Call 1-800-334-4943 for more information!

KiDSPARK EDUCATION

6th - 8th Grade STEM Program

In Kid Spark's 6th - 8th Grade STEM Program, students explore challenging STEM concepts from their everyday world, authoring with technology to solve problems and create new solutions.

Throughout the program, students learn concepts in structural and mechanical engineering, physics, rapid prototyping and 3D printing, and coding and robotics. These experiences give students the skills and confidence to persist in STEM throughout their lives.

What's Included in the Program?

Kid Spark's 6th - 8th Grade STEM Program includes the following resources:

6th - 8th Grade Curriculum

There are a total of six units of instruction included in Kid Spark's 6th - 8th Grade STEM Program. Each unit includes a unit overview, multiple hands-on lessons, and a unit assessment. All lessons follow Kid Spark's convergent to divergent learning format, which allows students to learn new content and then apply what they have learned through creative invention challenges.

- Kid Spark Basics
- Simple Machines
- Compound Machines
- Rapid Prototyping & 3D Printing
- Loops & Variables
- Integrated Engineering Challenges

TOTAL HOURS OF CURRICULUM ..... **62+ HOURS**

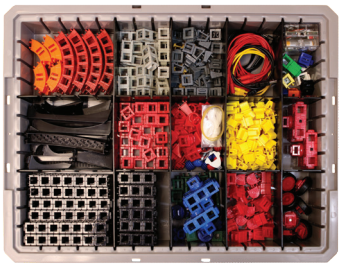
Below is an example of how Kid Spark's 6th - 8th Grade STEM Program might be implemented across grade levels. Ultimately, each school can decide which units of instruction to offer at certain grades. Kid Spark units are progressive which means educators have the ability to meet the needs of any student regardless of age or skill level.

6	Kid Spark Basics	5 Lessons, 1 Assessment	(7) 60-Minute Sessions
	Simple Machines	6 Lessons, 1 Assessment	(13) 60-Minute Sessions
7	Compound Machines	5 Lessons, 1 Assessment	(11) 60-Minute Sessions
	Rapid Prototyping & 3D Printing	5 Lessons, 1 Assessment	(9) 60-Minute Sessions
8	Loops & Variables	5 Lessons, 1 Assessment	(11) 60-Minute Sessions
	Integrated Engineering Challenges	5 Lessons	(10) 60-Minute Sessions

STEM Pathways Lab

The STEM Pathways Lab supports Kid Spark's 6th - 8th Grade STEM Program and covers a broad range of technologies and curriculum. Students get hands-on as they explore concepts in structural and mechanical engineering, applied mathematics, physics, rapid prototyping and 3D printing, and coding and robotics.

Each lab is designed to accommodate students working collaboratively in teams of 2 - 4 students and includes:

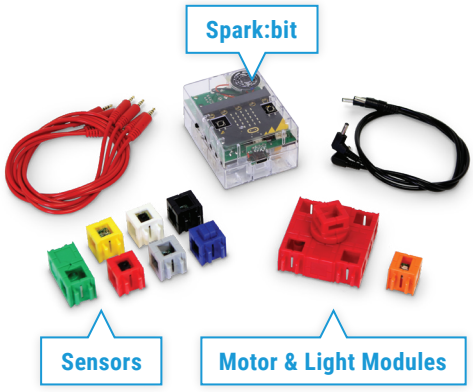


ENGINEERING MATERIALS

A large assortment of structural building components, articulating components, and robotic and electronic components.

SPARK:BIT ROBOTICS CONTROLLER

At the heart of the STEM Pathways Lab is Spark:bit, a Micro:bit-based robotics controller that can be combined with sensors, motors, and other Kid Spark engineering materials to create interactive, robotics systems. Students with little to no coding experience start with simple drag and drop coding and can transition to text-based coding when they are ready.

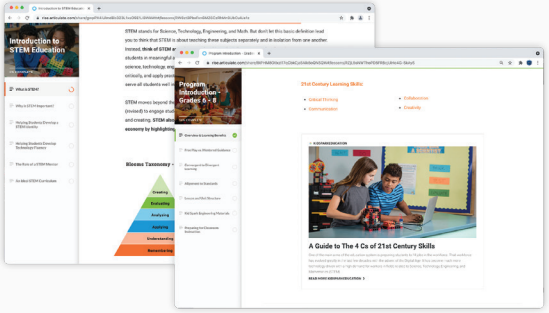


TRANSPARENT LID

Includes an inventory and organization guide to easily locate and manage materials in the lab.

Professional Learning

To help 6th - 8th grade educators prepare to use program materials and resources in their classrooms, Kid Spark offers professional learning courses through our online learning management system.

