**Mini-Economy Lesson:**

# Determining Demand

### Overview

Students participate in a role play activity, explore demand, and then learn to take a market survey and determine the demand for their own products.

### Concepts in Economics and Entrepreneurship

Market survey, price, quantity, cost of resources, cost per unit, total cost, total revenue, profit, demand, demand schedule, graphing the demand curve, maximizing profit, law of demand

### Materials

1. Activity: *Script:* *Terry's Lemonade Stand*
2. Activity: *Maximize Profit from Lemonade Sales*
3. Activity: *Graph the Demand for Terry's Lemonade*
4. Activity: *Take a Market Survey*
5. Activity: *Graph the Demand for Your Product*
6. Activity: *Maximize Profit for Your Own Product*
7. Answer Key:  *Maximize Profit from Lemonade Sales*
8. Answer Key: *Graph the Demand for Terry's Lemonade*
9. Transparency from page 5, *The Law of Demand*
10. Transparency from page 6, *Supply and Demand*

## Preparation

1. Duplicate the activity, *Script:* *Terry's Lemonade Stand*, making seven copies. Label each copy with the name of one of the characters in the role play activity, and highlight the lines read by that character.
2. Make a sign that says *Lemonade for Sale* and place it in the front of the room. (Optional: Use a lemonade pitcher and glasses for props.)
3. Make transparencies from the *Maximize Profit from Lemonade Sales* activity, the *Graph the Demand for Terry's Lemonade* activity, and the *Take a Market Survey* activity.
4. Duplicate the *Take a Market Survey* activity and *the Maximize Profit for Your Own Product* activity, making one copy of each for each student.
5. Determine a product to use in step 3 below, and make a prototype to show students. Decide in advance on the prices you will use in the survey in step 3.
6. In advance of this lesson tell students to be thinking of a product that they may want to sell in a mini-society business session.

### Procedure

1. **Introduction: Role Play Activity**

Enlist seven student volunteers to read the character parts in the role play activity. Give each volunteer a copy of the script with the character's lines highlighted. Tell students to say the name of their mini-society currency when there is a blank lines in the script. (If necessary, let these students read through their lines to become familiar with the play.) Instruct the remainder of the class to listen carefully, so that they will be able to answer questions later. Have students read through the play while the remainder of the class listens.

**2. Exploring Demand for Terry's Lemonade**

Give each student a copy of the *Maximize Profit from Lemonade Sales* activity and the *Graph the Demand for Terry's Lemonade* activity. To determine the demand for Terry's lemonade in the script, discuss and review the role play activity in the following manner:

(a) Place the transparency for the *Maximize Profit from Lemonade Sales* activity on the overhead projector, and have students work through the activity as a group, as directed on the activity page. Tell students that the table that they have created is called *a Demand Schedule*. (See the answer key for *Maximize Profit from Lemonade Sales*.)

(b) Place the transparency of the *Graph the Demand for Terry's Lemonade* activity on the overhead projector, and have students work through the activity as directed on the activity page. To plot the points in the demand curve, let one student at a time come to the overhead projector and plot a point from the demand schedule. Then have another student connect the points to form the demand curve. (See the answer key for *the Graph the Demand for Terry's Lemonade* activity.)

(c) Explain to students that this demand curve shows only an approximate demand for the lemonade, because Terry surveyed only a portion of the class (called a *sample*). Explain that businesses often survey a sample of the market in hopes of finding out what the entire market will do.

(d) Alternative procedure: When demonstrating the graphing activity, enlarge the graph and put it on a bulletin board. Have several students plot the points on the graph with push pins. Then connect the points with yarn to create the demand curve.

**3. Introducing a Market Survey**

Explain to students that the questioning process that Terry went through to determine the demand for lemonade is called *taking a market survey*. Explain that first you will show them how to take a market survey, and then each of them will take a market survey for a product that they may want to sell in their mini-society business session.

(a) Place the transparency for *Take a Market Survey* on the overhead projector. Tell students to imagine that you want to sell them a \_\_\_\_\_\_\_\_\_\_\_\_ (a product that students would want). Show students the prototype that you have constructed. Determine a set of five possible prices that could be charged (using mini-society currency), and write them in the blanks on the transparency in the first column of the market survey.

