

Archived Information

Owens (OH) Community College

This project will increase the quality of science teaching and enhance student learning in science and the application of mathematics in the sciences by providing K-12 teachers and administrators with an expanded knowledge of inquiry-based, real-life, age-appropriate scientific experiments. During August 2003, 240 teachers and administrators representing K-2, 3-5, 6-8, and 9-12, will participate in a series of seminars provided by Owens Community College and the Stranahan Arboretum. Participants will be recruited primarily from Toledo Public Schools (a high-need LEA) and Perrysburg Exempted School District. They will be divided into groups of 24 with each group including a variety of teachers and administrators from public, private, parochial and public charter schools who are either not teaching in their original field of study, or who have certifications that are emergency, provisional, or temporary, or who would like to expand their knowledge base.

The experiments will be designed to stimulate student enthusiasm for scientific inquiry, the application of scientific reasoning to everyday life, an awareness of the sciences as a desirable career option, and cover five content areas: Anatomy and Physiology, General Biology, Chemistry, Physics, and Geology/Astronomy. About five experiments will be performed in each content area. They will spend between four and eight hours in each area. The experiments will be accompanied by selected lesson plans that show classroom applications, learning objective(s), grade level, materials needed, step-by-step procedures, the time to complete the experiment, and how they address the State Academic Content, Performance and Proficiency Test Outcome Standards.

Each seminar participant will receive a "goody bag" of supplies necessary to carry out many of the experiments. Participants will return to their school and teach what they learned to other teachers through an in-service session. In November or December 2003 the participants will attend a wrap-up seminar to review their in-service experience and classroom applications, and to develop 1-2 new experiments in each of the five content areas. During January 2004 the Project Director will distribute a collection of experiments that were developed by science teachers, and a description of the project to enable other institutions to duplicate the seminars.