Each Community Spotlight features an outstanding group, partner, resource, or member of our community.
An instructor story following implementation of the InTeGrate module “Climate of Change: Unit 5 - Systems@Play”

By Kristen Genet

Module Description:

Unit 5 of InTeGrate’s “Climate of Change” module is designed to help students understand the climate system, how it functions through thresholds and feedback mechanisms, and how it can be modeled. Drawing on data on ice core methane concentrations and atmospheric greenhouse gas concentrations, students learn about climate records, climate projections, and how human choices can influence our future climate.

In this instructor story, Kristen Genet shares details of her teaching setting, the timeframe over which the module was implemented, student reactions to the unit, and “muddy” points for students. Kristen also notes that the unit to provided an active learning opportunity about climate models and climate change in lieu of either lectures or videos, as students are assembled into teams representing the climate forcing factors and talked through the model iterations.

Teaching Setting:

This unit was implemented in two sections of a non-majors Environmental Science course with 30-50 students at Anoka-Ramsey Community College. The class is an introductory course for non-science majors, although it is also a core required course for the A.S. in Environmental Science degree.

QUBES Citation:

Related Materials and Opportunities:

The InTeGrate project emphasizes interdisciplinary teaching about Earth for a sustainable future. Materials are developed and tested by teams of faculty from different institutions to ensure that modules are flexible and easy to use in a variety of settings. To date, InTeGrate has developed 39 different teaching modules on environmental science topics that are suited for use in both lower and upper level college courses. You can review the InTeGrate collection here: https://serc.carleton.edu/integrate/teaching_materials/index.html

InTeGrate has partnered with QUBES to run three faculty mentoring networks (FMNs) that promoted the implementation and adaptation of the InTeGrate resources. Each FMN participant was asked to write an instructor story, sharing the details of their course description, which InTeGrate modules they used and why, the module’s relationship to the course, assessment, and outcomes. To see how other faculty are using the InTeGrate materials to emphasize quantitative biology curriculum, check out the instructor stories from their most recent FMN (2018) or visit InTeGrate Instructor Stories.

If you are interested in learning more about environmental science and sustainability education or would like to present your own work in this area, consider attending the 5th annual Earth Educators Rendezvous, July 15-19, 2019, in Nashville, TN. The program is designed to appeal to everyone from the instructor attending their first Earth education-themed meeting, to experienced STEM education researchers, to administrators who want to better support students in their programs. Early bird registration is now open and closes on May 1, 2019. Submissions for poster abstracts or Share-a-thon presentations are also still being accepted here (deadline is May 15, 2019).