

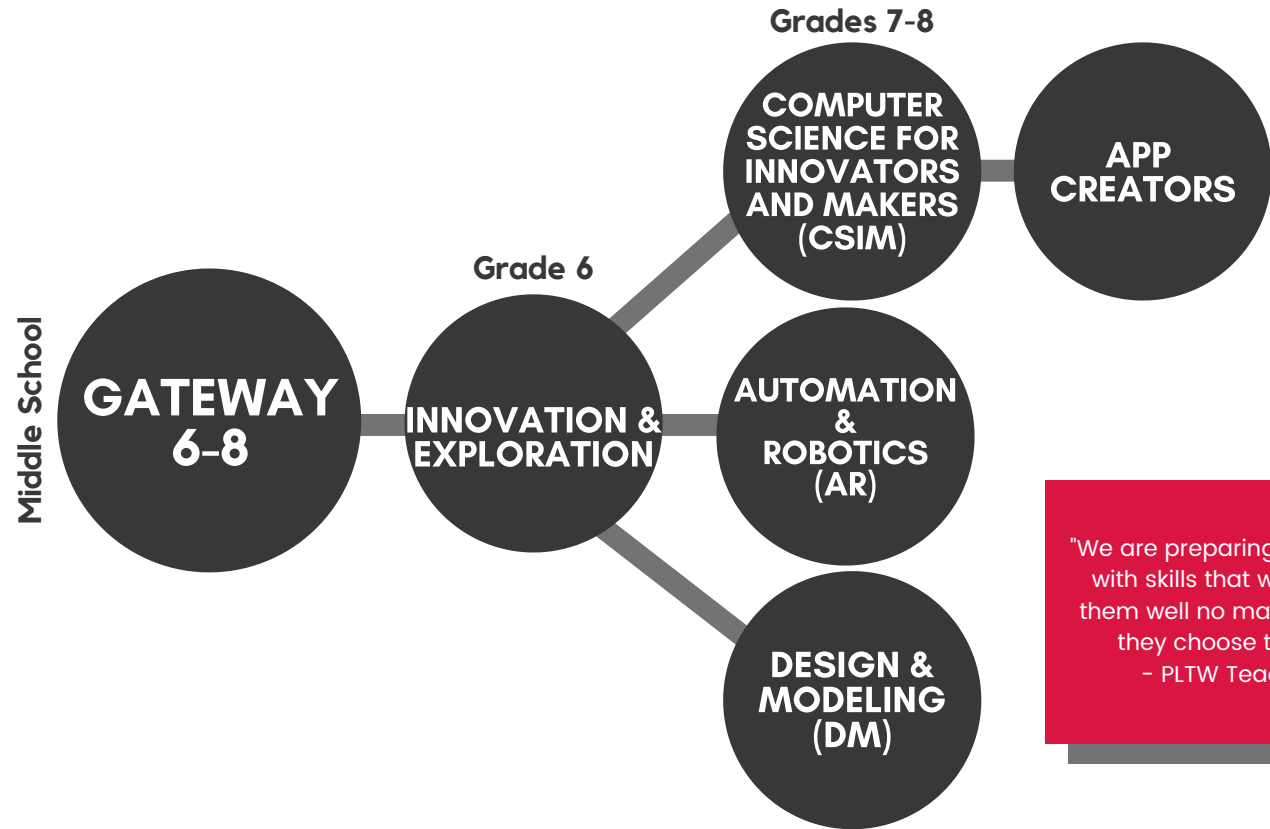
Project Lead the Way (PLTW)

