

STEAM

SCIENCE - TECHNOLOGY - ENGINEERING - ART - MATHS

@ SCHOOL



STEAM
SCHOOL

Virtual Club for 9-14 year olds
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- WEEKLY BROADCASTS
- STEAM CHALLENGES
- DIGITAL REWARDS



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education

www.rapidonline.com

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HORIZON'S MISSION

Founded in 2003, Horizon Fuel Cell Technologies began the sale of miniature fuel cells to demonstrate the technology to schools and students around the world, meanwhile investing into R&D of more advanced products and industrial applications. In 2013, Horizon Educational Group was formed as an independent division dedicated to the deployment of a complete range of educational solutions.

Horizon Educational develop, produce and distribute hands-on teaching material and didactic equipment as well as online curriculums and educational programs. With distributors in over 80 countries, the STEM kits and technical training equipment have an international reputation for quality, educational content and award-winning design.

FREE ONLINE CONTENT - www.horizoneducational.com



FCJJ-23
H-racer 2.0
Order code 06-6531

£92.22



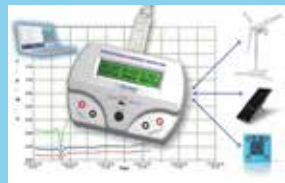
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**Wind Energy
Science Kit**
Order code 06-6559



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**Renewable
Energy
Education
Set**
Order code 06-6551



£164.86



WELCOME ...

To the Steam@School mailer

It's been a challenging year for schools, but we are determined to make the most of these important first few months of the new academic year by bringing you the very best in Science, Technology, Engineering, Art and Maths products. This publication is packed with useful practical resources including electronics kits, the BBC micro:bit and e-textiles, as well as robotics for every age group. Some products are available in class packs giving schools real value for money, while there are projects tips throughout.

Don't forget that we are official partners of Arduino Education and VEX Robotics, so we are able to offer extensive support for these products. Please do not hesitate to contact us for more information. We are also partnering with Steam School, the virtual Steam club for 9-14 year olds, and can offer 10% discount on subscriptions to this exciting platform. Find out more at www.rapidonline.com/steam-school.

For a comprehensive hub of projects and resources related to robotics, 3D printing, science, electronics, art and design and e-textiles, visit www.rapidonline.com/steam-lab.

Enjoy the mailer.

Pricing correct at time of going to press and excludes VAT. For up-to-date pricing visit our website.



Curriculum Kits	2-3
Rapid Kits	4
TruMotion & Arrex Kits	5
Velleman Projects	6
Soldering Products	7
Seasonal Board Projects	8
Snap Circuits Kits	9
BBC micro:bit	10
MakeyMakey	11
Arduino Projects	12-13
Bare Conductive Electric Paint	14
Makeblock Robotics	15
Wonder Workshop Robots	16
Ozobot Robots	17
VEX IQ	18-19
NAO & Pepper Robots	20
3D Printing	21
Construction Kits	22
Construction Materials	23
E-Textiles	24
Science Bundles	25
Physics	26
Chemistry	27
Biology	28
Test & Measurement	29
Art Materials	30-31
Maths	32

Audio Amplifier Project Kits



Aimed at **Key Stage 3**, the audio amplifier project provides teachers with a stimulating and inexpensive project through which to study the subject of amplification.

This schools projects package contains a comprehensive selection of components for schools working on audio related projects linked to the National Curriculum. The classpacks of 20 projects include PCBs and offers a worthwhile saving over parts bought separately which is ideal for schools working to tight budgets.

Teaching resources are available for free download at www.rapidonline.com

- Students have the opportunity to build a small amplifier, which can be incorporated into a variety of product designs, e.g., as an amplifier for a personal CD/MP3 player so that they can share their music with their friends
- The students have a number of design situations to select a starting point from, and they are provided with research topics and background material to help build understanding for their chosen design brief
- The student notes provide material for students to explore how a range of simple amplifier circuits work
- They also include guidance on the design and construction of speakers
- To support students during the construction of the circuit, detailed instructions have been included on how to assemble the amplifier, and how to integrate the circuit into student designs
- In addition, care has been taken, through extensive evaluation of the teaching material and PCB designs in schools, to ensure that the circuits are easy and robust enough for student manufacture
- A detailed set of teacher notes is available which includes suggested lesson plans and mapping to the National Curriculum
- The project notes have been designed for photocopying for class use

Each kit contains the following:

- TBA820M audio amplifier and IC socket
- Resistors, capacitors, and LED
- Switch and connecting jack socket
- Connecting cable
- Speaker and speaker cable
- Battery clip
- Available in **packs of 5 kit, 70-0180** (no PCBs) or **classpacks of 20 packs** (including PCBs)
- **Classpack of 20, 13-0106**, is supplied in a 43 x 31 x 7cm Gratnells tray
- **Classpack of 20, 13-0105**, has an enclosed battery box and is supplied without the Gratnells tray

Each kit requires 1x PP3 battery (not included). Pre-drilled PCBs are available separately in packs of 5, order code 70-0190 (Included in Classpacks of 20, 13-0105 & 13-0106).

5 kits - no PCBs		Pack of 5 PCBs	
Order code 70-0180	£9.32	Order code 70-0190	£5.89
20 kits plus PCBs in tray		20 kits plus PCBs no tray	
Order code 70-0106	£50.14	Order code 13-0105	£54.82

Each Kit contains:

Quantity	Description	Order code
1	7/0.2 Speaker Cable (150cm from 01-0162)	01-0162
1	150pF 2.5mm Ceramic Capacitor	11-3409
1	47nF 100V 5mm Polyester Box Capacitor	10-3258
1	100nF 63V 5mm Polyester Box Capacitor	10-3260
1	10uF 25V Radial Electrolytic Capacitor	11-0220
2	330uF 16V Radial Electrolytic Capacitor	11-1404
1	Battery Clip PP3 - end entry**	18-0093
1	3.5mm Stereo Plug to Plug lead	20-0040
1	3.5mm Stereo PCB socket	20-0137
1	8-pin DIL socket (1 from 22-0107)	22-0107
1	66mm Ferrite 8 Ohm speaker	35-0130
1	OSNR5164A 5mm 2.2V Red LED	55-1790
2	470R CR25 0.25W CF Resistor	62-0365
3	1K CR25 0.25W CF Resistor	62-0373
1	1R CR12 0.125W CF Resistor	64-1100
1	SPDT right angle PCD slide switch	76-0272
1	TBA820M Audio Amplifier IC	82-0485
13-0106 Classpack of 20 in Gratnells tray contains:		
4	Audio amplifier project kits (pack of 5)	70-0180
4	Audio amplifier project kit PCBs (pack of 5)	70-0190
1	Shallow Gratnells tray	14-0430
1	Gratnells tray lid	14-0436
13-0105 Classpack of 20 contains:		
20	PP3 battery holders** (replacing 18-0588)	18-0295
4	Audio amplifier project kits (pack of 5)	70-0180
4	Audio amplifier project kit PCBs (pack of 5)	70-0190



Stereo Audio Amplifier Kit

This project kit is a stereo version of our popular Audio Amplifier Project, 70-0180. Once assembled, the amplifier can be connected to MP3 players, laptops or any other device with a 3.5mm headphone jack socket.

The kit contains all components, speakers, printed circuit board and connecting cable. It is available in packs of 5 kits or as a class pack of 20 kits.

- Stereo version of the popular Audio Amplifier Project, 70-0180
- Can be connected to MP3 players, laptops or any other device with a 3.5mm headphone jack socket
- Kit contains all components, speakers, printed circuit board and connecting cable
- Available in **packs of 5 kits** or as a **classpack of 20 kits**

Each kit requires a 9V, PP3 battery (not included).

Pack of 5 kits	
Order code 70-0198	£19.53
Classpack of 20 Kits	
Order code 70-0199	£72.68
Empty PCB only	
Order code 70-0197	£1.20





Mini-light Project Kits

LED key ring light kits designed as an introduction for Key Stage 2 & 3 students to design and make in electronics. Project notes are available as a free PDF download, at www.rapidonline.com and are designed to be photocopied for class and teacher use.

Notes include suggested lesson plans and mapping to the National Curriculum, an introduction to circuits and symbols, batteries, LEDs and pricing and costing exercises and a series of homework assignments to support work in class.

- Students start by investigating the need for security and the problems of using locks in the dark
- They can then complete the design process of a mini-light, which can be attached to a key ring
- With careful organisation it should be possible to manufacture the design without specialist workshop facilities
- The component kits include batteries and LEDs, plastazote foam core and high impact polystyrene outer layers
- Available in four styles:
 - Standard Mini-light is a keyring torch kit using a red LED
 - Super-bright Mini-light is an updated version using a modern white LED

	Red
Order code 70-0015	£2.61

	White
Order code 70-0012	£4.05

	Rainbow
Order code 70-0013	£4.44

	Ultraviolet
Order code 70-0014	£4.96



- Rainbow Mini-light has a random colour-changing LED
- Ultraviolet Mini-light has a UV LED and can be used for revealing security coding on banknotes, etc.
- Suitable for **Key Stages 1, 2 & 3** (ages 5 to 14)
- Kits are supplied in **packs of 5**



AM Radio Project Classpack

This excellent projects package contains a wide range of components for schools working on radio type projects. Linked to the National Curriculum, this classpack of 20 projects offers a substantial saving on parts bought separately which is ideal for schools working to tight budgets. The kit is supplied in a strong box with lid.

- Dimensions of the box: 43cm x 31cm x 7cm
- Great school resource
- Suitable for Key Stages 3 & 4 (ages 11 to 16)
- Supplied as a pack

Each kit requires 1x AA battery (not included).

Classpack contains:	Order code
4 x Radio project kit (pack 5)	70-0110
4 x Radio project kit PCBs (pack 5)	70-0120
1 x Shallow tray	14-0430
1 x Tray lid	14-0436



	Radio project classpack
Order code 13-0100	£81.95



Moisture Tester Project Classpack

A classpack of 20 kits of components to build a functional Moisture Tester that can tell if pot plants require water. The classpack contains all the electronic components required, including ready-made PCBs, in a Gratnell's Tray with lid. It offers a substantial saving compared to parts bought separately.

Students will love this Moisture Tester Project, which is linked to the National Curriculum, as it is simple to assemble and is ideal as an introduction to electronics.

