

Croda, Lauren

Bio-Rad Question 1

De Anza High School

I could not believe my eyes. Before me were fifteen massive jugs of Martinelli's cider, needing to be consumed by my family of nine in just three days. My mother, the science volunteer for my second grade class, needed the bottles for a science project. As my mother came in biweekly to do hands-on projects with the students, I became immersed in science. My class, and myself, marveled at the sights before us. Our lessons were filled with sucking eggs into bottles, dissecting owls' poop, and even completing a circuit using wires attached to a student's capped front teeth. The possibilities for amazement were endless.

Experiencing science at an early age, I became enthralled with each new experiment, captivated by the chemistry of it all. I watched longingly as my older siblings created their science fair projects. Too young to enter the school science fairs, I took to my family. Force-feeding different animal food to my siblings and parents, I graphed their favorite types. While I was only six, my family has never forgiven me; my "experiments" remain the family joke. Nevertheless, I have progressed from my dog food days, leaving taste tests for DNA gel electrophoresis experiments.

While many find themselves turned away from the complexity of science, I have found myself mesmerized by it. This difference in opinion has spurred from my upbringings in science, feeling connected to science at an early age. By entering into

hands on experiences at an impressionable age, I realized that science was not only for experienced technicians in lab coats, but for anyone.

In order to encourage interest in science, students need to experience early interactions. By gradually assimilating into the world of science, children can find themselves capable of mastering science. Additionally, elementary years constitute the most impressionable years of a person's life. By experiencing science at such a young age, one can find themselves, like me, passionate about science for a lifetime.

Many science teachers find themselves unable, or unwilling, to teach using hands-on experiments and demonstrations. When learning the chemical formula of  $\text{NaHCO}_3$  (aq) +  $\text{HC}_2\text{H}_3\text{O}_2$  (aq), one feels themselves distant from these complex, boring symbols. However, when taken off paper and into the classroom, this distant formula reveals the ordinary household products able to create an exhilarating volcanic eruption. Hands-on learning experiences are vital to gaining interest in science, showing students that what they learn on paper operates not only in the books, but in everyday life.

By focusing funds on the creation of science labs in elementary schools, students can relate to science not as a foreign concept, but as a fun and intuitive way to learn about the world around them. Without interest and participation in science, the world could not continue. From roller coasters to doctors, science affects every aspect of life.