



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

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| Name(s) Natalie C. Kraft | Project Number 22555 |
| Project Title Which Factor Has the Greatest Effect on the Rate of Water Evaporation? | |
| Objectives/Goals The objective is to see what factor has the greatest effect on the rate of evaporation of water. Factors tested were surface area, wind speed, air temperature and water temperature. Abstract Methods/Materials Experiment #1 (Surface Area): Four different diameter plastic beakers were filled with 100 mL of water at the same temperature. They were placed right next to each other on the counter. Let sit for 63 hours and 20 minutes. Experiment #2 (Air Temperature): Three identical glass beakers were filled with 100 mL of water at the same temperature. One was placed under a heat lamp, one in the refrigerator and one on the counter at room temperature. Let sit for 60 hours and 30 minutes. Experiment #3 (Wind Speed): Four identical glass beakers were filled with 100 mL of water at the same temperature. One was placed in a cabinet for 24 hours. The other three (one at a time) were put in front of a fan at the same distance on low speed, medium speed and high speed. Each for 24 hours. Experiment #4 (Water Temperature): Three identical glass beakers were filled with 100 mL of water. One was placed on a hot plate, one under a heat lamp and one in an ice bath. Evaporation was measured 24 hours after temperatures stabilized. Results The hot water had the most evaporation of all the samples. The cold air had the least evaporation of all the samples. Conclusions/Discussion My conclusion is that the four factors I tested can have a significant impact on the rate of evaporation of water. This information could be helpful in the location of reservoirs to improve water conservation. | |
| Summary Statement My project is about which of these factors: surface area, air temperature, wind speed or water temperature has the most effect on the rate of evaporation of water. | |
| Help Received My father helped me to do the experiment by buying the equipment I needed and reminding me when it was time to check the experiment. My grandfather let me use his weather instrument to measure the wind speed of the fan and my mother helped me with MS PowerPoint problems. | |