- Dimensions of the box: 43cm x 31cm x 7cm
- Great school resource
- Each kit requires 1x PP3 battery (not included)
- Suitable for Key Stages 2 & 3 (ages 7 to 14)
- Supplied as a classpack

Classpack contains:	Order code
4 x Moisture tester kit (pack 5)	70-0030
4 x Moisture tester kit PCBs (pack 5)	70-0040
1 x Shallow Tray	14-0430
1 x Tray lid	14-0436



	Moisture tester classpack
Order code 13-0102	£20.13



Components Spares Kit

Order code **13-0108** **£63.55**



555 Astable/
Monostable Project Kit

Order code **70-0225** **£9.44**



LED Pack

Order code **13-0122** **£45.40**



Wire Starter Kit

Order code **13-0112** **£39.00**



LDR PCB
Project Kit

Order code **70-0245** **£23.91**

**For full details visit
www.rapidonline.com**



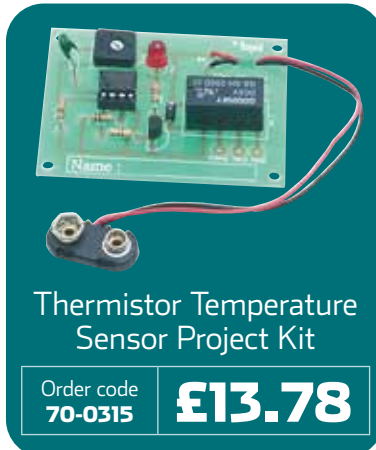
Essential Tool Pack

Order code **13-0130** **£30.68**



Electrical Kit

Order code **13-0114** **£28.62**



Thermistor Temperature
Sensor Project Kit

Order code **70-0315** **£13.78**



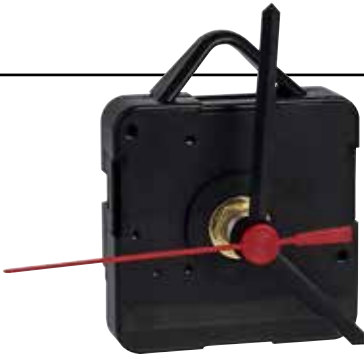
Keyboard Encoder
Project Kit

Order code **70-0325** **£15.62**



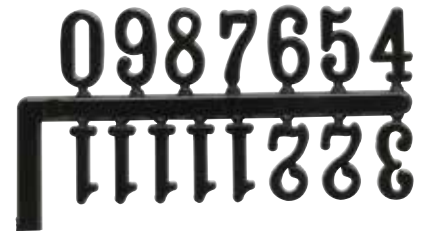
Clock Group Kit

Order code **13-0152** **£25.00**



TruMotion

Quartz Clock Movement and Numerals



Clock Movement
Order code **85-1430** **£1.85**

These quartz crystal controlled clock movements and numerals are ideal for replacing defective units or for creating your own personalised clock projects.

Black Numeral Set
Order code **85-1421** **£1.22**

Classical Piano Kit

Order code **13-1440** **£25.10**



No Soldering required!

Magic Light Kit

Order code **13-1441** **£8.59**



Piston Oil Pump Jack Kit

Order code **13-1443** **£10.44**

Stress Meter Kit

Order code **55-1571** **£11.69**





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Counter Kit

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£19.30



2-Channel RF Code Lock
Transmitter Kit

Order code
70-4019

£10.69



Electronic Watch Kit
and K1201 Watch
Programming Cradle

Order code
13-0203

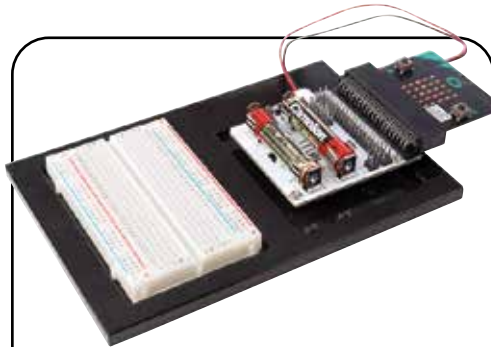
£23.06



DIY Mini
Quadcopter Kit

Order code
13-0207

£30.37



Micro:bit & Advanced
Experimenter Kit

Order code
13-0208

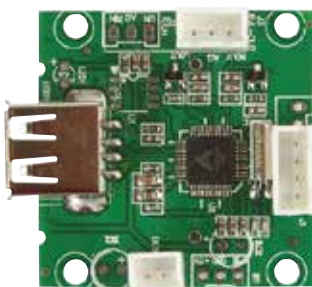
£28.28



1 Channel USB Stepper
Motor Card Kit

Order code
57-4143

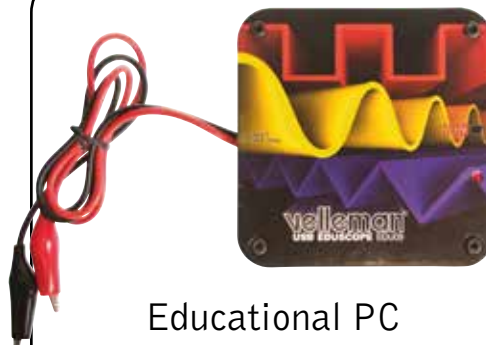
£27.27



USB/SD Card MP3 Player
Jukebox Module

Order code
57-4516

£16.25



Educational PC
Oscilloscope Kit

Order code
57-4590

£31.98



USB Message Board
Display Kit

Order code
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£33.49

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THERMALLY BALANCED 25W SOLDERING IRON

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From only
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A professional quality, thermally-balanced 25W, 230V mains soldering iron, ideally suited to the demands of both industry and education environments.



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A range of mains powered 25W soldering irons from Antex. Highly respected by both industrial users and hobbyists alike, Antex soldering irons have become one of today's classic soldering tools. It is a tribute to the simple, yet highly effective basic design of the XS25W miniature electric soldering iron that it has changed little over the years.

Type	Order code	Price each		
		1+	5+	10+
XS25W 230V	85-0525	£21.37	£20.25	
XS25W 110V	85-1141	£23.05	£22.50	
XS25W + plug	85-1140	£20.47	£18.37	
XS25W + silicone cable	85-0527	£24.74	£23.62	£22.50
XS25W + silicone cable + plug	85-1145	£20.99		
XS25W element	85-0530	£8.11	£7.67	£7.51

DESOLDERING TOOLS



Standard
Desoldering Tool

Order code
85-0601 **£5.12**

Standard
Nozzle

Order code
85-0609 **£1.06**

ESD
Desoldering Tool

Order code
85-0603 **£6.00**

ESD
Nozzle

Order code
85-0611 **£1.45**

LEAD-FREE SOLDER WIRE

Rapid high purity lead-free tin / copper solder is a cost-effective and versatile alternative to conventional lead solder and is suitable for all but the most demanding general purpose applications.

- Tin alloy with 0.7% copper
- Flux cored
- Melting point 227°C
- Available in 18SWG and 22SWG
- Supplied on 100g or 500g reels
- Also available in 1.0mm diameter in a handy 12g tube

19SWG 12g Tube

Order code
85-1165 **£3.08**

18SWG 100g Reel

Order code
85-1162 From only
£4.61

22SWG 100g Reel

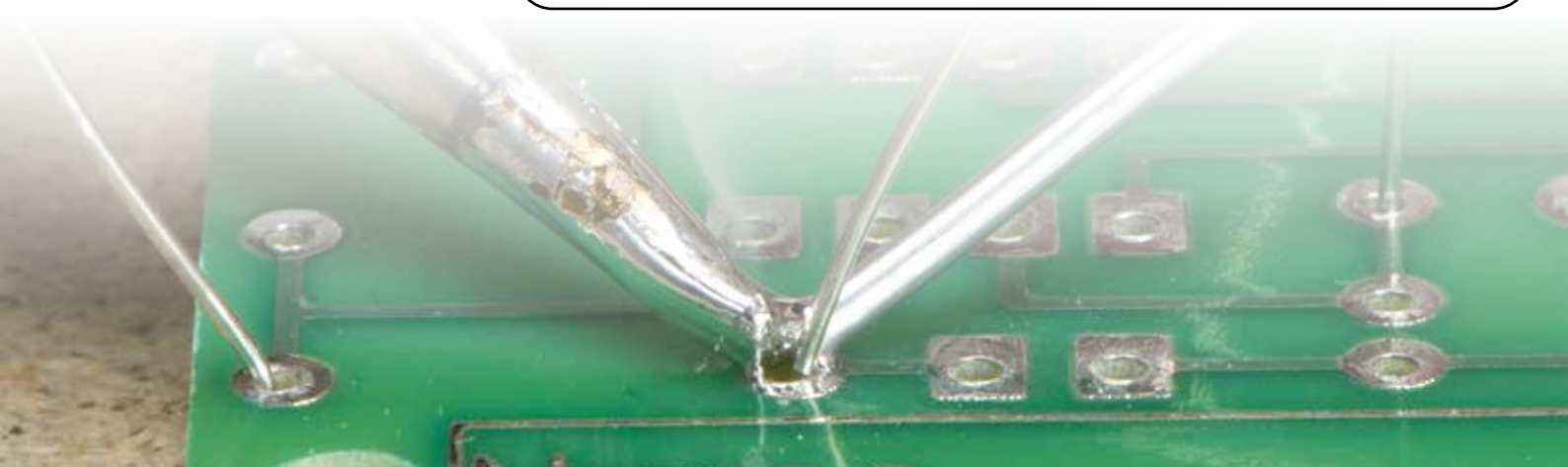
Order code
85-1166 From only
£23.98

18SWG 500g Reel

Order code
85-1164 From only
£5.12

22SWG 500g Reel

Order code
85-1168 From only
£25.90





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SEASONAL LED PROJECTS

Five Project Seasonal Minikit Pack

This starter set from Velleman gives you everything you need to start enjoying electronic projects.

The Velleman Seasonal Minikit Pack contains 5 different projects all with a festive theme. This pack contains the following kits: Electronic Christmas Tree (Rapid order code **70-4382**), Flashing LED Sweethearts (**70-4002**), 3D Christmas Tree (**70-4386**), Electronic Candle (**70-4406**) and Flashing Red LED Star (**70-4410**).

Order code
70-4466
£21.53



LED Animated Bell Kit

Order code
70-4148

£8.07



LED Halloween Pumpkin Kit

Order code **70-4162**

£6.99



Riding Santa Kit

Order code
70-4000

£14.59

Yellow Flashing LED Stars

Order code
70-4412

£8.07



Red Flashing LED Stars

Order code
70-4410

£7.65



Please note:
These are self-assembly kits and require soldering.

Electronic Christmas Tree

Order code
70-4382

£5.48



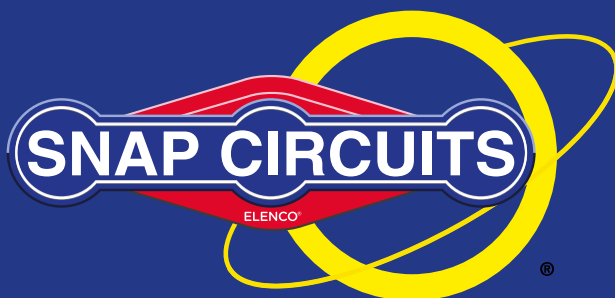
Prices start
as low as
£11.25



Snap Circuits® teaches basic engineering, electronics and circuitry concepts by using building components with snaps to assemble electronic circuits on a simple “rows-and-columns” base grid.

The resulting projects function like the printed circuit board found in most electronic products. Each Snap Circuits® part is easily identifiable by a different color and purpose, and each kit includes an easy-to-follow project manual.

The innovative product line offers a wide range of kits, in differing size and complexity, perfect for future engineers



ages 8+, with a beginner set designed for kids ages 5+.

The Snap Circuits brand has been endorsed by K12 primary educators globally and used in schools, libraries, museums, afterschool and home schooling

programmes, STEAM and Maker clubs. Many of today’s rising leaders in science and technology learned the basics of engineering by creating and inventing with Snap Circuits® as a child.

Teachers and educators worldwide use Snap Circuits® and its curriculum-rich, full-color manuals to teach kids basic concepts in a fun and exciting way. Educators also applaud Snap Circuits® because it reinforces other important skills, such as small motor skills and reading.

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Builds Over 500
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Strobe Light & Sound
Makes 14 Projects!

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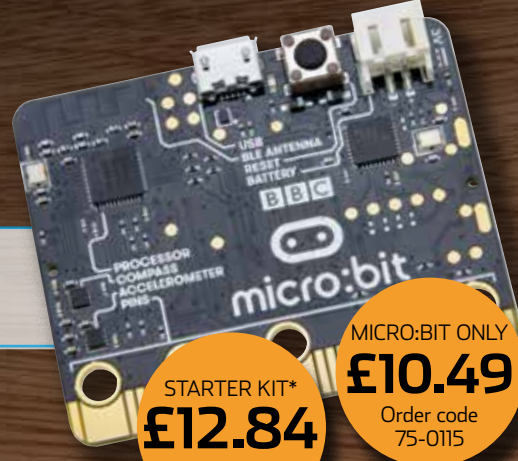
£14.75

LED Fun
Make 10 Different Projects!

