

Don't Smile before Christmas & Science for all, Except for ...

Success

I am so fortunate to have the opportunity to teach both middle school students and science teachers returning to the university to earn a master's degree in integrated science education. To "practice what I preach" has become a personal motivator and a great way to keep my teaching practices in check. Both groups push me to do better, to learn more and laugh often.

The laughter portion has been a passion of mine for the past twenty years, give or take a few months. My "aha" moments with my students around a specific science topic have almost all begun with a funny moment, a pun, an example or a correlation that lowers all of our defense mechanisms, our resistance to learning, our past horrific encounters with science/and or learning environments, and our physical reactions to them. The appropriate use of humor creates a classroom environment that allows students to really inquire; a process that I believe begins with trust. None of my students would allow me to continue higher level questioning, or enticing them to "think outside the box" if they didn't trust me, and each other. Roughly a third of my 8th grade students come from a life of financial poverty, while another third often suffer from a poverty of spirit or compassion. The students who have great financial wealth often suffer from a sense of entitlement that erodes their ability to inquire. After all, inquiry can get messy and it doesn't always leave neat and tidy answers.

Ruby Payne, Ronald Ferguson, Eleanor Renee Rodriguez and Reuven Feuerstein are a few of my heroes (and she-roes) in the arena of educational reform. My role at the university level currently is to help science teachers who have just completed a very intense "science immersion" program now try to integrate their wealth of content knowledge into urban middle school classrooms. I feel successful in helping them see their way past the "yellowing lecture notes" and textbooks towards solid mediated learning experiences. I currently measure this success by meeting with them to review what works, what doesn't and where do we go from here. These mini meetings help form the approach I'll use with the next cohort this summer. So far, they believe that their success is a result of two things. First, they have a new found sense of empowerment because they are content rich. Really knowing their subject matter and the state standards has provided them with the primary tools they needed to teach in a very challenging district. The second has to do with their ability to create a learning environment that has high standards, is safe, and a place they can have fun while learning. They know that the teacher cares about them, and these teachers believe it's because of some of the strategies and techniques we worked on this past summer. We can and should "smile before Christmas" if it means developing a better relationship with our students, which in turn will develop them as young adults who are science literate and care about this planet. I am very proud to be a part of this local cohort of teachers as well as the larger science education community.

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Vexation

Teachers who've retired, but forgot to tell anyone. They seem to rise to the surface, especially when asked to "adjust their teaching and assessment strategies" for special needs children. Good pedagogy will benefit all children. Trying to convince these teachers that learning an alternative way to assess learning, to not rely only on multiple guess questions, pure regurgitation of facts or avoidance of all hands-on-learning experiences has been one of my most challenging vexations. It saddens and sickens me to see all the amazing research being done regarding science for all, when it seems to be wasted on these teachers.

Every teaching day I try to enter my classroom with a positive plan. My students, both 8th graders and my college students, seem to rise to my standards and respond to my approach of a primarily constructivist classroom. I try to share what has worked and what has failed miserably with my colleagues at both levels. The response varies between gratitude and what I consider to be the highest compliment, they use some of what I've created, to contempt and an attack on my motives and results. The past year has marked many a battle with my administrators regarding the deliverance of a solid science program to our identified special needs students. I find that my frustration level regarding the services I can or cannot deliver is steadily increasing, almost to the point of giving up. I don't want to become one of the "shadow teachers," nor do I want to suffer from the "hinge disease" where all I do is close my door.

I delight in the prospect of meeting with people who have a similar passion for science education, not a "whine & cheese" party but a true collaboration of ideas and hope.

- How can we encourage administrators and current science teachers to open up their minds and classrooms to special needs kids?
- How can we as science educator's begin/continue to inspire new science teachers (or current teachers) to not fear these kids and their needs? That they are not alone and help is available?