

Teq™ Product

STEM Alignment

Amplify Science

Amplify Science was designed to give students engaging, realistic experiences that mirror how scientists and engineers actually work. To do this, the Lawrence Hall of Science and Amplify created compelling print and digital resources that work seamlessly together to enable students' investigations and explorations. Amplify Science blends hands-on investigations, literacy-rich activities, and interactive digital tools to empower students to think, read, write, and argue like real scientists and engineers. To support your STEM initiatives, Teq has aligned our K-12 STEM bundles and products to the units in Amplify Science. Learn more about Amplify Science at <https://www.amplify.com/programs/amplify-science/>



Inspire Science is designed to help spark students' curiosity and empower them to ask more questions, think more critically, and generate innovative ideas. Students bring solutions to everyday challenges through inquiry-based, hands-on investigations of real-world phenomena. Inspire Science is built with the proven 5E instructional framework that provides an in-depth, collaborative, evidence-based, and project-based learning experience to help you put your K-12 Science students on the path to career and college readiness. To support your STEM initiatives, Teq has aligned our K-12 STEM bundles and products to the modules and units in Inspire Science. Learn more about McGraw Hill Education's Inspire Science at <https://www.mheducation.com/prek-12/program/microsites/MKTSP-AIB05M0.html>



The codable robots featured in this catalog support the CSTA K-12 Computer Science Standards. The CSTA K-12 Computer Science Standards delineate a core set of learning objectives designed to provide the foundation for a complete computer science curriculum and its implementation at the K-12 level. Learn more at <https://www.csteachers.org/page/standards>



The codable robots featured in this catalog, including the Dash from Wonder Workshop, Sphero robots, and Ozobots support Code.org's Computer Science (CS) Fundamentals series, making it easy for teachers and students to get started coding. The Wonder Workshop Learn to Code Curriculum is organized into six coding levels, "A" through "F," with each level covering two or three of the six fundamental coding concepts (sequences, loops, events, conditionals, functions, and variables). You can learn more about Code.org's CS Fundamentals at <https://code.org/educate/curriculum/elementary-school>



Today's students must be prepared to thrive in a constantly evolving technological landscape. The ISTE Standards for Students are designed to empower student voice and ensure that learning is a student-driven process. The STEM products found in this catalog encourage student-led, project-based learning. They can be used as part of your adoption of the ISTE Standards. Learn more about the ISTE Standards for Students at <https://www.iste.org/standards/for-students>



Teq is a member of the national CSforALL initiative, the hub of the national K-12 computer science community. The goal of CSforALL is to expand, connect and amplify the collective voice of the CSforALL movement. Learn more at <https://www.csforall.org/>



Computer Science for All is part of Mayor de Blasio and Chancellor Carranza's Equity and Excellence for All initiatives. Together, the Equity and Excellence for All initiatives are building a pathway to success in college and careers for all NYC students. Computer Science for All brings 21st-century computer science instruction to every school. Learn more about CS4All in NYC at <http://cs4all.nyc/>

By offering products like Micro:bit, Teq supports the goals of CS4All by providing products that can help students complete meaningful units of CS when combined with CS4All curriculum. Learn more at <https://blueprint.cs4all.nyc/curriculum/intro-to-pcomp/>



The products and bundles included in Teq's STEM catalog support the implementation of the Next Generation Science Standards. Learn more at <https://www.nextgenscience.org/>

Grade Band and Compatibility Chart

Curriculum versatility indicates products with a higher versatility, meaning they can be used in multiple subject areas or grade levels compared to products that are more subject and/or grade specific. **Ease of use** ranks the complexity level for teachers as they implement the product into their instruction.

A **solid circle** indicates the grade band for which the product is most appropriate, while **outlined circle** indicates other grade bands where it can also be successfully applied.

