



The Business of Baseball Thematic Unit of Study

I. Introduction – rationale, goals, target audience

“You mean a hot dog only cost 10-cents in 1929, and a World Series ticket was just \$5.50 in 1940?” The varying worth of money is the basis of this lesson for teaching students how baseball history reflects American economics since the early 20th century. Hands-on math applications and factors of trade and industry – such as labor, transportation, materials, energy and the concept of supply and demand – are illustrated through primary source documents from baseball’s olden days and modern age to help students analyze the ever-changing value of a dollar.

II. Objectives – in completing this lesson, students will:

- A. **Examine** historical data from various sources, including museum and library collections, artifacts, primary source documents, oral testimonies and Web sites.
- B. **Analyze** data and interpret variables to compare and contrast their impact on economic trends, consumer prices, standard of living and the value of American currency across different eras.
- C. **Understand**, through dialogue and practical application, how the evolution of baseball coincides with historic events that impact buying power, including the allocation of scarce resources and the four key pricing elements of material, energy, labor and transportation.

III. Preparing the Students

A. Background

Because of baseball’s enduring popularity since the early 20th century, the game often reflects trends of trade and industry in American society. Consumer prices and the interconnected factors that influence them – materials, energy, labor and transportation – are typically represented in the rising cost of attending a baseball game. Player salaries, ticket prices and concessions are interrelated in their collective impact on the wealth of the game and its many associated industries (e.g. trading cards, equipment, clothing, etc.). The law of supply and demand ultimately determines the economic ebb and flow of baseball and the value placed upon it by contemporary culture.

B. Vocabulary

Baby Boomer	Labor
Cause and Effect	Materials
Concession	Product
Consumer	Rationing
Currency	Resources
Depression	Scarcity
Economics	Space Age
Energy	Supply and Demand
Era	Technology
Factory	Trade
Industry	Transportation
Inflation	Trend
Information Age	Vendor
Korean War	World War II

C. Pre-Program Activities

- 1) Acquaint students with different scenarios to explain the concept of supply and demand, such as the Homestead Act, the Stock Market, oil embargos or the scarcity of goods during the Great Depression and the war years. The examples, which could be simple or complex, do not necessarily need to be baseball related. These illustrations could be in the form of story problems integrating different areas of the curriculum.
- 2) Choose an existing product that, in its production, demonstrates the economic factors of material, energy, labor and transportation – as well as the causes and effects related to the pricing of that product.
- 3) Ask students to research, compare and contrast the cost of a gallon of milk, a postage stamp, a loaf of bread and a movie ticket as they were on the student's birth date and a family member's birth date.
- 4) Assign students one of the following eras to research: 1929-1939 (The Depression); 1940-1959 (The War Years and Baby Boomers); 1960-1979 (The Space Age); 1980-1999 (The Information Age); and 2000 to the present (Today). As individuals or in groups, have them develop a presentation on major economic or historical events of that era. The presentation could be in the form of a PowerPoint presentation, a simulated newspaper, a poster project or a written report.
- 5) Using the Hall of Fame's Web site at baseballhalloffame.org, ask students to sort and classify primary source documents to find artifacts related to an assigned era of study (see above). Students should be responsible for

comparing, contrasting and gathering documents or data related to their era of study.

D. Classroom Preparation

- 1) Primary source documents needed include contracts, tickets, game programs, concession prices, newspapers and an Economic Scorecard for each group.
- 2) Before the lesson begins, physically group students according to the following eras: 1929-1939 (The Great Depression); 1940-1959 (The War Years and Baby Boomers); 1960-1979 (The Space Age); 1980-1999 (The Information Age); and 2000 to the present (Today). Assign a role for selected students in each group – such as a general manager (contract salaries), ticket taker (ticket prices), press reporter (group recorder), and vendors (program and concession prices).

IV. Presentation

A. Opening

- 1) Display groups of pennies to visually compare the purchase price of a baseball across different eras. For example, in 1929 a baseball cost as little as 11 cents.
- 2) Ask students why they think the price of a baseball has risen over time. Use their answers to discuss the basic principle of economics and show how today's lesson illustrates this concept using actual baseball artifacts.

