CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
22401

Project Title
Water: Going, Going, Going, Gone

Abstract

Objectives/Goals
My objective was to find out which of following substances would reduce or prevent water evaporation: Mazola Canola Oil, Downey Fabric Softener, Heinz Vinegar, HUMCO Glycerin, or Tropical Fish.

Methods/Materials
Six identical glass jars of the same size, shape, brand, but having five different types of substances added€ to the water. One jar was left with plain Mojave tap water. In the remaining five jars, a certain amount o€ substance was added using identical medicine eyedroppers. The jars were placed outdoors undisturbed for 14 days to simulate the natural weather, and tested in five separate tests.

Results
In four out of five tests, Mazola Canola Oil had the least amount of water evaporation. Followed by the Tropical Fish, Downey Fabric Softener, HUMCO Glycerin, and the Heinz Vinegar had the most amount of evaporation.

Conclusions/Discussion
By conducting five separate tests and testing five different substances, I conclude all the substances that € chose will reduce the speed of water evaporation, some more than others. The Mazola Canola Oil had the least amount of water evaporation, followed by the Tropical Fish, Downey Fabric Softener, HUMCO Glycerin, and the Heinz Vinegar had the most amount of evaporation. However, the challenge is to find a substance that is safe for humans through filtering, safe for the environment, wildlife and/or sea life. Therefore, my hypothesis is correct.

It appears from initial testing and research, that Tropical Fish could be the answer for the reduction of water evaporation. Tropical Fish is flammable, however once the isopropyl alcohol is absorbed by the water, the remaining ingredients are biodegradable, environmentally safe and very harmless. It is also tasteless and odorless. The mixtures of ingredients are lighter than water so they automatically float to t€ surface, creating a barrier on the surface if not disturbed. It works best when there is little or no movement on the surface of the water.

Through my research and experiments, I discovered the weather plays a big part on water evaporation. Ideas for future testing: try different substances, testing larger amounts of water, and test during differe€ seasons of the year in and out of the shade to get an overall average of which substance would yield the least amount of water evaporation.

Summary Statement
To find a substance that is safe for humans through filtering, safe for the environment, wildlife and/or sea life that will reduce or prevent water evaporation.

Help Received
My mother helped me with the charts, graphs, graphics, taking the pictures, the display board, and measuring when I was unavailable. My father purchased the supplies and measured when I was unavailable.