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Course: MSCI 1501K Introduction to Marine Biology

Module: Ocean Sustainability

I had a positive experience with CHARTing II and using InTeGrate material in my Introduction to Marine Biology for non-science majors course. The activities were directly related to the topics being covered, so they were easily incorporated. I used multiple activities from units 1 – 4 in the Ocean Sustainability Module. Students were receptive to the activities and became more engaged when they had the opportunity to work in pairs or in a group. Some activities, such as the Calculating Your Carbon Footprint brought to light the impact that individuals have on the environment and were used at the beginning of the relevant chapter as a segue to my lecture pertaining to ocean acidification. I intend to continue to use InTeGrate activities in my course by using them as homework and in-class assignments.

I do recommend that instructors review the activities well in advance of their intended use to facilitate their incorporation. Typically, activities were used in my course at the end of the relevant chapter and modified by reducing the amount of material covered so that it could be completed during a lecture period. Once the activity was completed as per the instructions it was reviewed in class. Portions of the activities were also incorporated into quizzes and exams.

Several of the sessions I attended at the American Geophysical Union (AGU) Fall Meeting were productive, but the Diversifying Geoscience by Preparing Faculty as Workshop Leaders to Promote Inclusive Teaching and Inclusive Geoscience Departments and The MacGyver Session (a poster session) were the most beneficial. Through interacting with members in my group during the workshop I learned of different programs that NASA has to offer such as My NASA Data where real NASA data can be accessed and the Global Learning and Observations to Benefit the Environment (GLOBE) Program where the public can participate in data collection and the scientific process. From the poster session, I learned of several new instruments that are being refined that could benefit my potential research. Some examples of such instruments are a carbon dioxide sensor that can be placed in the water that is being refined by Dr. Joshua Blackstock and associates, The OPEnSampler, which is a customizable and modular open source water sampler being worked on at Oregon State University, and turning a Raspberry Pi Zero W into a DIY data logger from the Water Resources Section at Delft University of Technology. Between the InTeGrate activities and programs I learned about at AGU, I have acquired a new set of tools to use in helping to educate my students about the environment.