TEACHER'S GUIDE

P. 487 Defined
P. 491 Content standards
P. 492 Materials
P. 492 Procedure
P. 493 Lesson outline
P. 496 Closure
P. 497 Assessment
P. 501 Overheads

VISUALS ☞

Visuals for overhead projector.
Copy to transparent paper for overhead.

P. 502 ☞Visual-1: Market defined
P. 503 ☞Visual-2: Business defined

LESSONS ☞

Copy and handout to students.

P. 506 ☞Lesson-I: I, Pencil
P. 513 ☞Lesson-II: Specializing in production
P. 518 ☞Lesson-III: Wal-Mart
P. 522 ☞Lesson assessment
DEFINED

A market is a social arrangement that allows buyers and sellers to discover information and complete voluntary exchanges of goods and services. Commerce consists of trading something of economic value such as a good, service, information, or money between two entities. Business is the management and coordination of people and resources to accomplish particular production goals, usually for the purpose of making profit. Business, commerce, and markets create many benefits for consumers, and as a result of business, commerce, and markets in the economy, consumers experience an increased standard of living. Businesses obtain resources such as labor and equipment, and businesses specialize in the production of particular goods and services. As a result of business in the economy, the variety, quality, and quantity of goods and services available to consumers increases, while the prices of goods and services decrease.

To understand the important role that business plays in the economy and its influence on your standard of living, imagine a world in which you personally had to produce everything you consume (see Module 3). You would have to grow your own food, sew your own clothes, cook all of your meals, and build your own car, computer, cell phone, house, and furniture. It would be impossible to actually complete all of these activities on your own. Only a fraction of these activities could be completed because it takes a lot of time and resources to learn how and to build a car, computer, house, and so forth. Time and resources are scarce, and people have to make choices about how they spend them.

Because business is present in the economy, we are able to consume and enjoy many more goods and services than we otherwise could if we had to produce everything on our own. Compare your life today with the one described above. You eat food that is grown and often prepared by someone else. Your clothes are sewn by someone else. Your car, MP3 player, computer, and cell phone were produced by someone else. The movies you watch and the music you listen to were all created by someone else. Think of all of the incredible technologies that you have access to because of business in the economy. If you produced everything on your own, you would have little access to medical and dental care. These items are a part of everyday life and would not be available if not for markets and business.

Markets allow you as a consumer to purchase the goods and services that you want. Through markets, information is transmitted between
buyers and sellers about:
1) the goods and services desired by consumers, and
2) the price of those goods and services.

Markets bring consumers and producers together to coordinate the exchange of resources. Both the buyer and seller must stand to gain from the trade or else the transaction will not occur. This means that the buyer must benefit (i.e., acquires a product or service) and the seller must benefit (i.e., is paid for the product or service) in order for a trade to take place. Consumers convey information about the quantity and quality of the goods and services that they desire through markets by choosing to buy or not to buy particular products. Through markets, businesses determine the products and services that consumers desire, and they then produce those goods and services. As a result, you, as a consumer, experience a higher standard of living because the goods and services that make your life better off are produced by businesses.

The transmission of information between buyers and sellers through markets was first recognized by Adam Smith, the father of modern economics, as an invisible hand (see also Module-9). He refers to this as an invisible hand because buyers and sellers both act in their own interests, and in doing so, the interests of the other party is also served.

Trade is what increases our standard of living. Instead of having to produce everything that you consume on your own, you are able to trade with others and obtain a higher quality of life (see Module-3). Through specializing in the production of a particular good or service, more is produced compared to each of us producing everything on our own. Not only do individuals specialize in production, businesses also specialize in producing particular goods and services.

Businesses bring “specialized” people, equipment, and other resources together and coordinate the production of goods and services. Nearly all businesses start out small, and only those firms that meet consumers’ demands and produce efficiently stay in business and grow into larger firms. “Big” business is not a bad thing. In fact, big businesses are those businesses that are able to supply highly demanded products at the lowest prices and consistently meet the demands of consumers. Consumers are better-off because of business in the economy because they gain from purchasing the goods and services supplied by businesses.

To understand the important role of business, imagine if you only
traded goods and services with other students in your classroom. If each student specialized in producing one good or service, you would be better-off than if you produced everything on your own. What products might each of you produce? Someone may grow food, someone else may sew clothing, and someone else may produce wood furniture. No one, however, would likely be able to produce a car, TV, or computer.

Now, imagine if you could trade with everyone in your school. The variety, quality, and quantity of the goods and services available would be higher and prices would be lower than if you only traded with others in your classroom. Now think of trading with your entire town, state, country, or other countries. As you trade with more people, the goods available for you to consume increase. As people specialize and join together to produce on a larger scale, you have access to goods such as TV’s, computers, and cars. As you can see, the variety, quantity, and quality of the goods and services you wish to consume increase as you are able to trade with more and more people, while prices decrease.

