

CALIFORNIA STATE SCIENCE FAIR 2006 PROJECT SUMMARY

Name(s)

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Project Number

S0611

Project Title

H(2)O Life Line

Abstract

Objectives/Goals

Our objectives, or goals, were to save the lives of the many off-roaders who have broken down in the desert without materials needed to survive, such as water. We were also trying different ways to obtain water from sources other than natural wells and springs, such as condensation from desert plant life and various types of soil.

Methods/Materials

The first two years of our project we tested the potability of natural wells, springs, rivers, and lakes in the Mojave Desert. Using a test kit we tested over 10 water samples with iodine, chlorine, and natural filtration, finding out that only one was drinkable. This year we attempted to obtain water through condensation from desert plant life and soils. Materials included: water testing kit, water bottles, black trash bags, and desert resources.

Results

Only one water sample was found to be potable without the use of chemicals or filtration. All water samples were drinkable after being treated with chlorine. Iodine was incosistent, and no studies show the effect it will have on a human body. Filtration made absolutely no difference in the potability of the water. Creosote bushes and the various types of soil collected a lot of moisture during the summer, but the creosotes did not collect moisture during the winter.

Conclusions/Discussion

Desert water sources are not drinkable on their own, a chlorine tablet must be added and the water must sit for 20 minutes for the chlorine to dissolve and make the water potable. Condensation is easier to come by in the summer than it is in the winter, but a drip system must be designed to collect enough water to survive on.

Summary Statement

Our project is about finding different ways to collect water from the desert, in order to save the lives of those stranded in the desert.

Help Received

Parents drove us to different water sources in the desert.