B. Lesson

- 1) Introduce the example of a baseball factory that produces its product based upon supply and demand, and determines pricing based upon the cost of materials, energy, labor and transportation. *INSTRUCTOR NOTE: Be prepared to explain the operation of the factory, including factors of material, energy, labor and transportation. Develop inquiring questions to elicit how much students understand the concept of supply and demand.*
- 2) Ask students to an example of a newspaper headline of a major news event from each of the five pre-assigned eras. Engage students in an interactive dialogue about important social or economic events that may have occurred in that era as reflected by the newspaper articles, or other historical records.
- 3) Have them research, record and tally a sum cost for the following items related to their assigned era: a player's contract; a World Series ticket; a souvenir game program; a hot dog; a bag of peanuts; and a soft drink. To expedite gathering this data, assign research responsibilities to each student. *INSTRUCTOR NOTE: Give the students approximately four minutes for this activity with the expectation that slightly more time may be necessary.*

- 4) Ask the press reporter from each group to present the findings. As the data is presented by the groups, the press reporters complete their respective Economic Scorecards showing costs compiled for each era. As a class, draw conclusions about economic trends by comparing and contrasting the findings of each group.
- 5) Hold up a dollar bill, first fully unfolded then gradually fold to a smaller size, to illustrate its steadily diminishing value in relation to the goods and commodities discussed in this lesson.

C. Conclusion

- 1) To provide additional context, introduce the cost of other items not researched by the groups, such as an average annual wage and an automobile. Discuss the cost of these items according to the norms for that time period. Explain how the price of these commodities has increased dramatically across the eras due to inflation and other economic factors. *INSTRUCTOR NOTE: The intent of this discussion is to compare and contrast standards of living in each of the eras discussed.*
- 2) Use an assortment of baseball cards to relate modern-day players with the concept of value based upon supply and demand. Introduce the Honus Wagner T-206 baseball card from 1909 as an example of increasing worth due to scarcity of product, personal value, etc. *INSTRUCTOR NOTE: Show at least two modern-day cards of players with whom students may be familiar – then introduce the Honus Wagner card. Find a copy of the card and background information on its history at baseballhalloffame.org.*
- 3) Returning to the original example of a baseball as a product, rotate a ball to show the signature of a famous ballplayer on the reverse side. Explain how a simple variable, such as an autograph, can dramatically increase or decrease the value of a product.

V. Enrichment and Assessment Activities

- A. If a middle class family attended the World Series during the era they were assigned to research, what percentage of the family's weekly wage would be spent on the tickets? If the family bought hot dogs and sodas at that game, what is the total amount the family would have spent? What percentage of the family's weekly wage would that represent?
- B. Apply the law of supply and demand to current event situations, such as natural disasters or wars, which might impact costs associated with materials, energy, labor or transportation.
- C. Students can create a proposal to produce a new product. In the business plan, they should provide a production budget that accounts for materials, energy, labor and transportation.

- D. From data gathered during this lesson, students should create tables, graphs or pie charts to visually illustrate what they have learned. Working in groups, students should develop questions that can be answered by data found in the graphs they created. Students could then trade their graphs and questions with each other.
- E. Ask students to examine the “Green Light Letter” from President Franklin D. Roosevelt to Baseball Commissioner Kenesaw M. Landis urging the continuation of baseball at the outset of World War II. Discuss the economic implications and benefits of Roosevelt’s recommendation. Use this artifact (found at baseballhalloffame.org) as a writing or discussion prompt for measuring students’ ability to interpret a primary source document with an understanding of economic and historical impact.

VI. Additional Resources

A. Literature

Jennison, Christopher. *Baseball Math: Grand slam Activities and Projects for Grades 4-8*. GoodYearBooks, 1995.

National Baseball Hall of Fame and Museum. *Baseball As America*. National Geographic Books, 2002.

B. Web Links

econedlink.org/lessons/index.cfm?lessons=EM75
Baseball Economics 101

C. Multi-Media Gallery

Primary Source Documents available at baseballhalloffame.org

VII. Relevant National Learning Standards

A. Economics

- 1) Understand scarcity is the condition of not being able to have all of the goods and services that one wants. It exists because human wants for goods and services exceed the quantity of goods and services that can be produced using all available resources.
- 2) Understand the choices people make have both present and future consequences.
- 3) Understand scarcity requires the use of some distribution method, whether the method is selected explicitly or not.
- 4) Can describe the distribution methods used to allocate a variety of goods and services, such as, parking spaces, prison paroles, access to a new drug

treatment for cancer, seats on a bus, milk and tickets to a popular art exhibits. Then explain why a distribution method is necessary.