*Businesses* are vitally important in coordinating trade. *Businesses* not only allow for larger scale production to meet the needs of many consumers, they also make it easier for consumers to locate sellers who produce particular goods and services of interest. It is not always easy for an individual to coordinate trade with people who live far away. It is easier, however, for *businesses* to coordinate with other *businesses* allowing for greater variety, quantity, and quality for consumers, as well as lower prices. Because *businesses* have the incentive of making profit, they efficiently coordinate resources such as labor and equipment. Efficient production translates into lower prices, which attract consumers.

Clearly, we, as consumers, are better-off because of *business* in the economy. *Markets*, however, are not always perfect and sometimes people are hurt by *business* in the economy. Sometimes in *markets*, transactions between buyers and sellers also affect people not involved in the transaction. When people not involved in the transaction experience costs or are hurt by the transaction, this is referred to as a *negative externality* (see Module-14). Pollution is an example of a negative externality. Power plants that burn coal to produce energy may emit pollution into the air which negatively affects people who breathe that air. In cases where negative *externalities* are present, economists say that these are examples of *market failures*. In other words, *markets* and the interaction between buyers and sellers do not always account for all of the costs of trade. In the event of *market* failures, government interven-
tion and/or more clearly defined property rights are possible solutions to mitigate these problems.

*Businesses* sometimes create positive *externalities*. If a *business* purchases an eyesore, for example, such as a junk yard, and replaces it with an aesthetically pleasing facility, a positive *externality* is generated. An aesthetically pleasing facility is more likely to attract customers. The positive *externality* is received by passers-by that benefit from the positive viewscape.

Overall, the presence of *business* in the economy results in a higher standard of living for each of us. Even though people are sometimes hurt if *market* failures are present, the benefits of having *business* in the economy far outweigh the costs. *Businesses* benefit each of us by producing the goods and services that we desire. Instead of having to produce everything we consume on our own, *businesses* facilitate trade between people and allow for greater variety, quantity, and quality of products and services at lower prices. Although *business* is sometimes portrayed in a negative light, it is important to remember that *businesses* exist only if they serve the needs of consumers. Without consumers to buy their products, firms go out of *business*. We, as consumers, undoubtedly experience a higher quality of life due to *business* in the economy because each of us voluntarily chooses to engage in trade with *businesses*. We make this choice because we benefit from the products and services produced by *businesses* in the economy.

**CONCEPTS**

1. Market
2. Commerce
3. Business
4. Invisible hand
5. Trade
6. Externality

**OBJECTIVES**

1. Understand the meaning of commerce and trade.
2. Realize that the invisible hand will help markets approach equilibrium.
3. Understand the role of business in the economy.
4. Understand that externalities may affect equilibrium.
CONTENT STANDARDS

NATIONAL CONTENT STANDARDS IN ECONOMICS

1. (Standard 3) Different methods can be used to allocate goods and services.
2. (Standard 4) People respond predictably to positive and negative incentives.
3. (Standard 5) Voluntary exchange occurs only when all participating parties expect to gain.
4. (Standard 6) When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.
5. (Standard 7) Markets exist when buyers and sellers interact.
6. (Standard 8) Prices send signals and provide incentives to buyers and sellers.
7. (Standard 9) Competition among sellers lowers costs and prices, and encourages producers to produce more of what consumers are willing and able to buy.
8. (Standard 10) Institutions evolve in market economies to help individuals and groups accomplish their goals.
9. (Standard 13) Income for most people is determined by the market value of the productive resources they sell.
10. (Standard 14) Entrepreneurs are people who take the risks of organizing productive resources to make goods and services.

MONTANA SOCIAL STUDIES CONTENT (STANDARD 5)

1. (Benchmark 1) Identify and explain basic economic concepts.
2. (Benchmark 3) Understand the social costs and benefits to society of allocating goods and services through private and public sectors.
3. (Benchmark 4) Understand how different values and beliefs influence economic decisions in different economic systems.
4. (Benchmark 6) Understand the effects of new technology, global interdependence, and competition on individuals and the development of national policy.

TIME REQUIRED

1-2 class periods
MATERIALS

Overhead projector
Transparency pen
Copies of Lesson-II: Specializing in production
Enough scissors for each participant
Stop watch
Visuals for overhead projector: Copy to transparency.
   Visual-1: Market defined
   Visual-2: Business defined
Lesson worksheets: Copy for each student:
   Lesson-I: I, Pencil
   Lesson-II: Specializing in production
   Lesson-III: Wal-Mart
   Lesson assessment

PROCEDURE

1. Talk with students about markets and trade. Display Visual-1: Market defined. Remind them that a market is a social arrangement that enables people to trade. Now talk about Commerce. Commerce consists of trading things of economic value such as a good, service, information, or money between two entities. Remind students that we will only trade if we believe that the exchange will make us better off; trade is mutually beneficial. You may wish to review the ideas of exchange and trade from Module-3. Given time, you may also want to review comparative advantage from Module-4. Remind students that we have the comparative advantage when we have the lowest opportunity cost to produce something. When producing at the lowest opportunity cost, we give up the least for each commodity that is produced. Trade allows people to specialize which may further increase productivity and output.

