

Event

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## Statistics Project - 1

Have you ever stopped to consider all of the details that must be taken care of in order to put on a big event like a concert? It may surprise you! There are many potential sources on income but also many expenses that must be considered when organizing an event of this size.

**The Big Event:** In a group of three or four students, plan a realistic event to take place on your campus at a location chosen by your teacher. You will visit this location to determine the number of seats available and to discuss the sources of income and the expenses that will be a part of your event. Your goal is to make the maximum profit possible as a young entrepreneur. You will present your proposal to the class. Each student is required to turn in a unique project at the due date.

Type of Event: \_\_\_\_\_\_

Other Students in Group:

**Seating Chart:** Your group must determine the number of seats available for The Big Event and how much seats in the different sections will cost. Use these numbers to calculate the total income from ticket sales. We will assume that ALL tickets are sold. A color-coded seating chart with a price key will be included with your project.

**Income and Expenses:** Brainstorm ways to make money at your event (income) and the costs associated with putting on your event (expenses). You will do some research later to help you assign realistic numbers to the income sources and expenses.

Without giving away too many ideas, income might come from selling sodas at the event while hiring security guards might be an expense. Be creative and think through this event completely. Do not leave out obvious expenses or miss opportunities to make more income. Remember, the goal is to make the highest profit possible by maximizing income and minimizing expenses.

Sources of Income:

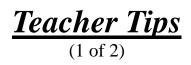
Expenses: \_\_\_\_\_

**Income and Expense Numbers:** After making your seating decisions and brainstorming the other sources of income and expense, get together in your group to determine reasonable numbers for these sources of income and expense. This may require a little research on your part. See your teacher if you have questions.

**Income and Expense Statements, Graphs, and Written Analysis:** Once you have determined the income and expense numbers you are ready to complete the assignments listed on the next page. The Income and Expense Statement should clearly show how your group arrived at each number. For example if you listed \$500 for sodas you might explain that you sold 250 sodas at \$2 each. Make sure to completely label and color your graphs and to include a well-written analysis of your Big Event.







**Lesson Description:** The Big Event is a hands-on group project that allows students the freedom to creatively plan a major campus event, taking into account all of the sources of income and expense involved. They design seating charts, create income and expense statements, estimate costs, and make graphs (line, bar, circle, and picto-) to visually show the mathematical results of their planning. Finally, they analyze their project in writing.

<u>Math Content:</u> Statistics, Line Graphs, Bar Graphs, Circle Graphs, Pictographs, Income and Expense Statement, Estimating, Real-life Problem Solving Application, Writing about Mathematics

Time Required: About 3 Class Periods plus Homework

## The Big Event includes:

- \* 2 Big Event assignment sheets
- \* 1 Big Event Teacher Project Notes
- \* 2 Big Event Teacher Tips pages
- \* 1 Big Event Grading Rubric
- \* 1 Big Event Cover Page

Materials Needed: None

Suggested Grade Level: 5th - 8th

## **Teacher Testimonial:**

The Big Event was a big hit with my students. They enjoyed working in groups on a problem that was a little bit outside of the box. They have to determine the type of event, the seating charts, seat prices, sources of income, expenses, and actual costs before completing their assignment. Many students got excited about the math because they were planning a concert by their favorite group or a movie premier complete with movie stars. Their imaginations provided a backdrop for the mathematics that was used in the project.

## **Teacher Tips:**

- \* This project assumes that students have been taught how to make a frequency table, line graph, bar graph, circle graph, and pictograph or that the teacher will cover this material during the project. The Big Event is designed primarily as an application project, not a skill-teaching project. You will most likely still have to discuss the concepts of income, expenses, and profit with the students and give guidance on the Income and Expense Statement.
- \* For this project I allow students to choose their groups. This makes it more likely that the type of event will be agreed upon easily and that students with similar interests will use their imaginations to create an outstanding event.

