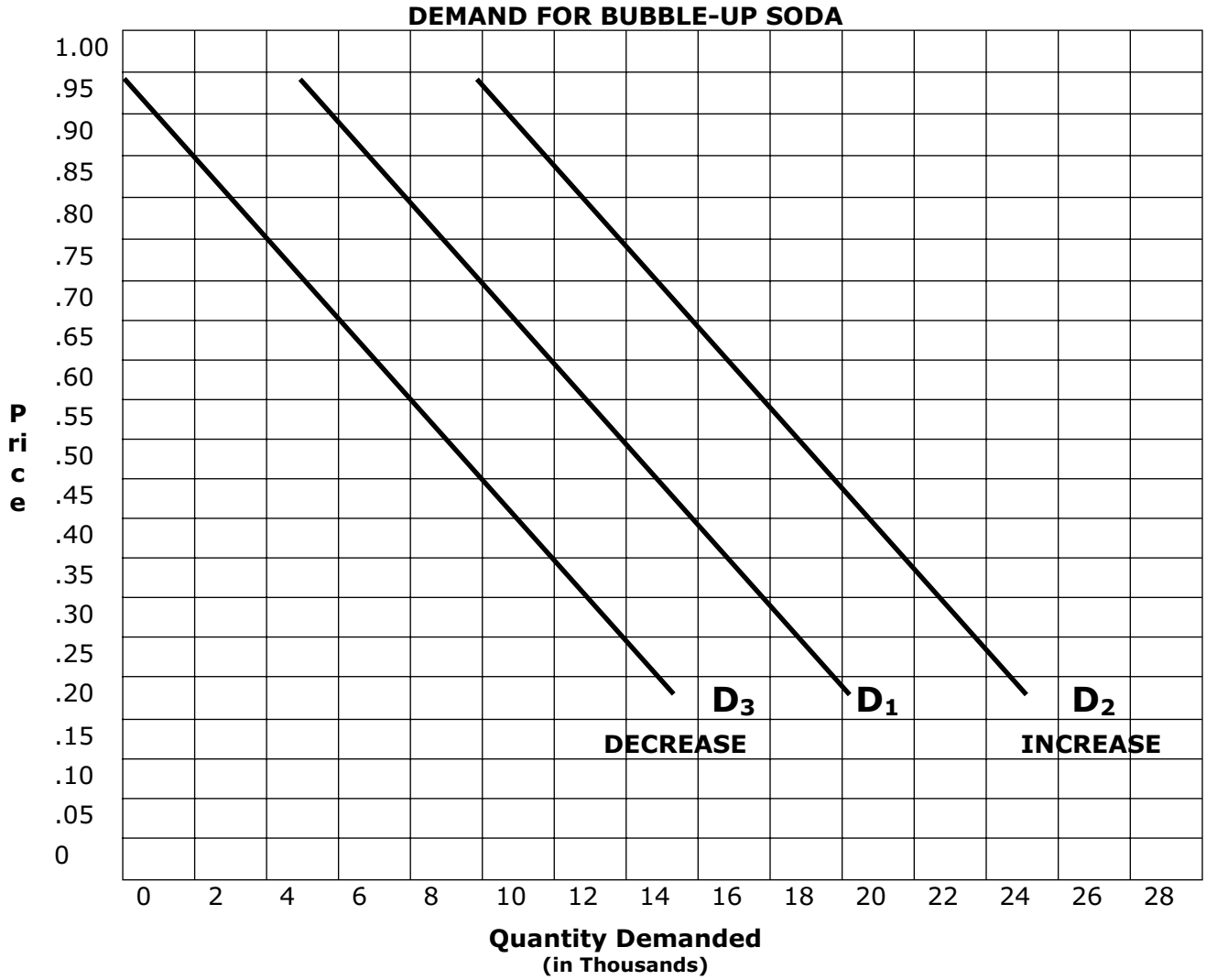
Addendum 4-2B

Demand for Bubble-Up Soda=D_2

Price	Quantity Demanded (in thousands)
$1.00	10
.75	15
.50	20
.25	25

Demand for Bubble-Up Soda=D_3

Price	Quantity Demanded (in thousands)
$1.00	0
.75	5
.50	10
.25	15



Addendum 4-2C

Change in Determinants of Demand

Determinants of Demand	Increase in Demand	Decrease in Demand
Consumer Income – When consumers wages and salaries increase.	Example: A local company increases all employees' wages by 5%.	
Tastes and Fads – When something becomes popular very suddenly.		
Number of Buyers – When more people are willing and able to buy a product.		
Complements – Goods that are used with another.		
Substitutes – Goods that can be used in place of another.		

