



Abstract

The Ocean Scientist Educator Partnerships Enhancing Science (OCEANS) GK-12 Teaching Fellowships are bringing ocean science concepts and research topics to education environments. The National Science Foundation supports graduate K-12 fellowships. These programs aim to improve science education through connecting graduate students and advanced undergraduate students in science with K-12 teachers. The intended outcomes of the OCEANS Program include science scientists effectively communicating and teaching science, strengthened collaboration between the University of South Florida College of Marine Science and local schools, and improved ocean sciences literacy among students.

The role of an undergraduate fellow in this yearlong program is to serve as an ocean science resource to students and graduate fellow-teacher teams and to serve as a science mentor for the Oceanography Camp for Girls. As an undergraduate, the rewards from participation in the OCEANS GK-12 Fellowship are remarkable. This program offers opportunities to work with graduate students, university faculty and educators. Participation also enhances leadership skills, communication skills and understanding of ocean sciences through working with an interdisciplinary team of scientists. The OCEANS GK-12 Fellowship program is greatly beneficial to undergraduate science students by encouraging professional development and preparation for graduate studies and productive careers that include education and outreach.



Undergraduate Fellows' Roles and Responsibilities

This yearlong fellowship is a tremendous learning experience for an undergraduate student. Starting in Summer the Fellowship begins with the preparation for Oceanography Camp for Girls.

- Oceanography Camp for Girls

This camp was started in response to a decline in the number of girls in science classes in Pinellas County, Florida. The aim of the program is to teach girls entering high school about ocean science, build their confidence in their science classes and to build environmental awareness. During the camp ocean science is taught as an interdisciplinary study so that the students understand that there are many areas of ocean science research.

First the undergraduate spends a full week learning teaching techniques and strategies from the program's Science Education Specialist. The second week of the fellowship is spent conducting all the activities and field trips that will be done during the camp. This gives an undergraduate student the opportunity to learn about fields of science with which he or she might otherwise be unfamiliar.

Field trips and activities include a trip to Ft. Desoto Marine Park, a day at an undeveloped barrier island, a full day on board a research vessel, laboratory activities and the opportunity to meet and interview a professional scientist.

During camp the undergraduate acts as a science mentor to the campers involved. This experience builds confidence explaining science concepts in front of groups of students. The camp also requires undergraduate students to build leadership skills, communication skills, and organizational skills.

OCG also gives the undergraduate the opportunity to bring the campers into a research setting. This allows the girls to get a more intimate look at specific fields of research that are being investigated. Campers are able to use laboratory equipment and present their own findings to their families at the end of camp.

- In the Classroom

During the Fall and spring it is the undergraduate fellow's role to assist graduate fellow-Pinellas County school teacher teams with their classroom activities. This allows the undergraduate the opportunity to work in a school environment with educators. The undergraduate student builds confidence with larger groups of students and varying age groups and levels of understanding. The undergraduate fellow must also carefully prioritize and manage time wisely. The fellowship activities must be completed while the student pursues undergraduate coursework at the University of South Florida.

Professional Skill Development

- Communication Skills
- Instructional Skills
- Organizational Skills
- Confidence in Leadership Roles
- Preparation for graduate work
- Time Management Skills



Conclusions

Working in the Ocean Scientist Educator Partnerships Enhancing Science (OCEANS) GK-12 Teaching Fellowship has been a great opportunity to teach science. It has also been a great opportunity to learn science. The aim of education and outreach programs is to educate students and make them aware of the role science research plays in our understanding of the natural world. By allowing undergraduate students to participate in education and outreach programs, not only are participating undergraduate students helping these programs meet their goals in the community but the undergraduate is able to further their education as well.

For Information about OCEANS GK-12 visit www.marine.usf.edu/education-and-outreach/GK12



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Expected Outcomes of the OCEANS Program

- Improved science communication and instructional skills for graduate and undergraduate fellows
- Professional development and funding opportunities for teachers in Pinellas County, Florida
- Enriched science learning for students in GK-12 OCEANS classrooms
- Strengthened partnerships between the University of South Florida, College of Marine Science and local schools and communities

