TEACHING NOTES

This section includes information and ideas for discussion and projects related to the student activity sheets.

Preview (Pages 5-6)

Focus: The unit preview introduces the city as an economic center, but it is much more—a center of culture, government, politics, and religion. Ask students to identify cities important to the American culture and to tell how those cities function as cultural centers.

Project: Ask students to make their own post-test on the unit, beginning with the ideas presented on page 5.

Keys to History (Pages 7-8)

Focus: The terms in the glossary are presented in a kind of time line, but they really fit every time period. Each one deals with an important aspect of economics that students should consider when they examine economic development.

Discussion Topics: Each term is important enough to justify a separate discussion, but of course your time is scarce. So choose the ideas that are most in need of clarification. While it may seem that you should discuss the more technical terms, such as human capital or infrastructure, those terms are not as likely to need clarification as terms that are in common use. Often, because they are so common, those ideas are simplified or too general for full comprehension.

For example, scarcity is one term that is used so basically in economics that every economic activity seems directly related to it. It may appear to be the economic motive for every development. But scarcity does not necessarily lead to innovation. In fact, many innovations of the age of exploration were fostered for trade. For example, the Portuguese combination of using sail instead of human energy to propel ships and the cannon aboard ship to knock any oar-driven ships out of the water combined to give them the power to break up the Islamic monopoly of trade in the Indian Ocean and East. Economic motives are more complex than a response to scarcity, though they may involve that response too.

Another example is capital, which many people would define as money. While people may use money to pay for capital, it means something else. It has to do with the potential for further production—unlike consumer products. It is human or physical. There are several ways to classify capital. Construction, equipment, and stocks is one way. Another classification is Directly Productive Capital (DPC), such as plant and equipment for manufacturing textiles, and Social Overheard Capital (SOC) or infrastructure. The infrastructure includes transportation, education, public utilities, and other facilities that support the production.

This unit was developed through a grant from the National Endowment for the Humanities to DePaul University.

What is Invisible and Everywhere (Page 9)

Focus: This activity sheet presents a simplified version of the Circular Flow Model, a way to show the connections among parts of an economy.

Discussion Topics: Ask students what is missing from this model. Point out that the page discusses government's role in the economy, but that it doesn't have a space on the diagram. The students should add government as a source of employment and products.

Some economists view government as a drain on the economy, and other view it as a vital participant. Discuss the position of government in the economy of the United States and in the economy of other countries—past and present.

Projects: While you could spend some time developing the circular flow model (you will find it illustrated in economics texts), the emphasis of this presentation is on the interconnections among the parts of the economy. So it would be more useful for students to diagram the connections involved in the production of just one product. They could construct a flow chart or use the same circular flow model to show the companies, workers, and funders involved in the production of one item, such as a movie.

Change: One View (Page 10)

Focus: This model is based on the work of Adam Smith and other economists who believed that the economy would grow automatically if unrestricted by regulations such as barriers to trade.

Discussion Topics: Adam Smith was an economic innovator when he published The Wealth of Nations in 1776. Based on what students know about the restrictions on economic activity by governments in Europe at that time, point out the revolutionary nature of Smith's proposal that government should have a far more limited role in the economy.

Projects: The argument about government's role in the economy has been continuing since long before Adam Smith wrote—and probably will continue long after your students finish this course. Often the different sides in this argument are stated very simplistically, without regard to the long-term consequences of intervention or non-intervention by government in the economy. Ask students to make a survey of the effect of economic intervention and non-intervention by government at different times in American history.

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City Centers and Economic Development (Page 11)

Focus: This page introduces the model of economic development that is central this project.

