Technovation 1 Scope and Sequence
2026-2027

TEKS Distribution among units

MS Technology Application Content Standards

	Computational Thinking	Creativity and Innovation	Data Literacy, Management and Representation	Digital Citizenship	Practical Technology Concepts
Unit 1 Algorithms, Problem Solving and Mechanical Engineering	6.1A 6.2B 6.1C 6.1D 6.1				
Unit 2 Engineering Design		6.3A 6.3B 6.3C 6.4A			6.12H
Unit 3 Artifical Intelligence, Machine Learning and Application Development		6.3A 6.3B 6.3C	6.4	6.5	
Unit 4 Solutions with Robotics	6.1A, 6.1B, 6.1C,6.1D, 6.1E, 6.1F, 6.2B	6.4C 6.1E 6.3B	6.7		6.12H

Grading Period 1		
Unit 1: Algorithms, Problem Solving and Mechanical Engineering Estimated Date Range: 8/11 - 10/8 Estimated Time Frame: 41 days		
Assessments		
STATE/NATIONAL ASSESSMENT(S) **TBD**	**DISTRICT ASSESSMENT(S)** **TBD**	**COMMON FORMATIVE ASSESSMENTS (CFAs)** ***(administered within designated concept)*** **N/A**

Concepts within the Unit	TEKS
Norms, Classroom Culture and Artificial Intelligence Framework (3 days) Concept 1 – Computational Thinking (5 days) • Lesson 1: What is Computational Thinking (3 days) • Lesson 2: Flowcharts Using Text (2 days)	**<u>Priority Standards</u>** **Computational Thinking** 6.1A- decompose real-world problems into structured parts by using visual representations <u>Important Standards</u> **Computational Thinking** 6.1F- analyze the benefits of using iteration (loops) in algorithms
Concept 2 - Programming Fundamentals (12 days) • Lesson 1: Block-Based Coding in Minecraft EDU (12 days)	**<u>Priority Standards</u>** **Computational Thinking** 6.1D - design a plan collaboratively using visual representation to document a problem, possible solutions, and an expected timeline for the development of a coded solution; 6.13E - analyze different techniques used in debugging and apply them to an algorithm;

	6.1F analyze the benefits of using iteration (code and sequence repetition) in algorithms. Important Standards **Computational Thinking** 6.1A- decompose real-world problems into structured parts by using visual representations
Concept 3: Mechanical Engineering (21 days) • Lesson 1: Beginning with Blueprint (2 days) • Lesson 2: Simple Machines (19 days)	**Important Standards** **Data Literacy, Management and Representation** 6.6 use digital tools to transform data in order to identify and discuss trends and make inferences.

Grading Period 2

Unit 2: Engineering
Estimated Date Range: 10/19 - 12/18
Estimated Time Frame: 40 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)*
N/A	**N/A**	**N/A**

Concepts in Unit	TEKS
Concept 1 – Using Productivity Tools While Applying the Engineering Design Process (23 days) • Lesson 1: Intro to Productivity Tools (5 days)	**Priority Standards** **Technology Applications** **Creativity and Innovation** 6.3A - resolve challenges in design processes independently using goal setting and personal character traits such as demonstrating courage and confidence.

• Lesson 2: Engineering Design Process: From Problem to Prototype (3 days) • Lesson 3: EDP in Marine Engineering (5 days) • Lesson 4: EDP in Civil Engineering (5 days) • Lesson 5: EDP in Architectural Engineering (5 days)	6.3B- discuss and implement a design process using digital tools to compare, contrast, and evaluate student-generated outcomes; 6.3C- identify how the design process is used in various industries **<u>Important Standards</u>** **Technology Applications** **Practical Technology Concepts** 6.12H- use productivity tools found in spreadsheets, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts.
Concept 2 – Aviation (17 days) • Lesson 1: Science of Flight (5 days) • Lesson 2: Action, Reaction (4 days) • Lesson 3: Variables of Rocket Flight (7 days)	**<u>Priority Standards</u>** 6.12H - use productivity tools found in spreadsheets, word processing, and publication applications to create digital artifacts such as reports, graphs, and charts.

