



CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

Name(s) Reem N. Awad	Project Number J0601
Project Title Saving the Oceans from Oil Spills: pH Edition	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals These days, people are using methods that clean oil out of the ocean fast but cause more harm than good to the environment. Today, there is a huge problem with the ocean's acidification. So this project was made to test the effect of oil spills on the acidity of ocean water and which method would affect the pH levels the least and retain the most oil to reuse.</p> <p>Methods/Materials Samples of ocean water and sand were collected and split into 11 different buckets. The pH was measured on the bottom right, left, and middle of each bucket before adding oil to the ocean water, after adding oil to the water, after 24 hours of the oil sitting in the water, after cleaning the oil, and 24 hours after cleaning the oil. There were three cleaning methods used: scooping the oil out manually with a spoon, adding Eco-friendly soap then scooping the out oil, and absorbing the oil from the surface with a reused, clean rag. Water and water and oil alone without cleaning were measured as a control factor throughout a number of days.</p> <p>Results None of the methods immensely changed the pH levels, but the scooping method changed the pH the least by an average of a 0.13 difference from the beginning until the end and retained the second most oil. When applying the Eco-friendly soap, it did not change the acidity much with a difference of -0.21 and retained the most oil. Lastly, the absorbing technique was the least efficient in both ways.</p> <p>Conclusions/Discussion The top method was scooping the oil, but the acidity changed by a very small amount. The absorbing approach was the least Eco-friendly, but coincidentally took the least amount of time. Even though the finest ways take a little more time and effort, it is a must for humanity to start working to help our planet. Although the scoping method did not retain the highest amount of oil, it is recommended to use this method more to reduce the acidification problems of the oceans.</p>	
Summary Statement This project tests the effect of oil spills on the ocean's pH levels, which of three methods affect the acidity of the ocean water the least, and retains the most amount of oil to reuse.	
Help Received Mrs. Arwa Alkhawaja	