Scientists in the Classroom

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Our Goal: Support educators teaching the science around socially and politically contentious, but scientifically sound topics.

- The National Center for Science Education has been around for over 30 years.
- NCSE started in the early 1980s, working to defend the teaching of evolution in public schools. We have expanded since then to include climate change education.
NCSEteach Background

● A more proactive approach by NCSE to directly support climate change and evolution educators.
  ○ Teachers run into science denial problems the most, and we want to find new ways to help them.
  ○ A push to provide resources and support for educators to teach the “good stuff”.

● Launched NCSEteach - teacher arm of NCSE in 2015
  ○ We asked our teacher advisory board what they want from NCSEteach
    ■ Access to Scientists
    ■ Vetted Resources
    ■ Newsletters
SiC Pilot Development: Survey Results

- How can a network of scientists help you and your students?

- Teachers responded positively to both in-classroom scientist visits and online interactions with scientists

- Scientists in the Classroom was born
SiC Pilot: Four step process

- Recruitment
- Matchmaking
- Training
- Program Implementation!
SiC Pilot: Recruitment

- Teacher Recruitment
  - Via NCSEteach, our growing teacher network (4,000 and growing)
  - Application process

- Scientist Recruitment
  - Recruited based on where teachers were located
    - Contacted department heads and professors in fields related to evolution and climate change at local universities near participating teachers
    - Contacted Climate Voices and other programs
  - Application process
SiC Pilot: Matchmaking

- Collected data on the scientists and teachers through an application process to make the most effective matches possible
- Scientist-Teacher matches made based on
  - Interests:
    - Subject matter studied by the scientist
    - Subject matter being taught by the teacher
  - Location:
    - Scientists and teachers within a 30 mile radius of each other
- Matches connected via email
SiC Pilot: Training

- Webinar at the beginning of the program for the scientists and teachers, respectively.
  - Overview of the program
  - Expectations for the program
  - Common issues in the classroom and how to deal with them effectively
- Challenges with webinar scheduling
- Successes found with recordings of the webinars, participants watching videos later and emailing us questions directly.
SiC Pilot: Program Structure

- **Social Media**
  - Monthly social media interactions
    - Skype, twitter, Facebook etc.
    - Prompts sent monthly to guide social media discussion
      - *ex* scientist introduction, the effects of climate change and evolution on students’ lives, what is the evidence behind climate change/ evolution

- **One In-Person Scientist Visit**
  - Scientists and teachers collaborate to plan the in-person visit
  - Teacher fully present during the visit, maintaining order in the classroom.
  - Scientists and teachers determine the activity based on the knowledge students already have on a topic and what the teacher wants them to go over with the scientist during the visit.
SiC Pilot: Success Stories

- Climate Change Community Action Plan
- Phylogenetic trees of aquatic bugs activity
- Letter writing to elementary students
- We’re still mid-pilot so there are more to come!
SiC Pilot: Challenges

- Teachers, for the most part, abandoned the social media component.
  - Privacy issues
  - School policy
- Administrative issues getting the scientists into schools
  - Unaccounted for hoops to jump through before being able to visit the classroom.
- A few scientists not responding to emails from teachers
- Timing of the program with evolution and climate change units in schools
Spring Implementation: Solutions

- Eliminate the social media component of the program
  - Scientists can communicate with the class via email and optional video conferencing.
- Include a “school visitor policy” component to the teacher application
- Proactive, direct contact with scientists who are not responsive to their teachers.
- Allow for flexibility with the timing of the program
  - If the evolution and/or climate change units are not covered during the Scientists in the Classroom semester, allow for pairs to postpone the program as needed.
Spring Implementation: Recruitment

- Scientists
  - Mass recruitment email started this month
  - Universities, science listservs, Climate Voices, and more

- Teachers
  - NCSEteach
  - The CLEAN Network!
  - NABT, NSTA, NAGT and more
  - Museum and Zoo listservs
  - State science teacher organizations
  - Alliance for Climate Education
  - And more..
Scientists in the Classroom Spring Roll Out

- Increase program to 100-150 matches
- Scientists and teachers work collaboratively to plan in-class visits
- Scientists visit the class in-person at least twice throughout the semester-long program.
- The first visit will take place at the beginning of the semester, in which the scientists will tell the story of how they became a scientist, what their research entails, and what their day-to-day life is like as a scientist.
- At the end of the semester, scientists will visit the class again to do an activity or experiment with the students related to either evolution or climate change.
Questions?
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