

Lemonade Anyone: How Much Is Demanded?



FOCUS:

Overview:

To be successful entrepreneurs, students must understand the basics of supply and demand. Many business decisions are based on the principles of supply and demand. This lesson develops the students' understanding of demand by exploring how much consumers will want at each price. In this activity students establish a demand schedule and curve for lemonade. Students discuss the relationship between price and quantity demanded and then graph demand. Information on demand from this lesson will interface with the information on supply in the Lemonade for Sale lesson – thereby creating equilibrium.*

Objectives:

- Students will understand that demand is the relationship between price and quantity demanded.
- Students will create a demand graph.
- Students will read a demand schedule.

Background Information:

Products are bought by consumers in markets around the world every day. Entrepreneurs are interested in consumer behavior because they want to produce products that consumers want and sell the products for a profit. Entrepreneurs need to understand consumer behavior --- which is demand. As the price of a product decreases, the quantity consumers want increases. This inverse or negative relationship between quantity demanded and price is called the Law of Demand. Demand is the relationship between various prices and the quantities consumers are willing and able to buy during a time period, holding all other factors constant.

*Adapted from NCEE Focus: Middle School Economics, Lessons 4 and 5.

Curriculum Multi-tasking:

- Economics
- Mathematics
- Graphing
- Entrepreneurship

PREPARE:

Materials:

- Visual/Handout 7.1 – Blank Demand graph to use in evaluation
- Handout 7.2 – Demand Shifters Practice
- Signs: Lemonade and Lemonade Pops

Construct:

1. Make an overhead of Visual/Handout 7.1.
2. Make a class set of Visual/Handout 7.1.
3. Place the signs on opposite sides of the room.

TEACH:

Introduction:

1. Discuss with students the importance of understanding consumer behavior as it relates to your business. Remind students that consumers are people who buy goods and services.
2. Tell students they each have a budget of \$1.00. It is a hot day and they can consume one of two products: lemonade or lemonade pops.
3. Have students stand beside the sign of the product they would choose. Count the number of students beside each sign.
4. Select the product with the most students. Have the other students return to their seats.

Activities:

1. Explain that price is what people pay when they purchase a good or service or what they receive when they sell a good or service.
2. Ask students in the product group how many they would be willing and able to buy if the price was 20 cents.
3. Record this number beside 20 cents.
4. Then ask them how many they would be willing and able to buy at .40 cents --- then .60 --- then .80 and \$1.00. Record their responses on the Visual 1. Have them do the same on their handouts.

<u>Price</u>	<u>Quantity Demanded</u>
.20	X- determined by number students would buy
.40	
.60	
.80	
1.00	

5. Ask students what they notice about the relationship between price and the quantity demanded. They will note that as price goes up demand goes down. The correct observation is that as price increases the *quantity demanded* decreases or as the price decreases the quantity consumers are willing and able to buy increases.
6. Explain that this is a negative or inverse relationship between price and quantity demanded.
7. Explain that this relationship between price and quantity demanded is the Law of Demand.
8. Explain that when consumers spend money on a product they are casting their dollar vote. Those votes tell producers what product is wanted. In this case consumers preferred _____ (lemonade or lemonade pops).
9. Explain that demand is what consumers are willing and able to buy at each and every price.
10. Explain that each quantity demanded is what consumers are willing and able to buy at a specific price.
11. Write **DEMAND SCHEDULE** above the table on the transparency.
12. Explain that demand may also be illustrated graphically. The graph is a **DEMAND CURVE**. When graphing demand, price is recorded on the vertical axis and quantity on the horizontal axis.
13. Using the bottom of Visual/Handout 1, direct students attention to the graph.
14. Plot each quantity demanded at each price on the overhead as each student plots their own on the handout. Emphasize that this is a demand curve which represents the information in the demand schedule --- which tells us about consumer behavior.

Closure for Demand Activity:

1. Use the following questions to discuss the graph:
 - What does the graph represent? (The class demand for lemonade or lemonade pops)
 - What does the curve look like? (It slopes down and to the right.)
 - Why is the curve downward sloping? (Because as the price of the product goes down, the quantity demanded goes up and vice versa)
 - What kind of relationship is this? (inverse)
 - What do we call this relationship between price and quantity demanded? (The law of demand.)
 - Which is easier for you to understand, the table or the graph? (answers may vary here but students should realize graphs are used to make data visually understood)

Optional Challenge: Demand Shifters

Now that students understand the law of demand, demand, and quantity demanded they are introduced to non- price determinants of demand. These are the factors held constant when establishing the demand for a product.

