Science Understanding: Public Interview

If you type “Science understanding” into the Wikipedia search engine you are left with this message;

“*The page "Science understanding" does not exist...*” (Wikipedia search results of “science understanding”, http://en.wikipedia.org/w/index.php?search=science+understanding&title=Special%3ASearch).

This search result resonated with me, not necessarily because it didn’t turn up any results, but because when I think of how the American general public searches for the answers to life’s perplexing scientific questions, one name constantly pops up in conversation: Wikipedia. Through my conversations with people of various ages, Wikipedia has become one of the most frequently used information sites for answers to the everyday questions that life proposes. “What is a Dugong”, “Chernobyl explosion”, and “household chemicals” are all completely varied, all searched with no order of importance, and all looked up by me at one point or another, yes I too am guilty of the wiki. So I found it slightly comical that when typed into the search engine of one of the most frequently used information sites by the general public, the phrase “science understanding” does not exist. Does this mean that we just don’t have any understanding of science today, or that we have not been properly prepared to answer the difficult scientific questions life throws at us? The answer is I don’t know, and that’s when I decided to go ask somebody.

I decided that the best artifact to utilize in the question of “science understanding” was a subject from which “science understanding” directly affected; the general public. The candidate that I interviewed is a colleague of mine that works with me at a snowboard shop a few times a week. This gentleman is in his early 20’s, graduated from high school, and has completed some university courses. Below are a series of questions that I asked him regarding his views of “science understanding” and what the purpose was to being exposed to science education.

Q: What does the term “science understanding” mean to you?

A: It means how comfortable someone feels with science knowledge.

Q: When should people first be exposed to learning science?

A: As early as possible. I think the earlier you can learn something the better it will stick in your mind as you get older.

Q: Why should K-12 students learn about science?

A: If they don’t learn anything about science during these years then they won’t be prepared for any college level classes that have to do with science, math, psychology or pretty much anything.

Q: Is it important for K-12 students to learn about science? If so, why?

A: Yes. If they don't learn about science then they won't be able to get into college which means they will not be able to move past most minimum wage jobs that require a university degree as they get older.

Q: What is your earliest memory of a science class?

A: Fourth grade science. We were learning about trees and leaves and nature, and our teacher took us outside into the woods and had us identify different trees by bark and leaf shape. He even told us that certain trees made certain sounds as the wind blows through their leaves. So we sat down with our eyes closed and he had us listen to a Poplar and an Ash tree blowing in the wind and identify them by the sound their leaves made.

Q: Do you feel like elementary and high school science classes prepared you for the science you experienced in college? If not, why?

A: Somewhat yes, but most of my understanding and interest in science came after I was in college because the classes just seemed more engaging and interesting.

Q: If a high school graduate had a sufficient understanding of science, what would he/she be able to do?

A: Get into college and get a better job as they got older. Plus they could help other people learn more about science.

Q: At this point in life do you feel like you have a solid enough grasp of science practices and concepts to come to your own conclusions regarding science based instances that occur in everyday life (e.g. nuclear plant meltdowns, oil spills, chemical use, etc.)?

A: With some of them I guess that I do. I mean I can generally tell if what I am hearing on the news is a lie or if a company is trying to cover something up because the story they are telling just doesn't make sense. It's like when that nuclear reactor in Japan blew up a few years ago and they said on the news that no one has to worry about any problems with radiation affecting them because it was totally contained. All you have to do is look back 20 something years to when Chernobyl blew up and see all of the devastation that it had on the people who lived close to that site. Even now their children can experience problems eve n if they weren't born when that whole thing happened.

Q: If you could, what changes would you make in regards to your experiences with science education, if there are any?

A: I would probably just make it more engaging and interesting and constant. I feel like there was a gap when I was learning science in grade school and high school. Sometimes we used information that we had already been learning a little about and sometimes I was just lost.

As an educator, “science understanding” has always meant an overall comprehension of science concepts and theories that a person gradually learns over their lifetime. This understanding can be applied to personal life, academic, and business experiences. Proper and meaningful training in science education will go a long way in fostering that type of “science understanding” as it produces a lasting and understandable scientific foundation that can gradually be built upon.

This interview was interesting to me as it put into words some of my questions that regarded the public’s views of “science understanding” and the role of science education. Now keep in mind when I say public I am speaking in complete generality. I have no idea what the entire general public thinks or comprehends when it comes to the concept of “science understanding”. What I can go off of is merely the random conversations I have had with people over the years including this one formal interview that I have conducted. With that being said, I was surprised when I asked the question “what does science understanding mean to you?” I expected an answer to the extent of how much a person remembers about science classes from school, but what I got was; “It means how comfortable someone feels with science knowledge”, I thought that was a great, well educated answer. I personally want to live in a world where people have the knowledge and skill set to question the complicated occurrences life throws at them. If everyone could have that basis of thought when it comes to their grasp of “science understanding” we would all be much better equipped with the right questions that should, and need to be asked.

As the interview went on questions such as “When should people first be exposed to learning science?”, and “Is it important for K-12 students to learn about science? If so, why?” came up in conversation. His answers matched my own feelings about science education; science is essential to proper growth as a person and the best time to start is as early as possible. An early start time will not only help with retention but it will also create a foundation to be built upon. As a matter of fact, the only problems that the interviewee had with science learning was that it was not engaging enough during his informative years and their seemed to be “gaps” in his consistency of science learning. These are both problems that many of us, myself included, have experienced at some point in our education and this is where I believe that the implementation of the NGSS could possibly benefit today’s students by breaking down traditional science learning patterns and creating a system of building blocks that can be added to and expanded upon over their academic career.

As educators we want to see people who are informed about the world that they live in. We want them to ask questions and we want them to seek answers, but we have to give them the tools to do so. I was pleasantly surprised with the answers to my interview questions. I hope that there are more critical thinkers out there who have been properly given the tools to succeed in today’s society, or maybe they are just all too busy looking up what a Dugong is on Wikipedia?