“Is Average Good Enough?”

By Richard Close, Director of Outreach, Delaware Valley Science Fairs, Inc

What do Shanghai, Korea, Canada and Finland have in common? These are just 4 of 22 countries whose students scored higher in science than those from the US in 2009. Using the PISA (Program for International Student Assessment) students from around the world were tested in science learning and thinking and out of the 65 countries, US students were a solid “average” at number 23 with a 502 score, just 1 point above the international average of 501 (http://www.oecd.org/dataoecd). This assessment is not designed to measure a student’s recall of facts but their ability to apply knowledge using deeper reasoning skills.

Has the United States ever been satisfied with “good enough”? Students around the country are being “turned off” to science, seeing it as for the “geeks” of the world—“It is way beyond me” thinking! This cannot be!! But how do we turn this around? How do we get students enthused about science, wanting to “discover” science and make a difference in our world?

It has been shown time and again that the way to the heart of students in science is through interaction and student discovery ( www.brynmawr.edu/biology/franklin/InquiryBasedScience). Yes, students need to a foundational level of science knowledge. This has been identified for a number of years through “The National Science Education Standards” (1996) (now in revision) produced by The National Research Council, The National Science Teachers Association and the American Association for the Advancement of Science. However, the foundation must be laid by students “doing” science—making science a verb!

Throughout the Delaware Valley region, the Delaware Valley Science Fairs, Inc (www.dvsf.org) is seeking to assist local teachers, administrators and interested community members in providing a unique avenue for “discovering science”—regional science fairs and competitions. These provide students—both boys and girls- in grades 6-12 from all schools with the opportunity to: select a question to be solved, do background research on the topic, design a procedure to solve the problem, take data, analyze their findings, identify conclusions that answer the initial question and then to present their findings to peers and science professionals at local and regional gatherings. Great skills for life!

The Delaware Valley region is divided into 13 regional fairs with the local schools from grades 6-12 participating at the local science competition. These are held in February and March. Those projects identified as excellent in quality move on to the Delaware Valley Science Fair held in Oaks, PA in early April. Close to 1000 students from throughout the region compete for prizes, honors, medals, special awards with over $1 million in college scholarships and the opportunity to represent the Philadelphia region at the International Science and Engineering Fair to be held in Phoenix, AZ in May.

Why not get your student involved in being part of “doing science”? Contact your regional fair director (http://www.drexel.edu/dvsf/regional_fairs.htm ) for the timeline and rules for the competition. By having more students doing science through local science competitions, the United States will have the opportunity to return to the top of the list in science excellence—no more “average is good enough” for us!!