



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> Tori C. Nishimoto	<b>Project Number</b> <b>J2316</b>
<b>Project Title</b> <b>Investigating the Effects of Automotive Fluids on the Hatching Rate of African Dwarf Frog Eggs</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> I wanted to determine which automotive fluids are the most and least harmful to our environment.</p> <p><b>Methods/Materials</b> Three African Dwarf frog eggs were placed into each compartment of a silicone ice cube making tray containing 15 slots. Each ice cube tray had 45 frog eggs that were each exposed to an automotive fluid. Each ice cube tray contained a different automotive fluid. I recorded the hatching rate of each pollutant.</p> <p><b>Results</b> Zero percent of the frog eggs exposed to the used antifreeze hatched. The eggs in the unused antifreeze also had a hatching rate of zero. The unused motor oil had the highest hatching rate at about 49% out of all the pollutants I tested.</p> <p><b>Conclusions/Discussion</b> All automotive pollutants, if not properly disposed, can be very harmful to our environment.</p>	
<b>Summary Statement</b> All automotive pollutants are harmful to our environment, so we need to make sure we properly dispose of them.	
<b>Help Received</b> Parents helped put board together and make revisions; retired science teacher helped get frog eggs for me	