LESSON 7: SUPPLY AND PRICE DETERMINATION

Focus Question: How do the forces of supply and demand determine the price of goods and services in our economy?

Objectives

Students will be able to:

- Explain the law of supply.
- Create and interpret supply charts.
- Discuss the factors that change supply.
- Explain and depict on a chart a shift in supply.
- Explain how the interaction of supply and demand results in an equilibrium price.

Standards

NES: 1, 7, 8, 9, 13
ELA: 1, 2, 3

Materials

Text, Chapter 7, pp. 186-201.

Teaching Strategies

I. The Law of Supply

- Tell the class that you would like them to take part in an experiment asking for their opinion about an opportunity to work part time, before or after school, in the school library.
    - You will ask the students to decide how many hours per week they would like to work, up to a maximum 25 hours per week at various rates of pay.
    - Have each student in the class complete exercise 1 in worksheet 7A. Once they have completed the survey, record the responses of **five** students on the chalkboard in a table like the one below.

Hourly rate	Student #1	Student #2	Student #3	Student #4	Student #5	Total hours students are willing to work
$30						
$25						
$20						
$15						
$10						
$7						
$5						
$3						
$2						
$1						

- Once the students' responses have been entered into the table, ask the following questions:
  1. Do you see a pattern to the students' responses?
  2. Why does a higher wage generally increase the students' willingness to work?
  3. What factors, besides the hourly wage rate, would influence a student's choice to work or not?
  4. Would you expect that all people would respond the same way to this offer? Explain.
  5. Ask the students to identify the economic concept illustrated by this activity. *(Supply)*
  6. Ask if anyone can provide the economists' definition of ***supply***. (*Economists use the term supply to describe the quantity of goods and services that will be offered for sale at a given price.)*
  7. Ask if anyone can explain the ***Law of Supply***. (*The quantity of a good or service supplied varies directly with its price. The number of units of something offered for sale increases as the price increases and the number of units offered for sale decreases as the price decreases.)*
  8. Elicit reasons why this is so. (*The* ***incentive*** *of higher profits: Existing producers will increase their output at higher prices to maximize revenue. New producers will be lured into the market by the higher prices.)*

II. The Supply Curve

- Have the students complete worksheet 7B and confirm their understanding of the Law of Supply by answering the following questions:
  1. What happens to the quantity supplied as the price goes up?
  2. What happens to the quantity supplied as the price goes down?
  3. Describe the slope of the supply curve: is it positive or negative?
  4. Describe the relationship between price and quantity supplied: is it direct (price and quantity move in the same direction) or inverse (price and quantity move in opposite directions)?

When economists refer to the ***quantity supplied****, they refer to a specific point along the supply curve. A change in the quantity supplied is a result of change in the price of a good and is shown as a movement* ***along the supply curve****.*

III. Determinants of Supply

- We have seen that as the price of a good or service changes, the quantity that producers are willing to supply changes. (A change in the quantity supplied.)
- There are some factors however that result in a shift in the supply curve.

When economists refer to ***supply****, they refer to the amount of goods or services offered at all price levels represented by a supply curve. A change in supply is a shift* ***of the entire supply curve****. A change in supply of a good or service is caused by something* ***other than a change in the price*** *of a good or service.*

- Have the students complete exercise 1 on worksheet 7C. Once they have finished the worksheet, present the following questions to the class:
  1. What was the cause of the increase in supply (Why did the supply curve shift to the right)?

2. Can you name any other factors that would result in a shift in the supply curve? *(There are four major determinants of supply: price of inputs, number of firms in the industry, taxes, technology).*

- Direct the students' attention to exercise 2 on Worksheet 7C which lists the determinants of supply. Lead a discussion with the students explaining how each of the determinants affects supply. Have the students record the results of the discussion by completing the table (provide examples when possible).

Determinant of supply		**Affect on supply**	**Explanation**
A change in the price of inputs (raw materials, wages, etc.)	A decrease in the price of inputs.	Increase (supply curve shifts to the right)	If the price of inputs decreases, production costs will be lower so producers will be willing to supply more at all price levels. Ex: when the price of memory chips fell, computer manufacturers were willing to supply more at any given price than before.
	An increase in the price of inputs.	Decrease (supply curve shifts to the left)	If the price of inputs increases, production costs will be higher so producers offer fewer products for sale at all price levels. Ex. If labor costs rise, producers will not be willing to produce as many units.
A change in the number of firms in the industry.	Increase in the number of firms in the industry	Increase (supply curve shifts to the right)	As more firms enter an industry, there are greater quantities supplied at every price.
	Decrease in the number of firms	Decrease (supply curve shifts to the left)	As businesses leave the market, fewer products are offered for sale at every price. Ex. A neighborhood dry cleaner closes (decrease in the number of firms) and a deli opens up in its place (increase in the number of firms).
A change in taxes	Increase in taxes	Decrease (supply curve shifts to the left)	If higher taxes are imposed, businesses will react as if production costs have risen, and will not be willing to supply as much as before.
	Decrease in taxes	Increase (supply curve shifts to the right)	A decrease in taxes is seen as a decrease in production costs, and, therefore, businesses will be willing to supply more at every price.
Technology development		Increase (supply curve shifts to the right)	The use of science to develop new products and new methods of production usually reduces the cost of production.

IV. Supply, Demand and the Market Price

You have learned that the Law of Demand that tells us that consumers will tend to buy less of a good or service at higher prices and more of a good or service at lower prices, and that the Law of Supply tells us that suppliers will tend to produce more of a good or service at higher prices and less at lower prices.

But how are prices determined in a market economy? Adam Smith explained in the Wealth of Nations, that the optimal economics decisions will be made when buyers and sellers are free to interact, guided by their own self-interest. The prices of goods and services are the result of interactions between people who are willing to buy and people willing to sell. The interactions between voluntary buyers and sellers results in an equilibrium price at which the quantity demanded equals the quantity supplied. In this way, supply and demand determine the final price of a product.

How does this work?

Have the students complete exercises 1 and 2 in worksheet 7D and answer the following questions:

1. Why does the price decrease if it is above equilibrium?
2. Why does the price increase if it is below equilibrium?
3. What are possible events that would result in a change in the equilibrium price?

Summary/Assessment:

- In New York City rent control limits the amount that landlords are able to raise some tenants' rents. Based on your understanding of the laws of supply and demand, explain the effect of rent control legislation on the rental market in New York City. Use a chart depicting supply and demand curves to support your explanation.
- The U.S. Congress has passed minimum wage legislation the mandates that all workers be paid at least a specified hourly wage. While supporters of the minimum wage argue that it protects low paid workers from being abused by employers who may otherwise pay wages that are too low to live on, detractors claim that a minimum wage results in higher unemployment among lower paid workers. Based on your understanding of the laws of supply and demand, explain how minimum wage laws affect the market for low wage workers. Use a chart depicting supply and demand curves to support your explanation.