Technology and Engineering Standard and Assessed Performance Indicators 6- 12

Technology and Engineering Standards are met through a variety of coursework, content and coursework pathways including STEM, STEAM, Industrial Technology, Material Sciences and Computer Science. Due to the variety, each standard does not have mandated performance indicators and each course aligns to these nationally recognized standards through medium specific learning targets.

BE Technology & Engineering Standard 1: Nature and Characteristics of Technology and Engineering

6-8th grade	9-12th grade
MS.TE.1 Student is able to develop a clear understanding of the relationship between technology, engineering, mathematics and science.	HS.TE.1 Student is able to analyze the relationship between the natural world and human made world and that changes in one have intended and unintended impacts on one or both.

BE Technology & Engineering Standard 2: Core Concepts of Technology and Engineering

6-8th grade	9-12th grade
MS.TE.2 Student is able to utilize basic technology and engineering resources to design and complete a product or system	HS.TE.2 Student is able to analyze how technology and engineering concepts, including optimization, interact in issues that affect them, their community and the world.

BE Technology & Engineering Standard 3: Integration of Knowledge, Technologies and Practices

6-8th grade	9-12th grade
MS.TE.3 Student is able to explore how things work and how technology affects the development of new products and systems by making connections across content areas.	HS.TE.3a Student is able to identify how technological developments and societal interests are interdependent and their effect on designing technologies. HS.TE.3b Student is able to utilize the idea of technology transfer in design creation or critique

BE Technology & Engineering Standard 4: Impacts of Technology

6-8th grade	9-12th grade
MS.TE.4 Student is able to express critically the differential impacts of technology, and objectively look at the pros and cons of a given technology in order to make design decisions.	HS.TE.4 Student is able to explore emerging technologies and evaluate their potential impacts in a systematic, objective and ethical manner.

BE Technology & Engineering Standard 5: Influence of Society on Technological Development

6-8th grade	9-12th grade
MS.TE.5 Student is able to make connections between the success of technology advancements and the demands and interests of society.	HS.TE.5 Student is able to express understanding of the influence of society on technology and how societal decisions can directly affect the development of a product or system.

BE Technology & Engineering Standard 6: History of Technology

6-8th grade	9-12th grade
MS.TE.6 Student is able to describe examples of technological milestones in human history and recognize how they affected people during that time period.	HS.TE.6 Student is able to describe how key developments in technology have pushed the evolution of civilization forward through history.

BE Technology & Engineering Standard 7: Design in Technology and Engineering Education

6-8th grade	9-12th grade
MS.TE.7 Student is able to utilize two or more design approaches and prioritize the best approach to optimize success.	HS.TE.7 Student is able to provide rationale for a chosen design process and apply this skill to optimize their own creations.

BE Technology & Engineering Standard 8: Applying, Maintaining and Assessing Technological Products and Systems

6-8th grade	9-12th grade
MS.TE.8 Student is able to use a variety of tools, technological products and systems with accuracy and attention to safety.	HS.TE.8 Student is able to use and maintain a variety of technological products and systems to ensure precise, safe and proper functionality.

BE Technology & Engineering Standard 9: Networks and the Internet

6-8th grade	9-12th grade
MS.TE.9a - Network Communications & Organization: Student models how information is broken into small pieces and transmitted over networks. MS.TE.9b - Cybersecurity: Student can identify cybersecurity problems and how personal	HS.TE.9a - Network Communications & Organization: Student can explain, model and evaluate network communication and organization HS.TE.9b - Cybersecurity: Student analyzes and compares the various security measures required in network or internet use to minimize ethical impacts and maximize usability.

information can be protected	

BE Technology & Engineering Standard 10: Data & Analysis

6-8th grade	9-12th grade
MS.TE.10 - Student is able to use data visualizations and computational tools to make data more useful and reliable.	HS.TE.10a - Storage: Student uses data analysis tools to effectively store, represent and evaluate data.

BE Technology & Engineering Standard 11: Algorithms & Programming

6-8th grade	9-12th grade
MS.TE.11a - Algorithms: Student compares sets of step-by-step instructions to determine the best algorithm for use. MS.TE.11b - Variables: Student creates programs that use multiple variables to store, represent and modify data. MS.TE.11c - Control: Student can create programs that include sequences, events, loops and conditional statements. MS.TE.11d - Modularity/Manageable Parts: Students is able to breakdown problems into smaller manageable sub problems in the program development process. MS.TE.11e - Program Development: Student analyzes the program development process, test, debug and refine their work.	HS.TE.11a - Algorithms: Student utilizes and analyzes the use of algorithms in programming. HS.TE.11b - Variables: Student is able to use formal variables to represent different data types in complex settings. HS.TE.11c - Control: Student is able to design and develop efficient programs that consider an analysis of the needs of society. HS.TE.11d - Modularity/Manageable Parts: Student can construct solutions to problems through systematic analysis. HS.TE.11e - Program Development: Student evaluates the design decisions involved in the creation of complex problems to match the needs of a given audience.

BE Technology & Engineering Standard 12: Impacts of Computing

6-8th grade	9-12th grade
MS.TE.12a - Culture: Student describes how computer technologies have changed the world. MS.TE.12c - Safety, Law & Ethics: Student analyzes	HS.TE.12a - Culture: Student evaluates the way computation impacts and affects society. HS.TE.12c - Safety, Law & Ethics: Students compares the

the sharing or use of information held within the public domain.	implications that arise in society and economics related to maintaining a balance between the public and private domain of information access.