

Name: _____

Date: _____ Hour: _____

MATH OF SPORTS FACILITIES PROJECT

Introduction

WHAT IS MY IDEA?

The purpose of this space is for you to record some of your thoughts about the kind of facility you would like to build, where you want to build it and what you intend to use it for.

Type of Facility

What are you building (a stadium, arena, etc.)?

Location of facility

Where do you plan to build your facility? Why?

Purpose of facility

What will your facility be used for?

Why do you want to build this facility?

Activity 1

WHAT IS THE COST OF AN AVERAGE FACILITY?

Just about every day, we hear about a city building a new type of facility that costs some very large amount of money. In this activity, you will need to find at least 10 such facilities and how much it cost to build them. In order to think of these facilities in today's dollars, you need to use stadiums built **after 1990**. Make sure you find similar facilities to the one you are going to build (we want to compare stadium costs to stadium costs, arena costs to arena costs, etc.). Also, find out how many seats are in each facility and record it on your worksheet. After you do some research and get this data, complete the worksheet and let's get a ballpark figure for the facility that you're going to design.

Suggestions:

- 1) Do a search on the Internet for new stadiums and their costs. Some sites will have some of the information needed, but you will probably have to look a little farther to find all the information. www.ballparks.com is an excellent resource!
- 2) If you know the name of a specific facility you want to research, you can also search the Internet for information on that specific facility.

Name of Facility	Location	Number of seats	Cost	Average cost per seat
1.				
2.				
3.				

4.				
5.				
6.				
7.				
8.				
9.				
10.				
	AVERAGES			

ACTIVITY #1 QUESTIONS

1. What was the highest cost per seat for a facility? _____
Where was it located? _____ Why do you think this
facility had such a high cost per seat? _____

2. What was the lowest cost per seat for a facility? _____
Where was it located? _____ Why do you think this
facility had the lowest cost per seat? _____

3. HYPOTHESIS: What do you think has the highest percentage of cost (concrete,
steel, land, planning, etc....) in the total cost of a facility? Why?

Activity 2

WHAT DO WE NEED IN THIS PLACE?

Every time we go to a facility, there is usually something special about the facility that stands out in our minds. Sometimes it can be something as simple as the ivy at Wrigley Field. Now is your chance to be creative and brainstorm a list of amenities you would like to have at your facility. You can list new ideas you have or you can use things that already exist at other stadiums and arenas. If you need some help to get started, go back to the list of facilities you compiled in Activity 1 and see what it is that makes these facilities unique and special. List the amenities (special or unique features) you would like to have in your facility (at least 15) using the spaces below.

List of Amenities (Special or Unique Features)

- | | |
|-----------|-----------|
| 1. _____ | 14. _____ |
| 2. _____ | 15. _____ |
| 3. _____ | 16. _____ |
| 4. _____ | 17. _____ |
| 5. _____ | 18. _____ |
| 6. _____ | 19. _____ |
| 7. _____ | 20. _____ |
| 8. _____ | 21. _____ |
| 9. _____ | 22. _____ |
| 10. _____ | 23. _____ |
| 11. _____ | 24. _____ |
| 12. _____ | 25. _____ |
| 13. _____ | |

ACTIVITY #2 QUESTIONS

1.) Which amenity do you think people visiting your facility will enjoy the most?

Why?

2.) Out of your list of amenities, how many are not presently available at an existing facility? Why do you think these are not available?

Activity 3

HOW MANY SEATS DO WE NEED?

How many times have you attended an event that was sold out? What we need to do now is a little research and see how many seats you will need at your facility. First, you will need to look at facilities that already exist. If possible, use facilities that are similar to the one you want to build. Next, try to get an idea of the ratio of people where you are building your facility to the number of seats. After you look at these and fill in the information below, we need to get some market comparisons to similar facilities that we used in Activity 1. After comparing all of these, make an estimate of how many seats your facility will need. (Note: you may want to figure your population numbers on a 50-mile radius of the towns.) Again, www.ballparks.com is a great resource for this activity.

