Technical Education Curriculum Review

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

Prepared by

Kate Skappel
Curriculum Coordinator

May 2015

The Curriculum Review Process

Curriculum in School District 197 is reviewed using a six-year cycle of continuous improvement. This process was adopted in the spring of the 2012-13 school year and includes professional development for teachers that is focused on the creation of digital curriculum and the adoption of innovative instructional practices.

In years 1-3, participating curriculum areas are considered to be in "formal review". In year one a content area team of teachers conducts an in-depth study of the current program to determine its overall effectiveness. Community and staff input is gathered and the team of teachers examines current best practice in curriculum and instruction. Based on the results of the study the team, with assistance from the Curriculum Advisory Committee (CAC), identifies strengths and needs of the existing program, creates a vision for future programming and develops Outcomes that Matter to All and Core Beliefs.

During year two content area teams review the current scope and sequence of the curriculum for grades K-12 and assess how it aligns to state and/or national standards and benchmarks. They then create a district curriculum framework/map that identifies the knowledge, skills, and learning targets that students need to know, be able to do, and act upon. Content area teams also select the materials (paper and electronic) needed to implement the revised curriculum and work to ensure the new curriculum and materials are culturally sensitive and non-discriminatory. If applicable or needed, in year two teams will develop digital curriculum for their content area. Teams also plan professional development activities to ensure proper training and support are provided relative to the new curriculum.

During year three each curriculum area moves to the implementation phase where teachers look at the curriculum as taught, identify holes, design common assessments and begin to review at data. The content area team also recommends grouping strategies, identifies how to accelerate or remediate students, and addresses issues relating to students with special needs (ELL and special education). Additionally, in the spring of year three, the content area team will meet to determine if the intended scope and sequence is achievable and identify areas for additional professional development.

Year four of the curriculum review cycle focuses on measurement and ensuring curriculum is being implemented as intended. Staff will pay careful attention to how well students are responding to the new curriculum and ensure that teachers' and parents' questions are answered. Common assessments continue to be reviewed and refined.

During year five, the revising phase, teams adjust implementation procedures and implement changes as needed. The curriculum is evaluated in terms of how well it is working and where modifications need to be made. Common assessments continue to be reviewed and refined.
In the refining phase, year six, teams continue to refine the curriculum. They determine if adjustments are needed and implement them accordingly. Common assessments continue to be reviewed and refined.

Summary of Year One Process

A review team was put together including teachers, building and district administrators to evaluate the Technical Education curriculum. Because the number of Technical Education teachers is small, all teachers were given the opportunity to participate in the review team.

The team gathered input staff at four Review Planning Team meetings. The feedback gathered during the meetings was used in developing the Outcomes that Matter to All, Core Beliefs and Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for Technical Education.

A key component of the review process is the SWOT analysis. Through the SWOT the committee identified some significant strengths, which included that we are a nationally certified Project Lead The Way (PLTW) program. Additionally we offer a K-12 PLTW pathway for students that attend Pilot Knob Elementary STEM Magnet School with the start of the new Launch program at that site.

The committee also identified some weaknesses and opportunities in the program that we will make recommendations on in year two of the review. Areas for consideration include how to distribute the grade six PLTW course over fifth and sixth grade for all students at both middle schools as well as what consistent programming will look like at grades seven and eight at both middle schools. At the high school level we will continue to align the work of all CTE courses to the International Technology and Engineering Educators Association standards. The team will also explore ways to offer postsecondary credit or certification for current Technical Education courses outside of the PLTW program.

Technical Education Curriculum Review Team

Team Member	Site
Joe David	Heritage Middle School
Nick Gross	Pilot Knob Elementary
Pat Johnson	Heritage Middle School
Christine Rogers	Friendly Hills Middle School
Doug Sisk	Henry Sibley High School
Kate Skappel	District Office
Brian Whalen	Henry Sibley High School

Technical Education Outcomes That Matter To All

Mission (Our Core Purpose) School District 197 provides a challenging educational environment that instills in each student a lifelong passion for learning, empowers all students to achieve their personal goals and academic potential, and prepares them to be responsible citizens in an interconnected world.

When our work aligns with our Core Purpose, we will produce Outcomes That Matter To All:

Students will:

- demonstrate technical reading and writing, problem solving, and collaboration skills.
- apply problem solving, thinking critically, and collaboration skills to achieve desired results.
- demonstrate practical applications in the subjects of math, science, language arts and social studies.
- develop an intellectual curiosity and desire for continual learning both within and beyond formal education.
- develop awareness of STEM career options and preparation for those careers.
- develop an understanding of the cultural, social, economic, and political effects of technology.
- develop the technical skills to effectively use and maintain technological products and systems.

http://www.iteea.org/TAA/PDFs/Benchmarks.pdf

Technical Education Core Beliefs

The School District 197 core beliefs for Technical Education:

1. We believe an effective K-12 Technical Education program provides a standards-based program that ensures that all students are technologically literate.

2. We believe an effective K-12 Technical Education program defines Technological Literacy as what technology is, how it was created, how it is used, its consequences, and how it changes and shapes society over time.

3. We believe an effective K-12 Technical Education program provides clear standards and expectations for increasing student achievement in science, technology, engineering and mathematics.

4. We believe an effective K-12 Technical Education program provides leadership and support that will produce continuous improvement and innovation in the program.

5. We believe an effective K-12 Technical Education program provides a learning environment that encourages students to become global leaders in innovation.

6. We believe an effective K-12 Technical Education program provides a program that constructs learning from a very early age and culminates in an advanced engineering experience that leads students to become the next generation of engineers, technologists (skilled trades), innovators, and designers.

7. We believe an effective K-12 Technical Education program provides the opportunity to demonstrate proficiency in multiple ways, ranging from informal, individual and collaborative activities and presentations to formal assessments.

8. We believe an effective K-12 Technical Education program provides opportunities for all students to succeed by employing a wide array of instructional strategies and tools that address the individual learning styles of our students.

9. We believe an effective K-12 Technical Education program provides postsecondary credit opportunities for all students while earning a high school diploma.

Technical Education SWOT Analysis

Strengths	Weaknesses
• Project based and hands-on learning • District supports program • High school offers college credit (2 and 4 year college) • Support from Colleges in the state and country • Strong PLTW pathway K-12 • Proven success as evidenced by postsecondary credits earned • National and State PLTW organization supports schools to implement program • Nationally certified with PLTW • Well defined and established PLTW curriculum	• PLTW Launch program is not available district wide • Lack of program awareness • Small percentage of 8th graders take PLTW due to Spanish and AVID options. • Small high school department causes an inability to become “the expert”. • Competes with other classes for enrollment • Tech Ed classes do not qualify for credit other than elective credit. • Loss of partnerships with local technical colleges (DCTC).
Opportunities	**Threats**
• Society values the importance of STEM education which causes a demand for STEM/Tech Ed programs. • Collaboration between Technical Education and Science. • College articulation opportunities with local technical colleges • Expand engineering week activities district wide • Expand program awareness to community and district • Industry/Community partner support/belief of Tech Ed program • Grant funding for equipment	• Multiple student opportunities that compete for student numbers. • 6th grade contact days reduced from 45 to 36 days spread across 5th and 6th grade in new Middle School Schedule. • Funding- program costs ever increasing, no set aside budget.