



# **Technology Education Curriculum Review**

West St. Paul - Mendota Heights - Eagan Area Schools  
School District 197

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## Summary of Year 2

Technology and Engineering Education promotes technological literacy (i.e., the ability to use, manage, assess, and understand technology), which will prepare students to live and work in a complex global technological society, encourage inquiry-based learning approaches (e.g., engineering design) to solve problems and promote career and college readiness, and 21st Century career pathways by developing interest in the human-made world—its materials, products, and processes.

The curriculum review committee met to review current course offerings and how those met the International Technology and Engineering Education Association (ITEEA) Standards. We met as a group to discuss current course offerings and how we could draw students into the programs. No additional courses were added to the Tech Ed offerings for the 2016-17 school year. Enrollment in our Project Lead the Way (PLTW) courses at the high school has continued to decrease over time. Principles of Engineering and Civil Engineering Architecture were not run in the 2015-16 school year and will not run again in 2016-17.

In our discussions it became clear that in order to maintain relevant and robust programming we need more data to demonstrate skills attainment for college and career readiness. It was recommended that we offer Technical Skills Assessments (Precision Exams) to all students in Tech Ed. These assessments will provide the student with a certificate that lists the skills mastered in each course. Students will then have concrete skills to add to their resume when pursuing a career.

A scope and sequence was created for each Tech Ed course offered in grades seven through twelve. The scope and sequence includes unit titles, student learning objectives, career pathways, activities, assessments, and standards addressed in each unit. These documents will guide teachers in the delivery of each course.

### School District 197 Technology Education Program

<b>7-8</b>	Project Lead the Way (PLTW): Automation and Robotics (2017-18) PLTW: Energy and the Environment (2016-17) *Offered on a rotating basis each year to 7th and 8th graders.		
	Level I Courses	Level II Courses	Level III Courses
<b>9-12</b>	PLTW: Introduction to Engineering	PLTW: Principles of Engineering	PLTW: Civil Engineering Architecture
	Woods I	Woods II	Woods III
	Basic Photography	Advanced Photography	
	Small Engines	Basic Auto Mechanics	

	Metals		
	Super Mileage Car Design		
	Printing Technology		

## Next Steps

In the 2016-17 school year we will begin using Precision Exams skills assessments for applicable Tech Ed courses at the high school level. You can view the knowledge standards for the courses, which include the objectives measured, by clicking on the exam name in the table below. Additional information on the exams can be found on the vendor website: [www.precisionexams.com/minnesota](http://www.precisionexams.com/minnesota). Training will happen prior to the start of the school year. The assessments will be given at the beginning of the school year as a pretest to measure student skill levels and then at the end of the course to demonstrate growth and achieve the certificate. Teachers of these courses will now have standardized data to use in their planning and preparation for their instruction. The exams from Precision Exams will be aligned with our courses as follows:

Course	Exam
Small Engines	<a href="#">501: Small Engines</a>
Basic Auto Mechanics	<a href="#">505: Basic Automotive</a>
Woods I	<a href="#">520: Woodworking</a>
Basic Photography	<a href="#">535: Film Photography</a>
Advanced Photography	<a href="#">537: Digital Photography</a>
Metals	<a href="#">595: Welding</a>

Note: Introduction to Engineering and Principles of Engineering are assessed through Project Lead the Way for college credit.

At the conclusion of each Tech Ed course, teachers will review data from the Technical Skills Assessments to modify course content to ensure students are successful in attainment of the skill certificate for that course. This work will happen through Collaborative Teams at the high school.