

# SNAPHOT SPECIALS

#### AIR ZOOKER

It's back! The amazing Airzooker air cannon will blow you away!

Blast a harmless vortex of air up to 6 meters towards any object or person. An interesting hands-on way to learn about air vortices and Newton's laws of motion. Requiring no batteries or electricity, the AirZooker works simply by pulling and releasing a builtin elastic launcher.



#### SINGLE HOT PLATE

Portable stainless steel electric hotplate. Sealed single-plate design. Designed to meet Australian Standards

- Power:1500W
- Stainless steel finish with diecast heating element
- Thermostat Control
- Automatic Safety Shut-off with Thermal Fuse
- Power Indicator Light

Plate: 185mm diameter

Overall: 460 x 260 x 65mm (L x W x H)



\$63

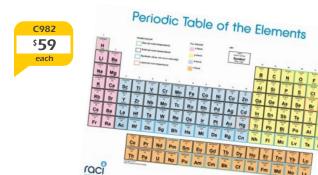
\$39

#### PERIODIC TABLE CHART, RACI

RACI, in conjunction with Haines Educational, are pleased to announce the arrival of the new periodic table.

This is the latest, totally up-to-date version, with all elements named and given their appropriate values. Made for use by all Senior Schools, this fully colour coded table is suitable for wall mounting.

Made from laminated heavy duty card, it is capable of being rolled up for storage without damage. Size 120 x 85cm.



# FOR THE VERY BEST IN SCIENCE **ORDER NOW!**

#### **INFINITY MIRROR**

LED lights and mirrors come together to create a dazzling optical illusion. Use the included LED lights to make the mirror appear like it will go on forever. Powered by USB, this is a fascinating and unique mirror will enthral your students.

Minimal assembly required. Mirror size 16cm tall.





### **ACCELERATOR**

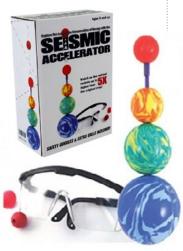
The Multiple Collision Accelerator that works like a real Super Nova!

The Seismic Accelerator has four balls threaded on a rod, with the largest at the bottom and the smallest at the top. When dropped vertically, the bounce energy from the bottom ball is transferred to the next ball, and so on until the energy reaches the top ball - and WOW! You see, the transferred energy increases with each ball, causing the top ball to be blasted off at up to 5

times the drop height! Includes safety glasses and teacher's guide.

Size: 15cm tall





\$38

#### **CONDUCTIVITY SET**

Consists of 12 various material strips screwed onto a plate. Test their conductivity easily. No more missing samples or strips! Size: 23 x 9cm

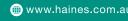
#### RADIATION CANS, SET OF 3

Not all colours are created equal. Investigate how colour can influence absorbing and radiating energy. The cans are finished with black, white, and silver exteriors, so students can easily determine the effect of surface colour on heat transfer. Set of three 500mL cans with stoppers to accommodate thermometer. Supplied without thermometer.



HAINES EDUCATIONAL 😊 52 GILBERT PARK DRIVE KNOXFIELD VIC 3180

(03) 8736 6000 (03) 8736 6020 (@ sales@haines.com.au (@) www.haines.com.au

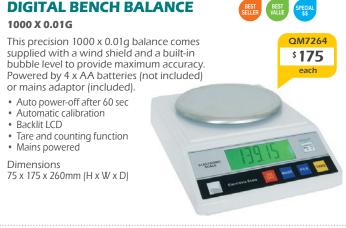


**HAINES NOW SELLS CHEMICALS** Contact us if you haven't already received one.

### **Great products at low prices!**













#### **LIGHT SOURCE COLOURED, SET/3 LEARN ABOUT THE PROPERTIES OF LIGHT**

This set of 3 coloured lights (red, green blue) is a simple and effective way to explore light and optics. Attach to a whiteboard or use on a table. Battery operated (included). Notes and suggested experiments included.

Size: 20 x 35 x 20mm (per block)

Note: Prisms & lenses set (P576) recommended

P607 \$29 set/3 Set/3 P6075 \$130





#### TESEP ROCK KIT

not filtered. Made in Australia.