2. Review the ideas brought up in Module-3 when thinking about what life would be like without trade and everyone must be self-sufficient. There would be little, if any, time to do anything besides produce necessities. There are great potential benefits from trade.

3. Now talk with students about the firm, or business.
   Question: Who provides most of the goods and services that we buy?
   Answer: Businesses, or firms.
Talk with students about the role of the firm, or business. Businesses are an institution that organizes people to produce something. Display Visual-2: Business defined. Business is the management and coordination of people and resources to accomplish particular production goals, usually for the purpose of making profit.

4. Review the idea of profit from Module-7. Remind students about the Skater Boards Lesson. Profit is the difference between total revenues and total costs. You may wish to write the formula on the board and give an example.
If total revenues are $100, for example, and total costs are $80, then profit is $20 ($100-$80).
Profit = Total Revenue–Total Cost
Profit = TR–TC

Remember that most firms are in business to earn a profit. Even most non-profit firms act as though they are trying to earn a profit.

5. Business, commerce, and markets create many benefits for consumers, and as a result of business, commerce, and markets in the economy, consumers experience an increased standard of living. Recall the discussion about the invisible hand from module-9. Businesses, or firms, can do well by doing good. Businesses obtain resources, such as labor and equipment, and use them to specialize in the production of particular goods and services. Remember, businesses must make what consumers desire and are willing to pay for. Businesses compete against each other to provide these products. This competition encourages businesses to provide the best product at the lowest cost. As a result of business in the economy, the variety, quality, and quantity of goods and services available to consumers increases, while the prices of goods and services decrease.

LESSON OUTLINE

Lesson-I: I, Pencil

Materials
Lesson-I: I, Pencil
Businesses are vitally important in coordinating trade. To help students realize this value have them read the attached article, I, Pencil. Have students complete the reading in class or at home as a homework assignment.

Talk about how many people it takes to make a pencil.

Question: Could any student make a pencil from start to finish without any help? Answer: That student would have to grow the tree, cut the tree, make the saw to cut the tree, whittle the tree down to pencil size, dig up the lead, shape the lead and fit it into the pencil, and so forth. That, of course, does not include making an eraser, the metal to hold the eraser, or painting the pencil. It does not include the food the student must eat to have the energy to make the pencil. It does not include any tools the student may use to cut the wood, carve the pencil, or mine the lead. We can see, that a very simple object, like a pencil, goes through an incredible process in the market before it reaches our hand.

Talk with students about this process. No centralized planning agency or government is necessary to plan this process. It is the coordination of businesses communicating with each other in the market that allows the production of a pencil. It is the price of the different products and inputs that signals to different businesses what is desired and how much of it. Refer back to Module-6: Price. Remind students of the importance of price and the information it provides to both producers and consumers. Price provides information about relative values. When allowed to fluctuate freely, price sends signals to producers about the desirability of products. At the same time price sends signals to consumers about the opportunity cost of producing those products.

Working through Lesson I: I, Pencil, will help students understand the complexities of the market and the spontaneity that it allows. Have students complete the reading and work through the lesson plan below.

Now that students have a better understanding of the complexities of the market, have them think about the production process and how businesses help increase productivity. Lesson II: Specializing in production, is an activity you can do with all or a select group of students. Follow the activity guidelines below.

Discuss with students that businesses not only allow for larger scale production to meet the needs of many consumers, they also make it easier for consumers to locate sellers who produce particular
goods and services of interest. It is not always easy for an individual to coordinate trade with people who live far away. It is easier, however, for businesses to coordinate with other businesses allowing for greater variety, quantity, and quality for consumers, as well as lower prices. Because businesses have the incentive of making profit, they efficiently coordinate resources such as labor and equipment. Efficient production translates into low prices, which attract consumers. As consumers we are better-off because of business in the economy.

**LESSON-II: SPECIALIZING IN PRODUCTION**

**MATERIALS**
One copy for each student:
Producing Everything You Consume on Your Own (Cover)
- Specializing in Production: Student A-E (Clip art)
- Copies of Specializing in Production: Student A-E (Clip art). 5 copies of any one clip art picture for each participating student
One pair of scissors for each student
Stop Watch

The goal of this activity is for students to understand the concept of specializing in the production of a particular good and the benefits that result from specialization and trade.

Make one copy of each of the 5 sheets of “Lesson-II: Specializing in production, student A-E” for each student participating. Each participating student will need a pair of scissors to cut out the clipart images. You may wish all students to participate or to choose a few volunteers such as 5 students to participate in this activity. In this case you will only need enough copies for each participant.

Have participating students come to the front of the room and supply each participating student with a pair of scissors.

