

Google Online Science Fair

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In university, I majored in English and minored in Biology. Hmmmm. Strange combination, you say. But I enjoyed both and reasoned that if I had two core areas in my teaching degree, I'd be more employable. Turns out, I taught very little science and math and a whole lot of English. Recently, however, my love of science has been awakened. As I follow the progress of the new NAD elementary science series, as I explore resources from the National Science Teachers' Association, as I listen to the ongoing creation/evolution debates in schools, and as I read more about 21st century skills and educational technologies, and as I talk to my science-teacher husband who has spent 30 years trying to convince me that science is more important than English, I am increasingly convinced that the principles of science are the principles of life and that we must strengthen how we do science in schools.

Science is not just the memorization of facts or the balancing of equations. It goes way beyond textbooks and worksheets, and even beyond demonstrations and lab activities. It is a way of thinking, an approach to problem solving, a recognition of our place in the universe and our responsibilities to each other, to our Creator, and to our earth. And it's also communication. It's time to transform our current curriculum that isolates and separates specific subject areas into an integrated learning experience that crosses subject boundaries. It is no longer cheating to use the same research paper in Biology and English classes! It's time for English and Science and Technology to join hands!

The Google Online Science Fair is one way to do just that. Though it's too late for this school year (the Fair runs from January to April), it is not too early to begin to plan for next year. Google has partnered with National Geographic, CERN, Scientific American, and the LEGO Group to create a new global science competition to engage students who might not yet be engaged with science. A wealth of information and resources for both teachers and students can be found on the Google website (<http://www.google.com/events/sciencefair/index.html>). The fair is open to full-time students, ages 13-18, from around the world, working on their own or in a team of two or three. It is open to students in private or public schools and to those who are homeschooled.

By participating in the Google Online Science Fair, students will have an opportunity to use various technologies to explore questions about their world and communicate their results. They will be practicing "inquiry-based learning" and will learn, not only science content, but also the nature of science—how real scientists do real science. They will also learn to use various technologies in authentic ways to support their learning (i.e., creating phone apps, using eBooks, designing 3-D models, taking and storing photos, creating and embedding videos). And they will build their communication skills by collaborating, summarizing, writing, speaking, analyzing, drawing conclusions, doing research, and properly citing sources. Talk about a perfect partnership of science, technology, and English!

An added bonus is that this science fair is completely free. So what's in it for Google? Google believes that universal access to technology and information can make the world a better place and that the need for access to useful information crosses all borders. They are in the business of creating and providing these

technological tools, and during the science fair process, students will have opportunities to use a wide variety of Google applications. Google is obviously hoping that these students will continue to use these apps, but it's really a win-win since most of these apps can be used for many educational purposes and also for out-of-school interests and projects. Most of us use the Google search engine, and maybe Google Earth and Google Maps, but few of us are aware of Google Alerts, Google App Inventor, Google Blogs, Google Books, Google News, Google Scholar, Google Sketchup, Google Translate, and more!

The other part of this opportunity I really like is that it encourages creativity. As Ken Robinson is quick to point out, all of us are born creative; we don't grow into creativity, we grow out of it. Because school in general (and science in particular) has often focused on left-brain thinking, students have had few opportunities to exercise and develop their creativity. 21st century experts are telling us that the world of the future, where information is readily and easily accessible, will need individuals who can come up with original ideas that have value. Creativity can be taught across all subject areas, and as teachers, we need to incorporate opportunities for students to think creatively . . . to come up with original ideas . . . to think outside the box. The Google Online Science Fair is just one of those opportunities.

I would encourage you to explore the possibilities. Take 5 minutes right now to go to <http://www.google.com/events/sciencefair/index.html> and watch the video clip there on the front page. The brief interview with Mitch Resnick and the Lifelong Kindergarten Group (can you imagine lifelong kindergarten?!), as he illustrates the importance of "keeping alive the kindergarten spirit" through science fairs, will inspire you to find out more and to encourage your students to get involved in the Google Online Science Fair.

(If you're an audio learner and would prefer to learn more by listening to a podcast, go to <http://laboutloud.com/2011/03/episode-61-googles-global-science-fair/> to download an NSTA "Lab Out Loud" podcast focused on the Google Science Fair.)

References:

Google.com. <http://www.google.com/events/sciencefair/index.html>

"Sir Ken Robinson: Do Schools Kill Creativity?" [video file] 6 January 2007. Video posted to <http://www.youtube.com/watch?v=iG9CE55wbtY&feature=Playlist&p=CEE0EBDB215343B1&playnext=PL&playnext=1&index=2>