Genuine & safe Switchable



A curriculum essential!

A safe, large 29pc rock set especially designed for Australian schools as part of the Teacher Earth Science Education Programme (TESEP). Includes one free registration to a TESEP professional development workshop. One of the best rock kits available anywhere in the world and assembled by a dedicated team of TESEP geoscientists. Purchase this set of 10 igneous, 9 metamorphic and 10 sedimentary rocks that are all:



- Large palm sized samples so key features can be studied
- Completely safe, free from asbestos, asbestos-like minerals and other toxic materials. Each rock sample has been inspected by TESEP geoscientists
- Guaranteed to be what we say they are
- Labelled with numbers with a list to ensure you always know which is which
- Nicely boxed, one box for each rock type (igneous, metamorphic, sedimentary)
- Free from distracting secondary minerals and other features not relevant to Australian year 8-9 students
- Collected from reliable sources for ease of replacement if lost or damaged beyond use

In addition, by registering for a free PD session (valid for one person), you will have access to:

- Stories about each rock, where they come from and how they formed
- Question and Answer materials to support student inquiry
- Extension materials including:
  - o Virtual 3D versions online
  - o Virtual thin sections to see what they are like on the inside

Register for your free PD session at www.tesep.org.au Dimensions:

350mm x 270mm x 100mm (W x D x H) each of 3 boxes





# HAINES

# LAB MANAGER

#### SAFETY SCREEN, **POLYCARBONATE**

Protect yourself from spills and debris from demonstrations and other hazards.

An ideal way to maintain hygiene standards as well. High quality and hard wearing clear polycarbonate safety screen, 60cm x 60cm size. Sits on a bench top. Made of 3mm thick polycarbonate. Unit comes flat packed, sides interlock with the

The screen comes with a protective film which needs to be removed prior to use.



815671

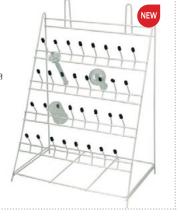




# DRAINING RACK, BENCH/WALL MOUNTED, 32 PLACE

Sits on the bench or mount it on a wall. Size is 360x500mm, 32 pegs (70mm long). Nylon coated wire.





flask not included

# FOR THE VERY BEST IN SCIENCE, ORDER NOW FOR TERM 1!

**EXPLORE. DISCOVER. INNOVATE.** 

#### **POWER SUPPLY**

For banana plugs and alligator clips, with front mounted on/off switch, overload trip.

Output Range/Max: 2-12V AC, 2-12V DC/5A



#### SILICONE BENCH MAT, **PACK 10**

Economical and ideal for all your lab work. 30x40cm size, 1mm thickness, non-stick, non-porous and non-toxic surface. Simply wipe or rinse clean. Heatproof to 220C.

Not suitable as a cutting mat.



\$99 pk/10

#### **DIGITAL BENCH BALANCE**

#### 1000 X 0.01G

This precision 1000 x 0.01g balance comes supplied with a wind shield and a built-in bubble level to provide maximum accuracy. Powered by

4 x AA batteries (not included) or mains adaptor (included).

- Auto power-off after 60 sec
- Automatic calibration
- Backlit LCD
- Tare and counting function
- Mains powered





#### **MULTI-TEST** pH METER

Comes complete with relevant electrodes, batteries and operational instructions.

pH Range/Resolution: 1 to 15 pH, 0.01 pH

EC Range/Resolution: 0-2000 μS, 2-20mS / 0.1 μS, 1 μS, 0.01mS

TDS Range/Resolution: 0-1000 ppm, .1-10 ppt / 0.1ppm, 1ppm, 0.01ppt

Salinity Range/Resolution: 0-10 ppt, 0.10 ppt

Temperature Range/ Resolution: 0 to 60°C, 0.1°C

#### **MULTI-TEST METER**

- Sound/Light level/ Temperature & Humidity meter
- · Ideal for all your classroom applications



