

American **INGENUITY**

Stories of Smithsonian Winners Inspire Wonderings about Student Achievement

By Gary Kipp

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I was both inspired and curious as I read an article in the December issue of the Smithsonian Magazine. The article highlights nine winners of the Smithsonian 2013 American Ingenuity Awards. I was inspired by the wonderful stories of these creative individuals, and curious about the lessons these stories might have for the world of education.

The stories of these award winners exemplify what has distinguished Americans as the world’s innovators. I hope that in all the discourse about student achievement today that we do not sacrifice what America has been known for — ingenuity. ■



Winner	Article Excerpt	My Wonderings
<p>Adam Steltzner The Mars Rover Team <i>A nine-year project to land the \$2.5 billion Curiosity Rover on Mars came down to seven nail-biting minutes.</i></p>	<p>“That is one of the beautiful things about engineering. It is a collaborative art.” He says. “We are only the product of what we do as a group.”</p>	<p>I wonder if we value the work of the group enough in classrooms today.</p>
<p>St. Vincent Performing Arts <i>She brings new sophistication to pop composition, conjuring ethereal dreamscapes from her suburban roots.</i></p>	<p>“I approach my work as a day job,” she told me. “If you’re a writer, you have to write. If you’re a musician, you have to make music.”</p>	<p>I wonder how we can get students to take more responsibility for their own learning. If you’re a student, you have to study.</p>
<p>Dave Eggers and Mimi Lok Social Progress <i>By capturing the stories of those who’ve survived crises, Voice of Witness is changing the way we record history.</i></p>	<p>“Organizers know from experience that the act of interviewing a subject has a remarkable impact on students... To this end, there is a maxim that Lok and the rest of the VoW staff repeat as a mantra. Empathy, they like to say, is the highest form of critical thinking.”</p>	<p>I wonder how many ways there are to define critical thinking. If this definition is the right one, I wonder what adult behaviors might develop students’ empathy.</p>

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<p>Saamil Bandyopadhyay Youth <i>A teenager harnesses cutting-edge physics and nanotechnology for a new kind of radiation detector with possible applications ranging from automobile to astronomy.</i></p>	<p>“He developed in fits and starts,’ said his father. Saamil could add by age 2, but he didn’t speak until 3 ½. Then he went from mute to fluent, chatting away in the Bengali his parents spoke at home.”</p>	<p>I wonder if our state policies are sensitive enough to the vast differences in development of the students they apply to.</p>
<p>John Rogers Physical Sciences <i>A revolutionary materials scientist pushes the boundaries of medicine with electronics that melt in your body.</i></p>	<p>“Rogers told me that childhood dinner conversations ‘would range from physics and hard science with my dad, and more inspirational aspects of science through my mom. It instilled the notion that creativity and the arts are kind of a natural part of science.”</p>	<p>I wonder how, in our traditionally departmentalized schools, we can think more of creativity and the arts as a natural part of science.</p>
<p>Caroline Winterer Performing Arts <i>How one historian is harnessing big data to map Ben Franklin’s world of enlightenment ideas.</i></p>	<p>“The experience of ‘pondering the past in a fleshed-out way...’ Winterer adds, ‘struck me then, as it does now, as an awesome exercise in the imagination.”</p>	<p>I wonder what role our state believes the subject of history plays in students’ education.</p>
<p>Caroline Hoxby Education <i>New research is revolutionizing the way the best colleges reach out to talented low-income students.</i></p>	<p>“‘Caroline,’ says Harvard’s Fitzsimmons, ‘has a great heart as well as a great intellect. And like every economist, she hates waste, especially a waste of human capital.”</p>	<p>I wonder how often we educators stop to consider students as human capital.</p>
<p>Doug Aitken Visual Arts <i>He uses video, music, mirrors, railroad cars, even entire buildings to create works that make every viewer a participant.</i></p>	<p>“‘Failure,’ he shrugs, ‘is something you kind of grow off of.”</p>	<p>I wonder how we can get students to value failure, rather than avoid it at all costs.</p>
<p>Michael Skinner Natural Sciences <i>He enraged the chemical community and shocked his peers by discovering that DNA changes aren’t the only way the environment can affect future generations.</i></p>	<p>“Michael Skinner’s biggest discovery began, as often happens in science stories like this one, with a brilliant failure.”</p>	<p>I wonder again the same thing I was wondering when reading the article on Doug Aitken.</p>



Gary Kipp has served as AWSP’s executive director since 2003. He has more than 40 years experience as a teacher, assistant principal, principal and assistant superintendent.