

Student: Sara Konopelski
School: Las Lomas High School
Walnut Creek, CA

What can be done to encourage interest and participation in science?

The beauty of science stems from its chameleon nature – its never-ending ability to change. Science is always improving upon itself via new technology and innovation, altering how we perceive and apply it in microscopic and macroscopic areas of our lives. From Newton's Law of Universal Gravitation to the preliminary stages of the Human Genome Project, science continuously outshines itself and habitually surmounts all expectations; thus, our interests within the subject are also ever twisting and turning. In short, science is magic.

In order to achieve higher levels of participation in science, particularly in today's youth, science teaching needs to begin at a young age. The best part of science is the experiments – especially the ones that make noise, emit light or give off smells. Merely using baking soda and vinegar to cause an "explosion" within a paper mache volcano is enough to capture any child's imagination, and from there a love of science will bloom. I remember excitedly watching balloons inflate with carbon dioxide by mixing vinegar and baking soda in a bottle, as well as doing my first grade science project on Bernoulli's Principle of Air Pressure and fooling all my classmates with his clever discovery. More importantly, though, after doing my experiments I actually wanted to learn what caused them to work, which helped to incorporate science into my life. Just as I learned from these past experiments, other children exposed to scientific research at an early age will come to realize that science can spark one's interest and maintain it for the rest of their lives.

In addition to learning the basics via experimenting at a young age, teachers who

exude passion and are devoted to the wonders of science should enlighten others through nonconventional, non-textual ways. Without that intense, fervent love and appreciation that my teachers had for all areas of science, I never would have considered science interesting let alone want to spend the rest of my life involved in it. My teachers' excitement, enthusiasm, and sometimes over-the-top craziness made me love science and want to dive deeper into the subject. In one example, my AP Biology teacher, Mrs. Verbanszky, instructed me and my fellow students in a lab designed to discover the genotype of an unidentified species of *Drosophila* flies via breeding known genotypes with unknown genotypes. We were told to observe the characteristics of the newborns and from that determine the undisclosed genotypes. Because of this experiment I discovered that I loved genetics, and I am now interested in studying it in college.

Moreover, scientists today who enjoy and take pride in their work need to resolutely take a stand to show others that they are proud of what they partake in every day. If more scientists acted like the Myth Busters crew or Bill Nye the Science Guy and openly informed the world of their discoveries and experiments in an easily understood manner, then the world would clearly view the versatility and magic that is science. For instance, the discovery of quarks, subatomic particles that make up protons and neutrons, caused people to think and learn more about science. Without this new finding, the world as a whole would have less general knowledge about science as well as fewer people interested in science if not for those who publish their works and knowledge. A topic of interest exists for everyone – the publishers of this information merely need to distribute it in such a way that those intrigued individuals can find it.

Ultimately, science becomes less about the world's natural biological and

physical processes than it is about what we, as humans, take from it. How we choose to adapt to and utilize science ultimately carries more importance than any other aspect.

Regardless of age, gender, or race, there is some aspect of science that applies to every individual's life. Yet even above that, finding enough people who are interested in and eager to help mold and shape science's future is necessary so that no generation is without its magicians.