Explain to the class that the clipart items represent goods that can be produced by the students. Cutting each item out represents producing these items. Since consumers expect functional products, students have to be careful to cut out each item neatly and precisely.

Round 1: Tell the participants that they have 45 seconds to neatly cut out the 5 clipart items on their sheet of paper. Time students for 45 seconds as they cut out the images.

Determine how many items each student was able to cut out. Items
that were sloppily cut out do not count towards that student’s total number of items. Most likely, none of the students will successfully cut out all five items. Explain to the class that this represents the limitations of producing everything on our own. Without specialization, it takes a lot of time to produce a variety of goods.

Now, give each participating student 5 sheets of the same clipart image (i.e., student A has 5 sheets of paper with a star on each page, student B has 5 sheets of paper with a circle on each page).

Round 2: Tell students they again have 45 seconds to neatly cut out the shapes, but in this round, they are able to specialize in producing just one of the goods. Specialization can be represented by stacking the 5 sheets and cutting out the single clipart image all at once. The images must, however, be cut out around the border of the clip art, not a circle containing the clip art.

Students should be able to cut out all 5 of the clipart images they are specializing in producing in the 45 second time limit if they stack the sheets of paper and cut them all at once. Determine how many clipart images each student was able to cut out.

Stacking the sheets of paper represents the increased productivity and efficiency that are created through specialization. Businesses, just like individuals, specialize in production and are able to produce on an even larger scale than individuals working on their own.

CLOSURE

LESSON REVIEW

1. Question: What is a market?
   Answer: A market is a social arrangement that allows buyers and sellers to discover information and complete voluntary exchanges of goods and services.

2. Question: What is commerce?
   Answer: Commerce consists of trading something of economic value such as a good, service, information, or money between two entities.

3. Question: What is business?
© Answer: Business is the management and coordination of people and resources to accomplish particular production goals, usually for the purpose of making a profit.

4. © Question: How do businesses benefit society?
   © Answer: Businesses specialize in the production of particular goods and services. As a result of business in the economy, the variety, quality, and quantity of goods and services available to consumers increases, while the prices of goods and services decrease.

ASSESSMENT

MULTIPLE-CHOICE QUESTIONS

1. © Question: Businesses are good for consumers and the economy. This statement is:
   a. True. Businesses earn a profit that they share equally with their customers.
   b. True. Businesses respond to consumer desires.
   c. False. Businesses earn a profit at the expense of consumers.
   d. False. Businesses do not know what consumers want.

2. © Question: Commerce is the trading of goods and services.
   a. Commerce hurts one party of the trade while the other benefits.
   b. Commerce only benefits large corporations.
   c. Commerce forces small productive firms out of business.
   d. Commerce allows mutual gains from trade.

3. © Question: What happens when prices are allowed to fluctuate freely?
   a. Price will signal the consumers willingness to pay for goods and services.
   b. Price will be set by a planning board at the market equilibrium.
   c. Price will be set higher than the market equilibrium by firms trying to make a profit.
   d. Price will always reflect the socially desired equilibrium.
4. **Question:** How do businesses benefit society?
   a. Businesses want to maximize profit and therefore charge a price higher than the equilibrium price.
   b. Businesses respond to consumers ignoring competition.
   c. Businesses can specialize in production.
   d. Businesses ignore comparative advantage.

5. **Question:** What did the famous economist, Adam Smith, mean when using the term “invisible hand?”
   a. People will always help others, regardless of costs.
   b. Businesses will always look out for the interest of all citizens.
   c. Businesses can do well by responding to consumer desires.
   d. Government planning is the best mechanism for allocating goods and services.

**Answers:**

1. b
2. d
3. a
4. c
5. c

**Discussion/Essay Questions**

1. **Question:** Business and commerce create benefits for consumers. Is this statement true or false? Explain.
   abı Answer: True. Businesses can specialize in production and produce more than individuals could produce alone. Businesses can also create a greater variety and quality of product at a lower cost. In this way, businesses benefit consumers and allow them to consume more with less.

2. **Question:** Why do businesses respond to consumers desires?
   jabi Answer: Businesses must respond to consumer desires to stay in business and make money. Businesses must produce products that consumers are willing to pay for. In this way businesses can do well for themselves while also doing good for others.
3. ☐ Question: Would society be better off if a government planning board determined the products to be produced and prices to be charged?

☐ Answer: Government planning lacks the information provided by price. Price signals to consumers the opportunity cost of production. Price signals to producers what consumers are willing to pay for. Without this information it is hard to reach equilibrium where quantity demanded equals quantity supplied and resources are put to their most efficient use.