Addendum 4-2C (ANSWER KEY)
Change in Determinants of Demand

Determinants of Demand	Increase in Demand	Decrease in Demand
Consumer Income – When consumers wages and salaries increase.	Example: A local company increases all employee wages by 5%.	Workers are no longer allowed to work overtime and therefore earn less money per year.
Tastes and Fads – When something becomes popular very suddenly.	Holidays can bring about a change in demand for goods associated with that holiday. For example: roses on Valentine's Day.	A good is determined to cause disease. For example: tomatoes in the summer of 2008 were contaminated with salmonella.
Number of Buyers – When more people are willing and able to buy a product.	The number of people over the age of 70 has increased.	Due to inclement weather, people cannot leave their homes to buy goods. For example: Delaware receives 30 inches of snow.
Complements – Goods that are used with another.	More shoelaces are needed because people want more than one pair of sneakers.	Cassette players are rarely used, so the demand for cassette tapes has decreased.
Substitutes – Goods that can be used in place of another.	Apples - People do not prefer pears more than apples and vice versa. If the price of pears increases, then the demand for apples will increase.	Dockers – Students do not prefer one type of pants to another. If the price of blue jeans decreases, then the demand for Dockers will decrease.

Reading 5-1 Determinants of Supply

Nonprice determinants of supply influence the supply for a product. A change in any of these factors will change the amount producers are willing and able to make at each and every price. This constitutes a change in supply.

1. **Price and Availability of Productive Resources** If the price and/or availability of productive resources (natural, human and capital resources) market for a product increases, the supply for the product will change. If the cost of productive resources for a product decreases, the supply for the product will increase. If cheese becomes less expensive, then the supply of pizza will increase. If a serious drought occurs in agricultural areas, decreasing the availability of crops, then supply decreases.

2. **Change in Technology (how work is done)**
If the technology for producing a specific product changes, the supply will increase. If a new machine that can sew twice as fast as the old machine, the supply of clothing will increase.

3. **Government Policies (taxes and subsidies)**
If a government policy causes taxes on a good to increase, then the supply will decrease. For example, if the tax on luxury boats increases, then the supply of those boats will decrease. If the government subsidies farmers crops, then the supply will increase.

4. **Number of Sellers**
The amount of competition among producers in a specific market impacts the supply. When a change in the number of sellers producing the same product changes, the supply will change. For example, if a new game system producer starts a new company, then the supply of game systems will increase. If a pizza shop goes out of business, then the supply of pizza in that area will decrease.

Addendum 5-2A
Predicting Scenarios – Bicycle Market

With a partner, read each of the scenarios and predict how you would react if you were a bicycle supplier or producer.

Scenario	Would the cost to produce each bicycle change?	Would the quantity you were willing to produce change?	Would you want to produce more or less than you do now?	What type of determinant of supply is this? (see below)
1. You have been making your bicycle frames out of titanium, a very strong and light-weight material. A new source of titanium has just been discovered.				
2. Several of your employees have moved away. You just heard that you could hire part-time help for less than what you paid the employees that moved.				
3. A new bicycle manufacturing company was just formed in a nearby town.				
4. In order to pay for building new bicycle paths, the government has passed a new law that adds a $10 tax to all bicycle sales.				
5. An ingredient in the paint you use on your bicycles is being bought in large quantities by car manufacturers.				

Identify the determinant of supply that is the focus of each scenario. Choose from the following (you may use a determinant more than once).