HAINES EDUCATIONAL





ELITEPCTS

\$395

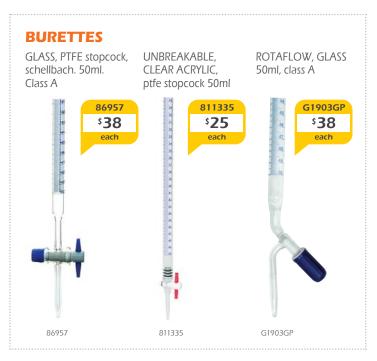






#### **NEOPRENE TUBING**

- · Non-slip strong tubing with reinforced ends
- Safe and secure connection of bunsen burners to gas taps
- Also suitable for condensers
- · Length 900mm





#### FIRST AID KIT 53 PIECE

Ideal for the smaller sized classrooms. This kit contains sticky plasters, bandages, safety pins, anti-bacterial solution, scissors and much more. All packed in a super durable, red high visibility nylon storage case.









 Holds stopwatches, map readers and compasses

Nozzle only

\$55.80

• 15 slots



#### **WATER BATH - 14L**

This simple, general purpose water bath is designed to rest on and be heated by an IEC Hot Plate or Hot Plate/ Stirrer (not included). Even heating may be accomplished by manual stirring or by using a magnetic spin bar in conjunction with a magnetic stirrer/hotplate.

- · Stainless steel bath for superior durability & high thermal efficiency
- Thermometer (not included) required to monitor temperature if a temperature controller is not used
- · Can also be used as a dry oven and will form an important part of IEC's new Gas Chromatograph Contact us for IEC hot plate/stirrer or thermometer.

Internal Dimension: 260 x 180 x 125mm (L x W x H)



#### **TEMPERATURE** CONTROLLER

This thermostat fits over the edge of the IEC Water Bath to control the hot plate. This ensures that the water temperature in the water bath is maintained.



(03) 8736 6000 (B) (03) 8736 6020

# **Great products at low prices**





#### **LABCOATS**

#### **BRAND NEW LABCOATS FOR USED COAT PRICES!**

Specify Colour When Ordering

• No Min Order Quantities!

Cotton Polyester / Press Button Studs / 3 pockets

XX-Small LCNXXS X-Small LCNXS Small LCNS Medium LCNM X-Large LCNXL

was \$39 \$26 each

**Navy Blue** was **\$39** Small LCNSB Medium LCNMB Large LCNLB \$29 X-Large LCNXLB

#### LAB COAT RACK - SINGLE RAIL

Portable single rail rack for keeping your lab coats organised and crease-free. Mounted on sturdy rubber wheels. Chrome-finish.

• Holds up to 80 coats

- You never have to fold your coats again!
- Easily store your coats
- Count & sort
- · Wheel them around easily
- Hang them up to dry



#### **GLOBAL HARMONIZATION STANDARD** (GHS) SAFETY LABELS

#### 25 X 25mm - 100 LABELS/ROLL

CODE	DESCRIPTION	UNIT	PRICE \$
GHS01	Explosive	each	9.90
GHS02	Flammable	each	9.90
GHS03	Oxidizing	each	9.90
GHS04	Gases Under Pressure	each	9.90
GHS05	Acute Toxicity	each	9.90
GHS06	Health Hazard	each	9.90
GHS07	Corrosive	each	9.90
GHS08	Chronic Health Hazard	each	9.90
GHS09	Environmental	each	9.90

#### 50 X 50mm - 100 LABELS/ROLL

CODE	DESCRIPTION	UNIT	PRICE \$
GHS10	Explosive	each	11.50
GHS11	Flammable	each	11.50
GHS12	Oxidizing	each	11.50
GHS13	Gases Under Pressure	each	11.50
GHS14	Acute Toxicity	each	11.50
GHS15	Health Hazard	each	11.50
GHS16	Corrosive	each	11.50
GHS17	Chronic Health Hazard	each	11.50
GHS18	Environmental	each	11.50

