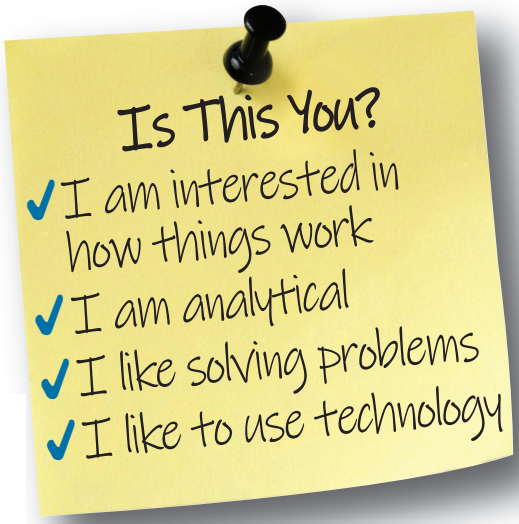
# Engineering

Engineering and robotics are essential in today's manufacturing industry. A problem-solving mindset is foundational to the engineering field. You will learn how to step into the role of an engineer to develop solutions to problems by engaging in real-world problems. Students will explore engineering topics such as mechanisms, strength of structures and materials, and automation/robotics.




**Career Opportunities:**
Civil Engineer, Electrical Engineer, Mechanical Engineer, BioMedical Engineer, Industrial Engineer

SkillsUSA®

## Potential to Earn: 2 Industry Certifications 12 College Credits

## Course Work in this Career Pathway

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| **Middle School Career Exploration Course** | **Robotics & Engineering** Grades 7 or 8 |
| **Intro-Level Courses** | **Intro to Engineering (PLTW)** Grades 9-12; **Intro to CAD** Grades 9-12; **Intro to Technology** Grades 9-12 |
| **Specialized Courses** | **Principles of Engineering (PLTW)** Grades 10-12; **Intro to Robotics DC** Grades 9-12; **Civil Engineering (PLTW)** Grades 10-12; **DC Circuits DC** Grades 11-12 |
| **Capstone Courses** | **Engineering Design & Development (PLTW)** Grades 11-12; **Youth Apprenticeship** Grades 11-12 |
| **Additional Recommended Courses for 4-Year Programs** | **AP Calculus AB & AP Calculus BC or IB Mathematics, AP Physics 1 & AP Physics 2 or IB Physics, AP Chemistry, Oral & Interpersonal Communication DC** |

**AP** – Advanced Placement **DC** – Dual Credit **IB** – International Baccalaureate **PLTW** – Project Lead the Way