Order code
42-0033

£11.25

micro:bit barely needs any introduction. Since its launch in 2016 when 1 million devices were delivered to students across the UK, micro:bit's popularity has continued to grow and the device has been used by students all over the world to learn coding and basic electronics.



What is micro:bit?

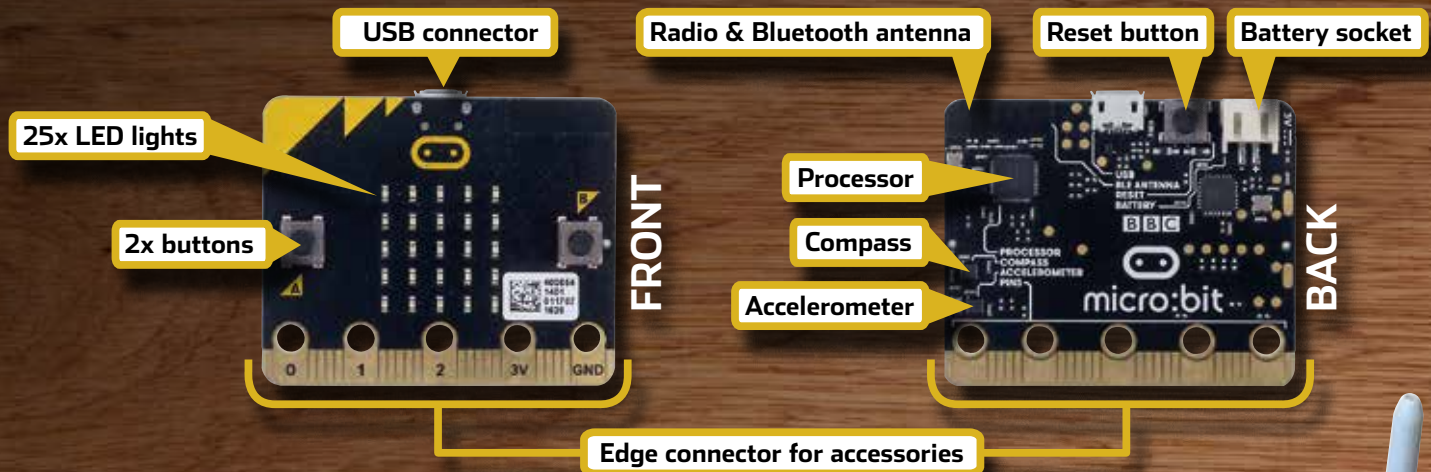
micro:bit is a small, handheld programmable computer that can be used for making all sorts of fun projects from robots and remote controls to wearable electronic devices.

It has an LED matrix on the front for displaying messages and shapes, two push-button inputs, a 3-axis accelerometer to detect movement in all directions and a compass to detect direction. It can also transmit to and receive data from another micro:bit which means it can be used to send messages or act as a remote control.

* Starter kit contains micro:bit, USB cable, switched battery box and 2x AAA batteries.

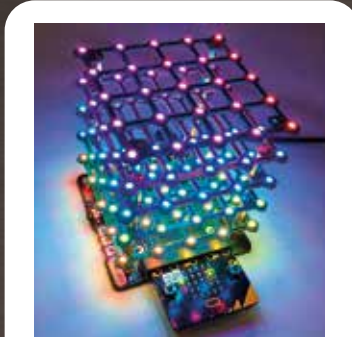
STARTER KIT*
£12.84
Order code 75-0116

MICRO:BIT ONLY
£10.49
Order code 75-0115



ROBO:BIT FOR BBC MICRO:BIT AND ACCESSORIES

Type	Order code	1+
Robo:Bit Buggy MK3	75-5014	£26.39
Line sensor	75-0127	£5.00
McRoboFace white	75-0147	£6.50
HC-SR04 v2	75-0146	£3.50
Talon/grabber	75-5008	£10.00



CUBE:BIT ADDRESSABLE RGB LEDs

Type	Order code	1+
3x3x3 RGB LEDs	75-5009	£18.00
4x4x4 RGB LEDs	75-5010	£37.98
5x5x5 RGB LEDs	75-0511	£75.00
Cube:Bit Base	75-5012	£10.00



BIT:COMMANDER GAME PAD FOR BBC MICRO:BIT

Type	Order code	1+
Bit:Commander	75-0898	£16.50



BIT:BOT XL ROBOT FOR BBC MICRO:BIT WITH ADDRESSABLE LEDs

Please note. BBC Micro:Bit (please see 75-0115), batteries, pen and ultrasonic sensor are sold separately - not included.

Type	Order code	1+
Robot only	75-5019	£34.90
Robot plus Bundle	75-0299	£39.95

BREAKOUT BOARD FOR BBC MICRO:BIT

Please note: The BBC micro:bit is not included.



Type	Order code	1+
Breakout Board	75-0264	£2.50



FOR FULL DETAILS ON ALL OF THESE PRODUCTS VISIT WWW.RAPIDONLINE.COM



Inventors
Kit
£41.17
Order code
73-5500

Makey Makey is an invention kit that allows you to turn everyday items into a touch pad that can be used to control your computer. But it is much more than just a replacement for your keyboard – by integrating Makey Makey with Scratch, you can now bring control and sensing to your programs.

So what is so cool about Makey Makey?

Well, you can turn just about anything that is conductive into an input device for your computer. Tin foil, fruit and veg, or just by drawing a shape with a normal pencil, the list goes on and on. Your students will learn about conductivity as well as getting to design their own input device or adding additional functionality to their Scratch programs.

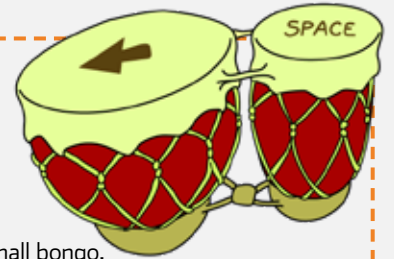
PROJECT IDEAS

Sounds great, so give me some examples of what I could do.

OK, let's start with something really simple – some Play Dough bongos. You can use off-the-shelf stuff or make your own from basic store-cupboard ingredients. Check out our Makey Makey page for a recipe!

Example 1

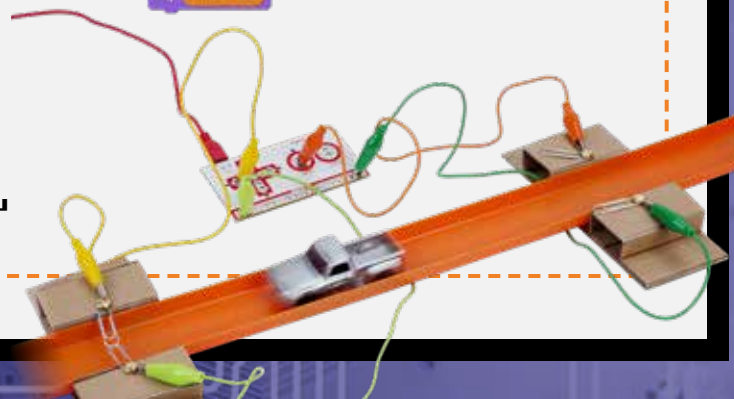
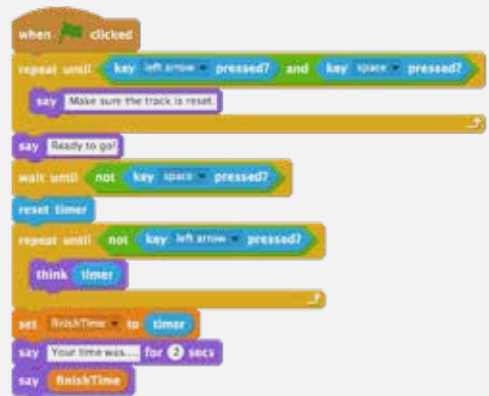
- 1) Once you have some Play Dough, make a couple of bongo shapes, one larger and one smaller.
- 2) Now visit apps.makeymakey.com/bongos in your browser.
- 3) Plug your Makey Makey into your USB port
- 4) Connect one crocodile clip lead to the left arrow pad and put the other end in the large bongo. Now connect another crocodile clip to the space pad and put the other end in the small bongo.
- 5) Make sure you are touching the earth on the Makey Makey with one hand and play the Play Dough bongos with the other!



Now try integrating your Makey Makey with a Scratch program. This one times a small toy car travelling along a track. You'll need some card, split pins, paperclips, a car and some track. You'll also need Scratch running on a computer with your Makey Makey connected to it.

Example 2

- 1) Using card, paper fasteners and paper clips, make some gates to suit your car track similar to those shown. The aim is to make the paperclips touch when the gate is closed and so they can be pushed open by the car as it passes through.
- 2) Place the gates one metre apart near the end of the track
- 3) Connect one side of each gate to the earth of the Makey Makey
- 4) Connect the first gate to the space pad and the second gate to the left arrow.
- 5) In Scratch, create the program as shown and run it
- 6) Make sure both gates are closed, the program will prompt you if they aren't. You will also see green lights on the Makey Makey next to the arrow and space keys if your gates are closed
- 7) Run the car down your track – the program will time how long it takes to pass between the two gates



Can you modify the program to tell you the speed in metres per second?



EDUCATION STARTER KIT

Order code 73-0166
from only

£185.95



STUDENT KIT

Learn the basics of programming, coding and electronics, including current, voltage and digital logic. No prior knowledge or experience is necessary as the kit guides you through step by step.

Order code
73-0207

£59.95

Teach 11 to 14 year old (middle school) students the basics of programming, coding, and electronics. No prior knowledge or experience is necessary as the kit guides you through step-by-step, you are well-supported with teacher guides, and lessons can be paced according to your students' abilities. You can integrate the kit throughout the curriculum, giving your students the opportunity to become confident in programming and electronics with guided sessions and open experimentation. You'll also be teaching them vital 21st-century skills such as collaboration and problem-solving.

Pixy 2 Vision Sensor Camera CMUcam5 Arduino/Pi Compatible

The Charmed Labs Pixy 2 vision sensor camera is smaller, faster and more capable than the original Pixy.

Like its predecessor, Pixy2 can learn to detect objects that you teach it, just by pressing a button. Additionally, Pixy2 has new algorithms that detect and track lines for use with line-following robots. The new algorithms can detect intersections and 'road signs' as well. The road signs can tell your robot what to do, such as turn left, turn right, slow down, etc. Pixy2 does all of this at 60 frames-per-second, so your robot can be fast, too.

No need to mess around with tiny wires - Pixy2 comes with a special cable that plugs directly into an Arduino and a USB cable that plugs into a Raspberry Pi, so you can get started quickly.

No Arduino or Raspberry Pi? No problem! Pixy2 has several interfaces (SPI, I2C, UART, and USB) and simple communications, so you can quickly get your chosen controller talking to Pixy2.

- Small, fast, easy-to-use, low-cost, readily-available vision system
- Learns to detect objects that you teach it
- Connects to Arduino with included cable. Also works with Raspberry Pi, BeagleBone and similar controllers
- All libraries for Arduino, Raspberry Pi, etc. are provided
- C/C++ and Python are supported
- Communicates via one of several interfaces: SPI, I2C, UART, USB or analog / digital output
- Configuration utility runs on Windows, MacOS and Linux
- All software/firmware is open-source GNU-licensed
- All hardware documentation including schematics, bill of materials, PCB layout, etc. are provided
- Kit contains: Pixy2 CMUcam5, Pixy IO to Arduino ISP cable, microUSB cable, mounting hardware

CHARMED LABS



£49.68

Order code 75-1010

CTC GO! MOTIONS EXPANSION PACK



Build on your high school students' STEAM knowledge with more complex programming concepts that develop computational thinking and 21st-century skills.