	K-2	3-5	6-8	9-12	Curriculum Versatility	Ease of use
KIBO	●	○			Medium	Easy
Osmo	●	●			Medium	Easy
KUBO	●	●	○		Medium	Easy
Robotis Play	●	●			Low	Easy
Kaibot	●	●			Low	Easy
Cricut	●	●	●	●	Low	Intermediate
UltiMaker (Makerbot)	●	●	●	●	High	Intermediate
3Doodler	○	●	●	●	Low	Easy
Strawbees	○	●	●	●	high	Easy
Snapcircuits	○	●	●		Medium	Easy
Ozobot	○	●	●	○	Medium	Intermediate
ActiveFloor	○	●	●	○	Low	Intermediate
Lu Interactive	○	●	●	○	Low	Intermediate
Wonder Workshop Dash	○	●	○		Medium	Intermediate
Maplewoodshop	○	●	●	●	Low	Easy
Fork Farms	○	●	●	●	Medium	Intermediate
xTool	○	●	●	●	Medium	Intermediate
SAM Labs		●	○		Medium	Intermediate
iRobot - Root		●	●	○	Medium	Easy
BirdBrain - Finch		●	●	●	Medium	Intermediate
BirdBrain - Hummingbird		●	●	●	High	Intermediate
Bloxels		●	●	○	Medium	Intermediate
Piper		●	●	○	Medium	Intermediate
MAD-learn		●	●	●	Medium	Intermediate
Merge		●	●	●	Medium	Intermediate
Formlabs			●	●	Low	Intermediate
Robotis		●	●	●	Medium	Intermediate
Kai's Clan			●	○	Medium	Intermediate
UBTECH		●	●	●	High	Intermediate
Umety		○	●	●	Medium	Intermediate
Inspirit		○	●	●	High	Intermediate
zSpace		●	●	●	High	Advanced
Mastery Coding		●	●	●	High	Intermediate
Raspberry Pi		●	●	●	High	Advanced
Rocket Drones		○	●	●	Medium	Intermediate
pi-top		○	●	●	Medium	Advanced
iRobot - Create 3			○	●	Low	Advanced
Dobot			○	●	Medium	Advanced

The compatibility chart below illustrates which devices are compatible with each product, and indicates the product's programming type. Depending on a product's specific application, its programming type can be further categorized as:

Device Free Programming (Grades K-2)

Programming concepts do not just have to be taught by using an app or a smart device, they can also be taught by utilizing physical objects to help students learn and understand basic programming concepts.

Block-Based Programming (Grades 3-7)

Involves dragging and dropping instruction blocks together to form a program. These blocks represent different text lines of code and make it easier for students to learn and understand basic programming concepts. Scratch and Blockly are popular block-based programming editors.

























Text Based Programming (Grades 7-12)

Text-based programming involves writing outlines of code in text form. These type of programming languages should only be taught after developing an understanding of basic programming concepts through device free and block-based programming.

