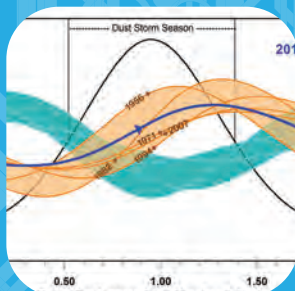
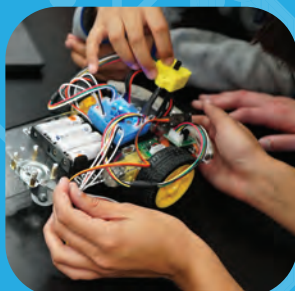
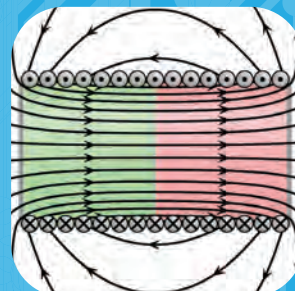
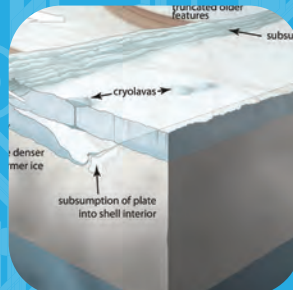


# Ecubit



Coding • Robotics • STEAM Education



School  
Specialty®



[buy.freyscientific.com](http://buy.freyscientific.com)

# Inspiring the Next Generation of Inventors, Creators and Builders

Cubit's mission is to inspire and nurture the next generation of inventors, creators, and builders through a unique and powerful synergy of coding, robotics and STEAM Education. Far more than a traditional robotics program, Cubit's modular design, intuitive interface and powerful sensor suite empowers students to explore their world, learn valuable coding skills and express their innate creativity while investigating diverse STEAM concepts.

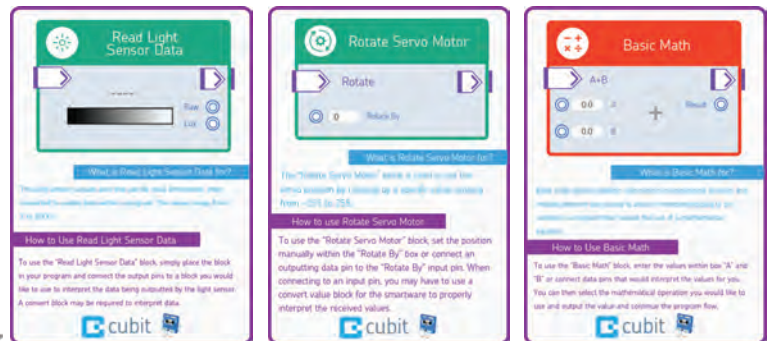
## Coding

Cubit Workshop and Cubit's progressive coding instruction evolves as students gain mastery and experience. In addition to the benefits of strengthening design and computational thinking, improved problem solving, and increased communication skills, coding with Cubit encourages students to express their innate creativity and bring their own designs and inspiration into reality. Our programming blocks include core concepts of programming and is a full programming language with the same capabilities as popular languages used in the industry.

### Cubit Workshop



### Programming Blocks



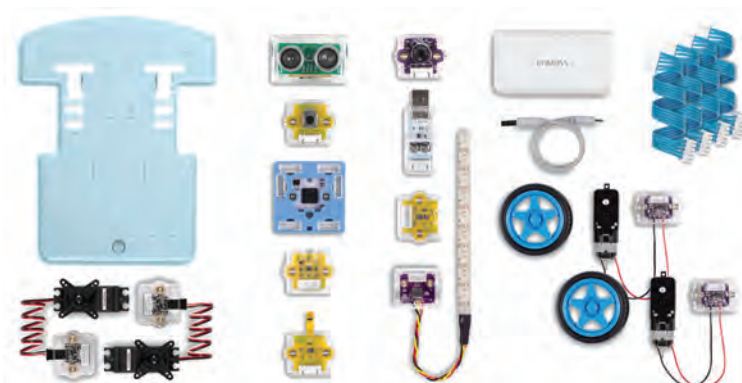
### Benefits:

- Easy to use and intuitive graphical drag-and-drop interface
- Coding Blocks or Text Coding
- Parallel processing
- Progressive coding instruction
- Custom Function Blocks

## Robotics

Cubit Smartware equips students with the same powerful instruments scientists and engineers utilize to measure such things as magnetism, spatial position, distance, temperature, and light. Cubit empowers students to envision and put their creations in motion with variable speed precision motors.

### Cubit Smartware



### Benefits:

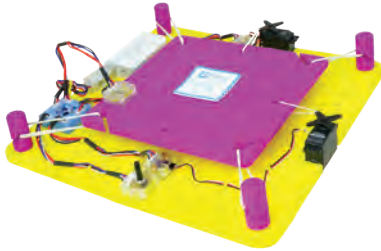
- Modular and easily expandable smartware
- Unified coding platform that drives all Cubit Smartware
- Students can combine Cubit components in an endless variety of configurations.
- Certified for ages 6+



# STEAM Education

Cubit empowers everyone to build their inventions through guided lessons that are intentionally created to introduce students to Science, Technology, Engineering and Mathematics standards and practice. These include design thinking and engineering, critical thinking, the scientific method and problem solving. Often left out in the STEAM equation, Cubit directly addresses support of the Arts. Cubit's flexibility and endless opportunities for creativity and innovation fosters and encourages development of the Arts.