#### 100 X 100mm - 100 LABELS/ROLL

CODE	DESCRIPTION	UNIT	PRICE \$
GHS20	Explosive	each	14.70
GHS21	Flammable	each	14.70
GHS22	Oxidizing	each	14.70
GHS23	Gases Under Pressure	each	14.70
GHS24	Acute Toxicity	each	14.70
GHS25	Health Hazard	each	14.70
GHS26	Corrosive	each	14.70
GHS27	Chronic Health Hazard	each	14.70
GHS28	Environmental	each	14.70



**DUN102** 

**DUN103** 

With insert

No insert

### **BOTTLES**

#### **DROPPING, SCREW CAP**

\$1.10

		CLEAR GLASS, WITH DROPPER				
			VOL	CODE	PRICE \$	
			25ml	BS250	1.40	
			50ml	BS500	1.50	
			100ml	BS100	1.60	
				AMBER GLASS, WITH DROPPER		
	1	Made in Australia	25ml	BS250A	1.40	
		Aus	50ml	BS500A	1.50	
DABCO - UNITRAY		100ml	BS100A	1.60		
Ideal for storing dropping bottles.		3171	RE DROPPE OPPING BO			
TYPE	CODE	PRICE \$	25ml	BS251	0.90	

#### **BOTTLES - STULL DROPPING, WITH STULL CAP**

CLEAR, POLYETHYLENE				
VOLUME	QTY	CODE	PRICE \$	
125ml	pk/50	DB125S	64.00	
50ml	pk/50	DB50S	54.00	
Stull cap only, 125ml & 50ml	each	SC002	0.70	
15ml	pk/10	DB1510	16.00	
15ml	pk/50	DB1550	74.00	



#### **STULL DROPPING BOTTLE STORAGE TRAYS**

FOR 6 BOTTLES				
MODEL	CODE	PRICE \$		
50/125 ml	TSB506	16.00		
FOR 12 BOTTLES				
50/125 ml	TSB5012	19.50		



\*Stull bottles not included

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50ml

100ml

6.50

5.00

BS501

BS601

0.90

1.10

■ 52 GILBERT PARK DRIVE KNOXFIELD VIC 3180



#### **ELECTRIC HEATING MANTLE**

GE327701 \$240

GE327801 \$240

GE327901 \$250 for 500ml flask

GE328001 \$265 for 1000ml flask

# omega I 101W/ \$670

#### **DISHWASHER-BENCH TOP**

Compact design features the electronic control panel at the top of the door for easy selections. Comes with stainless steel interior.

Size: 44 x 55 x 50cm (L x W x H)

- Connect directly to your tap
- Large 6 place capacity (42 pieces)
- 6 wash program options
- · Residual hot air drying
- Three-stage filtration cycle

#### SINGLE HOT PLATE

Portable stainless steel electric hotplate. Sealed single-plate design. Designed to meet Australian

- Power:1500W
- · Stainless steel finish with diecast heating element
- Thermostat Control
- Automatic Safety Shut-off with Thermal Fuse
- Power Indicator Light

Plate: 185mm diameter

Overall: 460 x 260 x 65mm (L x W x H)



\$295

# DISHWASHER -TEST TUBE RACK

Holds up to 132 test tubes



# \$420

#### **COPOLYMER PROTECTIVE BENCH MATS, 10/PKT**

#### **COLOUR CODE YOUR LAB!**

These 1mm thick flexible bench mats are waterproof, heat resistant to approx. 150°c, chemically resistant to moderate concentrations of acids and alkalis, and very cut resistant.

\*Available in green, blue or red. One colour only per pack. Please specify when ordering.

• 305mm x 370mm (H x W)



#### SENIOR TROLLEY

- 1 x Senior Trolley
- 1032 x 508 x 960mm

#### JUNIOR TROLLEY

- 1 x Junior Trolley
- 854 x 473 x 960mm



#### GLASS WASTE BIN WITH LID AND **LINER**

Disposable. 47 litres. Ideal for school science labs for the safe waste collection of broken glass. This box is printed with broken glass warnings and hazard symbols to help reduce potential workplace injuries from broken glass being put in general waste. Delivered flat, is easily assembled with plastic liner and flip top lid that can be removed when full to seal down box for safe transport to recycling.

