

*What if...all the lifeboats have now left the ship and can't return?  
What if...the nearest ship is twice as far away (8 hours)?  
What if...the sinking Titanic miraculously will stay afloat another 4 hours?  
How can you save more people with this extra time?*

Create an exciting, entertaining, and informative *Titanic* Survival display

**Assumptions:**

You left for New York at the same time with all the same passengers and equipment aboard.  
You will still encounter the iceberg at the same point along the way.

**Main question to answer:**

- How could we have saved an additional \_\_\_\_\_ people?
- Your goal is to prove your answer to this question MATHEMATICALLY.

**Display Requirements**

Each group will be given one piece of posterboard. Your display must be on one side only.

**All math computation work is to be taped to the back of the poster board.**

After you have decided your strategy to save the passengers, your team will create a display around the components that make up the strategy. For example if you were going to use food and the iceberg to solve the problem your display should include data about the food aboard and icebergs.

- Find a set of data that is important to your solution or important to the events of the Titanic. Make sure you have at least 10 numbers. Create a box plot of the data. Then describe the shape, center, and spread of the data including terms such as mean, median, mode, range, interquartile range, MAD, symmetric, and skewed.
- Most readers do not know what a box plot is so be sure to help them read the plot correctly.
- Make a couple of conclusions based on this set of data.
- Develop a specific survey question to ask 12 boys and 12 girls that relates to your project and your solution. The question must be able to be answered on a scale of 1 to 5. Define 1 and define 5 before you start asking others. Create two dot plots (one boys and one girls) with your results and compare their shapes, centers, and spreads to make conclusions.
- Create one bar on graph paper to display important data to your reader. Make a conclusion.
- Include a table of the data used in your graph.
- Provide at least three conversions (one weight, one volume, one length) for your readers between metric and customary units that relate to your topic. These should be in sentences explaining their meaning.
- Demonstrate your advanced knowledge of rates, unit rates, and ratios in some fashion to help the reader understand a topic.
- **Mathematically prove how your approach saves exactly the number of people listed above.**