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Hillsborough Community College, like many large metropolitan community colleges in close proximity to major universities, has a high ratio of Associate in Arts (A.A.) to Associate in Science (A.S.) degree seekers. At the particular campus where I teach, that ratio approaches 9:1. Not surprisingly, the majority of students enrolled in the geosciences courses that we offer[i] are seeking to fulfill general education requirements for a generic liberal arts A.A. or for a non-science university parallel A.A., rather than taking those courses for a terminal geosciences related degree or a university parallel degree in a geoscience major. Our college does have an Environmental Science Technology A.S. degree; however, most of the geoscience related courses required for that program are restricted to students in the program, and thus constitute only a very small part of our total enrollment.

In a 2008 review of data gathered to track the progress of our A.A. graduates as they progressed on to four year institutions, fewer than 5% entered programs related to the geosciences (including geoscience education). While we believe that there is certainly room to increase that percentage, the fact remains that the majority of our enrollment consists of general education students, and therefore our institutional goal has been to focus on broad science literacy themes in these courses. As the college-wide General Education Committee Chairperson since 2000, I have been an active participant in shaping those goals and objectives, while at the same time looking for ways to increase student interest in the geosciences (and other sciences) as career choices.

In formulating what we wanted to do to reconcile the general education science curriculum with the myriad of STEM initiatives and proclamations of the last decade, we decided on a rather simple path. Our belief is that engaging general education science courses – with their “captive audiences” – are the ideal place to recruit science majors. To “close the deal” we actively recruit interested students to join our science club (which offers subsidized field trips and activities) thus granting us further opportunities to mentor and advise them. This model seems to be working; however, we are still gathering data to see if we are truly getting more students to choose science as a major.

What has emerged from the collective efforts of those of us teaching geoscience courses at the Brandon Campus of H.C.C is a curriculum designed to engage students with visually interesting presentations, meaningful lab experiences[ii], and information that is presented in a manner that stresses its relevance to their lives now, and in the future. This does not mean that the curriculum is “watered down” or all about pretty

PowerPoint® slide shows. What it means is that the question in the mind of the vast majority of non-science majors taking a science course - "why do I need to learn this stuff?" - is addressed in virtually every class meeting. Like it or not, we do have to "sell" the subject, and we are dealing with a generation (at least among traditional college age students) who have grown up and come of age in one of the most anti-science periods in the recent history of our nation[iii].

Overcoming "science anxiety," overcoming the lack of preparation prior to entering college, and dispelling the negative perceptions and stereotypes created by the popular culture are all challenges. How do we address these? The first step is by directly dealing with these topics on day one, and then by continuing to address them throughout the remainder of the term. The very first activity that I use in my classes is based on a short essay that I have prepared which is entitled, *"Science as a Way of Knowing."* In that lesson we talk about what science is, and how it's done, and then have some fun discussing conspiracy myths and pseudoscience. This breaks the ice and sets the tone for the entire term. It also makes clear the message that I am trying to send about the class: *it's more about thinking and understanding, than memorizing trivial facts*. The reality is that there are still some facts (presumably not trivial) to learn and know, and some first level - knowledge-oriented questions that will be a part of the student assessments. More importantly though, every lecture also contains "thinking questions," that address the deeper concepts and ideas that will be on the tests as well.

I am quick to tell students that like life, not all parts of our subject matter are equally exciting. With a bit of effort though, virtually every topic and concept that is part of the typical geoscience curriculum can be connected to something that has the potential to engage students – there is a whole world of examples out there to use. The major strands that represent our "relevance approach" include: natural hazards, resources, human-environment interaction, and science and society issues. Connections[iv] between these subject areas and daily life abound, and I actively use them, both as examples, and as ways to keep the students interested. My experience is that this works well to teach science to general education students and to introduce some to what may become their life's work.

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[i] At H.C.C. we regularly offer the following geosciences courses: ESC1000/L – Earth Science, GLY1010/L – Physical Geology, MET2010C – Meteorology/Climatology – all of which fulfill general education requirements.

[ii] The science faculty has fought hard to keep a lab requirement as part of the general education curriculum.

[iii] I highly recommend the book: *Unscientific America – How Scientific Illiteracy threatens Our Future,* by Chris Mooney and Sheril Kirshenbaum, for an overview of the problems we face in dealing with science literacy.

[iv] Those of you familiar with the work of the British author, James Burke, will appreciate the choice of the term "connections." His style is illustrative of creatively using a narrative approach as a vehicle to teach science.