## Cubit STEAM Projects



## Benefits:

- STEAM projects and lessons combining coding and robotics
- Differentiated projects for every grade and skill level
- Foundation lessons for every Cubit Kit level
- Teacher and Student Lesson Guides, Worksheets and Expansion Activities
- Customizable and flexible projects that complement a number of instructional settings, including **Enrichment, After and Summer School Programs, and direct classroom instruction.**

## Instructional Settings and Differentiated Curriculum

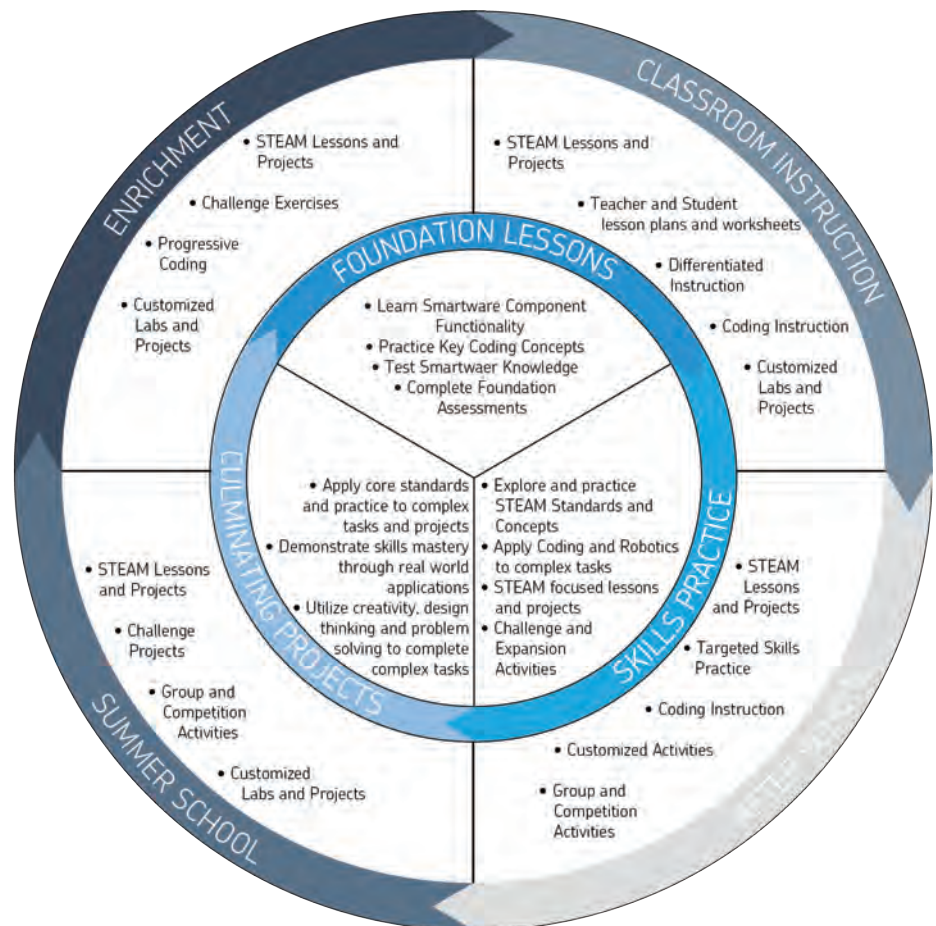
Cubit can be utilized in a wide array of instructional settings and grade levels. Cubit's tiered approach to curriculum – for beginners to more advanced learners – allows for each student to move at their own pace and complete projects appropriate for their level of experience and skills mastery.

## Instructional Settings





























- Classroom Instruction
- After School Programs
- Summer Programs
- Enrichment Programs

## Tiered Curriculum and Projects

- Foundations Lessons
- Skills Practice and Application
- Culminating Projects



## Cubit Kit Levels

	Cubit Controller	USB Power	Battery	Cables	Buzzer	Light Sensor	LED	Servo Motor	Temperature Sensor	Distance Sensor	DC Motor	Car Chassis	9-Sensor Array	Potentiometer
														
														
Voyager Kit	●	●	●	●	4	●	●	2	●	●	2	●	●	●
Pioneer Kit	●	●	●	●	4	●	●	2	●	●	2	●	○	○
Explorer Kit	●	●	●	●	4	●	●	2	●	○	○	○	○	○
Curiosity Kit	●	●	●	●	4	●	●	○	○	○	○	○	○	○

● | Included | ○ | Not Included

## Cubit Kits and Projects (Note: Higher Level Kits include all previous Kit Projects)

Curiosity Kit	Explorer Kit	Pioneer Kit	Voyager Kit
Musical Horn	Butterfly	Self-Driving Racer Car	Earthquake Table: Variable Speed (Advanced)
Water Quality Lab	Earthquake Table: single speed (Basic)	Rube Goldberg Open Challenge (Basic)	Rube Goldberg Open Challenge (Advanced)
Robotic String Can Telephone	Shake Table Wavemaker (tsunamis, erosion)	Blossoming Flower Pot	Cubit Racer: Force, Mass, and Motion (w/IMU)
Automatic Doorbell	Eco-House	Organism Survival Advantages	Magnetic Field Detector
Intruder Alarm	Terrarium Monitor / Plant Environment Analyzer	Material Analyzer	Electromagnets
Cubit Communication: Binary, Morse Code	Brightness, Shade, and Shadows	Tripwire Alarm	Designing Magnetic Shields
Ecosystem Tag Game	Magnetic Mystery Box	Addressing Invasive Species	Egg Drop Challenge
Game Show Buzzer	Inchworm	Planet Orbits Orrery	
Measure The Sun	Weather Station	Theramin	
Star Simulator	Pollinator Model		
	LED Thermometer		