

Experiential Based Summer Camps: Teaching Advanced Science Concepts to Elementary and Middle School Students

C.B. KIEBER*

Department of Chemistry and Biochemistry, University of
North Carolina Wilmington, Wilmington, NC USA
28403-5932 (*correspondence: kieberc@uncw.edu)

Introduction

The Department of Chemistry and Biochemistry at the University of North Carolina Wilmington (UNCW) hosts a unique set of summer science camps, which provide young students in the community the opportunity to learn important science concepts through experiential hands on activities in a university laboratory setting. This unique outreach program is designed to stimulate scientific inquisitiveness, foster critical thinking skills, and introduce essential scientific concepts to young elementary through middle school students from the surrounding community. By performing hands-on experiments, students acquire valuable scientific technical skills, as well as gain exposure to laboratory glassware, chemical reagents, and advanced equipment and instrumentation.

Goals

The primary goal of the summer science camps at UNCW is to enhance the ability of participants to communicate and analyze challenging information through discussion of hypotheses and results thereby increasing their understanding of the scientific process. All camp members, especially those who are underserved, are encouraged to pursue advanced science degrees. The ultimate goal of promoting a strong interest and experience in science, technology, engineering and math (STEM) related fields addresses the international call for increased STEM support in K-12 education, particularly among young girls and underserved students. By providing academically enriched STEM focused programs, we generate enthusiasm and excitement for science while elementary and middle school students are eager and most willing to learn. The camps also provide the graduate student instructors the opportunity to enrich their contribution in science education, satisfying another important international call for qualified science educators. Highlights of the camp program include two all-girls science camps that provide activities of special interest to this group in an encouraging environment of same gender instructors. The presentation will focus on the unique activities and experiments conducted in these camps that are geared towards strengthening advanced science concepts for the youngest members of the community.

**This abstract is too long to be accepted for publication.
Please revise it so that it fits into the column on one
page.**