Procedure:

1. Display transparency of Demand Curve from previous activity.
2. Review quantity demanded – the amount of a good or service people are willing and able to buy at a particular price, other things being equal.
3. Ask what happens to the quantity demanded as the price goes down? (increases)
4. Ask what happens to the quantity demanded as the price goes up? (decreases)
5. Remind students that the relationship between price and quantity demanded is an inverse relationship and is called the Law of Demand. Demand is the relationship between various prices and the quantities consumers are willing and able to buy during some time period, holding all other things constant. Demand is the ENTIRE schedule, not a single price and the resulting quantity demanded from the schedule.
6. Read each of the following scenarios to the class and ask them to predict an increase or decrease in demand and which non price determinant was affected. Have them use *Handout 7.2 – Demand Shifter Practice* to draw the change that would occur. Answer key is provided. After drawing the curve for Scenario 1 have the students write a possible quantity demanded column on the schedule representing an increase in demand. After scenario 3 have them fill in a possible quantity demanded column on the schedule representing a decrease in demand.
 - ◆ **Scenario 1 –Other neighborhoods learn the location of the lemonade stand.** (demand would increase due to number of consumers in the market increasing)
 - ◆ **Scenario 2 – Your older brother who is a member of a local band that if very popular agrees to film a promotional ad drinking your lemonade.** (demand would increase due to a change in consumer tastes and preferences)
 - ◆ **Scenario 3 – A new study found that lemonade has high sugar content and increases the risk of cavities.** (demand would decrease due to consumer tastes and preferences)
 - ◆ **Scenario 4 – A new law is passed and all kids ages 8-15 receive a \$5.00 a week increase in allowance.** (demand would increase due to a change in consumer income)
 - ◆ **Scenario 5 – The price of all soft drinks just went up.** (demand would increase due to price increase of a related goods)

Closure and Assessment:

Give students one card from Handout 7.3 – Assessment: Demand Shifters with demand increase or demand decrease on it. Ask them to work in groups of two to think of an additional scenario that would cause the shift in demand on their card. Share with the class and discuss if they are correct.

Standards:

Voluntary National Content Standards in Economics:

- **Content Standard 7:** Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services. Students will be able to use this knowledge to identify markets in which they have participated as a buyer and as a seller and describe how the interaction of all buyers and sellers influences prices. Also, predict how prices change when there is either a shortage or surplus of the product available.

Grade 4 Benchmark 1: At the completion of Grade 4, students will know that a price is what people pay when they buy a good or service, and what they receive when they sell a good or service. They will know that a market exists whenever buyers and sellers exchange goods and services. They will understand that most people produce and consume. As producers they make goods and services: as consumers they use goods and services.