(b) Call out each price and ask students to write down on a piece of scrap paper the quantity of the product that they would buy at that price.

(c) Choose up to seven students and ask them, one at a time, how many units of the product they would buy at each of the prices. Enter each students name at the top of a column, and record their responses to each price.

(d) Add across (horizontally) to determine the total quantity demanded at each price on the market survey, and record this information in the final Total column. (See example below.)

1. Using the graph at the bottom of the transparency, demonstrate how you would graph the demand for the product. Use the procedure in section 2b above. (See example below.)
2. **Taking a Market Survey for Student Products**

Give each student a copy of the *Taking a Market Survey* activity. Use the following procedure to explain how to take a market survey:

(a) Ask each student to write in the name of a product that they may want to sell in a mini-society business session.

(b) Initiate a discussion with students about prices for their product. Have students determine a set of five possible prices (in mini-society currency) that could be charged (taking into consideration the amount of money that will be available to students by the time they are ready for a business session). Try to use prices that would include both extremes for their incomes (from prices that would be extremely high to prices that would be extremely low). Have students record their prices in the first column.

(c) Using the transparency from Step 3c above, explain to students that they will interview several friends in the class, asking each one how many units of their product they would buy at each of the possible prices.

(d) Remind students to write the name of the person being interviewed at the top of the column, and record below the number of units of the product the person will buy at each price.

(e) Explain that when they take a market survey, they are finding out about the demand for their products. Remind students that demand shows them how much consumers are willing and able to buy at each possible price.

(f) Give students time to take their market survey.

1. **Determining Demand for Their Products**

Use the following activity to examine the demand for their products:

(a) After students have taken their market surveys, use the transparency of the *Taking a Market Survey* with the information you collected previously to remind them how to find the totals for each price.

(b) Have the students use the same procedure to calculate the totals on their own individual market surveys, by adding horizontally, finding the total quantity demanded at each price, and recording this information in the *Total* column.

(c) Again, use the transparency to remind students how to plot the totals for each price on the graph at the bottom of the Market Survey activity page, and then connect the plotted points to show the demand curve for products for the interviewed consumers.

(d) Help students plot their totals and draw their own demand curves, according to the data that they have collected.

(e) Explain that if they had included every student in their survey, the resulting demand curve would represent the entire demand for their product. However, since their survey included only a sample of the market, the curve represents only the demand of the selected sample.

(f) Compare students' graphs, and explain that although each person's graph is somewhat different, all of the graphs have the same general shape, sloping downward to the right. Display the transparency from page 5, *The Law of Demand*. Read the transparency with students and explain that their graphs illustrates the Law of Demand (the quantity demanded for a good or service will increase as the price decreases—or in other words, people will buy more when the price goes down.) This is the reason why the curves on their graphs have similar shapes.

(g) Distribute copies of the *Maximize Profit for Your Own Product* activity. Have students follow the directions to complete the page using the information from the market survey that each of them conducted.

(h) Conduct a class discussion concerning the best prices that students should charge to maximize their profits. Discuss reasons why the demand may not be the same on market day. (Students may not have as much money as anticipated or they may find other products on which they prefer to spend their money.)

**6. Review**

To review the concepts presented in this lesson, have students learn the song *Supply and Demand*. (See page 6.)

**The Law of Demand**

**As the price of a good increases the quantity demanded of the good will decrease . . .**

**and**

**as the price of the good decreases the quantity demanded of the good will increase.**

**or**

In plain English . . . People will buy more of a good at lower prices, and less at higher prices.

## Supply and Demand

(Tune The Farmer in the Dell)

## Supply and Demand.

## Supply and Demand.

Heigh Ho the Market O!

## Supply and Demand.

Producers make the goods.

Producers make the goods.

Heigh Ho the Market O!

Producers make the goods.

Consumers want the goods.

Consumers want the goods.

Heigh Ho the Market O!

Consumers want the goods.

Producers will supply.

Producers will supply.

Heigh Ho the Market O!

Producers will supply.

Consumers will demand.

Consumers will demand.

Heigh Ho the Market O!

Consumers will demand.

## Supply and Demand.

## Supply and Demand.

Heigh Ho the Market O!

## Supply and Demand.