Discussion Topics: The profile of the model on pages 32-34 provides an outline you can use to organize further study of it. In this model, at the heart of the process of change are three things: the vision, innovation, and funding. The middle factor is most crucial because the innovation (or introduction of the vision into the economy) requires that scarce talent of organization ability—the coordination of agents of production, the launching of the idea, the breaking of resistance, and the creation of demand. But the others are important. They are conditions without which there is no development. The vision is the idea or invention. The third element, funding, typically comes in response to the innovation. It does not precede it. (That sequence is one major difference between the economic views of Adam Smith and Joseph Schumpeter. Smith believed that the funding would precede the development, not be in response to it.)

Project: Have students make an economic geography/history map showing significant innovations and the cities that supported their development. They will have to research this map, and they can find the information by studying the history of major cities or by tracing the development of important innovations, such as the introduction of the automobile.

The City Center: Boston (Page 12)

Focus: There are two main ideas in this presentation: 1) a major economic center does not develop accidentally; 2) Boston became a center not just for its immediate area but for a whole region.

Discussion Topics: Boston was not just an economic center, but also a cultural, governmental, and political center. Its early development was closely related to its economic geography: its location and natural resources. The most important reason why Europeans came and settled on the North American shores was the exploitation of cod fish along the bank of Newfoundland and New England. Portuguese, French, and English ships were there, participating in an important innovation, the opening of a new source of supply, codfish. The English came upon the shore more than the others in the earliest years of the 16th century, perhaps because the English didn't have abundant supplies of salt and brought the fish ashore to dry before returning to Europe. At any rate, this activity was at the heart of Boston's early development. The "sacred" cod still hangs in the legislative halls of Boston as a symbol of the origin. Two commercial companies stand out in the early history of the Boston region's development. The Plymouth Company (a part of the Virginia Company) whose "merchant adventurers" sent the pilgrims and the Massachusetts Bay Company sent the Puritans to build Boston. "Merchant adventurers" were the capitalists or fund raisers. They lost money on these adventures and most all other such projects to develop North America.

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The City Center Boston (Continued)

Discussion Topics: Boston's economy grew more complex and interconnected with other economies. Boston merchants sent cod to Spain for precious metals and spent the gold and silver for manufactured goods in England, which they brought back to Boston. Also, they sent the poor quality cod to the West Indies to feed slaves working on sugar plantations. They brought sugar and took it to England in trade for manufactured goods that they brought back to North America.

Boston entrepreneurs started to manufacture rum from the West Indian molasses (sugar). Of great importance to Boston, they started shipbuilding. Before long, New Englanders could build sailing ships at half the cost of the English ship builders.

Projects: Suggest that students begin a file of newspaper and magazine articles on cities today. They should use the file to indentify key problems and opportunities for economic development today. Point out that development brings problems as well as progress. Then ask them to write news articles about Boston's development that might have appeared in a newspaper there in 1750.

City Connections: River Transportations (Page 13)

Focus: The page profiles one innovation with a framework based on the project model.

Discussion Topics: John Fitch launched an ingenious, odd-looking steamboat (it looked like a water bug) to ply the Delaware River between Trenton and Philadelphia in 1786. Unfortunately, however, this launching was 20 years before the state of the technical arts made such transportation feasible. Fitch's work took place in Philadelphia when that city was the prime economic city in the United States. The steamboat became practical in New York at a time when that city had replaced Philadelphia as a prime city.

The important point is that business innovation has a bad success record. Far more such attempts at innovation are unsuccessful than successful. Sometimes such innovational activity fails because the innovation is ahead of the state of the technical arts. For example, Leonardo da Vinci's design for a submarine was 450 years ahead of its time.

Project: Ask students to use the same outline to profile an innovation that succeeded on a very large scale: the United States.

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City Connections: Railroad to Chicago (Page 14)

Focus: This activity restates the model in terms of another major innovation—the railroad.

Discussion Topics: As far as we know, Ogden was both the man of vision as well as the entrepreneur in the development of the railroad. However, the railroad he planned was not the railroad he built. The situation changed while it was under construction. Instead of giving up, Ogden responded with a modified plan. When Ogden and his partners set up the railroad, their object was to exploit the lead in Galena, Illinois. By the time the railroad was completed for ten miles, the mines were worked out. So the road was pushed to the Mississippi River at Fulton, where it provided an important link for shipping goods.