Manufacturer	Product	Windows	Google (Chromebook)	Android	Amazon Fire Devices	MAC OS	Apple iOS	Mobile Device	Coding Language	Additional Coding Languages	Additional Languages Available
	Finch	●	●	●	●	●	●	●	Snap, Python & Java		
	Hummingbird	●	●	●	●	●	●	●	MakeCode	Arduino	
	Bloxels		●	●	●		●	●			
	Venture	●				●			N/A		
	Maker3	●	●			●	●	●	N/A		
	Explore3	●	●			●	●	●	N/A		
	Joy Xtra	●	●			●	●	●	N/A		
	Joy	●	●			●	●	●	N/A		
	Cubelets (with bluetooth hat)	●	●			●	●	●			
	Dobot Lab	●	● Limited (Blockly Only)	N/A					Blockly, Python, Teaching & Playback		
	Form 4	● Windows 7 (64-bit) or higher	N/A	N/A		●	● OS X 10.12 or higher	N/A	N/A		
	Pico	●	●	●	N/A	●	●	●			
	Meta Quest	●	●	●	N/A	●	●	●			
	Root Robot	●	●	●	N/A	●	●	●	Block based coding w/ Python text preview	Python SDK	
	Create 3	●			N/A	●	●		ROS 2	iRobot Education's SDK for Python Playground	
	KaiBot			●			●	●	Blockly/Drag & Drop		
	Kai's Clan Robots	●	●	●	N/A	●	●	●	Blockly/Drag & Drop		
	KIBO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	KIBO uses physical blocks to help teach coding concepts	N/A	N/A
	KUBO Robot	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	KuboPlay	●	●	●		●	●	●	Block Based		
	Software	●	●	●	●	●		●			
	Makey Makey	●	●	●	●	●	●	●	block based coding		
	THREE	●	●	●	N/A	●	●	N/A		N/A	
	MERGE Cube		●	●			●	●			
	All apps				●		●	●			Language Support
	Ozoblocky	●	●	●		●	●	●	Color Coding and Blockly	Java	Japanese, Korean, and Polish (Ozoblocky only)
	Ozobot Evo App			●			●	●	Color Coding and Blockly	N/A	Japanese, Korean, and Polish (Ozoblocky only)
	Piper Computer	●	●		N/A				Pipercode		
	Piper Make	●	●		N/A						
	pi-top								Python	Scratch, JavaScript	
	Raspberry Pi								Python	C/C++, JavaScript, HTML5, Scratch, Java	
	PLAY	●	●	●		●	●	●	Scratch, Blockly (Coming Soon)		
	DREAM	●	●	●		●	●	●	C/C++, Blockly (Coming Soon)		
	STEM	●	●	●		●	●	●	C/C++, Blockly (Coming Soon)		
	Mini	●	●	●		●	●	●	C/C++, Blockly (Coming Soon), Python		
	SAM Space	●	●	●		● Mac OS	● (only iPad 3 & above)		Block-based		Chinese (Simplified), German, Italian, Spanish, French, Dutch, Polish, Portuguese, Swedish, Korean, Japanese
	SAM Blockly	● (Windows 10 or later)	●	● (6.0 Marshmallow or later)	●		● (Using Chrome)		Block-based		N/A
	SAM Studio	● (Windows 10 or later)	●	● (6.0 Marshmallow or later)	●	● Mac	● (Using Chrome)		Block-based		N/A
	With Robotics Kit	● (Windows 7 or above)	Using app from Chrome web store	●	N/A	● Mac OS	● iPad		Microbit		
	UKIT Beginner		●	●			●	●	Block-based	Text based preview in Python	
	UKIT Intermediate		●	●			●	●	Block-based	Text based preview in Python	
	uKit Explore (Advanced)	●	●	●		●		●	Block-based	Dual text-based programming	
	uKit AI Beginner	●	●	●		●	●	●	Drag and drop coding w/ Python text preview	Drag and drop and MicroPython text coding	
	uKit AI Intermediate	●	●	●		●	●	●	Drag and drop coding w/ Python text preview	Drag and drop and MicroPython text coding	
	Cura	● (Windows 10 or later)		● Linux 64 Bit		● Mac OSX					
	VR Platform	●	●	●		●			N/A		
	Dash		●	●	●		●	●	Blockly		German, Mandarin Chinese, Mandarin Taiwanese, French, Korean, Spanish (Go, Path, and Xylo are available in English Only)
	F1	●		●	N/A	●	●	●	N/A		
	P2	●		●	N/A	●	●	●	N/A		
	S1	●		●	N/A	●	●	●	N/A		

Coding Products

Depending on a product's specific application, its programming type can be further categorized as:

Device Free Programming	Block-Based Programming	Text Based Programming
Grades K-2 Programming concepts do not just have to be taught by using an app or a smart device, they can also be taught utilizing physical objects to help students learn and understand basic programming concepts.	Grades 3-7 Involves dragging and dropping instruction blocks together to form a program. These blocks represent different text lines of code and make it easier for students to learn and understand basic programming concepts. Scratch and Blockly are popular block-based programming editors.	Grades 7-12 Text-based programming involves writing outlines of code in text form. These type of programming languages should only be taught after developing an understanding of basic programming concepts through device free and block-based programming.
    	Maker Products:      	ROBOTIS MINI & STEM    
	Modular Robots:    	Maker Products: 
	Coding Robots:    	
	Device Coding: 