EMPOWERING STUDENTS TO THRIVE IN AN EVOLVING WORLD

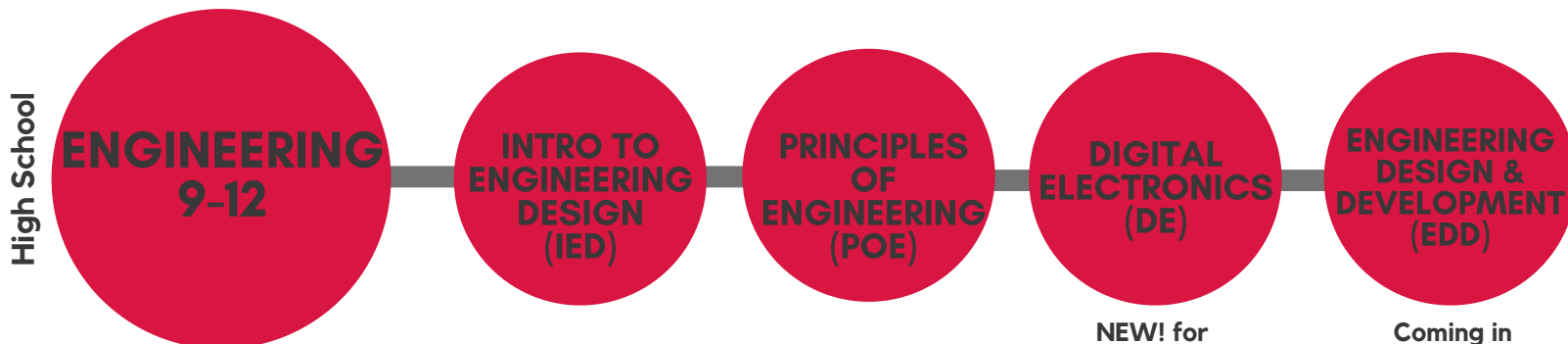
Project Lead the Way is a nonprofit organization that provides a transformative learning experience for PreK-12 students and teachers across the U.S. We create an engaging environment and empower students to develop the in-demand knowledge and skills necessary to thrive in an evolving world.

High school graduates who participated in PLTW were

3x more likely to major in STEM



"We are preparing students with skills that will serve them well no matter what they choose to do."
- PLTW Teacher



NEW! for
2021-2022

Coming in
2022-2023

Innovation & Exploration (Grade 6)

This course introduces students to Science, Technology, Engineering, and Mathematics through project-based learning. Students will explore the foundational concepts of engineering through a set of projects that are meant to expose them to a variety of different engineering fields. Students will get to learn about STEM (Science, Technology, Engineering, and Math) and how the different branches work together to make our world safer. They will also participate in projects meant to expose them to Computer Science, Biomedical Engineering, Civil Engineering and Mechanical Engineering. All the while they will be developing foundational engineering skills to be used in later engineering courses.

Design and Modeling (DM)

An Introduction to basic engineering concepts; students will learn how to use the design process and 3-D modeling to create solutions to problems around our world. They may be asked to create therapeutic devices for children with cerebral palsy or they may be asked to provide engineering solutions for other common problems of their choice. Whatever the task, students will grow their creativity, problem solving skills and be able to challenge themselves.

Automation and Robotics (AR)

Students will work with VEX Robotics® Kits to design and build solutions to everyday automation problems. They will learn about several different mechanical systems and how they work and move while at the same time learning the basics of robot coding. They will design dragsters to travel a set distance, help with human mobility challenges and investigate solutions to common problems around the city. As a capstone project students will work together to design a full automated system that works together to complete a challenging task.

Computer Science for Innovators and Makers (CSIM)

In this introduction unit students will get to blend electrical hardware and coding skills to design and develop solutions to everyday problems around our world. Students will be exposed to several different kinds of buttons and sensors along the way and they will design and program some security systems to keep their stuff safe. In their capstone project they will get to choose from several different activities based upon their interest levels. (Recommended Prerequisite to App Creators AC)

App Creators

Throughout the course of this unit students will learn how to create different kinds of apps and in the process they will learn more in depth Computer Science Skills. Students will learn how to use several different types of inputs from their phone to control their apps. After learning the basics of coding students will then get to use their skills to develop apps for several different industries including: education, medicine, health/fitness, organization and others as they show interest. (Recommended to take CSIM first.)

Introduction to Engineering Design (IED) DC

Engineers make a world of difference! Students apply the engineering design process, using math, science, and engineering standards to identify and design mechanical solutions to a variety of real problems. They work both individually and in collaborative teams to develop and document design solutions using engineering notebooks and 3D modeling software. Are you ready to design the future?

Principles of Engineering (POE) DC QR

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of materials and structures, automation, and motion. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. What type of engineer or engineering technologist would you like to be?

Digital Electronics (DE) DC QR

Digital electronics is the foundation of all modern electronic devices such as cellular phones, MP3 players, laptop computers, digital cameras, high definition televisions, etc. Students learn the digital circuit design process to create circuits and present solutions that can improve people's lives.

Engineering Design and Development (EDD)

The knowledge and skills students acquire throughout PLTW Engineering come together in EDD as they identify an issue and then research, design, and test a solution, ultimately presenting their solution to a panel of engineers. Students apply the professional skills they have developed to document a design process to standards, ready to take on any post-secondary program or career.

DC

Dual Credit
Available

Qualifies as a Quantitative
Reasoning course

QR