Number of Producers Cost of Production Taxes

Addendum 5-2B
Determinants of Supply

Complete the chart below by writing newspaper headlines that refer to increases and decreases in supply. For example: Natural Resources - **Hurricane Damages Forests that Produce Building Lumber**. (Decrease in Supply)

Supply Determinant	Increase in Supply	Decrease in Supply
Natural Resources		
Human Resources		
Capital Resources Or Changes in Technology		
Number of Sellers		
Government Action		

Addendum 5-3A
DVD Manufacturer Supply Curve

You are a manufacturer of DVDs for a small, movie production company. The production company sends you the original data and information, and your company reproduces high-quality DVDs that are then sold in stores. The chart lists some of your productive resources.

Natural Resources/ Intermediate Goods	Human Resources	Capital Resources
Blank DVDs	President of Advertising	DVD Recorder
Plastic Cases	DVD Recording Manager	Computer Printer
Paper Inserts	Graphic Artist	Factory and Office

Graph the DVD manufacturer's supply curve from the supply schedule below. Be sure to label all parts of the graph.

Price	Quantity Supplied
$10	0
$15	2000
$20	4000
$25	6000

Addendum 5-3A ANSWER KEY
DVD Manufacturer Supply Curve

You are a manufacturer of DVDs for a small, movie production company. The production company sends you the original data and information, and your company reproduces high-quality DVDs that are then sold in stores. The chart lists some of your productive resources.

Natural Resources/ Intermediate Goods	Human Resources	Capital Resources
Blank DVDs	President of Advertising	DVD Recorder
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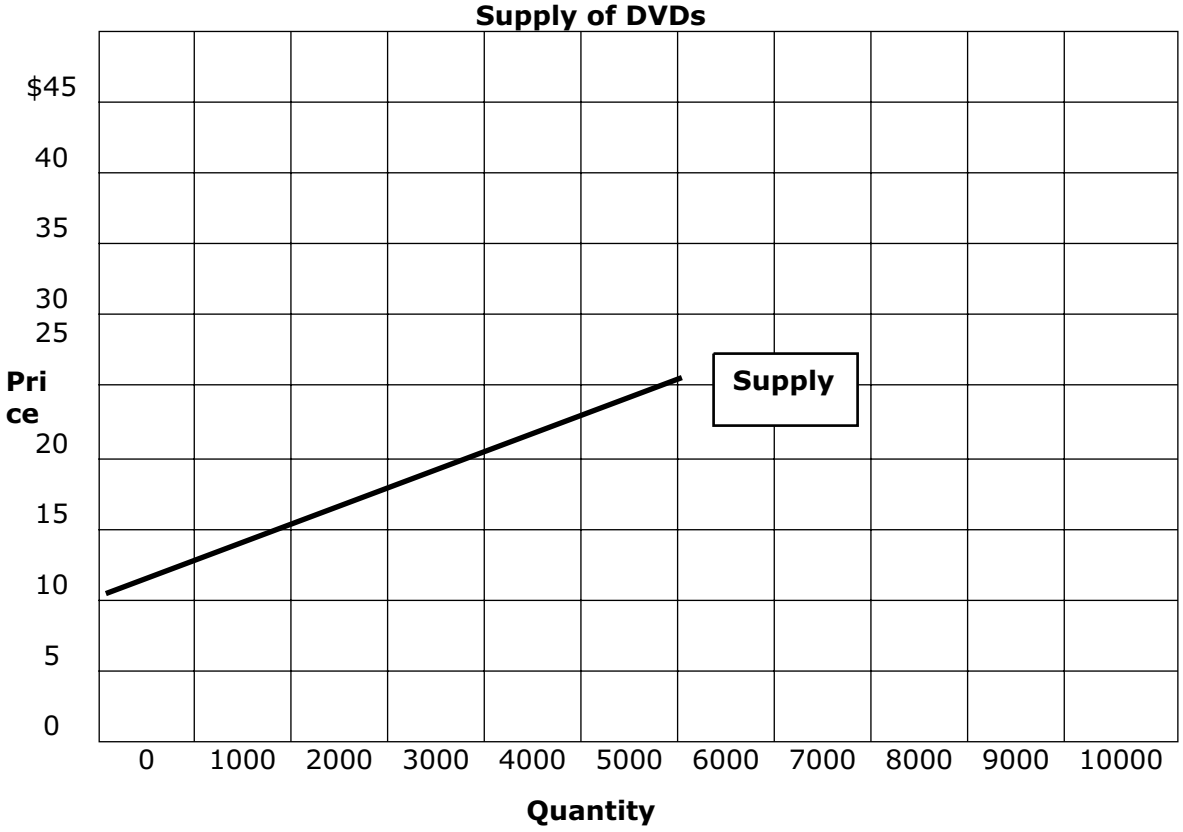
Paper Inserts	Graphic Artist	Factory and Office

