



# CALIFORNIA STATE SCIENCE FAIR 2014 PROJECT SUMMARY

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<b>Project Title</b> What Variables Affect the Rate of Water Evaporation?	
<b>Abstract</b> <b>Objectives/Goals</b> Our Science Fair project investigated variables that affect the rate of water evaporation. We thought that the water with greater surface area will evaporate faster because more sunlight is hitting the surface and evaporation takes place at the surface of the water. We thought that the warm water will evaporate faster because the water molecules will have more energy and will evaporate faster. We thought that the water with wind would evaporate faster because the air pushes already evaporated molecules out of the way. This allows for new molecules to evaporate. <b>Methods/Materials</b> Our first procedure for our wind experiment started with us pouring equal amounts of water into equal size containers. We put a fan next to one of the containers and left both of them out. In 13 days, we collected the data checked if wind had an effect on evaporation. Our second procedure for our temperature experiment started with us pouring equal amounts of water into two uncovered and equal size containers. We put one container in light and one in shade. After 1 weeks we recorded the data and saw if temperature had an effect on water evaporation. Our third procedure for our surface area experiment started with us pouring equal amounts of water into two uncovered, one having a surface area of 24.434 square centimeters, and one having a surface area of 824.23 square centimeters. After 2 weeks we determined if surface area had an effect on water evaporation. <b>Results</b> Our graph shows that in the tub with the wind passing over it, all 1000 mL of water evaporated and in the tub without wind only 296 mL evaporated. In the tub that was shaded 344 mL of water evaporated and in the non-shaded tub, 496 mL of water evaporated. The tub with a bigger surface area had 508 mL of water evaporate, while the tub with a smaller surface area had 112 mL evaporate. <b>Conclusions/Discussion</b> All three of our hypotheses were correct. The tub with the wind passing over it had more evaporation than the tub without wind. The tub that was not shaded had more evaporation than the tub that was shaded. The tub with the bigger surface area had more evaporation than the tub with a smaller surface area. Our project could help gardeners who want to have the water stay with their plants rather than evaporate, so our experiment could tell them when to water their plants.	
<b>Summary Statement</b> Our project explores different variables that affect how fast water evaporates.	
<b>Help Received</b> Mother helped with supplies	