

Rationale

In a world filled with the products of scientific inquiry, scientific literacy is a necessity for everyone in order to use scientific information to make wise choices. Today, the job market demands advanced skills, requiring people to be able to learn new skills, use reason, think creatively, make decisions, and solve problems. An understanding of science and the processes of science contribute in an essential way to these skills.

The Biomedical Sciences Program is a sequence of courses which follows Project Lead the Way's proven hands-on, real-world problem-solving approach to learning. The student explores the prevention, diagnosis and treatment of disease working collaboratively to investigate and design innovative solutions for the health challenges of the 21st century.

Course Description

In this capstone course, the student applies their knowledge and skills to answer questions or solve problems related to the biomedical sciences. The student designs innovative solutions for the health challenges of the 21st century as they work through progressively challenging open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician's office, or industry. Throughout the course, the student is expected to present their work to an adult audience that may include representatives from the local business and healthcare community. Dual credit is available for this course.

Prerequisites

Medical Interventions with a "C" or higher and concurrent enrollment in appropriate grade-level science course.
Weighted: 0.75

Course Objectives

1. The student will research problems associated with current medical interventions used in the prevention, diagnosis, treatment and rehabilitation of patients and develop and report on strategies to resolve the problems with 80% accuracy. (A+ Research)
2. The student will design, conduct, critique and present an investigation that evaluates the treatment of a disease with 80% accuracy. (A+ Speaking)
3. The student will research and employ the skills and tools of a public health official to investigate a fictitious epidemic and then design and present an intervention plan to address the needs of the population with 80% accuracy. (A+ Reading)
4. The student will identify and research a disease and then write a detailed grant proposal outlining an intervention plan for the disease with 80% accuracy. (A+ Writing)

BOE 11-6-14