Graph the DVD manufacturer's supply curve from the supply schedule below. Be sure to label all parts of the graph.

Price	Quantity Supplied
$10	0
$15	2000
$20	4000
$25	6000



Addendum 5-4A

How would the following situations affect the DVD manufacturing company?

SITUATION 1:
The workers in your factory have negotiated a new contract that requires the company to pay the cost of health care insurance.

SITUATION 2:
Several companies that manufactured movies on VHS tape now are starting to manufacture DVDs instead.

SITUATION 3:
The price of plastic cases has gone up considerably.

SITUATION 4:
You have purchased a new computer printer that uses less ink and electricity than your old printer.

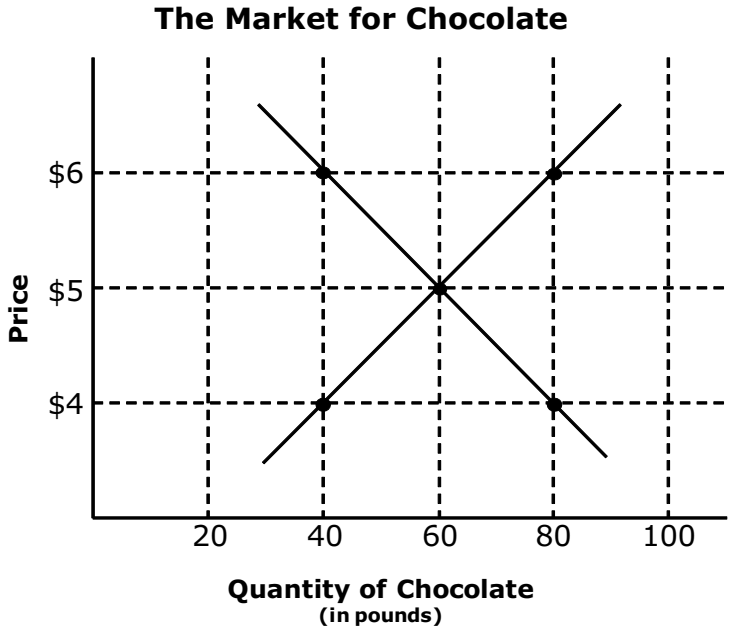
Situation 5:
The federal government has placed an Entertainment Tax on all movies, including DVDs.

Addendum 6-1A
Chocolate Bar Market Situations

What happens when: **Consumer income increases.** [Demand for chocolate increases, price of chocolate increases, quantity of chocolate increases.]	What happens when: **Smores are a dessert treat made from marshmallows, chocolate bars, and graham crackers. The price of graham crackers has decreased.** [Demand for chocolate increases, price of chocolate increases, quantity of chocolate increases]
What happens when: **Doctors believe chocolate can cure colds.** [Demand for chocolate increases, price of chocolate increases, quantity of chocolate increases.]	What happens when: **Doctors find a new treatment for chocolate allergies.** [Demand for chocolate increases, price of chocolate increases, quantity of chocolate increases.]
What happens when: **Consumers now buy jellybeans instead of chocolate bars.** [Demand for chocolate decreases, price of chocolate decreases, quantity of chocolate decreases.]	What happens when: **A new machine has been invented to make producing chocolate less expensive.** [Supply of chocolate increases, price of chocolate decreases, quantity of chocolate increases.]
What happens when: **The government has just placed a tax on all chocolate products.** [Supply of chocolate decreases, price of chocolate increases, quantity of chocolate decreases.]	What happens when: **A frost causes cocoa plantations to lose 80% of their crops.** [Supply of chocolate decreases, price of chocolate increases, quantity of chocolate decreases.]
What happens when: **The price of energy increases.** [Supply of chocolate decreases, price of chocolate increases, quantity of chocolate decreases.]	What happens when: **New companies are started that make chocolate bars**. [Supply of chocolate increases, price of chocolate decreases, quantity of chocolate increases.]

