



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Isabella M. Moore	Project Number 38044
Project Title Oil Spills and Nanotechnology	
Abstract Objectives/Goals My project's purpose was to determine the effectiveness of cleaning up an oil spill with ferrofluid and a neodymium magnet. Methods/Materials Materials: 6 identical Petri dishes, colored water, mineral oil, motor oil, ferrofluid, and rectangular neodymium magnets. Methods: 3 of the dishes were tested with mineral oil, the other 3 with motor oil. Each dish had 35 ML of water and either 1, 3, or 0 drops of ferrofluid on top of the 1 mL of oil. To remove the oil I dipped the magnet into the center of the "spill". I tested the various number of drops of ferrofluid 13 times each for both oil types. The oil was measured in microcentrifuge tubes. Results In both the mineral oil and motor oil results, the averages of oil removed increased along with the drops of ferrofluid. Conclusions/Discussion I concluded that using ferrofluid and magnetism is an effective method to clean up an #oil spill# of certain oils.	
Summary Statement I showed that certain oil spills can be cleaned up effectively by using ferrofluid and magnets.	
Help Received I planned and preformed the experiment myself (with some help labeling the data). I did receive some research topic ideas and suggestions for testing methods from my science teacher.	