

How Science should be taught ?

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Science, at its core, is a practice of mind. Every theory, every hypothesis has been devised by thinking out of the box, by making a curious effort to understand the world around us. The first ever human act of scientific discovery was the discovery of fire, and that was from diligent observation.

Science cannot be taught, it can only be learned. But today, our young generations, the hope for future, are being restricted to the pages of text books and the four walls of the classroom. They learn about nature from the pictures in their books, when a field trip to the Botanical Garden or even just the patch of greenery in their locality will teach them about those in a more practical way.

That brings us to one of the most problematic part of our current science curriculum- the lack of practical approaches. Research has proven that humans learn better from experience, by witnessing the phenomena firsthand. If a child is shown the rotations and revolutions of Earth via simple torch and globe experiment, they are far more likely to understand and remember it than just reading it in a textbook.

Our students see the inside of a real laboratory in the 11th standard for the first time, far too later along their education career. It takes them years to learn proper laboratory etiquette, and by the time they are truly comfortable in it, they are ready to graduate. For a great number of students, laboratory is a matter of headaches, the challenges it poses quite an insurmountable hurdle. This can all be surpassed by an early and regular practice of laboratory usage.

I myself am a visual learner dominantly, and in past few years I've found it quite a challenge to remember the specifics of my organic chemistry syllabus, despite my dutiful studying. That is, until I realized that the problem was not my countless albeit vain efforts, but rather the lack of visual cues I was experiencing while trying to remember the information sitting in the examination hall. Fortunately, in the final year of my graduation, the syllabus included practical applications on them, and my grades improved unsurprisingly. This is just one of the many instances I have found where the first person practical experiments has helped students more than the mundane texts in a textbook. Textbooks are indeed a staple in education, that cannot be denied, but it is my humble opinion that practical approaches in science education be given at least equal, if not more, importance.

Another way modern science education can be made even more productive, is by writing experiment papers and learning to do proper scholastic research. Research is a mandatory tool in higher studies, and especially in the field of something so globally valued as science, it is very important to

be aware of the different studies happening worldwide. If we start writing papers from the basic levels, the scientific approach itself will mold the mind of every individual to be more logical and precise, as science demands.

And last but definitely not the least, we need to cultivate creativity. Anyone can look at animals getting stuck in thorn bushes, but only creativity leads to the invention of Velcro. We need to start thinking outside the box, and need to encourage and reward lateral thinking.

In today's world, science is an irreplaceable tool, whether to figure out the mystery of Big Bang, or even to cure common cold. The future rests on the shoulders of science and technology, and it's high time we learn to use this indispensable tool properly.