Addendum 6-2
Evaluations

Use this graphic for Questions 1 & 2:



1. Suppose that the government set the price of chocolate at $6 per pound. Which of the following statements best describes an effect of this price control?
   A) There would be a surplus of 40 pounds of chocolate.
   B) Less chocolate would be demanded at $4 than at $6.
   C) Producers of chocolate would want the price set at $4.
   D) There would be a shortage of 20 pounds of chocolate.

2. If the government removes the price control of $6, what will be the price and quantity sold of chocolate?

	Price	Quantity Sold (in pounds)
A)	$6	40
B)	$5	60
C)	$5	100
D)	$4	80

3. Recently, the hourly wage that parents are willing to pay babysitters increased dramatically. Higher pay will most likely cause which of the following changes in how babysitters divide their out-of-school time between babysitting and other activities?

	Time Spent Babysitting	Time Spent on Other Activities
A)	No change	Decrease
B)	Increase	Decrease
C)	Decrease	No change
D)	Increase	Increase

4. When people's incomes increase, the demand for roses and the price of roses are most likely to change in which of the following ways?

	Demand for Roses	Price
A)	Decrease	Decrease
B)	Decrease	Increase
C)	Increase	Decrease
D)	Increase	Increase

5. What is most likely to happen when consumers increase their purchases of goods and services?
   A) Businesses will increase production, and workers will receive more income.
   B) Businesses will increase production, and workers will receive less income.
   C) Businesses will decrease production, and workers will receive more income.
   D) Businesses will decrease production, and workers will receive less income.

6. Which of the following defines the equilibrium price for a product in a competitive market?
   A) The price that most consumers are willing to pay for the product.
   B) The price at which business makes the maximum revenue.
   C) The price that is equal to the total cost of producing and marketing the product.
   D) The price at which the quantity supplied is the same as the quantity demanded.