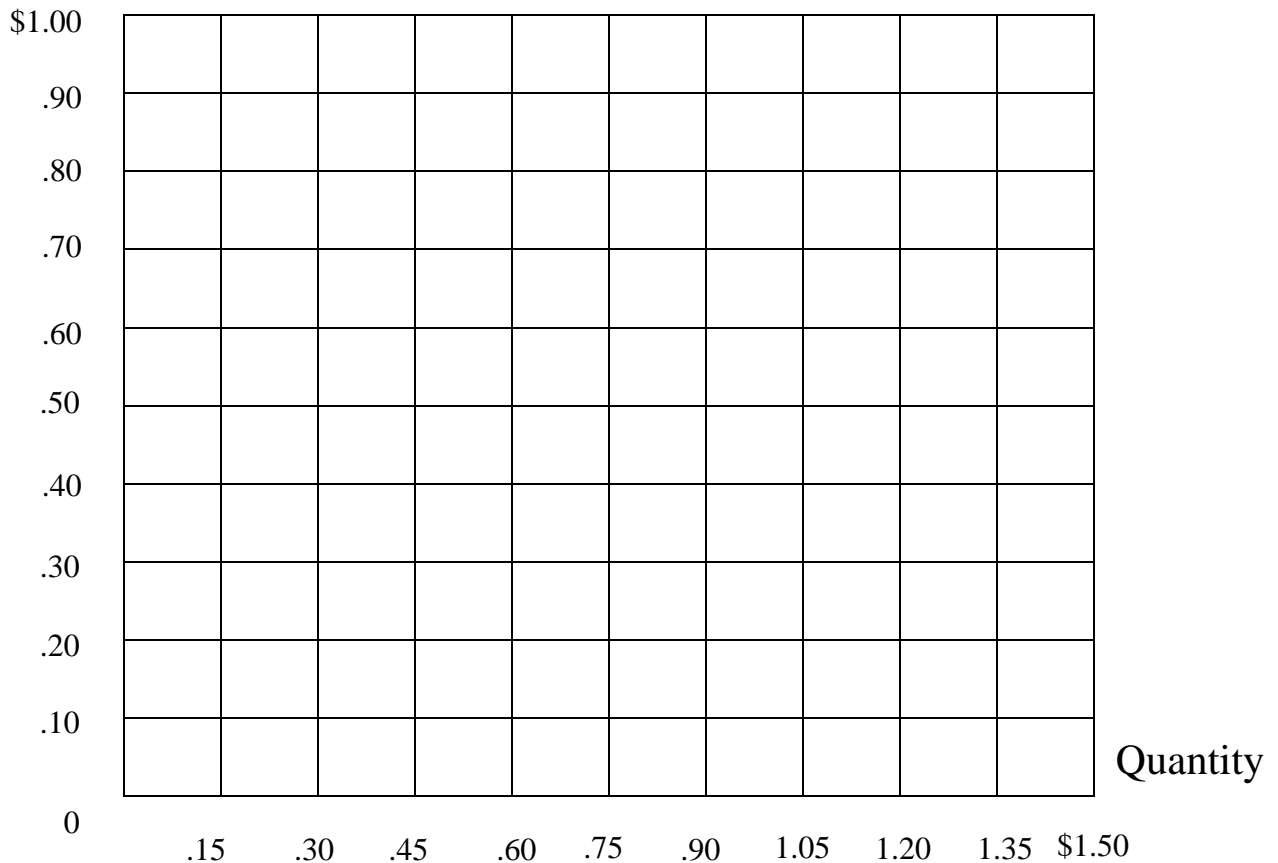
Grade 8 Benchmark 1: At the completion of Grade 8, students will know the Grade 4 benchmarks for this standard, and also that market prices are determined through the buying and selling decisions made by buyers and sellers. They will understand that relative prices refers to the price of one good or service compared to the prices of other goods and services. Relative prices are the basic measures of the relative scarcity of products when prices are set by market forces (supply and demand). Students will know that the market clearing or equilibrium price for a good or service is the one price at which quantity supplied equals quantity demanded. If a price is above the market clearing price, it will fall, causing sellers to produce less and buyers to purchase more: if it is below the market clearing price, it will rise, causing sellers to produce more and buyers to purchase less. An exchange rate is the price of one nation's currency in terms of another nation's currency. Like other prices, exchange rates are determined by the forces of supply and demand. Foreign exchange markets allocate international currencies.

Visual/Handout 7.1 – Demand

How much lemonade will we buy?

Price Demanded	Quantity	New Quantity Demanded
\$1.00	_____	_____
\$.80	_____	_____
\$.60	_____	_____
\$.40	_____	_____
\$.20	_____	_____

Price



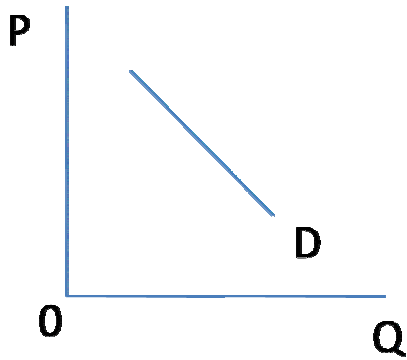
Handout 7.2 – Demand Shifters Practice

Demand Shifters:

- *number of consumers in the market
- *consumer income

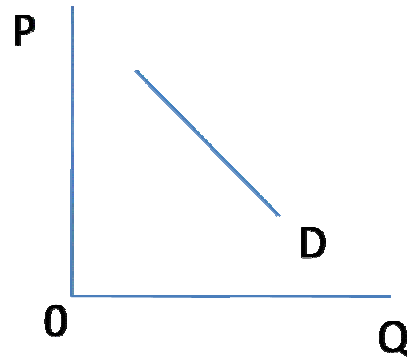
- *consumer tastes and preferences
- *prices of related goods