77 (H) x 32 (W) x 31 (D)cm

L421 \$22 L4211 \$99





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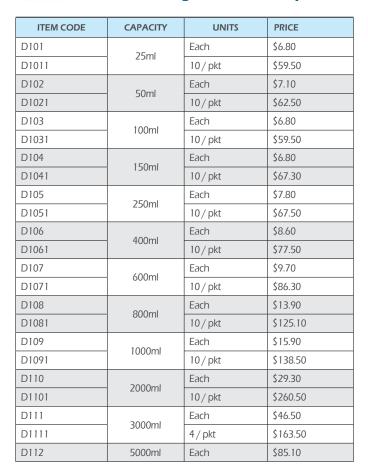


# SCHOTT DURAN® GLASSWARE 2021





#### SCHOTT DURAN® Beaker Low form with graduation and spout





**INTRODUCING THE WORLD'S MOST HIGHLY REGARDED GLASSWARE SCHOTT DURAN®** 

- The complete range is now available from Haines Educational
- The following items will be in stock at exceptional prices

**CHECK OUT THE NEW** YOUTILITY BOTTLE RANGE



#### **SCHOTT DURAN® Erlenmeyer flask** Narrow neck, with graduation





ITEM CODE	CAPACITY	UNITS	PRICE
D201	50ml	Each	\$8.60
D2011	301111	10 / pkt	\$77.40
D202	100ml	Each	\$8.20
D2021		10 / pkt	\$73.80
D203	250ml	Each	\$8.60
D2031		10 / pkt	\$77.40
D204	500ml	Each	\$10.50
D2041	3001111	10 / pkt	\$94.50
D205	1000ml	Each	\$18.20
D2051	1000ml	10 / pkt	\$164.00
D206	2000ml	Each	\$29.50



#### **SCHOTT DURAN®** NEW **Erlenmeyer flask** Wide neck, with graduation



ITEM CODE	CAPACITY	UNITS	PRICE
D301	50ml	Each	\$8.70
D3011	301111	10 / pkt	\$78.30
D302	100ml	Each	\$8.60
D3021	100ml	10 / pkt	\$77.40
D303	250ml	Each	\$9.20
D3031		10 / pkt	\$82.80
D304	500ml	Each	\$11.00
D3041	3001111	10 / pkt	\$99.00
D305	1000ml	Each	\$18.10
D3051	TOOOTII	10 / pkt	\$162.90
D306	2000ml	Each	\$31.50
D3061	2000ml	10 / pkt	\$283.50

### A new generation lab bottle by Schott Duran®...



Specially shaped gripping zones on both sides of the bottle enable easier and safer handling.

The slimmer YOUTILITY bottle shape allows a more optimal use of limited space on benches, shelves and autoclaves.

With the new YOUTILITY bottle thread opening or closing the bottle is significantly faster. The thread is fully compatible with DIN GL 45 closures and other accessories.



#### **SCHOTT DURAN®** YOUTILITY bottle, clear, graduated with cyan screw-cap and pouring ring (PP)

ITEM CODE	CAPACITY	UNITS	PRICE
D601	125ml	Each	\$11.90
D6011		4 / pkt	\$39.40
D602	250ml	Each	\$11.50
D6021		4 / pkt	\$43.80
D603	500ml	Each	\$13.20
D6031	500ml	4 / pkt	\$49.80
D604	1000ml	Each	\$18.90
D6041		4 / pkt	\$68.10













**SCHOTT DURAN® Laboratory Glass Bottle, Amber** with screw cap and pouring ring (PP)



#### **SCHOTT DURAN® Laboratory** Bottle, clear, graduated with screw-cap and pouring ring (PP)

ITEM CODE	CAPACITY	UNITS	PRICE
)1	50ml -	Each	\$11.00
)11		10 / pkt	\$95.00
)2	100ml	Each	\$9.80
)21		10 / pkt	\$89.00
)3	250ml	Each	\$11.30
)31		10 / pkt	\$99.50
)4	500ml	Each	\$12.50
041	Suumi	10 / pkt	\$111.20
)5		Each	\$18.20

