Maker : Code

What is it?

A kit designed for the classroom or makerspace to engage kids in coding using real world problems and projects inspired by their interests and imagination. This kit is a complete set of coding equipment for 10 children to work individually or up to 30 or 40 in small groups.

What is the aim of the kit?

To allow students to learn coding in a real world setting. This is not hand held, simplified coding through apps but teaches children how to write code and how to use hardware in projects. It is the best program for rapid prototyping and learning how coding works.

What age/year level is it for?

Upper primary with assistance but mainly for high school. There are simplified ways to introduce this software for intermediate students such as drag and drop. This is not an entry level coding product.

Skills learnt?

1. Understanding the Arduino coding language.
2. Greater understanding of coding, hardware and how to use these to develop projects.
3. Solving real life problems with technology
4. Creative thinking and design logic to develop projects that meet a need or solve a problem

What is Arduino?

Arduino is an open sourced (can be adapted by anyone) software and hardware product developed in Italy. The hardware allows the user to make everyday projects from as simple as turning on an LED light to complex scientific instruments. It is an easy to use system that is suitable for beginners through to experienced programmers. Teachers and students use it to build low cost scientific instruments, to prove chemistry and physics principles, or to get started with programming and robotics.
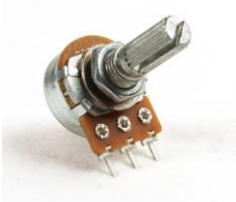
Some of the projects they can make?
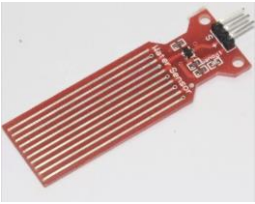
Robotics, remote control vehicles, temperature and humidity instruments, gaming, heartbeat sensor for exercise, temperature controlled environments, mini piano, RFID projects and the list is endless.

What are the benefits of the kit?

1. The kits tap into the child's interests making it relevant and engaging
2. All parts are reusable, one kit can keep being used for years.
3. The number of projects is limitless
4. Can be used from beginners using drag and drop programming to advanced programmers using Arduino code
5. Unique to the market, no class sets are available and buying individual pieces is very expensive.
6. Supported with project ideas and videos
7. If teachers have introduced scratch they can use a scratch for arduino program that makes it easy
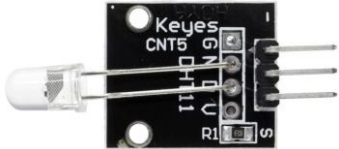8. Exclusive to OfficeMax
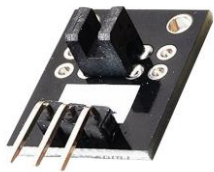
Maker : Code Parts List
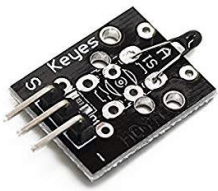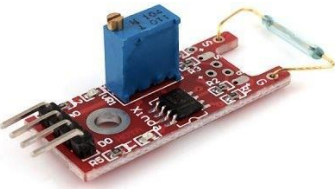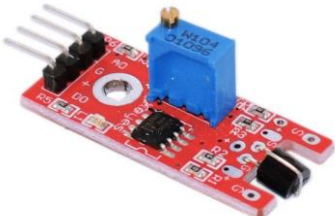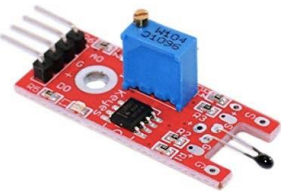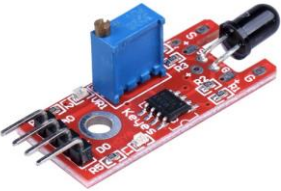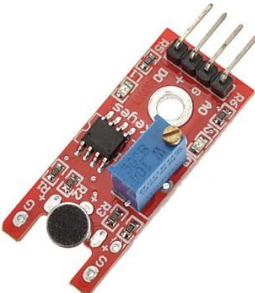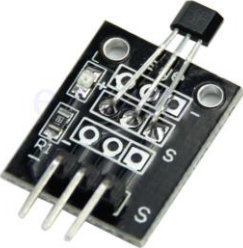
Part	Name	Number	Part	Name	Number
	Uno R3 Board	10		10k resistance	30
	102 Breadboard	10		220R resistance	30
	Yellow LED	25		Male to female DuPont Lines	20
	Red LED	25		10k potentiometer	10
	Green LED	25		Passive buzzer	10
	1k resistance	30		Active Buzzer	10
	74HC595	10		Infrared receiver	10

Part	Name	Number	Part	Name	Number
	LM35dz	10		4-digit digital tube	10
	Flame Sensor	10		8x8 dot matrix module	10
	Ball Switch	10		1-digit display tube	10
	Photoresistor	10		Stepper motor driver board	10
	4 x 4 keypads	5		Stepper motor	10
	Button Caps	20		Servo sg90 motor	10
	Remote Control	5		1602 LCD	10

Part	Name	Number	Part	Name	Number
	XY joystick module	4		RGB 3 colour module	9
	Temperature and humidity Module	4		Relay module	4
	Water Test Module	5		9V battery buckle	10
	RFID522 Key Identification card	5		USB cable	10
	Sound Module	4		Breadlines	300
	Clock Module (battery not included)	5			

Module Box Parts List

Part	Name	Part	Name
	Rotary encoder		RGB 3 colour module
	Temperature and humidity Module		Heartbeat module
	Passive Buzzer Module		SMD RGB
	Digital Temperature sensor module		Tap Module
	Buzzer Module		Relay module
	Tracking Module		Tilt Switch Module

Part	Name	Part	Name
	3 Colour RGB LED Module		2 colour LED module
	7 colour flash LED Module		Mercury tilt switch module
	Button Module		Light blocking module
	Photoresistor module		Infrared IR Sensor Module
	Infrared emission Module		Joystick module
	Laser Transmitter Module		Mini Magnetic Reed Switch Module

Part	Name	Part	Name
	Analog temperature Sensor Module		Infrared Avoidance sensor module
	Light cup Module		Vibration witch shock sensor module
	Reed switch Module		Touch sensor module
	Digital temperature sensor module		Flame detector sensor Module
	Linear hall magnetic sensor Module		Microphone voice sound sensor module
	Big sound sensor Module		Hall Magnetic sensor Module