Point out that William Ogden served as the mayor of Chicago. Ask students how much of an asset that position might have been and how much of a liability.

Project: Ask students to write a reply that Ogden might have written in response to this letter to the editor from The Democrat, February 16, 1848.

"…Now, in place of the railroad now agitated, construct three hundred miles of plank road…This will not cost more than $500,000, about what it will cost to build a good railroad to the Fox river…When the road is worn out (ten years hence) we would have a city containing seventy thousand inhabitants. Then we might talk of a railroad. One of the reasons most argued with those in favor of the proposed railroad to Fox River is that if we don't build one, Milwaukee will. The people of that city are not able to build a railroad of any length; if they were, they are not so simple."

Farming Progress in a City: McCormick's Reaper (Page 15)

Focus: There is an interrelationship between a city and its hinterland, and developments in a city influence and are influenced by that hinterland.

Discussion Topics: The manufacturer of agricultural implements started very early in Chicago. In 1833, blacksmiths began to make "prairie plows." In 1845, Charles M. Gray was providing grain cradles and scythes that had wide popularity. With a partner, he obtained a contract to manufacture the "Virginia reaper" invented by Cyrus McCormick. It was in demand immediately.

By 1847, McCormick was a partner. He had the vision to see that Chicago was the strategic location to produce his invention, so he came there from Virginia. His decision to come to Chicago rather than go to St. Louis, Cincinnati, Cleveland, or Milwaukee gave Chicago its real start as the most important center of farm implement manufacture in the world. In the 1960s, Chicago lost this position to foreign producers.

Just as the cotton gin greatly increased production of cotton in the South, so the reaper increased the production of wheat in the Midwest—to the advantage of Chicago. The city remains the grain capital of the world with the commodity features and options markets there.

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Social Change: Hull House (Page 17)

Focus: While this presentation deals with one innovator, it represents a kind of innovation (social change) as well as the effects of other kinds of innovation (the deterioration of the parts of an industrializing city).

Discussion Topics: We may call Jane Addams a communal entrepreneur, someone who innovates to change the structure of the economy and society by whom operates outside of the "for profit" sector of the economy as well as the public sector (government). Daniel Burnham's plan for the beautification of Chicago's lakefront might be another example.

Addams' plan to help the poor in Chicago has a redistribution of income effect. Through Hull House's activities, Addams gave a little but more of the national product to the poor.

While Hull House was the first settlement house in the United States, it was not the first one in the world. Jane Addams actually got her idea for the settlement house on a visit to England, so this project is an example of an adopted or adapted idea.

Project: Whatever the economic conditions in the neighborhood of your school, there are social problems there. Invite a representative of a community group or agency to discuss with your class that organization's agenda for the community.

Labor Change: The Haymarket Conformation (Page 19)

Focus: The activity presents one episode in an ongoing effort by representatives of labor.

Discussion Topics: The issues involved in Haymarket really are too complex to be summarized in just two pages. But the kind of dissatisfaction and distrust that were part of that struggle are clear in the statements and events recorded here.

The crucial labor entrepreneur was Samuel Gompers and the significant innovation was to restrict the trade union movements to raising wages and to refrain from efforts to change the economic system. Labor in most countries tried to make the system more beneficial to the working man by transferring ownership of large firms to the government and thus eliminating the share of income (profits) going to capitalists. Gompers led American labor to work within the private enterprise (capitalistic) system but to get the working man who joined the union a larger share of the income pie. The emphasis would be on raising wages and reducing the work week.

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Labor Change (Continued)

Gompers (1850-1924), born in London, was a cigar maker by trade. He was one of the founders of the American Federation of Labor in 1881. This union, like other American unions influenced by Gompers, was non-partisan. It stayed out of politics in the sense that it had no political party or ran no candidates. But it did support candidates who were more favorable to the working man. Samuel Gompers and his union were political, therefore. Gompers used his influence to get legislation beneficial to wage earners.

