



## CTE Courses at DRMS

### Science, Technology, Engineering, & Mathematics (STEM) Courses

The courses below are part of the Project Lead the Way curriculum which is used in the 9<sup>th</sup> through 12<sup>th</sup> grade level Engineering courses at DRFS and DRHS.

#### Principles of Applied Engineering

**Grade 7**                      **1 High School Credit**

**Design and Modeling:** Students apply the design process to solve problems and understand the influence of creativity and innovation in their lives. They work in teams to design a playground and furniture, capturing research and ideas in their engineering notebooks. Using Autodesk design software, students create a virtual image of their designs and produce a portfolio to showcase their innovative solutions.

**Automation and Robotics:** Students trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms.

#### Engineering Essentials

**Grade 8**                      **1 High School Credit**

Students explore the breadth of engineering career opportunities and experiences as they solve engaging and challenging real-world problems like creating a natural relief center system or creating a solution to improve the safety and well-being of local citizens.