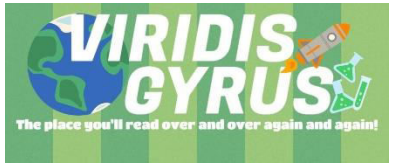

Five Ways to Promote General Science to Secondary School Students

MANILA, Philippines – With schools all over the country offering senior high school programs, the number of Grade 11 students increased to over a million, according to the Department of Education. Due to the implementation of the K-12 program, a new dilemma has come to young students – what track to take in Senior High School.

Recently, *Viridis Gyrus*, an online blog dedicated in promoting general science, conducted a survey in Manila High School, Intramuros to know what Grade 8 students think about general science. Nine out of 20 respondents found it uninteresting and untimely repetitive. The same was done to Grade 9 students, and the number of students displaying disinterest in general science increased from nine to 12 out of 20. Finally, when the last survey was conducted to Grade 10 students, the loss of interest in general science became evident with 16 out of 20 respondents expressing their detachment from general science. We then proceeded to ask them a few questions about scientific terms and what they knew about the layers of the Earth. To our dismay, almost all of them only got 35-40% correct answers.

General Science, without a doubt, is faced with the challenge of being contextualized properly; the success is highly influential based upon the extent to how scientific literacy is imparted. However, with the disinterest of science in general due to external factors and tedious systematic processes, the youth of today's generation tend to disregard even fundamental scientific findings.

In this paper, the focus will be on creating ways to invigorate children at an early age to earn and maintain a high interest in general science which manifests in forms of activities that augments their knowledge domain. The objective is to review the mental and cognitive abilities of children ranging from 7-12 years old in order to incorporate ideas of general science by utilizing creative methods that will make them easily comprehend scientific concepts.

Why does general science matter?

A variety of scholars would argue that understanding general science is the first hallmark of informative learning. As different developments in science surge new issues open for public debate, those who fully grasp the notion of basic science are able to give more informed judgements.

When does the interest in general science start?

The interest in general science starts as early as childhood. Studies have shown that children who are exposed to 10 hours of science make them smarter every year.

Letting them venture upon the importance of general science will also result to greater willingness to thrive for newer information.

How does the interest in general science start?

Invigorating children about general science involves actively engaging them in unique, distinctive and constructivist approaches so as to advance their insights even further. This will allow them to mature upon healthy habits which they would eventually deem as fun, interesting and interactive.

The Dilemma; the Uninterested, Misinformed Flock

With the K-12 program, high school students are now exposed to general science subjects every year, in contrary to the old curriculum where general science is taught only the first year of high school. The students who participated in the same survey mentioned beforehand was also asked what their favorite subjects are, and what track they are planning to take upon reaching Grade 11 (Senior High School). 11 out of 20 Grade 8 participants mentioned Science as their favorite subject, while 14 out of 20 are going with Science, Technology, Engineering, and Mathematics (STEM) as the track of their choice. For Grade 9 participants, eight out of 20 participants named Science as their favorite subject, with surprisingly, the majority still leaning to taking STEM as a senior high school track with 13 students out of 20 responding. Lastly, Grade 10 students had the least number of students choosing Science as their favorite subject with only four out of 20 respondents. However, ironically, among these students were also the most number of students who are planning to take STEM in senior high school. 15 out of 20 students are opting to walk career paths of engineers, architects, and doctors (just to name a few) not because of science but because of the wage professionals in that career path earn.

The interest of students for general science in the earliest phase of secondary school is not cultivated properly, causing the decline that can be seen in the students of Manila High School. Learning is hard for students due to the scarcity of classrooms, but the learning environment for laboratories is far worse. In 2014, the Department of Education reported an important need for science laboratories in schools all over the country.

In the same year, in a survey conducted by Raymond Pingol from the VISSER project, it was found out that only 20% of government-owned high schools have laboratories with non-traditional modern equipment. Additionally, laboratory equipment given to public high schools are not even adequate enough to produce an environment conducive to scientific learning as it comprises only of a simple computer and an LCD projector.

This lack of proper learning facilities for general science results in the uncultivated interests of students for scientific knowledge, but still retaining the idea to pursue science-related careers because of a mindset developed by a culture

that pushes students to chase large amount of income upon graduating college (should they pursue an undergraduate degree), leading to a misinformed flock.

In an effort to preserve the enthusiasm for general science of young students, *Viridis Gyrus* formulated **Five ways to promote general science to secondary school students**. These tips are tailored towards teachers, as they are the torchbearers of knowledge to children, leading them properly to the path of learning.

5 Creative Ways to Promote General Science to Secondary School Students

1. Allow room for outside-the-classroom learning exercises.
As a teacher, you must first understand that science is not a subject that can be taught outside the four corners of the classroom. Give your students homework that involves applying the principles you teach them so they may have the chance to see for themselves how science works. No scientist fell in love with science by just hearing scientific terms; love for science starts with experience.

2. Use modern technology to engage students in discussions.
These days, students are easy to reach out to even outside the classroom hours through social media and websites that encourage educational discussions. Talk to them about science – which is basically everything – in a conversational level to let them know how the subject is incorporated to everything about the world. In this manner you can keep the learning momentum from going down even when your students leave the classroom.

3. Encourage your students to ask questions.
If there is one thing teachers should teach their students, it is to ask questions. Every invention that helped the world become what it is today started with simple questions of what ifs. By teaching students the art of inquiry, teachers are raising an army of enthusiastic learners without the students even knowing.

4. Teach them that it's okay to make mistakes
The worst thing that a teacher could do to a student is to never allow him to commit mistakes. Everyone is flawed – and that is a truth. Do not make students chase in perfecting examinations; Let them see mistakes as areas for improvement instead.

5. Value your students' questions
It may be hard to grasp, but for a teacher, every question should count. Students ask the most difficult of questions sometimes – and often times these questions do not even pose a threat to your intellectual prowess, as it sounds plain ridiculous. But every time this happens remind yourself you would not be having an easy time computing your bills with a calculator if one person in the past did not wonder if he can

build an artificial machine-slave that can count, add, and subtract numbers.

These Tips work best with **CANVAS**.

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REFERENCES:

1. Brighenti, A. M. (2010). On Territorology: Towards a General Science of Territory. Theory, Culture & Society January 2010 vol. 27 no. 1 52-72

2. H. (n.d.). DepEd: Senior high school enrollment hits 1 million. Retrieved September 16, 2016, from http://www.rappler.com/nation/136758-senior-high-school-enrollment-one-million

3. Prpic, K. (2010). Science, the public, and social elites: How the general public, scientists, top politicians and managers perceive science. Public Understanding of Science November 2011 vol. 20 no. 6 733-750

4. Times, T. M. (2014). Science education realities. Retrieved September 16, 2016, from http://www.manilatimes.net/science-education-realities/100096/