Biomedical Science (PLTW)

PLTW - Principles of Biomedical Science

This is a foundation course in a series of Project Lead The Way (PLTW.org) biomedical courses designed to introduce students to the field of biomedicine and prepare the students to pursue a career in biomedical science. Students explore concepts of biology and medicine to determine factors that led to the death of a fictional person. While investigating the case, students examine autopsy reports, investigate medical history, and explore medical treatments that might have prolonged the person's life. The activities and projects introduce students to human physiology, basic biology, medicine, and research processes while allowing them to design their own experiments to solve problems.

PLTW – Human Body Systems

This course is part of the Project Lead The Way (PLTW.org) biomedical science sequence. Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis in the body. Exploring science in action, students build organs and tissues on a skeletal ManiKen®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real world medical cases.

PLTW – Medical Interventions

This course is part of the Project Lead The Way (PLTW.org) biomedical science sequence. Students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection; screen and evaluate the code in human DNA; evaluate cancer treatment options; and prevail when the organs of the body begin to fail. Through real-world cases, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

PLTW – Biomedical Innovations

In the final course of the Project Lead The Way (PLTW.org) biomedical science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent project with a mentor or advisor from a university, medical facility, or research institution.