Scenario 1: neighborhood



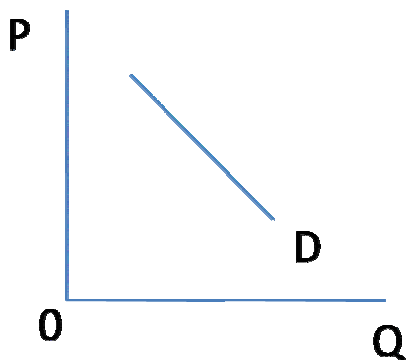
Demand Shifter: _____

Scenario 2: band member



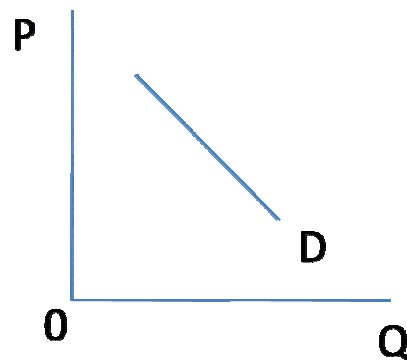
Demand Shifter: _____

Scenario 3: research



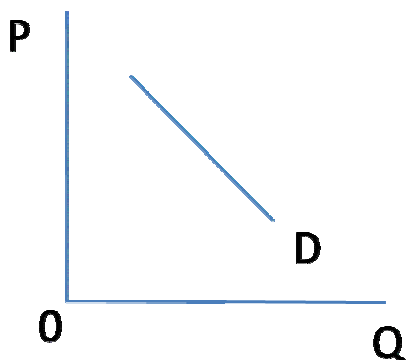
Demand Shifter: _____

Scenario 4: allowance increase



Demand Shifter: _____

Scenario 5: soft drink price



Demand Shifter: _____

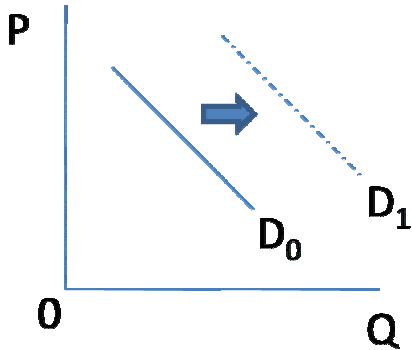
Handout 7.2 – Demand Shifters Answers

Demand Shifters:

- *number of consumers in the market
- *consumer income

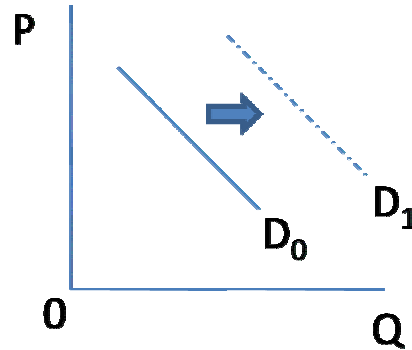
- *consumer tastes and preferences
- *prices of related goods

Scenario 1: neighborhood



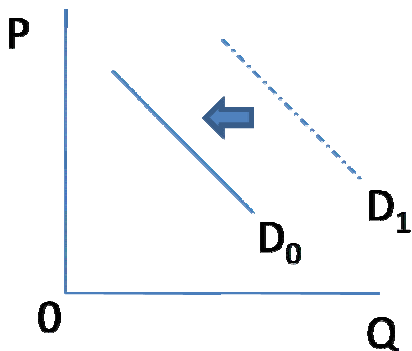
Demand Shifters: number of consumers

Scenario 2: band member



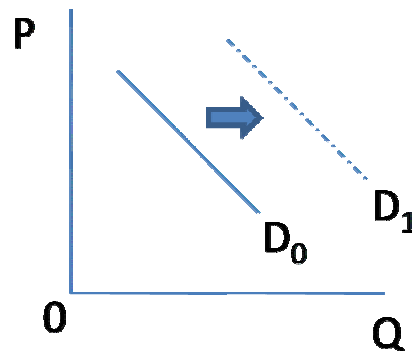
Demand Shifters: consumers tastes

Scenario 3: Research



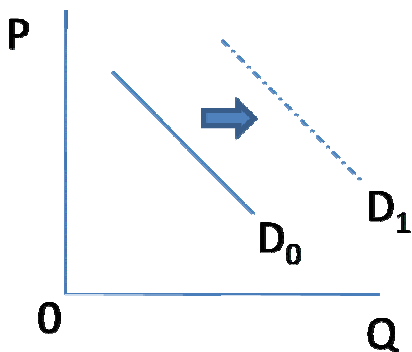
Demand Shifters: consumers tastes

Scenario 4: Allowance Increase



Demand Shifters: consumers tastes

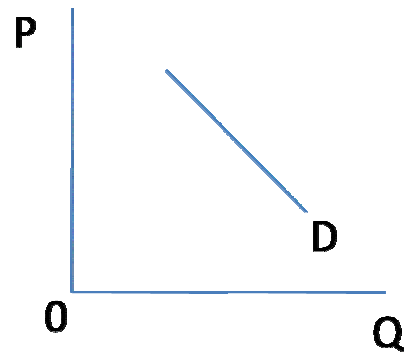
Scenario 5: Soft Drink Price



Demand Shifters: prices of related goods

Handout 7.3 – Assessment: Demand Shifters

Demand Increase



Demand Decrease

