



STEM Education Works®

Scope & Sequence

Foundations of Engineering, Technology, and Robotics Middle School



FOUNDATIONS OF ENGINEERING, TECHNOLOGY, AND ROBOTICS

	Grade Level	Lesson	NGSS Standards Alignment	Common Core Standards Alignment
FOUNDATIONS OF ENGINEERING, TECHNOLOGY, AND ROBOTICS - Middle School	6-8	Unit 1 Lesson 1: What Is a Robot?	HS-ETS1-2	RST.6-8.4 RST.6-8.1 SL.6-8.1
	6-8	Unit 1 Lesson 2: Writing and Drawing	HS-ETS1-2	WHST.6-8.2 SL.6-8.5 RST.6-8.3
	6-8	Unit 1 Lesson 3: Teaching and Playback	HS-ETS1-1 HS-ETS1-2 HS-ETS1-4	RST.6-8.3 RST.6-8.7 MP.4
	6-8	Unit 2 Lesson 1: Block Coding Basics	HS-ETS1-1 HS-ETS1-2 HS-ETS1-4	6.G.A.3 MP.1 MP.5 RST.6-8.3
	6-8	Unit 2 Lesson 2: Block Coding with Variables	HS-ETS1-2	6.EE.A.2 6.SP.B.5 MP.4 MP.7 RST.6-8.7
	6-8	Unit 2 Lesson 3: Block Coding with Lists	HS-ETS1-2	6.EE.A.2 6.SP.B.5 MP.4 MP.7 RST.6-8.7
	6-8	Unit 3 Lesson 1: Block Coding with Logic	HS-ETS1-1 HS-ETS1-3	MP.2 MP.3 RST.6-8.3
	6-8	Unit 3 Lesson 2: Block Coding with Loops	HS-ETS1-2 HS-ETS1-4	MP.8 7.EE.B.4 RST.6-8.7
	6-8	Unit 3 Lesson 3: Block Coding with Functions	HS-ETS1-2	MP.4 MP.7 8.FA.1



NGSS Discipline		Connected Subjects	Time Required
Unit 1 Lesson 1	Engineering, Technology, and Applications of Science Physical Science Engineering Design Science and Engineering Practices	Physics Environmental Science Language Arts Communication and Collaboration Design Thinking Scientific Literacy and Critical Thinking	260 minutes
Unit 1 Lesson 2	Engineering, Technology, and Application Science Engineering Design Science and Engineering Practices Modeling and Optimization	Language Arts Communication and Presentation Skills Collaboration Design Thinking and Innovation	190 minutes
Unit 1 Lesson 3	Engineering, Technology, and Applications of Science Physical Science (PS) Earth and Space Science Engineering Design Science and Engineering Practices	Language Arts Analytical Thinking and Problem Solving Scientific Communication and Collaboration	190 minutes
Unit 2 Lesson 1	Engineering Design Science and Engineering Practices Engineering Design	Computer Science Language Arts Design Thinking Communication, Collaboration, and Problem Solving Critical and Analytical Thinking	240 minutes
Unit 2 Lesson 2	Engineering Design Science and Engineering Practices Engineering, Technology, and Applications of Science	Data Science and Computer Science Language Arts Problem Solving, Critical Thinking, and Communication	220 minutes
Unit 2 Lesson 3	Engineering Design Science and Engineering Practices Engineering, Technology, and Applications of Science	Data Science and Computer Science Language Arts Problem Solving, Critical Thinking, and Communication	190 minutes
Unit 3 Lesson 1	Engineering Design Science and Engineering Practices Engineering, Technology, and Applications of Science	Language Arts Problem Solving, Collaboration, and Communication Critical and Analytical Thinking	260 minutes
Unit 3 Lesson 2	Engineering Design Science and Engineering Practices Engineering, Technology, and Applications of Science	Data Science and Computer Science Language Arts Problem Solving, Critical Thinking, and Communication	210 minutes
Unit 3 Lesson 3	Engineering Design Science and Engineering Practices Engineering, Technology, and Applications of Science	Computer Science and Systems Thinking Critical Thinking and Problem Solving Communication and Collaboration	240 minutes



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