



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Maxine E. Holland	Project Number S1906
Project Title Filter Feeders	
Abstract Objectives/Goals My problem question was #Can Mytilus edulis (mussels), in the class of bivalvia and the phylum mollusca, absorb the particles put in the water they live in?# My hypothesis stated that the Mytilus edulis would absorb the particles because they are a type of filter feeder and filter feeders filter out water when feeding on plankton and could possibly absorb the particles within the water. Methods/Materials My variables are 6 tanks filled with Mytilus edulis and my controls are 2 tanks containing no livestock. In my procedure, I put in 250 ml of a carbon solution (30.16 g of black carbon pellets and 250 ml of fresh water) in all 8 tanks, found how well my variables (Mytilus edulis) absorbed the particles, and compared their results to the results of my control. Results In the results I found that the first day the variable tanks had 28 cells per milliliter of water and the controls had 118 cells per milliliter of water. The second day the variables had 24 cells per milliliter of water and the control had 99 cells per milliliter of water. The third day the variables had 17 cells for every milliliter and the controls had 77 cells per milliliter. The fourth day the variables had 15-cells/ milliliter and the control had 68- cells/ milliliters. The fifth day the variables had 12-cells/milliliter and the controls had 62- cells/milliliter. The sixth day the variables had 10-cells/milliliter and the controls had 58-cells /milliliter. And finally, the last day the variables had 6-cells/milliliter and the controls had 56-cells/milliliter. Conclusions/Discussion My conclusion was that the Mytilus edulis did absorb the particles because the variable tanks had decreased in cell numbers, which means that the carbon particles have been absorbed. My hypothesis was proven correct and it leads me to believe that Mytilus edulis may absorb bacteria as well.	
Summary Statement My project was to find out if Mytilus edulis (mussels) could filter out the carbon particles put in their water.	
Help Received used lab equipment from teacher, fish tanks donated by neighbors and teachers	