Stadium Consultants

Grade Level: Grades 6–8

Related Academic Subjects: Mathematics, U.S. history

Overview:
In this lesson, the class becomes a business partnership of stadium consultants. Each student consultant has been called in to analyze the attendance and ticket prices of one major league baseball stadium. Consultants will make recommendations regarding changes in ticket prices, spending on player salaries, stadium development projects and other creative options to present to the owners.

Lesson Objectives: (The student will...)
- Analyze the appeal of ballparks of the past for fans and the game
- Speculate on the reasons older ballparks were replaced by mega-stadiums and how these stadiums changed the relationship between the fans and the players
- Identify how different situations affect economics
- Compare the costs of tickets, the number of tickets sold, and other data to make evaluations for taking action in the future

Estimated Time for the Lesson: Two to three class periods

Video Segments:
*Baseball: The Third Inning, The Faith of Fifty Million People*
Chapter 7: “Pigtown”

*Baseball: The Sixth Inning, The National Pastime*
Chapter 5: “Hilda is Here”

*Baseball: The Eighth Inning, A Whole New Ballgame*
Chapter 1: “Top of the Eighth”

Materials Needed:
- Internet connection
- Student handouts
  - Out With the Old and In With the New
  - Planning for Next Year
Lesson Procedure:

Opening Activity
Tell students that in this lesson they will become a business partnership of stadium consultants called upon to analyze attendance and ticket prices at a major league baseball stadium and to make recommendations for the next season. Before they begin, provide them with a little history on the evolution of major league baseball stadiums with this opening activity.

1. Divide the class into small groups of three or four students.
2. Distribute the handout “Out With the Old and In With the New” to all students. Review the directions with the class. Watch the video clips.
3. Have students meet in their small groups to discuss the post-viewing questions. Then review several groups’ responses with the class. Ask them to identify aspects of the older ballparks that made them inviting to fans. Why are the new stadiums so large? Do the builders think such facilities are good for the game and the fans? Why or why not?

Main Activity
In this activity, students will take two aspects of the operation that bring success to a baseball franchise—attendance and ticket prices—and determine whether a ticket price increase is warranted. They will also make recommendations on players’ salaries, building a new stadium or upgrading the current facility, and other suggestions they feel might help the organization.

1. Assign each student one major league baseball team. Distribute the handout “Planning for Next Year” to all students and review the directions.
2. Have students complete the Stadium Consultant Chart and make their recommendations.
3. Have each student make a small presentation on his or her findings.
4. Debrief the activity by asking the following questions:
   a. What trends do you see among the different teams?
   b. Are ticket sales increasing or decreasing?
   c. How might this have an effect on attendance? What other factors besides increases in ticket prices would affect attendance?
   d. How would your recommendations make the game more enjoyable for the fans?

Assessment:
Assessment can include consideration of Stadium Consultants Chart responses and discussion participation.

Extension Activity:
Baseball players are making higher salaries, owners are charging higher ticket prices, and even the peanuts and crackerjacks cost more. Or do they? Using historical data for ballpark operation as well as national monetary trends and values for the economy in general, have students compare past prices to current values to see how the economics of the game of baseball have changed.

Resources:
(NOTE: While the following resources provide a good overview of the history of baseball in the United States, the teacher should also encourage students to conduct research using traditional resources such as books, magazines, and encyclopedias.)

- Baseball Web site (http://www.pbs.org/kenburns/baseball)
- Tenth Inning Web site (http://www.pbs.org/kenburns/tenthinning)
- ESPN Major League Baseball (http://espn.go.com/mlb)
- Major League Baseball (http://mlb.mlb.com/index.jsp)
- Ballparks of Baseball.com (http://www.ballparksofbaseball.com)

**Standards:** This lesson fits the following academic standards set by the National Council of Teachers of Mathematics (NCTM) (http://www.nctm.org).

**Number and Operations**
Understand and use ratios and proportions to represent quantitative relationships.

Represent, analyze and generalize a variety of patterns with tables, graphs, words and, when possible, symbolic rules.

Model and solve contextualized problems using various representations, such as graphs, tables and equations.

**Measurement**
Solve problems involving scale factors, using ratio and proportion.

**Data Analysis and Probability**
Formulate questions, design studies and collect data about a characteristic shared by two populations or different characteristics within one population.

Find, use and interpret measures of center.

Use observations about differences between two or more samples to make conjectures about the population from which the samples were taken.

**Communication**
Communicate mathematical thinking coherently and clearly to peers, teachers and others.

Analyze and evaluate the mathematical thinking and strategies of others.