NOTES
OVERHEAD VISUALS

THE ROLE OF BUSINESS IN THE ECONOMY
MARKET

A SOCIAL ARRANGEMENT THAT ALLOWS BUYERS AND SELLERS TO DISCOVER INFORMATION AND COMPLETE VOLUNTARY EXCHANGES OF GOODS AND SERVICES

COMMERCE

TRADING SOMETHING OF ECONOMIC VALUE SUCH AS A GOOD, SERVICE, INFORMATION, OR MONEY BETWEEN TWO ENTITIES
BUSINESS

BUSINESS IS THE MANAGEMENT AND COORDINATION OF PEOPLE AND RESOURCES TO ACCOMPLISH PARTICULAR PRODUCTION GOALS, USUALLY FOR THE PURPOSE OF MAKING PROFIT.

BUSINESSES PROVIDE A GREATER VARIETY, QUALITY, AND QUANTITY OF GOODS AND SERVICES.

BUSINESSES CAN PRODUCE AT A LOWER COST.

BUSINESSES SPECIALIZE IN THE PRODUCTION OF PARTICULAR GOODS AND SERVICES.

BUSINESS, COMMERCE, AND MARKETS CREATE MANY BENEFITS FOR CONSUMERS, AND AS A RESULT CONSUMERS EXPERIENCE AN INCREASED STANDARD OF LIVING.
Lesson Worksheets

The Role of Business in the Economy
Lesson-1: I, Pencil

My Family Tree as told to Leonard E. Read

I am a lead pencil—the ordinary wooden pencil familiar to all boys and girls and adults who can read and write. Writing is both my vocation and my avocation; that’s all I do.

You may wonder why I should write a genealogy. Well, to begin with, my story is interesting. And, next, I am a mystery—more so than a tree or a sunset or even a flash of lightning. But, sadly, I am taken for granted by those who use me, as if I were a mere incident and without background. This supercilious attitude relegates me to the level of the commonplace. This is a species of the grievous error in which mankind cannot too long persist without peril.

For, the wise G. K. Chesterton observed, “We are perishing for want of wonder, not for want of wonders.”

I, Pencil, simple though I appear to be, merit your wonder and awe, a claim I shall attempt to prove. In fact, if you can understand me—no, that’s too much to ask of anyone—if you can become aware of the miraculousness which I symbolize, you can help save the freedom mankind is so unhappily losing. I have a profound lesson to teach. And I can teach this lesson better than can an automobile or an airplane or a mechanical dishwasher because—well, because I am seemingly so simple.

Simple? Yet, not a single person on the face of this earth knows how to make me. This sounds fantastic, doesn’t it? Especially when it is realized that there are about one and one-half billion of my kind produced in the U.S.A. each year.

Pick me up and look me over. What do you see? Not much meets the eye—there’s some wood, lacquer, the printed labeling, graphite lead, a bit of metal, and an eraser.

Innumerable antecedents

Just as you cannot trace your family tree back very far, so is it impossible for me to name and explain all my antecedents. But I would like to suggest enough of them to impress upon you the richness and complexity of my background.
My family tree begins with what in fact is a tree, a cedar of straight grain that grows in Northern California and Oregon. Now contemplate all the saws and trucks and rope and the countless other gear used in harvesting and carting the cedar logs to the railroad siding. Think of all the persons and the numberless skills that went into their fabrication: The mining of ore, the making of steel and its refinement into saws, axes, motors; the growing of hemp and bringing it through all the stages to heavy and strong rope; the logging camps with their beds and mess halls, the cookery and the raising of all the foods. Why, untold thousands of persons had a hand in every cup of coffee the loggers drink!

The logs are shipped to a mill in San Leandro, California. Can you imagine the individuals who make flat cars and rails and railroad engines and who construct and install the communication systems incidental thereto? These legions are among my antecedents.

Consider the millwork in San Leandro. The cedar logs are cut into small, pencil-length slats less than one-fourth of an inch in thickness. These are kiln dried and then tinted for the same reason women put rouge on their faces. People prefer that I look pretty, not a pallid white. The slats are waxed and kiln dried again. How many skills went into the making of the tint and the kilns, into supplying the heat, the light and power, the belts, motors, and all the other things a mill requires? Sweepers in the mill among my ancestors? Yes, and included are the men who poured the concrete for the dam of a Pacific Gas and Electric Company hydro-plant which supplies the mill’s power!

Don’t overlook the ancestors present and distant who have a hand in transporting sixty carloads of slats across the nation.

Once in the pencil factory—$4,000,000 in machinery and building, all capital accumulated by thrifty and saving parents of mine—each slat is given eight grooves by a complex machine, after which another machine lays leads in every other slat, applies glue, and places another
slat atop—a lead sandwich, so to speak. Seven brothers and I are mechanically carved from this “wood-clinched” sandwich.

My “lead” itself—it contains no lead at all—is complex. The graphite is mined in Ceylon. Consider these miners and those who make their many tools and the makers of the paper sacks in which the graphite is shipped and those who make the string that ties the sacks and those who put them aboard ships and those who make the ships. Even the lighthouse keepers along the way assisted in my birth—and the harbor pilots.

