



**CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY**

Name(s) Alyssa J. Fraser	Project Number J0611
Project Title Soaking Shells	
Abstract Objectives/Goals My objective was to determine if shells will become weaker after soaking them in vinegar for 5 days. I think that the soaked shells will lose weight, size, and color. They will also get smoother and become easier to break with a hammer. Methods/Materials Three different shell types were used, Pecten, Turban, and Saucer, and I selected four of each. I made measurements and soaked half the shells in vinegar for five days. Daily, I noted how the shell's appearance changed over time. At the end of five days, I repeated the measurements on the soaked shells and used a hammer to break both soaked and not soaked to measure strength. Results All shells lost over 25% of their weight and the Saucer shells lost half their size. Over all, the shells lost color and were soft and slimy. The shells that were soaked in vinegar took less hits to break compared to the ones that were not soaked. Conclusions/Discussion My conclusion is that the shells soaked in vinegar will become weaker, softer, or even dissolve. Even though the vinegar effected all the shells, the Turban was the most resistant and strong while the Saucer more weak and fragile.	
Summary Statement I selected three different kinds of shells and did several measurements to see if soaking shells in vinegar will have an effect on them.	
Help Received My mom helped me by showing me how to make my graphs. My dad cut the paper for the board.	