



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

<b>Name(s)</b> <b>Alexandra Q. Morris</b>	<b>Project Number</b> <b>J1121</b>
<b>Project Title</b> <b>Household Materials Save Environment</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Using safe, non-toxic household materials to absorb oil spills helps protect the environment and the people and animals that live in it. I wanted to determine which household material would absorb oil the most efficiently.</p> <p><b>Methods/Materials</b> Used motor oil was measured with a measuring spoon and put into 15 identical glass bowls. The absorbents (flour, baking soda, bread crumbs, and cat litter) were measured with a separate measuring spoon and placed into the bowls with the motor oil. I used evaporation as my control. Each absorbent was tested three times. To measure the amount of oil absorbed, I used observations. Other methods of measuring the oil absorption could have resulted in the oil leaking out of the absorbent that I was testing.</p> <p><b>Results</b> After testing multiple household materials to determine which one would absorb the motor oil the most efficiently, I found that in two out of three trials, the bread crumbs absorbed the most oil. In all trials, the control group of evaporation absorbed the least amount of motor oil.</p> <p><b>Conclusions/Discussion</b> My hypothesis was that flour would absorb the most oil because it is made out of starch and gluten, which are both good absorbents. In the end, I found that flour, cat litter, baking soda and evaporation did not absorb as much oil as bread crumbs. I believe this is because the bread crumbs act as a sponge to absorb the liquid. With this project and research, we can learn new ways to protect our environment and the things that live in it.</p>	
<b>Summary Statement</b> I tested non-toxic, household materials to determine which would absorb an oil spill the most efficiently.	
<b>Help Received</b> I had help with obtaining the oil and tested materials I used for the experiments. I also had help with the proper disposal of the oil once the experiments were completed.	