The graphite is mixed with clay from Mississippi in which ammonium hydroxide is used in the refining process. Then wetting agents are added such as sulfonated tallow—animal fats chemically reacted with sulfuric acid. After passing through numerous machines, the mixture finally appears as endless extrusions—as from a sausage grinder-cut to size, dried, and baked for several hours at 1,850 degrees Fahrenheit. To increase their strength and smoothness the leads are then treated with a hot mixture which includes candelilla wax from Mexico, paraffin wax, and hydrogenated natural fats.

My cedar receives six coats of lacquer. Do you know all the ingredients of lacquer? Who would think that the growers of castor beans and the refiners of castor oil are a part of it? They are. Why, even the processes by which the lacquer is made a beautiful yellow involve the skills of more persons than one can enumerate!

Observe the labeling. That’s a film formed by applying heat to carbon black mixed with resins. How do you make resins and what, pray, is carbon black?

My bit of metal—the ferrule—is brass. Think of all the persons who mine zinc and copper and those who have the skills to make shiny sheet brass from these products of nature. Those black rings on my ferrule are black nickel. What is black nickel and how is it applied? The complete story of why the center of my ferrule has no black nickel on it would take pages to explain.

Then there’s my crowning glory, inelegantly referred to in the trade as “the plug,” the part...
man uses to erase the errors he makes with me. An ingredient called “factice” is what does the erasing. It is a rubber-like product made by reacting rape-seed oil from the Dutch East Indies with sulfur chloride. Rubber, contrary to the common notion, is only for binding purposes. Then, too, there are numerous vulcanizing and accelerating agents. The pumice comes from Italy; and the pigment which gives “the plug” its color is cadmium sulfide.

**No one knows**

Does anyone wish to challenge my earlier assertion that no single person on the face of this earth knows how to make me?

Actually, millions of human beings have had a hand in my creation, no one of whom even knows more than a very few of the others. Now, you may say that I go too far in relating the picker of a coffee berry in far off Brazil and food growers elsewhere to my creation; that this is an extreme position. I shall stand by my claim. There isn’t a single person in all these millions, including the president of the pencil company, who contributes more than a tiny, infinitesimal bit of know-how. From the standpoint of know-how the only difference between the miner of graphite in Ceylon and the logger in Oregon is in the type of know-how. Neither the miner nor the logger can be dispensed with, any more than can the chemist at the factory or the worker in the oil field—paraffin being a by-product of petroleum.

Here is an astounding fact: Neither the worker in the oil field nor the chemist nor the digger of graphite or clay nor any who mans or makes the ships or trains or trucks nor the one who runs the machine that does the knurling on my bit of metal nor the president of the company performs his singular task because he wants me. Each one wants me less, perhaps, than does a child in the first grade. Indeed, there are some among this vast multitude who never saw a pencil nor would they know how to use one. Their motivation is other than me. Perhaps it is something like this: Each of these millions sees
that he can thus exchange his tiny know-how for the goods and services he needs or wants. I may or may not be among these items.

**No Master Mind**

There is a fact still more astounding: The absence of a master mind, of anyone dictating or forcibly directing these countless actions which bring me into being. No trace of such a person can be found. Instead, we find the Invisible Hand at work. This is the mystery to which I earlier referred.

It has been said that “only God can make a tree.” Why do we agree with this? Isn’t it because we realize that we ourselves could not make one? Indeed, can we even describe a tree? We cannot, except in superficial terms. We can say, for instance, that a certain molecular configuration manifests itself as a tree. But what mind is there among men that could even record, let alone direct, the constant changes in molecules that transpire in the life span of a tree? Such a feat is utterly unthinkable!

I, Pencil, am a complex combination of miracles: A tree, zinc, copper, graphite, and so on. But to these miracles which manifest themselves in Nature an even more extraordinary miracle has been added: The configuration of creative human energies—millions of tiny know-hows configurating naturally and spontaneously in response to human necessity and desire and in the absence of any human master-minding! Since only God can make a tree, I insist that only God could make me. Man can no more direct these millions of know-hows to bring me into being than he can put molecules together to create a tree.

The above is what I meant when writing, “If you can become aware of the miraculousness which I symbolize, you can help save the freedom mankind is so unhappily losing.” For, if one is aware that these know-hows will naturally, yes, automatically, arrange themselves into creative and productive patterns in response to human necessity and demand—that is, in
the absence of governmental or any other coercive masterminding—then one will possess an absolutely essential ingredient for freedom: A faith in free people. Freedom is impossible without this faith.

Once government has had a monopoly of a creative activity such, for instance, as the delivery of the mails, most individuals will believe that the mails could not be efficiently delivered by men acting freely. And here is the reason: Each one acknowledges that he himself doesn’t know how to do all the things incident to mail delivery. He also recognizes that no other individual could do it. These assumptions are correct. No individual possesses enough know-how to perform a nation’s mail delivery any more than any individual possesses enough know-how to make a pencil. Now, in the absence of faith in free people—in the unawareness that millions of tiny know-hows would naturally and miraculously form and cooperate to satisfy this necessity—the individual cannot help but reach the erroneous conclusion that mail can be delivered only by governmental “master-minding.”

