



**CALIFORNIA STATE SCIENCE FAIR  
2005 PROJECT SUMMARY**

<b>Name(s)</b> <b>Chelsea A. Hoover</b>	<b>Project Number</b> <b>J0916</b>
<b>Project Title</b> <b>Of Fish and Plants</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this experiment is to see how plants affect the water quality of a goldfish tank. <b>Methods/Materials</b> The materials I used for my experiment were four milk cartons that can hold eighty ounces of water, a fish net, fifteen goldfish, same size, seven plants, same size, gravel, enough to fill the bottom of all four milk cartons an inch thick, a can of fish food, a thermometer that measures humidity as well as temperature, a cardboard circle, draw in fourths of a size of a quarter, a turbidity kit, PH testers, a water quality tester, a pencil or marker, a twelve ounce measuring cup, a notebook, water, a tank big enough to hold all the fish <b>Results</b> The results on this project turned out perfectly but not exactly the way I expected. My hypothesis was wrong, it turned out that the tank with the most plants had the dirtiest water out of all of them. I believe this is because at night the plants suck up oxygen instead of giving it out and there wasn't enough oxygen for all the plants at once. The tank that did the best was tank number three because it had just the right amount of plants to create oxygen and not take too much back at night. Tank number one accumulated bubbles on the top of it and so did number two indicating there was not enough oxygen in the tanks. The only problem that occurred during this experiment is that the fish in tank number two decided to eat their plant, don't ask me why. <b>Conclusions/Discussion</b> In this experiment I learned that plants are not good to have too many of, like many things in life. If you over run a tank with plants they will suck up all the oxygen at night when they are not photosynthesizing. Also fish are a very hard thing to work with. One little thing could go wrong and your entire experiment could go down the wrong way and end in a fiery crash. Luckily I oversaw these things and was able to pull it off.	
<b>Summary Statement</b> My project is on plants and how they affect the water quality of a goldfish tank.	
<b>Help Received</b> my mom helped me decorate it, my dad helped me solder and wire the water quality testing device, my teacher set deadlines for me to follow	