

CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

Name(s)

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Project Number

J2011

Project Title

Soap Wars: Comparing Dishwashing Liquids in Oil Spill Cleanups

Abstract

Objectives/Goals

My objective was to determine if there was another dishwashing soap that can clean oiled birds as well as Dawn. I hypothesized that another brand of dishwashing soap will clean oiled birds just as well as Dawn, which is currently used by rehabilitation centers.

Methods/Materials

I soaked a duck feather in motor oil and cleaned it with Dawn. I repeated this process with four other feathers and four other dishwashing liquids. The cleaning process was timed and the number of cleaning attempts, until there was no longer any visible residue, was noted.

Results

Three of the five dishwashing liquids took 3 or more cleaning attempts. Dawn and Seventh Generation each took two cleaning attempts to remove the oil from the duck feather.

Conclusions/Discussion

Although Dawn and Seventh Generation appeared to have the same number of cleaning attempts, oil residue was discovered to have soaked onto the project board days later. It is now clear that Seventh Generation worked the best at cleaning the feathers. As can be seen on my board, Seventh Generation has the closest shape to the original feather and Dawn has residue. It is clear that other factors are used by rehabilitation centers when determining which product to use.

Summary Statement

Determining which soap is the best at cleaning oiled birds.

Help Received

Parents bought all supplies and mom helped with the timer.