Consequences of Change: The Auto and the Airplane (Page 21)

Focus: Major innovations have major impact not only on the metropolitan area that supports their introduction, but on the interconnected parts of the economy throughout the country—and often the world.

Discussion Topics: The automobile and the airplane had great effects upon the respective central city that happened to serve as the locus for the major innovations. Although it is changing somewhat, still the greatest proportion of American autos is made in the greater Detroit area. That development helped to make the Midwest the industrial center of the United States.

As we would expect of one of the greatest causes of development in the 20th Century, there were countless inventions, innovations, and secondary innovations related to the automobile. The prime invention, the Lenoir-Olto internal combustion engine was a French idea, but was best exploited by American innovators.

An innovation of greatest importance was Ford's Model T. This light, cheap, 4-cylinder black car for everybody was introduced in 1908. With it, Henry Ford created a demand for automobiles. Potentially, with this model he could sell to every family in the U.S. and to many in the rest of the world. Ford pioneered in paying a five-dollar-per-day wage, above the pay scale in effect. He advocated profit sharing. Both of these innovations would affect management and workers in many industries. Ford initiated the assembly line for putting automobiles together, an innovation that doubled and tripled daily production.

General Motors originated the multidivisional corporate structure, which made General Motors an even more efficient producer than Ford's firm because the individual division, such as Chevrolet and Pontiac, was fairly independent and competitive with each other. By 1935, 90% of the cars produced were made by these two companies and Chrysler.

Secondary innovations included the rubber industry to supply tires, gasoline (a product of the petroleum industry that didn't exist before the auto), and the growth of the suburbs as we know them today. Before the car, suburban development was a matter of residential construction along railroad and streetcar lines, a rather narrow strip.

Project: Ask students to diagram the impact of one major innovation on the economy, showing creations as well as destruction.

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Economic Development: One City Neighborhood (Page 22)

Focus: This activity restates the project themes on the scale of innovation in one metropolitan neighborhood.

Project: Ask students to consider different points of view on change within one neighborhood. They can develop this approach in two ways. They could project the positions of different members of a hypothetical or actual neighborhood. They also could interview members of their own neighborhood about changes taking place there—and proposed.

Framework for Developing a Case Study (Page 24)

Focus: This activity clarifies the project themes in an outline students can use to organize their own case study.

Project: Students could work on this activity in conjunction with the study of different time periods in history. At each time period they will find significant innovations based in important cities. They also can use the outline to profile changes in their own metropolitan area today.

MUSEUM CONNECTIONS—A Unit Project

Students will find that exhibits at the Historical Society, Natural History Museum, and Science Museum have an important connection with the themes if this unit. Here are some of the approaches you can take to connect those exhibits with your students' work on this unit:

Historical Society: Divide the class into groups, each one to a different time in your city's development. Have the groups collect information directly from the objects on exhibit about that time period, recording their observations and inferences as they study the exhibit. Then ask each group to identify what they see as the important innovations in the city as each time period—and the secondary innovations based upon them.

Natural History Museum: Have students look for evidence of innovations in the exhibits. For example, when they find the introduction of glass beads in North America, they will probably be able to locate other objects that show that Europeans had arrived here, bringing objects and ideas that represented the major European cities. Ask students to look for objects that represent ideas the Europeans might have taken back to Europe, too.

Science Museum: Have students look for shared ideas that have been the basis of secondary innovations. For example, they will find the same ideas—the simple tools of the wheel and inclined plane—in many applications today.

General Discussion Points: Why have cities set aside resources for these places? How do they represent and reinforce the city's position as a regional center? Then turn the city into a museum. Discuss other buildings in the city, what the size, style, and other features of those buildings show about the nature of the city at different times.

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