**Testimony Galore**

If I, Pencil, were the only item that could offer testimony on what men and women can accomplish when free to try, then those with little faith would have a fair case. However, there is testimony galore; it’s all about us and on every hand. Mail delivery is exceedingly simple when compared, for instance, to the making of an automobile or a calculating machine or a grain combine or a milling machine or to tens of thousands of other things. Delivery? Why, in this area where men have been left free to try, they deliver the human voice around the world in less than one second; they deliver an event visually and in motion to any person’s home when it is happening; they deliver 150 passengers from Seattle to Baltimore in less than four hours; they deliver gas from Texas to one’s range or furnace in New York at unbelievably
low rates and without subsidy; they deliver each
four pounds of oil from the Persian Gulf to our
Eastern Seaboard—halfway around the world—
for less money than the government charges for
delivering a one-ounce letter across the street!
The lesson I have to teach is this: Leave all
creative energies uninhibited. Merely organize
society to act in harmony with this lesson. Let
society’s legal apparatus remove all obstacles
the best it can. Permit these creative know-
hows freely to flow. Have faith that free men
and women will respond to the Invisible Hand.
This faith will be confirmed. I, Pencil, seemingly
simple though I am, offer the miracle of my
creation as testimony that this is a practical faith,
as practical as the sun, the rain, a cedar tree,
the good earth.

Leonard E. Read (1898-1983) founded FEE
in 1946 and served as its president until his
death.

“The, Pencil,” his most famous essay, was first
published in the December 1958 issue of The
Freeman. Although a few of the manufacturing
details and place names have changed over the
past forty years, the principles are unchanged.

* My official name is “Mongol 482.” My
many ingredients are assembled, fabricated, and
finished by Eberhard Faber Pencil Company.
LESSON-II: SPECIALIZING IN PRODUCTION
Lesson-II: Specializing in Production
LESSON-II: SPECIALIZING IN PRODUCTION
Lesson II: Specializing in Production
LESSON-II: SPECIALIZING IN PRODUCTION
Wal-Mart is most often portrayed as an evil big business that hurts rather than benefits consumers. The logic behind this argument, however, is flawed. Big businesses like Wal-Mart only exist if they are meeting the needs of consumers because without consumers to purchase their products, they will go out of business. Consumers voluntarily choose to shop at Wal-Mart. No one forces consumers to purchase goods from Wal-Mart. Customers choose to engage in trade with Wal-Mart because they benefit from buying groceries and other household items. Wal-Mart’s motto of “Always Low Prices, Always” represents the benefits that consumers obtain from shopping at Wal-Mart.

In addition to prices that are often lower than its competitors, Wal-Mart offers a variety and an abundance of goods that consumers desire.

Wal-Mart has generated benefits for consumers through creating wealth, increasing productivity, and offering low prices. Wealth, in an economic sense, is the accumulation of goods that are produced from resources such as labor, land, and natural resources. Wealth is different from money. Money is simply a medium of exchange. Instead of trading one good for another, society puts value in money to facilitate exchange and trade. Economic progress can be thought of as increasing the level of wealth of an individual and the economy as a whole. Through increased productivity, Wal-Mart has increased the level of wealth in the economy.

Productivity

Productivity is increased when more can be produced using fewer resources. For example,
WAL-MART HAS USED MANY COST-SAVING STRATEGIES SO THAT IT CAN OFFER LOW PRICES AND ATTRACT A LARGE NUMBER OF CUSTOMERS. FIRST, WAL-MART BUYS ITS PRODUCTS IN LARGE VOLUMES TO GET THEM AT CHEAPER PRICES PER UNIT.

productivity is increased when someone finds a way of producing pizzas in half the time such as through the use of an assembly line. Through increased productivity, wealth is increased because the resources saved due to increased productivity can be used to produce other goods. Wal-Mart is more productive and more efficient at supplying groceries and household items than its competitors; thus, it can offer lower prices. Wal-Mart’s low prices have attracted many customers and have resulted in high sale volumes for the company. Wal-Mart is able to charge less than its competitors because it has lower costs than is competitors due to higher productivity and other cost-saving strategies.

Wal-Mart has used many cost-saving strategies so that it can offer low prices and attract a large number of customers. First, Wal-Mart buys its products in large volumes to get them at cheaper prices per unit. It also has chosen to have more basic and less extravagant stores, resulting in saved costs. Wal-Mart has also elected to cut costs by having company managers fly coach rather than first-class on airplanes, eat at cheaper restaurants, and save on hotel costs. In addition, Wal-Mart has utilized technologies such as the UPC code that have increased productivity and saved money. Although none of these cost-saving activities are very effective on their own, when combined together they results in substantial reductions in the costs of running a business; thus, consumers face lower prices at the check-stand when they shop at Wal-Mart.

