



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Sunderbans Estuary Simulated: The Effect of Salinity on the Height of a Floating Object Above the Water	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals This experiment was designed to see the change in the height of a floating body above water, as the level of salinity of water was changed.</p> <p>On the basis of Archimedes principle, it was calculated that the amounts of salt added to the water and the lengths of the object above the water, if plotted on a graph, will fall on a straight line.</p> <p>Methods/Materials This was done by floating a cylindrical object in a glass of water and gradually adding salt to the water.</p> <p>A large transparent cup of water, about 100 grams of common salt, a cylindrical cork commonly used in wine bottles, a rubber band, a teaspoon, a few coins, a ruler, and a ballpoint pen were used to perform the experiment.</p> <p>Results The measurement of added salt in the water and height of the object above the water were tabulated and a graph was drawn which more or less confirmed the hypothesis.</p> <p>Conclusions/Discussion From the result, it was verified that the height of a floating body is linearly related to the salinity of the water.</p> <p>However, lack of precision in measurements and possibility of air bubbles being attached to the object could have introduced some errors because of which a few points did not exactly fall on a straight line in the graphs.</p> <p>The results suggest that the drop in salinity of water when a boat laden with fish returns from the estuary into the river, may be a contributing factor for the accidental drowning of some of these boats. The fact that the variation in the height of the boat before and after the boat is loaded in the estuary is the same as that in freshwater, can be used to avoid accidents on this account.</p>	
Summary Statement The variation in the height of a boat with varying salinity of estuary water was simulated by gradually increasing the salinity of the water in a beaker and observing the variation in the height of a floating cork.	
Help Received Dad helped finding material, printing photographs and guiding the mathematical deductions ; teacher, Mrs Begbie, helped me with encouragement and guidance.	