



**CALIFORNIA STATE SCIENCE FAIR  
2007 PROJECT SUMMARY**

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<b>Project Title</b> <b>Salinity and Its Effect on Lettuce Seeds' Germination</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> To see if different amounts of salt in water effects the germination of lettuce seeds</p> <p><b>Methods/Materials</b> Materials: 1. Bleach, 2. Water, 3. Lettuce Seeds, 4. Paper filter, 5. Petri dishes, 6. Salt, 7. Beakers, 8. A dark place, 9. Ruler, 10. Plastic Bags, 11. Measuring cup, 12. Teaspoon.</p> <p>Methods: 1. First you take the seeds and treat them in a bleach solution consisting of 10% bleach and 90% water for 20 minutes. 2. Then rinse 5 times with water ( this kills all the fungal spores that will delay germination). 3. Take 6 Petri dishes and place paper filter in it and label them with the amount of salt in it. ( make a salt solution consisting of 0.2m of salt and 11.69g of water ) Put amount of salt solution and water the amount graph says. 4. In each dish put 4-5 lettuce seeds spaced out evenly on the filter paper so they don't touch each other. 5. Put the dishes in a plastic bag and put it in the dark at a constant temperature for 5 days. 6. After 5 days see how many seeds germinated and measure the root length. Look carefully and make sure to only measure the roots and not the seed.</p> <p><b>Results</b> Yes, salt does effect germination of lettuce seeds. The salt worked as an inhibitor, which means it slowed down the process of germination. The seeds in the solution with the most amount of salt took a much longer to germinate than the seeds with the least amount of salt.</p> <p><b>Conclusions/Discussion</b> In my project i found out that the more salt there is in the water the slower the germination and the the less salt there is in the water the faster the germination. So the salt really does affect the germination of lettuce seeds and i also learned that if you want to plant lettuce seeds you must let them germinate in light before you plant them in soil because in the soil the seeds wont get the light it needs for it to germinate (because it has a thin seed coat.</p>	
<b>Summary Statement</b> To see if different amounts of salt will effect lettuce seed germination	
<b>Help Received</b> Mother and father bought supplies and encouraged me through out the research of the project	