**Connections**
Recognize and apply mathematics in contexts outside of mathematics.
This lesson fits the following standards as set by the Mid-Continent Research for Education and Learning (McREL) (http://www.mcrel.org).

U.S. History

**Standard 31.** Understands economic, social and cultural developments in the contemporary United States

- **Level III (Grade 6-8)** Understands influences on American culture
- **Level IV (Grades 9-12)** Understands the influence of social change and the entertainment industry in shaping views on art, gender, and culture

Economics

From the Council for Economic Education (http://www.councilforeconed.org/ea/standards)

**Standard 2.** Marginal cost/benefit

- **Grade 8:** To determine the best level of consumption of a product, people must compare the additional benefits with the additional costs of consuming a little more or a little less.

About the Authors:

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Out With the Old and In With the New
(Student Handout)

Directions:
Before there were mega-stadiums, there were ball parks, where the players and the fans could, for the most part, look each other in the eye. As you view the video clips on Fenway Park and Ebbets Field, brainstorm the factors you think brought people to baseball parks besides the teams playing the game. In the clip from “Inning 8,” look for reasons these factors changed and speculate about why older parks were replaced by mega-stadiums. After viewing the clips, share your ideas with the rest of the class.

Fenway Park and Ebbets Field were the state-of-the-art ballparks of their time. Ebbets Field was embraced and beloved by the community of Brooklyn.

1. For most of the 20th century, the Boston Red Sox finished low in the standings. Why do you think fans of many baseball teams like the Red Sox maintain their loyalty and keep coming to the games?

2. How did the older ballparks, like Ebbets’ Field, reflect the personality of the people who lived nearby? How did the fans see the ballparks as landmarks of their communities?

The demolition of Ebbets Field

1. What factors caused the older ballparks and playing fields to be torn down? In what ways were these ballparks more than just athletic venues?

2. What economic factors do you think brought about the building of the mega-stadiums? How did stadiums like the new Yankee Stadium change the relationship between the fans and the players?
Planning for Next Year
(Student Handout)

Overview:
In this activity, you will focus on two aspects that help bring success to a baseball franchise—
attendance and ticket prices—and determine whether a ticket price increase is possible and
warranted. Then you will make recommendations on players’ salaries, building a new stadium or
upgrading the current facility, and other suggestions you think would help the organization.

For this lesson you will need to acquire information on your major league team and its stadium
using the following Web sites:

- ESPN’s Major League Baseball site on ball teams and their stadium
  (http://sports.espn.go.com/mlb/teams)
- ESPN’s Major League Baseball site on team attendance
  (http://sports.espn.go.com/mlb/attendance)
- Ballparksofbaseball.com charts on attendance for the past 10 years
  (http://www.ballparksofbaseball.com)

Directions: Fill out the first box on the chart following these directions:
1. Make a list of the range of ticket prices for a regular season game two years ago.
2. Determine the median ticket price for a regular season game two years ago.
3. Record the annual attendance two years ago.
4. Multiply the median ticket price by the annual attendance for two years ago to determine
   the income level from ticket sales for that year.
5. Follow steps 1–4 for last year and record your findings on the second box on the chart.
   (In some cases, the team might not have increased prices over these two years.)
6. Subtract last year’s ticket income from the income two years ago to determine whether
   revenue increased or decreased.
7. Divide this amount by the total annual attendance (add both years) to find the percentage
   of possible increase or decrease for next year’s ticket prices.
8. Make recommendations for how much more or less tickets will have to cost next year. Also consider changes in player salaries, stadium upgrades, and other creative options that might increase earnings. Explain how these recommendations will enhance revenue as well as the fan experience.

**STADIUM CONSULTANTS CHART**

Name of Consultant _________________________________________

Date of Consultation _________________________________________

Names of Team and Stadium __________________________________

<table>
<thead>
<tr>
<th>Ticket Prices and Attendance for Two Years Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of ticket prices</td>
</tr>
<tr>
<td>Median ticket price</td>
</tr>
<tr>
<td>Annual attendance</td>
</tr>
<tr>
<td>Total annual ticket sales income for two years ago</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ticket Prices and Attendance for Last Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of ticket prices (if different than the year before)</td>
</tr>
<tr>
<td>Median ticket price (if different than the year before)</td>
</tr>
<tr>
<td>Annual attendance</td>
</tr>
<tr>
<td>Total annual ticket sales income for last year</td>
</tr>
</tbody>
</table>

Increase or loss in annual ticket sales income

Determine the percentage of increase or decrease to propose for next year’s ticket prices