PLTW Medical Detectives and Flight and Space/2026-2027/6-8 Instructional Plan

8/6/2026

Contact Information

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COURSE DESCRIPTION

In Medical Detectives, students will explore medical careers. They will learn about the human body systems, how to take vital signs, and how to diagnose and treat patients for a variety of ailments.

In Flight and Space, students will explore careers in the areas of aviation and aeronautics. They will learn about the dynamics of flight, flight planning and scheduling, and roles and responsibilities of astronauts in space.

COURSE ACTIVITIES

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:

- Complete case notes for each "patient"
- Conduct experiments and run medical tests
- Interview "patients"
- Diagnose illness
- Research the brain
- Research diseases
- Learn about human organ systems
- Learn about various careers and opportunities in Aeronautics
- Learn about the roles and responsibilities of pilots, airport administrators, and astronauts

GRADES - Click here for → YWLA Grading Policy

Major (Test, Projects, Presentations)	60%
Minor (Notes, Daily Work, Group Participation)	40%

Classroom Resources

- **PLTW online Textbooks**
- **Google Classroom**
- **Online materials from ABCYA, Teacher Pay Teacher (body systems)**
- **FOSS science education materials from the Human Body course**
- **Lucidchart**
- **Model planes, drones, and Alpha II rockets**

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Exam Date

Fall-December 15&16
Spring–May 24-25

COURSE OBJECTIVES AND TOPICS

Fall Semester–Medical Detectives

- **Before beginning the PLTW curriculum, we will learn about the body systems through a variety of activities such as making a poster, creating a game, and presenting research projects**
- **Unit 1–vital signs, disease agents, diagnosing patients**
- **Unit 2– Central and Peripheral Nervous system–nerve cells and the brain (includes a dissection)**
- **Unit 3–Outbreak! Epidemiology and food-borne illnesses**

Spring Semester

- **Before beginning PLTW, we will review the planets from elementary and research aviation careers**
- **Unit 1–Dynamics of Flight–Sir Isaac Newton's Laws of Motion, Daniel Bernoulli, Instant Design Challenge (airplane), model planes, aircraft with rotors (helicopters and drones), flight planning and management**
- **Unit 2– Space– rocketry, living in space, exercising in space, life on the ISS, and a rocket launch**
- **Unit 3–Destination Mars: plan an expedition to Mars. Select a crew, rocket, vehicle, menu, landing spot, and astronaut roles**

Optional Materials/Resources

Supplemental materials–materials available for review
Pixton (teacher regulated and curated)

Please note:

This class is project based. If students are absent, they are expected to come to tutorials to make-up what was missed. On rare occasions, they may receive an alternate assignment if it is not possible to recreate the experience in tutorials.

Project Lead the Way is very proprietorial. If you want to view materials, you will have to schedule an appointment with me or go into the text with your student. You will not be able to preview materials otherwise.

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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