ITEM CODE	CAPACITY	UNITS	PRICE
D401	50ml	Each	\$11.00
D4011	301111	10 / pkt	\$95.00
D402	100ml	Each	\$9.80
D4021	100ml	10 / pkt	\$89.00
D403	250ml	Each	\$11.30
D4031		10 / pkt	\$99.50
D404	500ml	Each	\$12.50
D4041	3001111	10 / pkt	\$111.20
D405	1000ml	Each	\$18.20
D4051	TOOOTTII	10 / pkt	\$161.00
D406	2000ml	Each	\$36.50
D4061	20001111	10 / pkt	\$325.30
D407	5000ml	Each	\$215.80



### **SCHOTT DURAN® Spares**

2000ml

NEW	

\$1084.60

ITEM CODE	CAPACITY	UNITS	PRICE
LB525	Cap, lab bottle, blue, GL 45	Each	\$3.80
LB520	Pouring ring, blue, GL 45, pkt 10	10 / pkt	\$14.90

10 / pkt

≥ 52 GILBERT PARK DRIVE KNOXFIELD VIC 3180

D5051



# **PHYSICS**

**MAGNETIC LINES OF FORCE** 

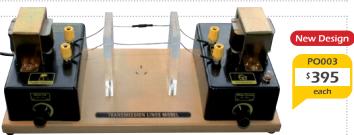


This two part unit is ideal for showing the lines of force surrounding both U shape and bar magnets. Made of strong polystyrene, the position of the many compass needles can be seen easily by the whole class. Easy to set up and store, it comes complete in a styrofoam case. Great for showcases!

**DEMONSTRATION EXTRA LARGE MODEL** 

Size: Bar magnet 17cm Ø, 20cm high. U Magnet 21cm high x 17 cm wide





#### **POWERL LINES TRANSMISSION MODEL**

Show safely and effectively why electricity is stepped up to 1,000s of volts when transported over large distances. Measure all currents and voltages in the power station, transmission lines and home. Compare the electricity loss (with step up) to the electricity loss (no step up). Includes teacher's notes and instructions.



ballistic launcher, rigid arm pendulum, angle backdrop, steel ball, and release mechanism are all included. This unit can be used to aid in the understanding of momentum, velocity, conservation of momentum and energy, potential energy, and kinetic energy. Its sturdy construction and clear labels make it easy to use. Available in November 2020. Size: 50cm long.

# FOR THE VERY BEST IN SCIENCE, ORDER NOW FOR TERM 1!

**EXPLORE. DISCOVER. INNOVATE** 

# **CLASSROOM DIGITAL**

The most accurate, reliable and indestructible DC meters ever, the three models cover 0-20 x 10 mA, (LB2122-001), 0-2x 1mA, (LB 2122-010) and 20x 10mV (LB123-001). Reversible polarity, large displays, auto off. Light and compact, able to withstand massive overload. A must for all senior schools

CODE	DESCRIPTION	PRICE \$
LB2122-001	Ammeter,+/-20A.DC, x10mA, AUTO PWR OFF	80
LB2122-010	Ammeter +/- 2A.DC, x 1mA,AUTO PWR OFF	80
LB2123-001	Voltmeter +/- 20V.DC. x10mV,AUTO OFF	80



#### OSCILLOSCOPE, DIGITAL STORAGE, 25MHZ

This fully featured digital storage oscilloscope (DSO) is packed with features, including trace capture, PC interface, storage of data on portable media, on-screen menus, mathematical functions and a full 64k colour TFT. This DSO can also serve as a benchtop multimeter and frequency counter. Includes probes, software and USB cable.

#### LENZ LAW APPARATUS

The Lenz Law Apparatus allows you to demonstrate electric and magnetic forces. 2 identical-looking plugs are dropped through the copper pipe, but react very differently. As you watch them drop through the viewing window you will see 1 drop quickly and without resistance while the other moves slowly through the tube. Comes with a Teacher's Guide.