Key learning values

- Understanding the basics of servo control and being able to translate servo's rotational and linear motion by using gears and pulleys
- Expanding programming knowledge and concepts, controlling multiple attributes by reading data from sensors
- Being creative in ways of using resources and technology to design and develop physical computing projects
- Working collaboratively and efficiently to tackle real-world problems by following a design process

Order code
73-0163
from only

£595.95



ENGINEERING KIT Rev2

Challenge engineering students and help them develop physical engineering skills with the Arduino Engineering Kit Rev2. Featuring cutting-edge technology, the kit is a practical, hands-on tool that demonstrates key engineering concepts, core aspects of mechatronics, and MATLAB and Simulink programming.

Order code 73-0167
from only

£152.95

FOR FULL DETAILS AND TO SEE OUR FULL ARDUINO PRODUCT RANGE VISIT WWW.RAPIDONLINE.COM

BUILD YOUR OWN ARDUINO!

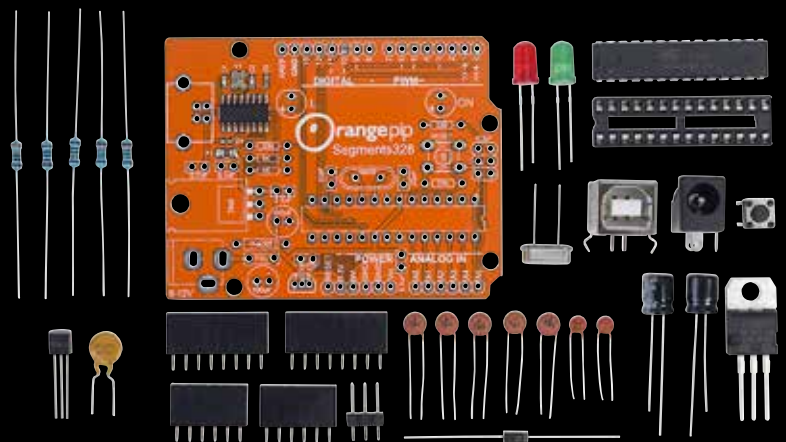


Orangepip Segments328

- An Arduino compatible board you can use in your own projects.
- Test your soldering skills!
- Understand the components needed to support a microcontroller.

Contents includes:

- | | |
|------------------------------|--------------------------------|
| 1 Orangepip Segments PCB | 1 Power supply jack socket |
| 1 x 16MHz crystal | 1 x 10K resistor |
| 1 ATmega328 microcontroller | 2 x 330R resistors |
| 1 Dual in line socket | 2 x 1K resistors |
| 1 Tactile switch | 2 x 47µF electronic capacitors |
| 1 Red LED | 1 x 1N4007 diode |
| 1 Green LED | 1 x 7805 voltage regulator |
| 1 x 6-pin dual row header | 1 x 7133 voltage regulator |
| 2 x 8-pin single row sockets | 1 PTC resettable fuse |
| 2 x 6-pin single row sockets | 5 x 0.1µF ceramic capacitors |
| 1 USB socket | 2 x 22pF ceramic capacitors |



SINGLE
£11.95

CLASSPACK OF 15
£120.00

Order code 75-1200

Order code 75-1201



Interactive Electronics

Tubes of electric paint were just the start.

Bare Conductive delivers capacitive, interactive experiences. With products like the Touch Board, Pi CAP as well as the classic, original conductive paint, surfaces can be brought to life by integrating touch or distance sensors and bespoke audio content. It is a joy to create with Bare Conductive – all the fun of electronics, without the sparks!



Electric Paint

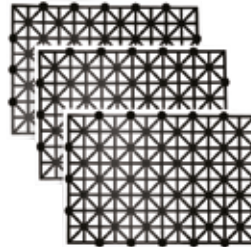
Bare Conductive Electric Paint is conductive which means that electricity from the battery can pass through it just like a wire. When you draw a circuit with a Bare Electric Paint Pen, the components and battery are joined together by the paint and make a complete loop, or circuit.

Type	Order code	1+
10ml Pen	70-0873	£9.00
50ml Jar	70-0874	£19.14
1l Tin	70-0885	£242.34

A5 Printed Sensors – Set of 3

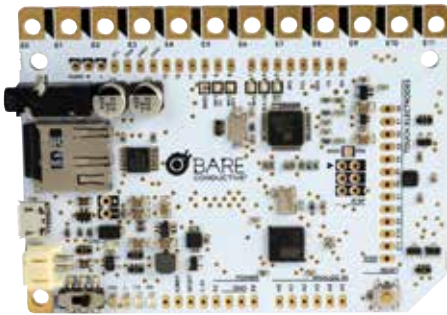
Order code
70-0882

£8.38



For full details and project ideas visit

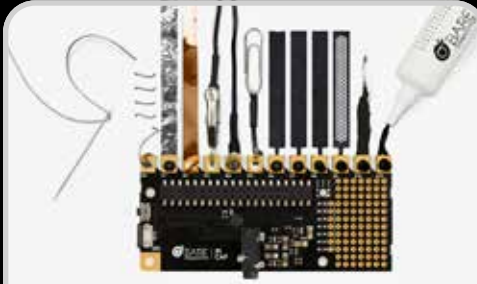
www.rapidonline.com/bare-conductive



Touch Board

Order code
70-0105

£35.84



Pi Cap for Raspberry Pi A+, B+ and 3

Order code
75-0720

£23.33



Electric Paint Lamp Kit

Order code
70-0881

£34.43



makeblock education

Makeblock Secondary Education Solutions are designed to develop students' higher thinking and coding skills. It includes well-equipped teaching resources and elaborate programming projects.



mBot Arduino Compatible STEM Robot Kits with Bluetooth or 2.4GHz

The **mBot from Makeblock** is the perfect introduction to robotics for STEM or personal use. It is based around the mCore programmable module with Arduino UNO compatibility which brings with it excellent online educational and tutorial resources.

Type	Order code	1+
mBot v1.1 2.4GHz	75-0701	£81.17
mBot Servo add-on	75-0704	£14.90
mBot 6-legged add-on	75-0705	£14.90
mBot LED matrix 8x16	75-0707	£8.11

563837



Arduino Compatible Ultimate Robot 10 in 1 Kit

The **Ultimate 10 in 1 robot kit from Makeblock** is the flagship of the Makeblock range with more parts, more possibilities and more fun. At the heart of the kit is the MegaPi robotics controller which is based on the popular Arduino Mega 2560 but with additional motor driver interfaces.


Order code
75-0695
£218.90



mBot Ranger Arduino Compatible STEM 3-in-1 Robot Kit

The **mBot Ranger 3 in 1 from Makeblock** is an intermediate robotics kit for STEM or personal use. It is based around the Me Auriga programmable module with Arduino Mega 2560 compatibility which brings with it excellent online educational and tutorial resources. The Me Auriga has a wide range of programming options from novice to expert using free Open Source tools including mBlock, a graphical Scratch-like programming tool, all the way up to C/C++ using the Arduino development tools.

Order code
75-0699
£135.18



Robot Grippers

These **Grippers from Makeblock** let your robot grab and carry objects giving you a new dimension of robot building to explore.

Type	Order code	1+
Mini-gripper	75-0706	£13.00
Robot gripper	75-0703	£24.37
RJ25 adaptor	75-0712	£3.09
Dual DC motor driver	75-0713	£19.37

563844



Codey Rocky Programmable Robot

The **MakeBlock Codey Rocky** is a coding robot for STEAM education. Codey provides an entertaining learning experience and introduction to programming for ages 6+. With the combination of easy-to-use robotics hardware together with mBlock 5 block-based programming, you'll be up and coding within minutes.

Order code
75-0516

Singly
£63.75

Order code
75-0519

Class bundle of 10
£649.99

For full details visit www.rapidonline.com/makeblock

£130.95
Order code
70-1100



£44.99
Order code
70-1101



£120.69
Order code
70-1108



DASH, DOT AND CUE

A COMPLETE PLATFORM THAT IS KID APPROVED,
TEACHER RECOMMENDED.



See full product details at
www.rapidonline.com/wonder-workshop



Launcher for
Dash Robot
£20.99
Order code
70-1102



Xylophone for
Dash Robot
£29.99
Order code
70-1103



Dash and Dot
Wonder Pack
£195.00
Order code
70-1104



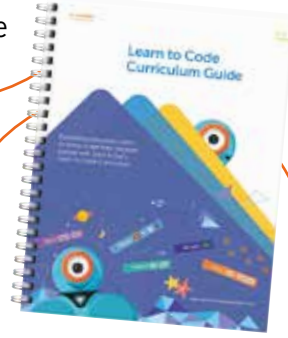
Dash and Dot Building
Brick Connectors
£12.90
Order code
70-1105



Dash and Dot
Accessory Pack
£29.99
Order code
70-1106



Dash and Dot
Challenge Card Set
£24.14
Order code
70-1107



Learn to Code Curriculum
Guide and Subscription
for Dash and Dot
£109.99
Order code
70-1109

Ozobot

THE SMALL BUT MIGHTY LOW COST ROBOT!

Here at Rapid we know a thing or two about educational robots and the Ozobot Bit and Ozobot Evo really grabbed our attention because of how easy they are to use. We'd go as far to say they are the easiest to use programmable robots we have ever seen.

One of the biggest barriers with robots can often be related to software rather than hardware – is it compatible with your machines? Do I need drivers?

Do I need to involve IT support? What about if I want to use a tablet? Ozobot removes all that pain. As long as you have an internet connection and a web browser, just about any device can program Bit and Evo. PC, Mac, tablet, smart phone, interactive whiteboard...

And even if you don't have a screen to hand, you can still program Ozobot with just pens and paper using the unique screen-free coding system.

So what can Ozobot do?

Essentially, Ozobot is a programmable line-tracking robot although this simple description doesn't do it justice. It has two motors, one on each side that allow it to move forwards, backwards and turn. There is a multicolour LED (or 6 LEDs on the Bit version) that can be made to light up any colour you like. A bank of colour sensors on the bottom of the robot can be used to track lines or detect the colour of the surface underneath the robot, meaning you can program it to respond to maps that you draw with normal felt tip pens on paper. The Evo version also has a proximity sensor for obstacle avoidance.



	Bit	Evo
Order Code - White	70-8200	70-8203
Price	£39.27	£86.17
2-motors for movement	✓	✓
RGB LEDs – Light up any colour	1	6
Colour and line sensors	✓	✓
Proximity sensors	x	✓
Push button sensor	✓	✓
Sound	x	✓
Bluetooth connection	x	✓
Programmable via Ozoblockly	✓	✓
Screen-free coding	✓	✓

OzoBlockly is a graphical programming language based on Blockly which is used by a wide range of educational coding tools. What makes Ozoblockly different is the five progressive programming modes that it offers.

Whichever skill level you are using, Ozoblockly has a built-in help file and plenty of challenges to keep your students busy. Simply colour-print the challenge "maps" on A4 paper and follow the task instructions.

OZOBlockly



Ozobot Pens Pack of 4 (Black, red, green and blue)

The Ozobot felt tip pens can be used to draw your own maps, mazes and challenges on normal paper which you can then solve by coding you Ozobot Bit or Evo. Many other standard black, red, green and blue felt tip pens also work just fine too.

£4.88

Order code 70-8202



Upload your programs to Ozobot by simply holding it against the screen of your device.