7. Which event would *most likely* cause a decrease in the market price for cherries?

A

C

B

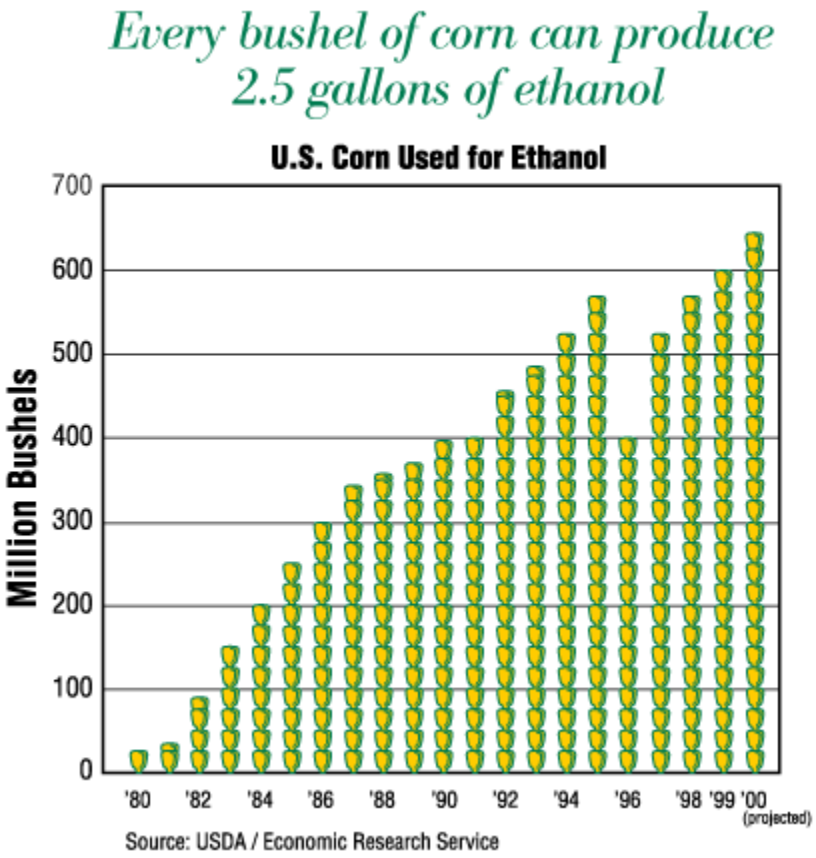
D

8. This chart shows the price in U.S. dollars (April 2003) of the same type of hamburger made by a U.S. fast food chain compared to the price in its international locations.

Country/Market	Price in U.S. Dollars
United States	2.71
Australia	1.86
Brazil	1.48
Canada	2.21
China	1.20
Egypt	1.35
European Union	2.97
Iceland	5.79
South Africa	1.84
Switzerland	4.59
Venezuela	2.32

Why would the price of this hamburger vary around the world when each is made with the same ingredients? Explain your answer.

9. Ethanol is a renewable fuel made from corn and other agricultural products. In 1982, less than 100 million bushels of corn was produced for the production (use) of ethanol. By the year 2000, over 600 million bushels of corn was being used for the production of ethanol.



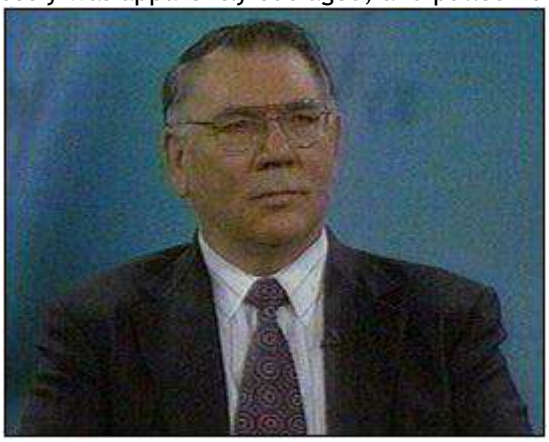
http://www.nwicc.cc.ia.us/pages/continuing/business/ethanol/Module3.htm

What is a possible cause for the trend that appears in the graph? Explain your answer.

Addendum T-1 for Task
News Article

Texas Cattlemen v. Howard Lyman and Oprah

 In April of 1996, Mr. Lyman (a former cattle rancher and now food-safety expert) was invited to appear on ***Oprah*** to discuss Mad Cow disease, food production, and the rendering process. He was part of a discussion of experts, including an expert from the beef industry, about food safety in the U.S. This included a discussion of potential health risks from e-coli and mad cow disease (which only weeks before was making headlines in Britain and throughout the world). When Mr. Lyman explained that cows are being fed to cows, Ms. Winfrey seemed to be repulsed by this thought, and exclaimed that it had just stopped her cold from eating another hamburger.

The show aired on a Monday, and beef futures -- which had been in a steep decline due to drought, over-supply and a number of complex factors -- fell further on Tuesday. (Pundits referred to this as the "Oprah crash.") The cattle industry was apparently outraged, and pulled hundreds of thousands of dollars worth of TV advertising in  retaliation. Pressured by television executives to mollify the cattle industry, Oprah offered to do an hour-long segment in which experts from the cattle business could debate Mr. Lyman on her show. However, the cattlemen refused to appear on the show if Lyman were going to be present. They did not desire such a debate.

So, Oprah subsequently permitted a cattle business "expert" to appear and speak for ten minutes on her show, presenting the meat industry "side" in which the meat industry could say whatever they wished, secure in the knowledge that no opposing or questioning viewpoint would be heard.

A short time later, some Texas cattlemen, led by billionaire Paul Engler, owner of Cactus Feeders, Inc., filed suit against Lyman, Oprah, Harpo Productions (which produces ***Oprah***) and King World Syndicator (King World was released from the suit by summary judgment). The lawsuit alleged Lyman and ***Oprah*** had violated a Texas law which forbids someone from "knowingly making false statements" about agricultural business. The cattlemen have alleged that the all-powerful and God-like Oprah is responsible for the decline in beef futures.

