



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

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Project Title Rocketology	
Objectives/Goals To determine the correct ratio of baking soda to vinegar that will result in the highest launch of a plastic canister	
Abstract	
Methods/Materials Material : 1. Plastic Fuji film canisters with the tops (at least 3). 2. Construction paper, any color, 9 inches (in.) X 12 in. (1 pack). 3. Scotch tape (1 roll). 4. Scissors. 5. Permanent marker. 6. Ruler, in inches. 7. Optional: Ladder. 8. Baking soda (1 box). 9. White vinegar (1/2 gallon bottle or jug). 10. Measuring spoon, 1/8 teaspoon (tsp.). 11. Measuring spoon, 1 tsp. 12. Bowl. 13. Water. 14. Spoon. 15. Safety goggles. 16. Adult volunteer. 17. Lab notebook. Methods : 1. We collected all oyr materials and put it on the Table. 2. We read the instruction for the experiment and made one change. The change was that we did not put construction paper onto the film canister as the canister was heavy and was not lifting up too much anyway. 3. We made a measuring scale using construction paper and hung the scale on the wall in the backyard. 4. We put 3 teaspoons of vinegar in the film canister 5. We then put the right amount of baking soda and pasted it on the canister cap. 6. The Cap was then tightened by our adult volunteer on the canister. 7. The Adult volunteer then turned the canister upside down and placed near the measuring scale. 8. We did a lot of trials with different amounts of Baking soda and Vinegar and noted our results.	
Results Vinegar and Baking soda when came in contact there was a small explosion and the Canister went up following Newton's 3rd law of motion.	
Conclusions/Discussion Our Conclusion was that more the baking soda used for same amount of vinegar, the higher the canister goes.	
Summary Statement Newton's third law of motion helps to propel a rocket.	
Help Received Father helped in typing the application. Both parents helped in our experiments and literature survey over the Internet.	