Facility Ratios

1) Name of Facility	1) Name of Facility
2) Capacity	2) Capacity
3) Population Base	3) Population Base
4) Ratio 1 (population base: capacity)	4) Ratio 1 (population base: capacity)
5) Ratio 2 (# of people: 1 seat)	5) Ratio 2 (# of people: 1 seat)

1) Name of Facility	1) Name of Facility
2) Capacity	2) Capacity
3) Population Base	3) Population Base
4) Ratio 1 (population base: capacity)	4) Ratio 1 (population base: capacity)
5) Ratio 2 (# of people: 1 seat)	5) Ratio 2 (# of people: 1 seat)

Average Ratio

What is the average ratio of number of people per seat in these 4 facilities?

ACTIVITY #3 QUESTIONS

1. Based on your findings, how many seats do you plan to have in your facility?
Why?

2. Is the ratio of population to number of seats the same among each of these 4 facilities? If not, why do you think there are differences?

Activity 4

WHO'S GOING TO PAY FOR THIS THING?

Being the multi-billionaire you are, you could probably finance the construction of your facility and still have enough money left over for a seven-course meal at the local burger hut. However, most communities do not have individuals like you to pay for the costs associated with a facility. What you will need to do in this activity is a little research and find out how other places have financed their facilities (you will need to use the same 4 facilities you used in activity 3). After you do your research, come up with a plan that you can sell to the people in your area that will provide the necessary funding to construct your awesome facility.

Research Results

1. Name of Arena _____ Location _____

Cost to build _____ What was their plan to pay for the facility?

2. Name of Arena _____ Location _____

Cost to build _____ What was their plan to pay for the facility?

3. Name of Arena _____ Location _____

Cost to build _____ What was their plan to pay for the facility?

4. Name of Arena _____ Location _____

Cost to build _____ What was their plan to pay for the facility?

What is your plan or proposal?

Why do you think this plan will work?

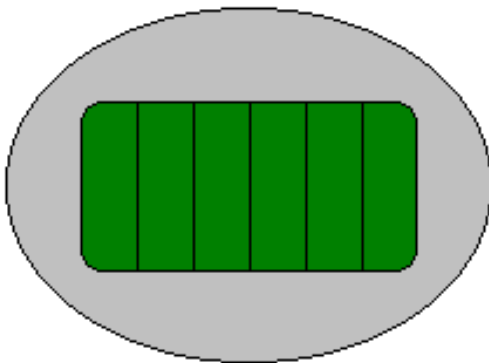
Activity 5

THE VISION

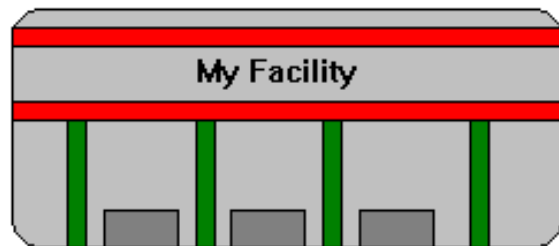
By now, you have seen some pretty impressive facilities as well as some that border on simply pathetic and outdated. Now is your chance to get creative! It is your job to design a facility and create some images of what it will look like when completed. Make sure you include the following points of view so that we admirers can get a complete glimpse of your vision:

1. overhead view
2. front or side view (from the outside)
3. your choice, but this needs to be inside the facility (for example, you may draw what the outfield looks like if you're standing at home plate or what it looks like from a fan's perspective; this your chance to show of your amenities!)

Samples:



Overhead View



Side View



Front View

Note: These images are here to help you see some of the different perspectives. Your drawings will probably be much, much better! I expect your work to be neat, detailed, and colored!

Activity 7

POSTERBOARD PRESENTATION

You have spent a lot of time researching and planning the construction of your new facility. Now it's time to share your ideas with the class! Your responsibility is to create a poster board presentation that meets the following requirements:

Point Value	Requirement
2 points	Your name
4 points	Heading that includes your facility's name and location
4 points	Capacity (How many seats will it have? Why? What is your average cost per seat?)
12 points	At least 3 detailed, colored drawings: <ul style="list-style-type: none">▪ Overhead view▪ Outside view▪ Additional perspective of your choice
8 points	Detailed paragraph(s) describing: <ul style="list-style-type: none">▪ The cost of your facility and how you plan to pay for it▪ What kinds of events your facility will host (Do you have a sports team that plays here? Will you have concerts, etc.?)
4 points	List of amenities or special characteristics that make your facility unique.
4 points	Neatness / Creativity
38 points	TOTAL

This poster presentation is due _____.