Because Wal-Mart has increased productivity, more and more people have access to and are able to afford groceries and household goods. Through advances in productivity, the abundance of goods available to consumers has increased, while at the same time, the prices of those goods have fallen. Think of TV’s for a moment. When the first TV’s were introduced, few people could afford them and therefore few people benefited from the existence of TV’s. As productivity
increased and as businesses became better and better at producing TV’s, prices dropped and the supply of TV’s increased. As a result, almost everyone owns a TV, and the benefits to consumers are much higher as a result of increased productivity. Just as TV manufacturers increased their productivity, Wal-Mart has been able to benefit consumers because of the low prices and abundance of goods it offers.

**Prices and Income**

It is important to understand the importance of lower prices for consumers. Consumers’ incomes and prices are directly related to consumer well-being. It is the relationship between income and prices that determines the quantity of goods that can be consumed. Nominal income is the amount of money a person earns. Real income is the ratio between nominal income and prices; it represents the quantity of goods that a consumer can purchase. For example, if the prices of all goods double and your income remains the same, you can purchase half as much as you could before prices doubled. If, instead, prices of all goods were cut in half and your income remained the same, you could purchase twice as much as you could before the price change. The amount of money that a person has is not what matters; the amount of goods that a person can buy with a given amount of money is what affects a person’s standard of living.

The low prices that Wal-Mart offers make consumers better-off because they are able to consume more goods on the same amount of income; basically, lower prices translate into greater wealth (the accumulation of goods a person possesses) for consumers because they can consume more. When everything else is held constant, real incomes of consumers increase when prices decrease. The consumers that benefit the most from Wal-Mart’s low prices are those consumers that spend the highest percentage of their income at Wal-Mart. This group is made up mostly of people with low
incomes. Those with the lowest incomes are the ones who benefit the most because of Wal-Mart’s low prices because their real incomes increase.

**The benefits of Wal-Mart**

Because of Wal-Mart’s increased productivity and efficiency, it is able to lower prices and increase the total level of wealth in the economy. An increase in total wealth means that more goods are able to be produced and consumed. Although Wal-Mart certainly makes a profit, consumers who shop at Wal-Mart also reap numerous benefits. The fact that Wal-Mart makes profit is a good thing. Because Wal-Mart is trying to make a profit, it utilizes cost-saving techniques to lower prices and attract customers. Just because Wal-Mart makes a profit does not mean that consumers are hurt. In fact, it means quite the opposite. Consumers voluntarily choose to shop at Wal-Mart because of the low prices and abundance of goods available. Because Wal-Mart offers desirable products at attractive prices, a lot of consumers choose to shop at Wal-Mart. As a result, consumers benefit in terms of greater wealth and Wal-Mart benefits by making a profit. It is the fact that both businesses and consumers stand to benefit from trade that ensures that the products we, as consumers, desire are made available and at low prices. If businesses like Wal-Mart did not make a profit, they would have no incentive to produce and consumers would be worse-off because we would face higher prices and have access to fewer goods.

**Reference:**


**Lesson: Assessment**

**Multiple-choice questions**

1. **Question:** Businesses are good for consumers and the economy. This statement is:
   a. True. Businesses earn a profit that they share equally with their customers.
   b. True. Businesses respond to consumer desires.
   c. False. Businesses earn a profit at the expense of consumers.
   d. False. Businesses do not know what consumers want.

2. **Question:** Commerce is the trading of goods and services.
   a. Commerce hurts one party of the trade while the other benefits.
   b. Commerce only benefits large corporations.
   c. Commerce forces small productive firms out of business.
   d. Commerce allows mutual gains from trade.

3. **Question:** What happens when prices are allowed to fluctuate freely?
   a. Price will signal the consumers willingness to pay for goods and services.
   b. Price will be set by a planning board at the market equilibrium.
   c. Price will be set higher than the market equilibrium by firms trying to make a profit.
   d. Price will always reflect the socially desired equilibrium.

4. **Question:** How do businesses benefit society?
   a. Businesses want to maximize profit and therefore charge a price higher than the equilibrium price.
   b. Businesses respond to consumers ignoring competition.
   c. Businesses can specialize in production.
   d. Businesses ignore comparative advantage.

5. **Question:** What did the famous economist, Adam Smith, mean when using the term “invisible hand?”
   a. People will always help others, regardless of costs.
   b. Businesses will always look out for the interest of all citizens.
   c. Businesses can do well by responding to consumer desires.
   d. Government planning is the best mechanism for allocating goods and services.
LESSON: ASSESSMENT

DISCUSSION/ESSAY QUESTIONS

1. Question: Business and commerce create benefits for consumers. Is this statement true or false? Explain.

2. Question: Why do businesses respond to consumers desires?

3. Question: Would society be better off if a government planning board determined the products to be produced and prices to be charged?