A trial is underway in Amarillo, Texas -- smack in the middle of cattle ranching country, from which the jury has been selected -- despite numerous requests from the defendants to move the trial to another part of Texas.

From: Website: Howard Lyman – A Voice for a Viable Future
http://vegsource.com/lyman/lawsuit.htm Accessed July 24, 2008

Addendum T-2 for Task
News Article Excerpts

Original reference can be found at:
"Mad Cattlemen Sue Oprah", EconEdLink Online Lesson,
http://www.econedlink.org/lessons/index.cfm?lesson=EM15

OPRAH VILIFIED IN COURT, ADORED OUTSIDE "Witness Bill O'Brien, head of plaintiff Texas Beef Producers, said the Winfrey Show, aired on April 15, 1996, caused prices to fall by 7 cents a pound in one day...O'Brien said meat packers, after hearing about the show, started pulling out of the market in droves." Source: Yahoo! News	"Mr. O'Brien detailed how the West Texas cattle market crashed to 10-year lows in the wake of the show. He cited industry figures showing a drop from 62 cents per pound on April 16 to 55 cents eight days later...The defense blames the beef industry's price drop on drought and other factors." Source: Dallas News
O'Brien testified that he heard about an immediate slide in cattle prices after the program aired from contacts in Chicago -- which is home to both Winfrey's show and the mercantile exchange that sets a benchmark for nationwide cattle prices. He responded by notifying his feed yards to start selling off cattle. Within an hour, O'Brien had sold more than 2,000 head. Prices, meanwhile, continued dropping for weeks. "I didn't try to sell any cattle (later) that week, but from people I talked to, they said the market was dead," said O'Brien, one of several Texas cattle producers suing Winfrey. Plaintiffs claim that Winfrey's show triggered the market downfall, costing them $10.3 million. They're seeking unspecified punitive damages from Winfrey, her production company Harpo Productions Inc. and show guest Howard Lyman, a food safety activist." Source: CNN	AVERAGE RETAIL BEEF PRICE DECLINES AGAIN DENVER, May 15, 1996 -- Average retail beef prices declined again during the past month, the National Cattlemen's Beef Association points out. Reporting on its monthly 19-city survey of supermarkets, NCBA noted that the average price on May 9 was $2.96 per pound, compared to $3.01 on April 11 and $3.15 a year ago. Beef production has been exceptionally large, as have total meat supplies. All of this has kept pressure on beef and cattle prices and, in turn, on average retail prices. In addition, drought and a devastating cost-price squeeze have caused many owners of cow herds to send more cows to market, compounding beef supply and price problems. Source: National Cattlemen's Beef Association, NCBA News

Unit Title: **Grade 8 - How Markets Work** Content/Benchmark: **Economics/Microeconomics**

Enduring Understanding:

- Scarcity leads to making choices. Market economies are based on consumer and producer choices. Cost-benefit analysis helps to make good choices.

Students will be able to: **analyze** how changes in technology, costs, and demand interact in competitive markets to determine or change the price of goods and services.

Unit Essential Question:

Under what market conditions does price change?

Concept: Demand	**Concept:** Supply	**Concept:** Demand & Supply	**Concept:** Determinants of Demand	**Concept:** Determinants of Supply	**Concept:** Changes in Markets and Prices
LEQ/C4U • How does price affect demand?	**LEQ/C4U** • How does price affect supply?	**LEQ/C4U** • How are prices determined in a market economy?	**LEQ/C4U** • What causes demand to change? • When demand changes, what are the effects on price and quantity?	**LEQ/C4U** • What causes supply to change? • When supply changes, what are the effects on price and quantity?	**LEQ/C4U** • Under what conditions do prices and quantities change?
Vocabulary: demand supply quantity price increase decrease market equilibrium	**Vocabulary:** consumers producers inputs costs capital labor	**Vocabulary:** shortage surplus	**Vocabulary:** substitute goods complementary goods tastes and fads income number of buyers	**Vocabulary:** cost of productive resources taxes subsidies technology number of sellers	**Vocabulary:** Determinants of Demand Determinants of Supply