- ✓ Tablets
- ✓ Laptops
- ✓ Desktops
- ✓ Interactive whiteboards
- ✓ Smart phones

1
Pre-Reader

Suitable even for reception age children, Pre-Reader is the most basic mode in OzoBlockly. It has clear picture-based blocks that are large and easy to assemble.

2
Beginner

Beginner mode extends from Pre-Reader with the introduction of simple loops. Blocks are now described with text titles as well as pictures.

3
Intermediate

Control Ozobot's ability to follow lines using the line navigation category. Intermediate mode also introduces some simple if/else logic blocks.

4
Advanced

Advanced mode significantly expands Ozobot's programmability with the introduction of repeat, while and for loops, more logic, integers, variables and functions.

5
Master

Take full control over Ozobot in Master mode with the addition of lists and arrays

DRIVE FORWARD IS THE NEW HELLO WORLD

VEX IQ

VEX IQ is a robotics platform designed to transform STEM learning for young students (aged 8-15) and their teachers.

SUPER KIT

The Super Kit is where the VEX IQ experience begins. This comprehensive package is tailored to give you everything you need to build VEX IQ robots for both classroom and competition use. As well as having over 800 structural and motion components, the kits also contain motors, sensors, controller, batteries, charger, storage bin and free programming software.

Use the Super Kit to design your own robots from scratch or build one of the numerous robots from our detailed instructions.



Only
£327.99
Order code
70-7891



VEXcode IQ 2.0

The VEXcode family of programming software is used across all VEX Robotics products. VEXcode IQ 2.0 gives students the ability to create code in Scratch blocks or using C++ making it simple enough to pick up in KS2 but able to challenge programmers all the way through KS3 and beyond.

- Completely Free
- Integrated tutorials
- Scratch blocks and C++ text coding
- Available for Windows, Mac, Chromebook and iOS or Android tablets
- Download from www.vexrobotics.com/vexcode or via your device app store

No robot? No problem. Introducing VEXcode VR

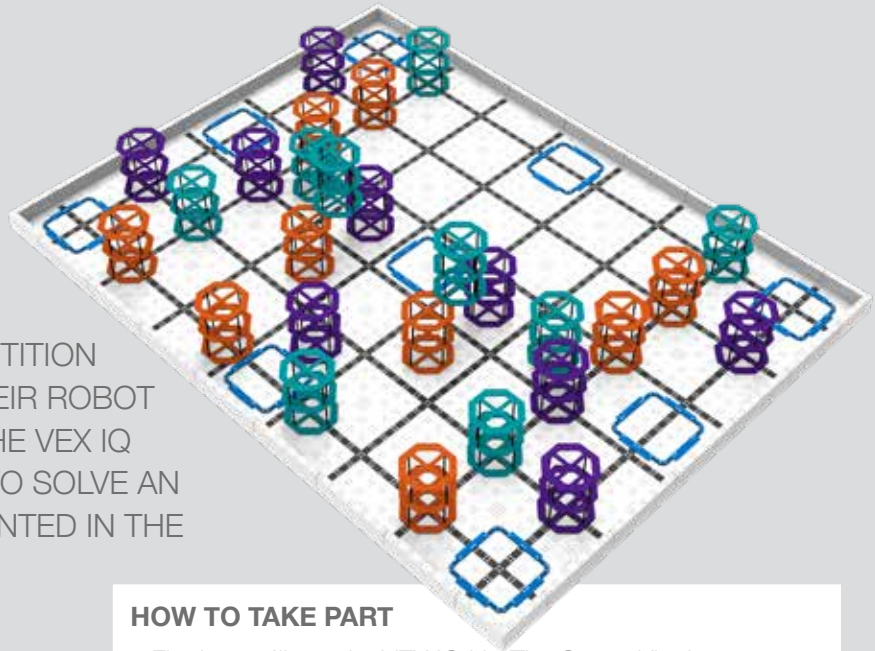


Students can't get access to a robot all the time. Sometimes it is just not practical – other groups may be using the hardware or there is just not enough hardware to go round. VEXcode VR is a browser-based virtual robotics coding tool that uses the same VEXcode interface as physical VEX robots so helps to support learning when access to a robot is not possible.

- Free to use
- No sign-in or installation required
- Integrated activities to teach numerous programming concepts
- Scratch blocks and Python text coding
- Blocks to Text conversion to support progression
- Supplements the use of physical robots in the classroom
- Works on any device with a compatible browser
 - Windows – Chrome, Firefox or Edge (Chromium only)
 - MacOS – Safari
 - Android – Chrome
 - ChromeOS - Chrome
- VEXcode VR runs in your browser – get started at vr.vex.com

VEX IQ CHALLENGE

(RISE ABOVE)



THE VEX IQ CHALLENGE IS A STEM COMPETITION FOR KS2 AND KS3 STUDENTS TO TEST THEIR ROBOT DESIGN AND PROGRAMMING SKILLS. IN THE VEX IQ CHALLENGE, STUDENTS BUILD A ROBOT TO SOLVE AN ENGINEERING CHALLENGE THAT IS PRESENTED IN THE FORM OF A GAME.

The 2020-2021 VEX IQ Challenge game is called Rise Above and it's a bit like three-dimensional noughts and crosses. The idea of the game is to use your robots to place the Risers in matching horizontal, vertical or diagonal rows. Once you have a completed row, you can make your scores even higher by stacking more Risers of the same colour on top of these in the row.

As with all previous years in the VEX IQ Challenge, there are three disciplines to master:

- Teamwork Challenge – you'll be paired with other teams and will need to work together to score as many points as you can
- Driver Skills - set the highest score you can with just your robot on the Field and using your controller
- Programming Skills – program your robot to score points autonomously, no controllers allowed

HOW TO TAKE PART

- Firstly, you'll need a VEX IQ kit. The Super Kit shown on this page is the perfect starting point and contains everything you need to build a robot. The kit is reused year after year.
- Next you'll need a way to program your robot – VEXcode IQ coding software is free and available for Windows, Mac, Chromebook and iOS or Android tablets
- Register a team at www.robotevents.com and sign up for events near to you. The 2020-2021 season will run later in the year than usual because of the logistical issues stemming from the Coronavirus pandemic. To find out more about how VEX IQ Challenge events will adapt to these circumstances, contact education@rapidonline.com
- Once you have registered a team, you will receive a Welcome Pack containing a Riser to help you design your robot. If you need inspiration for your first robot design, visit www.rapidonline.com/vexiq and go to the downloads section for robot build instructions. Rise is recommended for this game.

Coming Soon – preorder now!

VEX GO

GO get creative

Meet VEX GO.

An affordable construction system that teaches the fundamentals of STEAM through fun, hands-on activities that help young students perceive coding and engineering in a fun and positive way.



- Easy to assemble/disassemble
- Includes programmable Brain, battery, 3 motors, Eye Sensor, LED Bumper and Electromagnet
- Supplied in storage cases making it easy to keep track of parts
- Use the FREE VEXcode Blocks app on Windows, Mac, Chromebook, iOS and Android to program your creations

VEX GO kit £179.99

Shipping October

Preorder and find out more at www.rapidonline.com/vexgo

VEX 123

Robotics as easy as 123

Children as young as 5 can learn to code with VEX 123.



- Program sequences using the buttons on top of the robot
- Create more complex programs by sliding cards into the Coder
- Use the FREE VEXcode Blocks app on Windows, Mac, Chromebook, iOS and Android to unlock the full power of 123

Robot, Coder and cards £99.99

Shipping late 2020

Preorder and find out more at www.rapidonline.com/vex123



SoftBank Robotics

INTERESTED IN FINDING

OUT WHAT NAO

CAN DO?

ONLY WANT NAO

FOR ONE TERM?

**Pepper Robot
Academic Edition
with 3 year
warranty**

Order code 70-8870

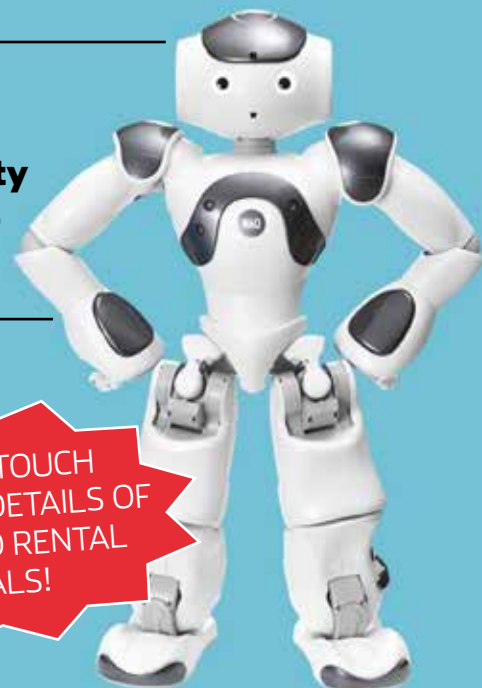
£14,300.00

For more information about
our NAO Robot rental deals
email education@rapidonline.com

**NAO6 Robot
Academic Edition
plus 2 year warranty**

Order code 70-8893

£5,400.00



GET IN TOUCH
NOW FOR DETAILS OF
OUR NAO RENTAL
DEALS!

Both models are fully enclosed designs with integrated HEPA filters which are strongly recommended for use in a classroom environment.



Rapid Exclusive Bundle Deal: FREE Red, White, Blue & Green PLA Filament

Up Mini 2 ES

Based on the original UP mini 2, the UP mini 2 ES 3D printer offers the same benefits that made its predecessor a best-seller, including HEPA filtration, Wi-Fi, and extensive materials compatibility. Its enclosure provides an outstanding anti-warping environment for ABS and other high-temperature printing while allowing for a wide range of filaments, from PLA to polycarbonate. However, the UP mini 2 ES also boasts new features not found in its older sibling:

- An enhanced colour touchscreen with onboard Linux operating system, capable of receiving programming updates for future additions to the touch-screen's menu and implementing innovations as they become available
- Pre-sliced print jobs can be saved as TASK files, a new file format that includes details such as layer height, print quality and infill
- The second USB port can be used to read TASK files from a USB memory stick, making printer operation without direct computer control possible
- Tiertime Print Queue provides a unique user interface for controlling a series of print jobs assigned to the printer by authorized users. It is accessible from both UP Studio and the printer's touchscreen
- An Ethernet port for wired LAN connectivity

Order code **25-0234** **£569.00**

UP 300

The Tiertime UP300 3D printer has been designed for users demanding a large build volume and consistent performance across different materials. It combines new innovations and improved, popular UP features with Tiertime's renowned reliability.

- Material-specific print heads - optimised temperature, etc., for different materials
- Double-sided interchangeable build plates - the glass surface provides a consistent, flat base, ensuring a smooth model underside, desirable for printing without a raft
- Dual air filtration - version 2 - for healthier 3D printing using HEPA and activated carbon with higher airflow capacity
- Control and monitor print jobs with a 110mm (4.3in.) full colour LCD touchscreen - Tiertime print queue, print job settings and print job status right at your fingertips
- Waste collection tray - a removable tray positioned below the build platform makes cleaning the bottom of the enclosure a breeze
- Tiertime Print Queue - control and re-order the print queue over a network connection
- Print directly from USB stick - includes a second USB port for loading print tasks (a sliced 3D model file with print settings embedded) from a USB memory stick
- Ethernet connection - in addition to Wi-Fi, the UP300 includes a LAN Port for those preferring to work in a more secure, hard-wired network environment

Order code **25-0233** **£1708.90**

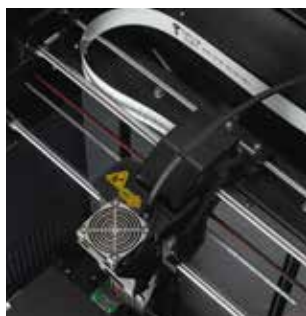
Dremel Digilab 3D45

The Dremel 3D45 Digilab 3D printer provides the flexibility and reliability needed to meet the demands of higher education, Maker-spaces and industrial applications that benefit from advanced FDM (Fused Deposition Modelling) 3D printing.

