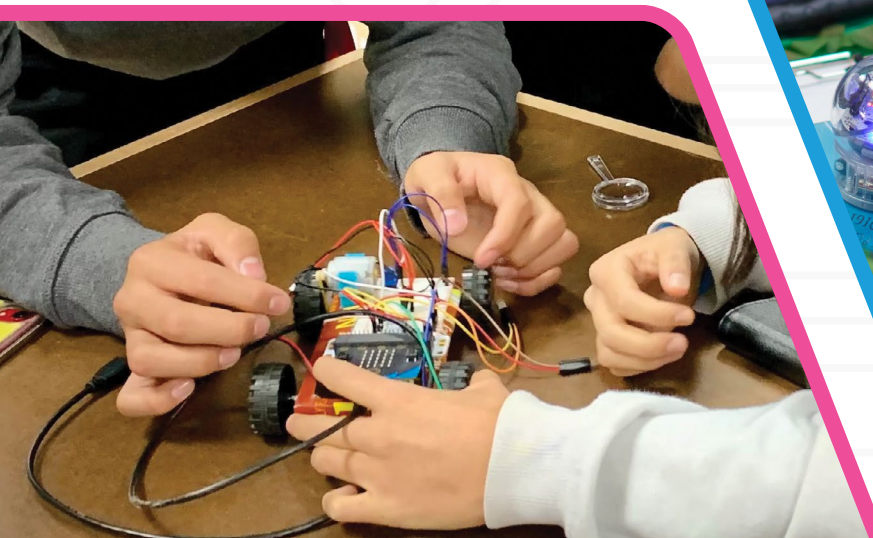




STEM Education Works®

Scope & Sequence

micro:bit - Middle School
Discoveries in Design and Innovation



MICRO:BIT – Middle School Discoveries in Design and Innovation

MICRO:BIT – Middle School Discoveries in Design and Innovation	Grade Band	Unit	Overview
	6-8	Coding Superheros	Students become superhero creators for the endangered city of Micro:Ville, using micro:bits to program their characters' unique powers. Combining language arts and STEM, they design heroes with both technical and narrative depth. The lesson culminates in a project that tests their coding and storytelling skills, fostering creative problem-solving in interdisciplinary contexts.
	6-8	Weather Broadcasters	Students act as junior meteorologists, using micro:bits to collect real-time temperature data from three locations around the school. They analyze the data to identify patterns or anomalies and create an engaging weather broadcast to explain the unusual conditions. This activity reinforces temperature conversion and data analysis while encouraging teamwork, critical thinking, and public speaking skills.
	6-8	Escape Room	Students will design an escape room using the micro:bit platform, programming it to provide clues, timers, and interactive elements. By exploring themes like superheroes, mysteries, and adventures, they will apply computational thinking, problem-solving, creativity, and collaboration to create an engaging experience.
	6-8	Game Show	Students will use the micro:bit to design game show elements like buzzers, score trackers, and randomizers. Through hands-on activities and programming tasks, they will deepen their STEM understanding and improve problem-solving and teamwork skills, exploring how digital tools can enhance traditional game shows.
	6-8	Fashion Statement	This cutting-edge lesson immerses students in the world of fashion and technology. Students will design wearable accessories that are not just stylish, but also smart. This lesson fuses creativity and critical thinking to make fashion statements for our digital world.
	6-8	micro:bit Gamer	Level up your classroom with arcade game design using the micro:bit! This lesson blends computer science, engineering, and storytelling, transforming students from game players into game creators. By designing their own games, students quickly grasp complex programming concepts.

MICRO:BIT – Middle School Discoveries in Design and Innovation	NGSS Standards Alignment	NGSS Discipline	Connected Subjects	Time Required
	MS-ETS1-1 MS-ETS1-2 MS-ETS1-4	Engineering, technology, and applications of science / engineering design	ELA, arts, science	3.5 Hours
	MS-ESS2-5 MS-ESS3-2 MS-ETS1-3	Earth and space science / earth's systems	ELA, arts, science, math, social studies	3.5 Hours
	MS-ETS1-1 MS-ETS1-2 MS-ETS1-4	Engineering design	ELA, arts, science, math, social studies	3.5 Hours
	MS-ETS1-1 MS-ETS1-2 MS-ETS1-4	Engineering design	ELA, arts, science, math	3.5 Hours
	MS-PS4-3 MS-ETS1-2 MS-ETS1-4	Engineering design	ELA, arts, science, math, social studies	3.5 Hours
	MS-ETS1-1 MS-ETS1-2 MS-ETS1-4	Engineering design	ELA, arts, science, math	3.5 Hours



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