\$38 each



# HODSON

HODSON 12V. STANDARD KIT

The comprehensive kit of parts permits many experiments in basic optics and colour blending.



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#### **SLOTTED MASSES, STAINLESS STEEL**

- High quality stainless steel
- Can not tarnish
- Exceptional weight stability
- Extra strong hook and weights
- Spare hangers & slotted weights available



#### **DEMOUNTABLE TRANSFORMER SET**

Easily conduct activities to illustrate electromagnetism and induction with this set of dissectible coils and cores. Kit consists of a plastic base, a laminated iron core, mounting fixtures and six coils protected in a heat resistant film. Also useful in basic transformer experiments.

Coils: 200, 400, 600, 800, 1600, 3200

Includes comprehensive instructions and activity

#### Best Value

Total = 500g

#### **DYNAMIC CART, METAL**

#### PERFECT FOR INCLINED PLANE & BENCHTOP EXPERIMENTS

- Modern and compact, designed with robust metal bodies and wheels
- Low friction wheel bearings with individual spring suspension

One end of the metal body carries an integral spring plunger/trigger system for explosion experiments, whilst the other end has a clamping screw for attaching ticker tape. Includes velcro pads for non elastic collisions and locating pins to permit secure stacking of

Size: 150 x 78 x 50mm, 600q per cart



#### **IDEAL FOR THERMODYNAMIC STUDIES**

# P411 \$55

# **LESLIE'S CUBE**

Tin plate box with 130mm sides. The vertical faces of the box are blackened, roughened, varnished and polished respectively. The top opening is fitted with a stopper with a hole for a thermometer (not supplied)



#### **ICE MELTING PLATES**

A great demonstration for conductivity and heat transfer. The melting plates display quizzical properties when an ice cube melts on each plate. The aluminum plate that is cold to the touch melts the ice faster than the plastic foam plate, even though both have equivalent temperatures.

- Includes instruction manual
- 1x each aluminum & foam plate (9 x 9 x 1cm)

P150

\$36

per set

Prices do not include GST

# \$79 per set

#### **EXPANSION OF LIQUIDS APPARATUS**

For demonstrating the different thermal expansions of various liquids. Comprising five glass tubes in a frame and supported in a water trough. The frame has a special sliding arrangement with clips to hold glass bulbs with tubes.

The bulbs can be easily removed and fixed and have funnel formation on top for easy filling. Size: 29 x 14 x 38cm



#### **FIRE SYRINGE DEMO**

Safely demonstrate the principle of the Diesel engine ignition, where heat is produced when a gas is rapidly compressed. When the plunger in the transparent cylinder is rapidly pushed down over a piece of cotton or paper towel, ignition occurs.

Size: 22cm tall

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**HAINES NOW SELLS CHEMICALS** 

Contact us if you haven't already received one.





#### **LIGHT SOURCE COLOURED, SET/3**

#### LEARN ABOUT THE PROPERTIES OF LIGHT

This set of 3 coloured lights (red, green blue) is a simple and effective way to explore light and optics. Attach to a whiteboard or use on a table. Battery operated (included). Notes and suggested experiments included.

Size: 20 x 35 x 20mm (per block)

Note: Prisms & lenses set (P576) recommended

#### **MAXWELL'S** WHEEL

Investigate conservation of mechanical energy and momentum with this intriguing device. The wheel is rolled to the top by means of strings wound on its axle. When released, its potential energy becomes kinetic, allowing it to roll back down. At the bottom, kinetic energy is converted into potential and the wheel rolls upward again. In an ideal world this would continue forever, but friction eventually sets in and the wheel will stop. 44 x 29cm



#### REFRACTION AND REFLECTION APPARATUS

The laws of refraction and reflection are easily demonstrated by this new portable apparatus. A vertical semicircular white enamel plate is marked in one degree intervals 0-90-0. A battery powered red LED is magnetically attached to the plate so that the beam passes through a semicircular clear plastic plate, also magnetically attached. The light can be moved across the top of the plate to show both the angles of reflection and refraction. The plastic plate may also be positioned so that many variations can be measured.