- Fully enclosed chamber for minimum noise
- HD camera for remote monitoring
- Easy filament set-up using RFID recognition
- Heated bed and cooling fan prevents warping
- Easy setup and print control via full-colour touch-screen
- Integrated filter systems for dust and fumes
- 50 micron build resolution
- Fast and accurate calibration with semi-automatic levelling
- Start printing via WiFi, Ethernet or using a file on a USB flash drive
- 1 year Dremel warranty
- Supplied complete with 500g reel of black ECO-ABS filament, 500g reel of black Nylon filament, 3x build tapes, power cable, USB flash drive, un-clogging tool, glue stick, removing tool and instruction manual
- **PLUS FREE** Red, White, Blue & Green PLA Filament

Order code **25-0536** **£1136.09**

For full product details and our range of 3D Printing Consumables visit www.rapidonline.com





education New products coming soon!

Build Students' Skills for Any Challenge

Hands-on LEGO® Learning is a universal language and LEGO® Education solutions for secondary school grow with students as they engage at every level, providing hands-on experiences that stimulate communication, creativity, collaboration, and critical thinking skills. When students learn with LEGO® bricks, coding tools, and supporting lesson plans for teachers, they ignite their natural curiosity and sharpen their scientific inquiry, engineering

“ WE SEE THE WORLD WITH OUR EYES, WE CHANGE IT WITH OUR HANDS ”

design, and data analysis skills — so they can succeed in their STEM classes today and realize their full potential as digital citizens and leaders tomorrow.

Hands-on LEGO® Learning is for life.

K'NEX Education



LEVERS AND PULLEYS

Learn and understand how pulleys and levers operate, with this great K'NEX education construction set, linked directly to the National Curriculum.

Order code 70-0620 X **£28.11**



BRIDGES

Build fantastic structures and bridges with this K'NEX education set.

• Pack contains activity cards, model ideas, Teachers notes and lesson plans

Order code 70-0626 X **£26.29**



AMUSEMENT PARK EXPERIENCE

This educational amusement park experience will help to illustrate how energy, acceleration, and speed work in popular thrill rides.

Students can assemble and operate a motorised roller coaster, swing ride, boom ride, Ferris wheel, scramble ride, and carousel from the 2235 pieces and additional supplies included in this kit.

Order code 70-0964 X **£168.71**

267-PIECE CLASSROOM COLLECTION

The KID K'NEX® 78690A Classroom Collection includes 267 pieces and blocks and can support up to 8 children building simultaneously.

The collection contains sufficient parts to build 23 models, 8 at a time.

Order code 70-0965 X **£57.64**



Jelutong

10x10x600mm

Pack of 100

Order code
06-0757

£21.09



Dowel

6x600mm

Pack of 100

Order code
06-1299

£11.87



Wooden Balls

25mm

Pack of 10

Order code
37-0424

£1.66



MDF Sheets

300x600x3mm

Pack of 36

Order code
06-0755

£29.95



Perspex® Cast Acrylic Solid Colour Sheets

These cast acrylic sheets from Perspex® are available in a choice of sizes and in a range of vibrant, bright colours. These coloured sheets will make any project get noticed – whether it's a sleek storage unit, a specialist point of sale display or a new corporate identity. With excellent resistance to outdoor weathering, unsurpassed batch-to-batch colour consistency and excellent environmental credentials, Perspex® Solid colours will help you bring your creative ideas to life.

Corrugated Plastic

605x605x4mm

Pack of 10

Order code
37-3315

£27.34



Order code
06-7734

£1.89

Neoprene Sheet Black

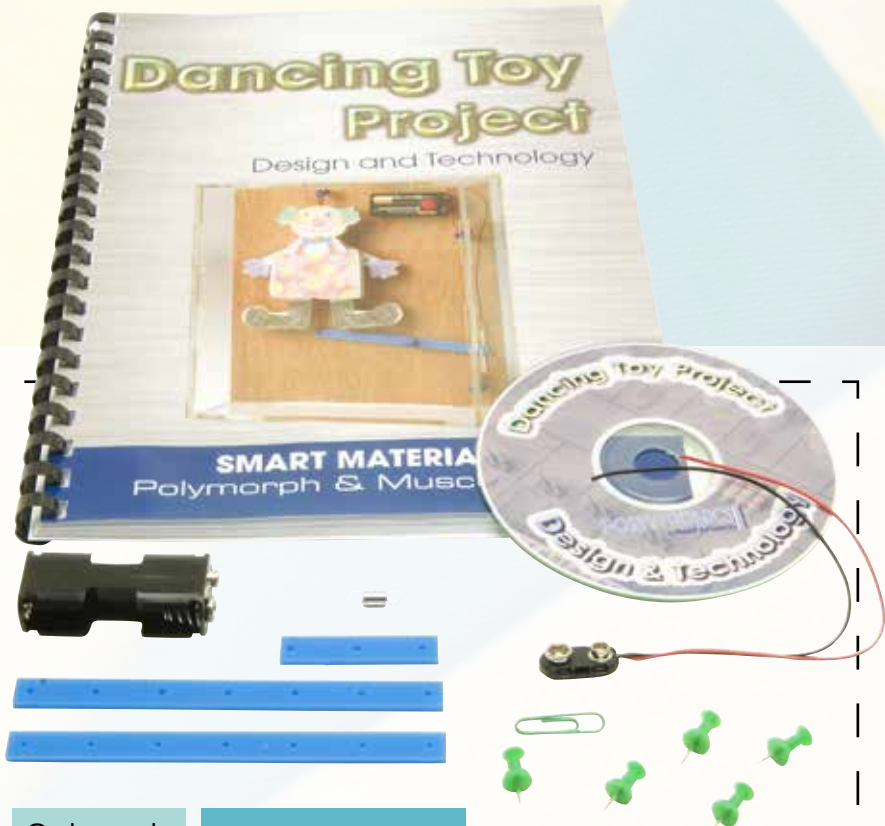
250x300x2mm

SEE OUR FULL RANGE OF CONSTRUCTION MATERIALS AT WWW.RAPIDONLINE.COM

E-TEXTILE PROJECT KITS



Light Stitches
E-Textiles for Education



Dancing Toy Smart Textiles Project

This exciting smart textiles and electronics project provides a fun way of using and understanding the properties of two smart materials, muscle wire and polymorph.

A polymorph or MDF model is constructed by the student. This is suspended by the muscle wire and via a set of levers. On passing a current through the wire the composition of the wire changes which makes it contract, the toy will then move its limbs and the spring will move them back.

- History of muscle wire, how muscle wire is crimped, underlying technology, contraction time
- Useful benefits, future research, sample applications, Frequently Asked Questions
- Four muscle wire projects
- Scheme of work, lesson plans, brief, design specification, product analysis
- Levers and linkages
- High-medium-low ability worksheets, assessment sheets, etc.

Order code
87-6123

£15.52

FOR MORE INFORMATION, SEARCH FOR 'LIGHT STITCHES' AT WWW.RAPIDONLINE.COM



Flashing LED Pencil Case Project Kit

A KS3 textile and electronics project that uses smart textiles and electronic components to create a flashing LED pencil case.

- Includes all components and materials to make one flashing green LED pencil case
- Free downloadable instruction booklet includes all the printable resources needed for lessons
- Due to this NEW smart material (conductive thread) connections can now be produced by a simple knot or sewing around the LEDs (Lights)

Order code
87-6107

£4.68



Camper Van Key Ring Kit

The Light Stitches Camper Van Key Ring Kit is a KS3 textile and electronics project. It is available as a single kit.

- Kit includes all components and materials
- Smart conductive thread allows connections to be made by simply tying a knot or sewing around the LEDs (Lights)

Order code
87-6149

£5.09



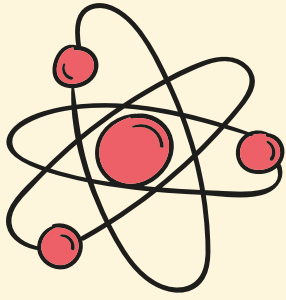
iPod™ Holder Smart Textiles Project Kit

A KS3 project that uses smart textiles and LEDs to create an illuminated iPod™ pouch.

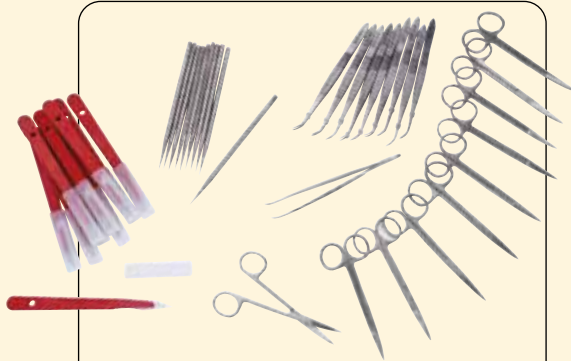
- Includes all components and materials to make one LED colour changing iPod™ holder
- Free downloadable instruction booklet includes all the printable resources needed for those lessons
- Due to this NEW smart material (conductive thread) connections can now be produced by a simple knot or sewing around the LEDs (Lights)

