Improving Quantitative Attitudes in Environmental Issues

Considering that Environmental Issues (ENVS 1140) is a course for non-science majors, there are mostly business and liberal arts and social sciences students taking it. Many of them have math-phobias that are rooted so deeply that they cringe at anything beyond a phone number or street address and modern technological advances create an environment in which they really don't use those either.

Thus, the idea of applying our Environmental Science Program's Program Student Learning Objective (PSLO) 4 is unrealistic as it states, 'Student is able to effectively convert data units and utilize equations as needed in the field of Environmental Sciences.' Unit conversion is a maybe and equations beyond the I=(PAT)/S formula are unlikely. Thus, I am making a conscious effort for the next few times that I teach this course to be able to build in another scaffolded project that will work toward the Savannah State University Institutional Student Learning Objective, which is, 'Quantitative Literacy: A "habit of mind," competency, and comfort in working with numerical data' (ISLO4).

This is because my primary goal with this broader impacts-type of course is to build confidence and not exacerbate existing fears of working with numbers. Ideally, I would like to find or create a VERY low-stakes number game as a starter that feeds into basic concepts that can be kept relevant long enough to get students to the big dataset with some appreciation intact for the importance and rich *information* that can be obtained from the large data set. I envision that this could be coupled with some of the climate models/Sea Surface temperature, or maybe even buoy data coupled with population or land use information.

At this point, I have only decided upon these modifications for taking the quantitative components of the course beyond some strategically placed discussions and anecdotes to help them learn unit conversion. I figure that they have, in most cases, had unit conversion taught to them at some point and it did not grasp them so this approach may.