Grading Period 3

Unit 3: Computer Science Discoveries
Estimated Date Range: 1/6 – 3/4
Estimated Time Frame: 39 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S)	COMMON FORMATIVE ASSESSMENTS (CFAs)

N/A	N/A	*(administered within designated concept)* N/A

Concepts in Unit	TEKS
Concept 1 – AI and Machine Learning (27 total days) Lesson 0: Intro to App Lab (2 days) Lesson 1: Understanding Machine Learning (16 days) Lesson2 : Designing a Machine Learning App (9 days)	**<u>Priority Standards</u>** **Computational Thinking** 6.1A- decompose real-world problems into structured parts using visual representations 6.1B- analyze the patterns and sequences found in visual representations such as learning maps, concept maps, or other representations of data; 6.1E- analyze different techniques used in debugging and apply them to an algorithm; 6.1F- analyze the benefits of using iteration (code and sequence repetition) in algorithms. 6.2A- define and label variables that relate to their programming or algorithm **Creativity and Innovation** 6.4C- transfer current knowledge to the learning of newly encountered technologies. **Practical Technology Concepts** 6.12H - select and use productivity tools found in spread sheet, word processing, and publication applications to create digital artifacts, including reports, graphs, and charts, with increasing complexity.

Concept 2 – Creating Apps with Devices – Chapter 1 (Microbit) - 12 total days Lesson 1: Inputs and Outputs (12 days)	**<u>Priority Standards</u>** **Creativity and Innovation** 6.4C- transfer current knowledge to the learning of newly encountered technologies. **Practical Technology Concepts** 6.12H - select and use productivity tools found in spread sheet, word processing, and publication applications to create digital artifacts, including reports, graphs, and charts, with increasing complexity.

Grading Period 4

Unit 4: Robotics
Estimated Date Range: 3/15 – 5/27
Estimated Time Frame: 52 days

Assessments

STATE/NATIONAL ASSESSMENT(S)	DISTRICT ASSESSMENT(S) N/A	COMMON FORMATIVE ASSESSMENTS (CFAs) *(administered within designated concept)* N/A

Concepts within the Unit	TEKS
Concept 1 - Exploration of Robotics (25 days) • Lesson 1: Visual Representations Using Pseudocode (3 days) • Lesson 2: Block Based Coding with Lego Spike Prime (10 days) • Lesson 3: Text Based Coding with Lego Spike Prime (12 days)	**<u>Priority Standards</u>** **Technology Applications** **Computational Thinking** 6.2B- use a design process to create block-based and text-based program that includes sequences, loops, conditionals and events to solve everyday problems. **<u>Important Standards</u>** **Technology Applications** **Computational Thinking** 6.1A- decompose real-world problems into structured parts by using visual representations 6.1B- analyze the patterns in sequences found in visual representations such as learning maps, concept maps or other representations of data 6.1C- define abstraction between generalized information and specific information in the context of solving a

	problem or completing a task 6.1D- design a plan collaboratively using visual representation to document a problem, possible solutions and an expected timeline for the development of a coded solution 6.1E- analyze different techniques used in debugging and apply them to an algorithm 6.1F- analyze the benefits using iteration (code and sequence repetitions in algorithms) **Creativity and Innovation** 6.3B- discuss and implement a design process using digital tools to compare, contrast, and evaluate student-generated outcomes **Data Literacy, Management and Representation** 6.7- use digital tools to communicate and display data from a product or process to inform an intended audience.
Concept 2 – Automation and Problem Solving (27 total days) • Lesson 1: Introduction to Hummingbird (13 days) • Lesson 2: Developing Automated Systems with Hummingbird (14 days)	**<u>Priority Standards</u>** **Technology Applications** **Computational Thinking** 6.2B- use a design process to create block-based and text-based program that includes sequences, loops, conditionals and events to solve everyday problems. **<u>Important Standards</u>** **Technology Applications** **Computational Thinking** 6.1A- decompose real-world problems into structured parts by using visual representations 6.1B- analyze the patterns in sequences found in visual representations such as learning maps, concept maps or other representations of data 6.1C- define abstraction between generalized information and specific information in the context of solving a problem or completing a task 6.1D- design a plan collaboratively using visual representation to document a problem, possible solutions and an expected timeline for the development of a coded solution

	6.1E- analyze different techniques used in debugging and apply them to an algorithm 6.1F- analyze the benefits using iteration (code and sequence repetitions in algorithms)