Order code
87-6105

£4.83



Science Bundles



Dissection Value Bundle

Order code 78-7206

£41.68

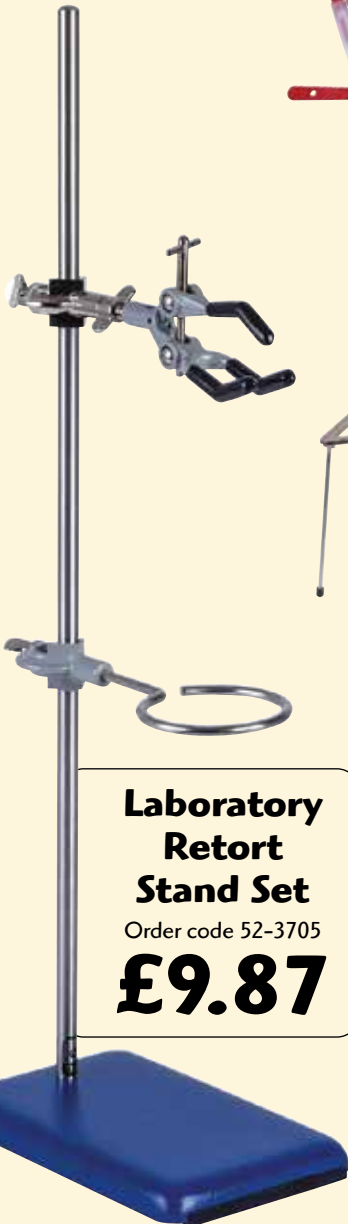


Biology Organs Model Bundle

Lungs, Heart & Kidney

Order code 78-7213

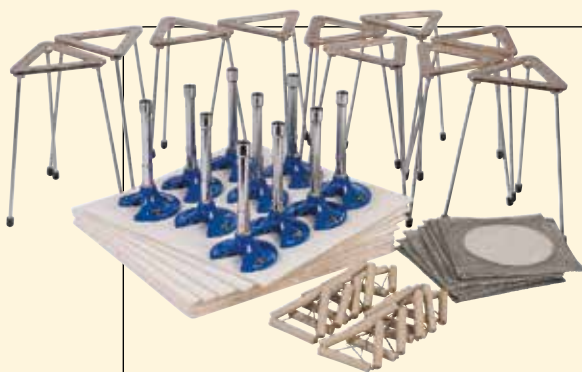
£89.07



Laboratory Retort Stand Set

Order code 52-3705

£9.87



Chemistry Basics Bundle

Order code 78-7210

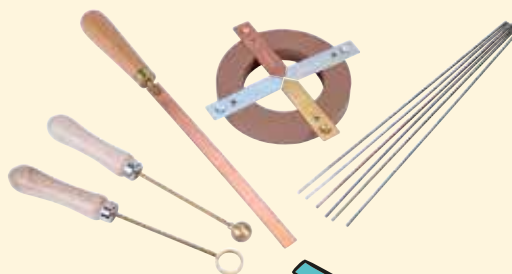
£95.21



Metal Block Calorimeter Bundle

Order code 78-7207

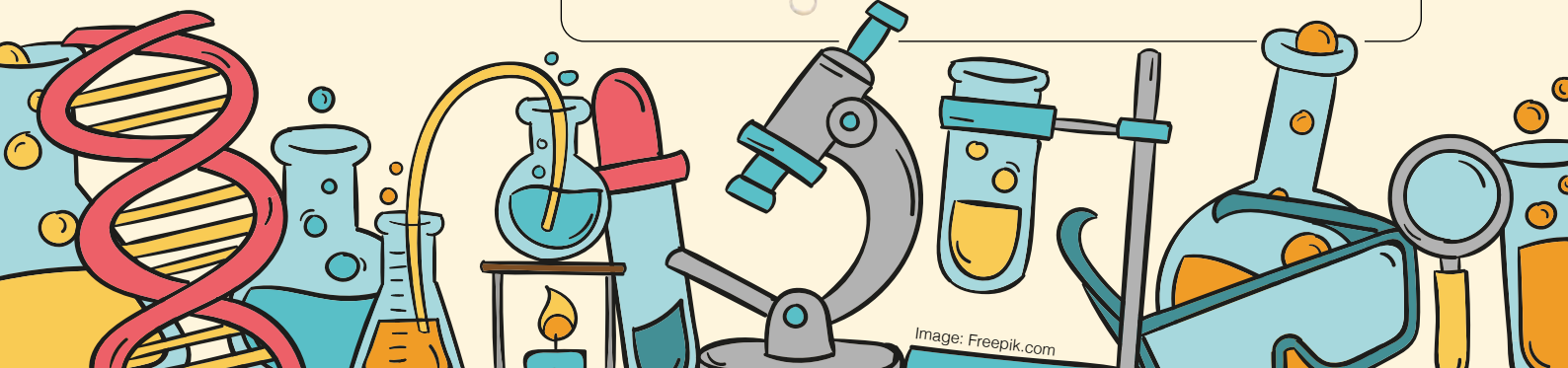
£56.30



Thermal Energy Bundle

Order code 78-7214

£14.95



ONE METRE WHEATSTONE BRIDGES

Wheatstone bridges allow accurate comparison of two resistances by sliding a 'jockey' contact along a metre length of 'resistance wire'.

When a balance is achieved, indicated by a zero reading on a galvanometer

(not included), the position of the jockey on the wire, gives an indication of the ratio of the two fixed resistances.

If the value of one of the fixed resistances is known, the value of the other can be inferred.

These substantial bridges have broad, heavily plated brass strips mounted on a polished hardwood base. Terminals with 4mm sockets are provided. 24 SWG constantan wire is stretched along the top of a metre scale graduated in mm and cm.

- Supplied with jockey
- Dimensions 1.13m x 80mm x 5mm approx.
- Available in 2-gap and 4-gap models
- Eisco PH1156 series

Four Gap Bridge

Order code **52-3627** **£26.21**

Two Gap Bridge

Order code **52-3628** **£17.74**

JOLLY BULB WITH GAUGE

This Jolly bulb apparatus consists of a 60mm diameter bulb directly connected to a bourdon pressure gauge.

The apparatus is used for investigation of gas at a constant volume. By inserting the glass bulb into either warm or cold water, the expansion or contraction of the air contained in the bulb can be seen as a pressure change on the gauge.

- 60mm diameter glass bulb
- Gauge calibrated in both kg/cm² and in psi
- Eisco type PH0138C

Jolly Bulb with Gauge

Order code **52-3700** **£32.33**

Physics



shaw
magnets

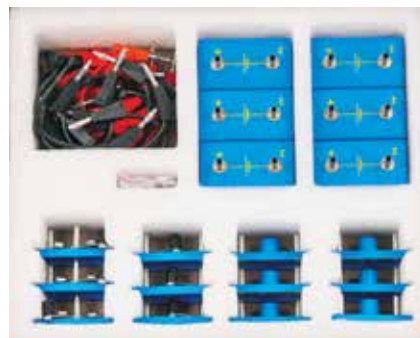
Magnet Electricity Kit - Connections

26 Piece Set

Covering the needs of the National Curriculum Science for Key Stages 1 & 2, this unique set uses the force of magnets to make all connections between bulbs, switches, motors and buzzers.

Order code
17-1506

£37.51



Primary Basic Electricity Kit A

This basic student kit from Eisco has been designed as a resource for the introductory teaching of electricity.

- Set includes 6x bulb, 6x bulb holder, 6x switch, 8x red cable, 8x black cable
- Includes detailed instruction manual

Order code
52-4207

£27.55



Rapid

Newton's Colour Disc

This apparatus demonstrates the discovery, made by Newton, that white light is made up of seven individual colours. The apparatus consists of a pulley mounted on a metal stand. The seven-coloured disc is driven by a belt connected to a hand-driven wheel. When the disc is rotated fast, the eye is unable to distinguish between individual colours and perceives it as white.

Order code
06-2243

£13.29

Full range of Physics products available at: www.rapidonline.com

Rapid
education

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Vast range of chemicals available from Rapid

NOTE:

Rapid Electronics supplies this product to customers in the expectation that it will be used for legitimate purposes. However, all chemicals, whether individually or in combination with other substances, have the potential to be extremely dangerous and pose a risk to human life.

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For delivery outside of the UK, please phone Customer Services on +44 (0)1206 751166.

www.rapidonline.com/chemicals



Chemistry

molymod®

MMS-004 Inorganic - Organic Teacher Set
- 108 Atoms, 86 Links



Set contains 108 atoms: 14 Hydrogen (I, II), 20 Carbon (IV, V), 22 Oxygen (II, IV), 10 Nitrogen (III, IV), 13 Sulphur (II, IV, VI), 7 Phosphorus (III, IV, V), 8 Halogen (I), 14 Metal (I, II, III, IV, VI), 18 Lone pair 2D paddles (6 pink, 6 purple, 6 beige) Links: 38 Medium grey, 12 medium purple, 36 Long flexible

ONLY £26.41
Order code 52-0474

molymod®

MMS-009 Inorganic - Organic Student Set
- 52 Atoms, 37 Links



Set contains 52 atoms: 14 Hydrogen (I), 6 Carbon (IV), 7 Oxygen (II, IV), 3 Nitrogen (III, IV), 2 Sulphur (II, VI), 2 Phosphorus (III, V), 6 Halogen (I), 8 Metal (I, II, III, IV, VI), 4 Brown (III, IV, V, VI), 3 Lone pair 2D paddles (beige) Links: 20 Medium grey, 5 Medium purple, 12 Long flexible

ONLY £13.24
Order code 52-0475

Rapid

Density Identification Set - Set of 15 Mixed Materials



This set consists of specimens of 15 different types of materials. Its aim is to challenge students to identify materials by measuring their mass, length and volume to determine their density.

ONLY £18.32
Order code 06-2164

Full range of Chemistry products available at: www.rapidonline.com



Science Bundles

Class pack bundles – save up to 30% off list price on product bundles

www.rapidonline.com/science-bundles

Biology



Double Sided Magnetic Human Body - 17 Piece Set - 900mm

ONLY £16.99

Order code 06-8962

Rapid

Working Stethoscope

A real working, traditional style stethoscope of conventional design allowing students to learn about the function of the lungs, heart, monitor heart rates and measure the effects of exercise.

ONLY £3.92

Order code 52-0539

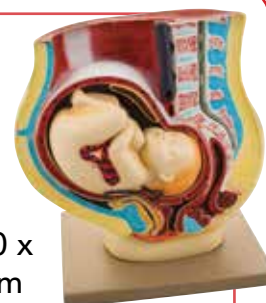


eisco

Human Pregnancy Model With Removable Foetus - 420 x 230 x 420mm

ONLY £46.02

Order code 52-3508



INVICTA EDUCATION

Rain Gauge

An inexpensive and accurate rain gauge, graduated in millimetres. The gauge can be used free-standing or with the provided detachable spike. A lid prevents spillage for when the gauge is carried.

ONLY £5.84

Order code 52-1604



INVICTA EDUCATION

Insect Pooter 70x54mm

- Collects insects and small organisms and deposits them into the viewing chamber
- The Pooter consists of a small, reusable jar with a green lid containing two holes; one of which has a fine mesh covering

ONLY £1.78

Order code 52-3097



Rapid

Zoom Pocket Microscope

A simple, yet robust LED illuminated pocket microscope that allows you to see things under high magnification even in poor light conditions.

- 20x to 40x zoom
- Super bright LED illumination
- Size: 100 x 80 x 30mm

ONLY £6.99

Order code 06-7089



Full range of Biology products available at: www.rapidonline.com

Temperature

Order code **52-3300** **£17.89**

Light Level

Order code **52-3301** **£17.89**

Acceleration

Order code **52-3303** **£24.89**



Mini USB Dataloggers

This range of mini USB dataloggers are an indispensable tool for investigations and experiments where there is a requirement to record temperature, light level, or acceleration.

The dataloggers are in the form of a USB stick, so no cables are required to retrieve data or configure the device. The sensor, memory and battery are all encapsulated on a single circuit so no additional hardware is required.

Simply plug the datalogger into your PC or laptop and configure it. Unplug it and position it where you want it to log. At the end of the logging period, plug it back into your PC or laptop to retrieve your data.



LINE EA 3010 DIGITAL HAND-HELD ANEMOMETER

A hand-held anemometer with a digital display that can measure wind speeds from light air to violent storm. The meter can also measure wind chill factor and temperature.

- Simple and straightforward operation
- Measures wind speed in km/h, mph, m/s or knots
- Wind display to Beaufort on bar graph wind scale
- Temperature display in °C or °F
- LCD backlighting
- Auto power off
- Splashproof
- Neck strap
- Battery included



Wind Gauge

Order code **60-7418** **£34.10**

LogIT



Price each

Order code **88-2667** **£34.13**

Price Pack of 10

Order code **88-2669** **£299.97**

LED Voltmeter

These compact and tough bench Voltmeters have clear and bright green coloured displays on the front of the unit and horizontal 4mm input sockets on the rear, allowing convenient use on a workbench.

This arrangement allows the position of the meter within a circuit to be easily seen, with the connecting wires laying flat.

- Voltmeter range: 0 to 20 Volts (2 decimal places)
- Accuracy: $\pm 0.5\%$

Current Measurement Set

This adaptor and probe set allows easy measurement of current in a DC circuit. When measuring voltage at the same time the negative terminal of each probe must be connected to the same point in the circuit.

- Current measurement with resistor or lamp, ohms law
- Heating effect of current (with temperature sensor), power (with voltage probe), capacitor discharge.