- 5) Understand people in all economies must address three questions: What goods and services will be produced? How will these goods and services be produced? Who will consume them?
- 6) Can answer the three economic questions while producing a simple classroom product, such as your bracelets, greeting cards or decorations for a school dance.
- 7) Can list the resources used to produce some item and identify other items that could have been made from these resources.
- 8) Understand incentives can be monetary or non-monetary.
- 9) Understand when people buy something, they value it more than it costs them; when people sell something, they value it less than the payment they receive.
- 10) Understand market prices are determined through the buying and selling decisions made by buyers and sellers.
- 11) Can play a market game in which buyers and sellers determine the market price for a common product, for example: wheat, apples, baseballs.
- 12) Understand relative prices refer 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).
- 13) Can identify examples of products for which the price fell because sellers were unable to sell all they had produced; identify examples of other products for which the price rose because consumers wanted to buy more than producers were producing.
- 14) Understand an increase in the price of a good or service encourages people to look for substitutes, causing the quantity demanded to decrease, and vice versa. This relationship between price and quantity demanded, known as the law of demand, exists as long as other factors influencing demand do not change.
- 15) Understand increase in the price of a good or service enables producers to cover higher per-unit costs, causing the quantity supplied to increase and vice versa. This relationship between price and quantity supplied is normally true as long as other factors influencing costs of production and supply do not change.
- 16) Understand markets are interrelated; changes in the price of one good or service can lead to changes in prices of many other goods and services.

- 17) Understand scarce goods and services are allocated in a market economy through the influence of prices on production and consumption decisions.
- 18) Understand competition among buyers of a product results in higher product prices.
- 19) Understand the level of competition in a market is influenced by the number of buyers and sellers.
- 20) Understand the basic money supply in the United States consists of currency, coins and checking account deposits.
- 21) Understand employers are willing to pay wages and salaries to workers because they expect to be able to sell the goods and services that those workers produce at prices high enough to cover the wages and salaries and all other costs of production.
- 22) Understand to earn income people sell productive resources. These include their labor, capital, natural resources and entrepreneurial talents.
- 23) Can survey several adults regarding their sources of income, and conclude that the largest portion of personal income for most people comes from wages and salaries.
- 24) Understands a wage or salary is the price of labor; it usually is determined by the supply of and demand for labor.
- 25) Understand entrepreneurs and other sellers earn profits when buyers purchase the product they sell at prices high enough to cover the costs of production.
- 26) Understand entrepreneurs and other sellers incur losses when buyers do not purchase the products they sell at prices high enough to cover costs of production.
- 27) Understand standards of living increase as the productivity of labor improves.
- 28) Understand technological change is an advance in knowledge leading to new and improved goods and services and better ways of producing them.
- 29) Understand increases in productivity result from advances in technology and other sources.
- 30) Understand Inflation reduces the value of money.
- 31) Can interview someone aged 50-59 years old about grocery prices. Compare the groceries that could be purchased for \$10 in 1967 with those that can be purchased for \$10 today.

- 32) Understands when people's incomes increase more slowly than the inflation rate, their purchasing power declines.
- 33) Can compare the prices of a market basket of goods in 1980 with similar prices today. Explain how inflation reduces purchasing power for people whose income is fixed or increasing slower than the rate of inflation.

B. Mathematics

- 1) Select, create, and use appropriate graphical representations of data, including histograms, box plots and scatterplots.
- 2) Discuss and understand the correspondence between data sets and their graphical representations, especially histograms, stem-and-leaf plots, box plots and scatterplots.
- 3) Use observations about differences between two or more samples to make conjectures about the populations from which the samples were taken.
- 4) Use conjectures to formulate new questions and plan new studies to answer them.
- 5) Solve problems that arise in mathematics and in other contexts.
- 6) Apply and adapt a variety of appropriate strategies to solve problems.
- 7) Make and investigate mathematical conjectures.
- 8) Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.
- 9) Recognize and apply mathematics in contexts outside of mathematics.

C. Language Arts

- 1) Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).
- 2) Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
- 3) Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

- 4) Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.
- 5) Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion and the exchange of information).