



Medical Interventions/2025-26 Instructional Plan

Created on 08/06/2025

Contact Information

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WHAT ARE PROJECT LEAD THE WAY CLASSES?

Project Lead the Way (PLTW) classes follow two distinct paths, Engineering and Biomedical. Biomedical classes like Biomedical Innovations expose students to the medical field STEM careers by “...delv[ing] into activities like designing a prosthetic arm as they follow the life of a fictitious family and investigate how to prevent, diagnose, and treat disease..” (PLTW.org)

COURSE DESCRIPTION

Students build on the knowledge and skills gained from previous courses to design their own innovative solutions for the most pressing health challenges of the 21st century. They will use project-based learning to investigate the variety of interventions involved in the prevention, diagnosis, and treatment of disease as they follow the lives of a fictitious family, the “Smiths”. They will study overall health and homeostasis in the body. Through hypothetical scenarios students will be exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Each family case scenario will introduce multiple types of interventions, reinforce concepts learned in the previous two courses, and present new content. Interventions may range from simple diagnostic tests to treatment of complex diseases and disorders.

COURSE ACTIVITIES (What we will be doing)

Below you will find descriptions of the most common activities that students will participate in during the course of each semester.

Throughout the year, students will:

- Explore infection prevention, diagnosis, and treatment.
- Explore cancer prevention, diagnosis, and treatment.
- Explore organ failure prevention, diagnosis, and treatment.
- Explore Healthcare of the past, present, and future.
- Explore lifestyle choices and preventive measures.
- Explore scientific thinking and engineering design.

GRADES - Click here for → [YWLA Grading Policy](#)

Major (Test, Projects, Writing) 60%

Minor (Notes, Daily Work) 40%



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Classroom Resources (examples below)

- Google Classroom
- PLTW.org
- Vernier, Carolina, and other Science company instruments and resources.
- Internet searches for research

Fall Semester Exam Date:

TBA

End of Course Exam Date:

TBA

COURSE OBJECTIVES AND TOPICS

- **Unit 1**
 - **L 1.1** Mystery Infection
 - **L 1.2** Antibiotic Treatment
 - **L 1.3** Hearing Loss
 - **L 1.4** Vaccination
- **Unit 2**
 - **L 2.1** Genetic Testing and Screening
 - **L 2.2** Our Genetic Future
- **Semester Exam**
- **Unit 3**
 - **L 3.1** Detecting Cancer
 - **L 3.2** Reducing Risk
 - **L 3.3** Treating Cancer
 - **L 3.4** Building Better Treatment
- **Unit 4**
 - **L 4.1** Manufacturing Human Proteins
 - **L 4.2** Organ Failure
 - **L 4.3** Transplant
 - **L 4.4** Building a Better Body
- **End of Year Final Exam**

Optional Materials/Resources

Google Scholar, National Institute of Health, National Library of Medicine, Google Searches

Please feel free to reach out with any questions or concerns. We are excited to work together to make this a successful year of learning!



YOUNG WOMEN'S
Leadership Academy

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