Current Measurement Set

Order code **85-2711** **£41.00**



- Display size 32 x 19mm
- 4mm input sockets mounted horizontally on rear panel
- Colour-coded 4mm input sockets mounted horizontally to allow cables to lay flat
- Tough ABS case
- Unit size 130 x 90mm
- Rear height 40mm, front height 15mm allowing perfect student viewing angle
- Powered by 2x AA batteries (included)
- SmartPower – manages internal batteries to extend life and performance
- Designed and manufactured in the UK



Air Hardening Air Drying Clay - Terracotta & Stone

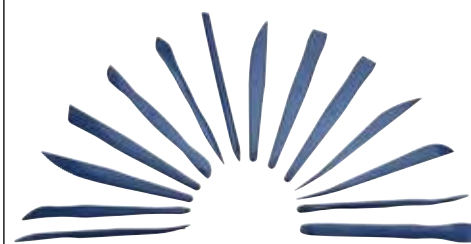
Colour	Pack size	Order code	1+
Terracotta	2.5kg	06-5439	£4.25
Terracotta	12.5kg	06-0687	£10.95
Stone	1kg	06-2285	£1.75
Stone	2.5kg	06-5433	£4.45
Stone	12.5kg	06-0641	£10.95



Newclay Air-Drying Modelling Clay

Newclay 12.5kg

Order code 06-0142 **£12.00**



Plastic Modelling Tools

These different plastic modelling tools are ideal for sculpting and contouring.

- Supplied as **set of 14 pieces**

Order code 06-0044 **£1.49**

Over 35 colours



System 3 Acrylic Paints

Daler-Rowney's System 3 Acrylic Colour Paint is a durable, water-resistant, acrylic-based paint with excellent adhesion.

500ml Bottles **£6.45**

2.25L Bottles **£22.95**



System 3 Screen Printing Medium

Daler-Rowney System 3 Screen Printing Medium enables you to use your screen printing equipment again and again. The medium slows down the drying of acrylic colour on the screen and reduces the risk of screen blocking, making it easier to wash out with soap and water. The medium can be thinned with water.

1L Pack Order code 06-8708 **£8.49**

5L Pack Order code 06-8710 **£30.81**



Marbling Inks

Using the principle that oil floats on water, marbling can produce a simple way of giving spectacular results on paper and other porous materials.

- Set contains red, black, green, blue, yellow, orange, purple, brown, turquoise and prussian blue oil
- Supplied as a **set of 10x 25ml dropper bottles**

Marbling Inks Order code 06-0078 **£8.04**

For full details on all of these products visit www.rapidonline.com



Graduate Premium Hardback Spiral Books

High quality spiral-bound premium hardback sketch books from Daler-Rowney.

Type	Order code	1+
A5 Spiral book	06-6105	£2.04
A4 Spiral book	06-6108	£2.79
A3 Spiral book	06-6106	£4.04



Available in pads or loose sheets



A3/A4 Tracing Paper 62gsm

This tracing paper is ideal for a host of various projects, including art and crafts. The 62gsm sheets are also great for drawings, sketches, transfers and overlays in pencil, marker and ink.

Size	Pad/sheets	Order code	1+
A4	Pad	06-0981	£1.35
A3	Pad	06-0983	£2.39
A4	Sheets	06-0985	£3.21
A3	Sheets	06-0987	£5.80



White and Coloured 250gsm A4 Card

Medium weight A4 card, available in plain white or assorted colour packs.

- Assorted colour pack contains 20 sheets each of: Red, Yellow, Mid Green, Mid Blue and Dark Blue
- Acid-free
- Supplied in **packs of 100 sheets**

Type	Order code	1+
A4 White card	06-0930	£6.41
A4 Coloured card	06-0932	£7.46



Polystyrene Sheets

Great for all 3D applications, these textured polystyrene ceiling tiles can be layered or alternatively cut into highly intricate shapes, using a heated cutting knife.

- 300 x 300mm
- Approximate thickness 8mm
- Supplied in **packs of 20**

Order code 06-0732 **£11.67**

MAJOR BRUSHES

Magic Snow Instant 100g

This remarkable material is a form of polyacrylamide, capable of absorbing many times its own weight in water and expands rapidly when wet to form a snow-like mass.

- Mix with water to make your own snow as seen on TV and film sets
- Ideal for science investigations and as the raw material for snow machines that pupils design
- Non-toxic
- Re-useable when dried
- Available in **100g packs**
- Makes approximately 16 pints of snow



Order code
06-8121

£4.21

RVFM

Make Your Own Christmas Crackers

Make your very own Christmas crackers with this cracker kit.

- Each cracker is 39cm long and 60mm in diameter
- Plenty of space to put your own special gift inside
- Can be painted and decorated in many ways
- Supplied as pre-cut and scored white blank cards
- All you need to do is to add a little imagination
- Suitable for Key Stages 1 & 2 (ages 5 to 11)
- Supplied in **packs of 20**



Order code
06-4014

£5.33



Glitter Shakers ASSORTED COLOUR PACKS

- No-fuss glitter
- Excellent for adding sparkle and shimmer
- Available in **packs of 6x 500g**
- Colours: multi-coloured, silver, gold, blue, red and green

Order code
06-5815

£40.38



Rapid

Textile Cones

- Cardboard cones
- Ideal for making models
- Especially suited to making Christmas Angels
- Just add a polystyrene ball, a doily and some cardboard wings!
- Approx. dimensions: height 170mm, outside diameter 64mm tapering to 40mm
- Hole in top is approx. 26mm
- Supplied in **packs of 30**



Order code
06-0911

£4.83

Rapid

Spun Paper Egg in Egg Cup

These spun paper eggs have their own egg cup attached and are ready for you to decorate with your pens, pencils, crayons or paint.

- Life-size: approximately 80mm tall
- Ideal for Easter Decorations
- Decorate with pens, pencils, crayons or paint
- Supplied in **packs of 10**



Order code
06-8626

£4.27

Artstraws Ltd.

Wooden Lollipop Sticks

These natural coloured lollipop sticks form Artstraws are a useful construction material which can be easily coloured and glued.

- Size: 115 x 10mm
- Ideal for construction and model making
- Pack contains ideas leaflet for DT and craft projects
- Supplied in **packs of 1000**
- Artstraws type CT3771



Order code
06-4131

£4.86

MAJOR BRUSHES

Natural Wooden Lolly Sticks

Great value packs of natural wooden lolly sticks.

- Ideal for construction and model making
- Approximate size 114 x 10 x 2mm
- Available in **packs of 200 and 1000**



Pack of 200
Order code 06-1195

£0.77

Pack of 1000
Order code 06-0717

£4.27

Rapid

Jumbo Natural Lolly Sticks

These lolly sticks are an ideal resource for the creative child.

- Made from plain wood
- Dimensions 150(L) x 19(W) x 2mm thickness
- Provides children with hours of constructive fun
- Supplied in **packs of 100**
- **CE approved**



Order code
06-4220

£1.46

Artstraws Ltd.

Coloured Pipe Cleaners

Pack of assorted colours, standard-sized pipe cleaners.

- Length: 150mm
- Supplied in **packs of 100**

Order code
06-0194

£1.04

Rapid

Pipe Cleaners White 15cm - Pack of 100

Standard size pipe cleaners available in white.

- Length: 150mm
- Supplied in **packs of 100**

Order code
06-0192

£1.05

Artstraws Ltd.

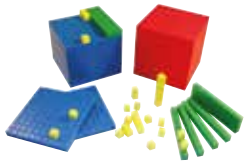
Bright Pipe Cleaners

Bright coloured standard size pipe cleaners.

- Length: 300mm
- Supplied in **packs of 100**

Order code
06-7572

£1.92



INTERLOCKING
BASE 10 SET

Order code 52-3107 **£9.62**



BASE 10 NUMBER
STRUCTURE SET

Order code 06-0786 **£10.12**



CUISENAIRE
PLASTIC RODS

Order code 52-0872 **£45.36**



Order code 06-8954 **£12.80**



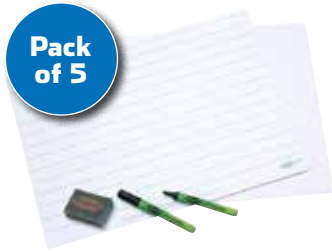
TENNIS BALLS
ASSORTED PACK OF 12

Order code 53-2060 **£5.65**



RIGID LINED DRYWIPE
A4 WHITEBOARDS

Order code 34-9780 **£16.27**



A3 DRYWIPE BOARDS
WITH LINES

Order code 98-0792 **£22.95**



KALEIDOSCOPE LONG
SENTENCE STRIPS

Order code 98-0208 **£5.19**



ASSORTED SMALL
FLASH CARDS

Order code 98-0200 **£6.72**



PRECISION
THUMBWHEEL
COMPASS

Order code 34-2042 **£5.96**



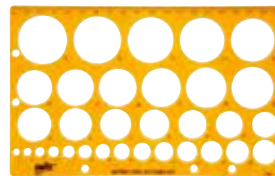
VALUE MATHS
SET

Order code 52-4000 **£1.48**



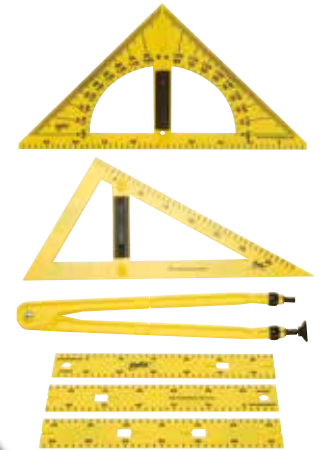
300mm TRIANGULAR
SCALE RULE

Order code 52-9818 **£4.26**



CIRCLE
TEMPLATE
32 circles - 3 to 34mm dia.

Order code 34-2500 **£2.35**

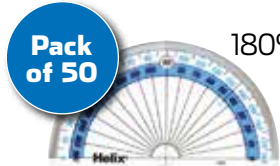


BOARD EQUIPMENT
SET

Order code 34-2590 **£30.40**

Order code 34-2040 **£1.13**

METAL COMPASS



180° PROTRACTORS

Order code 34-2665 **£13.85**



SET
SQUARES

Order code 34-2670 45°/45°
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each

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Year	Pack qty	Order code	1+
1	5	53-0110	£26.79
1	30	53-0104	£126.56
2	5	53-0111	£26.79
2	30	53-0105	£126.56
3	5	53-0112	£26.79
3	30	53-0106	£126.56
4	5	53-0113	£26.79
4	30	53-0107	£126.56
5	5	53-0114	£26.79
5	30	53-0108	£126.56
6	5	53-0115	£26.79
6	30	53-0109	£126.56
Monster Pack of 180			
180x A3 whiteboards			53-0116 £709.70

KEY STAGE 1 & 2 WHITEBOARD GAMES PACKS

Order code 53-0101



Only **£60.94**
Each

Order code 53-0102



Order code 53-0103

Wipes & Sanitising



Pack of 1000 single Wipes
Order code 87-0181

£188.14



Pack of 30 Wipes
Order code 87-0180

£3.09

750ml Super Professional
Antiviral Disinfectant
Order code 34-2238

£4.99



75% Alcohol Hand Sanitising Gel with Tea Tree Fragrance



200ml pump bottles
Order code 87-2708

£44.99



500ml pump bottles
Order code 87-2710

£54.99



5L screw-top bottle
Order code 87-2706

£39.99

Fastenings & Fixings – Handles



Hands Free Door Opener L-Bow Handle

Order code
31-0100

£7.99



Order code
65-3713



Order code
65-3714



Order code
65-3715



Order code
65-3716

Hands Free Door Opener 71 x 105 x 78mm Polyamide

£9.99
EACH

Partitioning Screens



829mm x 927mm
(W x H)
Order code 65-3705

£66.75

1029mm x 927mm
(W x H)
Order code 65-3706

£89.99

Acrylic Hygiene Screens Protective Walls



500mm x 850mm
(W x H)
Order code 65-3707

£49.21



700mm x 850mm
(W x H)
Order code 65-3708

£57.77



850mm x 700mm
(W x H)
Order code 65-3709

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