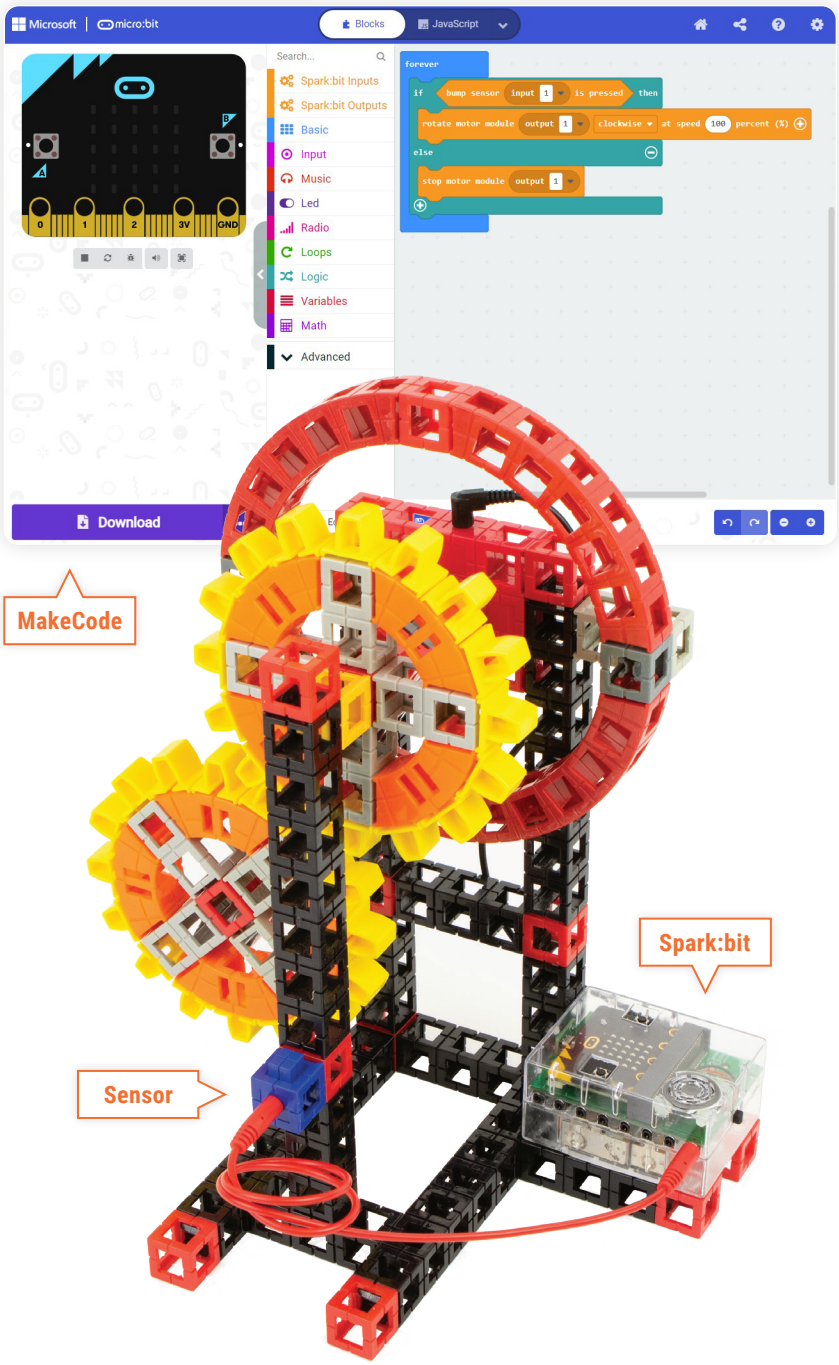


Teaching Computer Science?

Meet Spark:bit

- **Micro:bit-based**, programmable robotics controller that can be combined with sensors, motors and other Kid Spark engineering materials.
- Supported by **Microsoft's MakeCode** programming environment, and includes access to interactive MakeCode programming tutorials.
- Compatible with most operating systems including **Chromebook, MacOS, and Windows**.
- Includes **Motor Override Mode** feature which allows users to power motor and light modules with **no programming required**.
- Supported by **3 units of instruction (15 lessons)** in Kid Spark's 6th - 8th Grade STEM Program.

KIDSPARK EDUCATION



Standards Alignment

Kid Spark's 6th - 8th Grade STEM Program is aligned to the following national education standards:

Next Generation Science Standards (NGSS)

International Society for Technology in Education Standards (ISTE)

Common Core State Standards (CCST)

Computer Science Teachers Association Standards (CSTA)

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