Acrylic flat prisms, blocks and lenses in wooden carry case. Ideal for student use on desktop or bench. Excellent for use with light sources.



#### **FORCE TABLE, ECONOMY**

Demonstrate Newton's First Law and the vector nature of forces.

Durable, polymer tabletop with thick support & heavy cast

base with levelling screws. Tabletop carries angle scale with 0.5° divisions, marked every 10° in both rotation directions.

• Includes 1 x tabletop, 4 x pulleys and 4 x 250q chrome-plated



Demonstrate V = IR • Lamps in series light up differently to those in parallel.





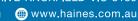
#### CONDUCTIVITY **TESTER**

Battery operated. Place the probes in liquids or against solids to test their conductivity. Cheap enough for class sets.





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#### **HAND DC GENERATOR**

View the inner workings of the torch with the clear plastic housing. Mounted lamp on the end can be used as a flash light. Use binding post to connect outside electrical circuit.



#### **SWITCH BALL**

Toss the ball in the air and watch the colors magically flip! These fascinating balls transform back and forth between two colors. Amazing!!! Colors may vary. Chemistry teachers – this is

a great Activation Energy Demo. Physics teachers this is a great tool to learn about force, motion, and other newton related topics!



#### **LIGHT GUIDE**

An "S" shaped acrylic bar used to demonstrate total internal reflection. Length: 22cm



#### MINI HOVERCRAFT/AIR PUCK

Air pucks, the best way to demonstrate Newton's Three Laws of Motion!

Virtually frictionless, simple and versatile, this battery powered mini hovercraft/air puck will glide across surfaces, respond to applied forces, and allow measurement of velocity, acceleration, applied force and conservation of energy with a stopwatch or photo gates. Novel ideas including effects of rotation, inclines and air currents can be investigated.



#### **NEWTON'S CRADLE**

Demonstrate the conservation of momentum and energy via a series of swinging spheres. When one on the end is lifted and released, it strikes the stationary spheres; a force is transmitted through the stationary spheres and pushes the last one upward.



#### LIQUIFLY WATER **ROCKET, DELUXE**

**NEW IMPROVED DESIGN!** 

Use air and water to power the bottle rocket more than 100 feet into the atmosphere. Includes fins, two valves, 27cm rocket bottle, hose and pump.





\$15

\$84

#### **ENERGY STICK**

This item is a great introduction to the science of circuits and electricity! Conduct electrical energy through your students.

Make a human chain by holding hands then add the ENERGY STICK into the circle and watch it light up.



#### **ELECTRIC EXPERIMENT CAR**

#### **ASSEMBLE THIS EXTREMELY FLEXIBLE EXPERIMENT CAR**

Study energy conversion and motion. By changing the layout of the battery holders you can compare and test parallel and series connections. A perforated board used as the car base body makes it easy to add parts. Also included is a bulb and propeller for further applications. Size: 160x75x50mm.

Requires 2x AA batteries, not included.









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# **CHEMISTRY**

# FOR THE VERY BEST IN SCIENCE, ORDER NOW FOR TERM 1!

**EXPLORE. DISCOVER. INNOVATE.** 

Fluorine

**Big Connector** 

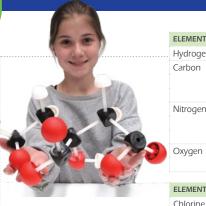
#### **DISTILLATION, SET/9 PIECES**



The 9 piece interchangeable glassware set enables students to perform organic chemistry experiments. Made of sturdy borosilicate glass, the set consists of interchangeable connections type 14/23 and 19/26 standard taper ground glass for easy

\$99.50

\$99.50



#### COLOUR Hydrogen 40 White Carbon 20 Black 10 Black Blue Nitroaen Blue Blue 10 Red Oxygen Red

OTY

COLOUR

Light Blue

Green

65mm length

#### **MOLECULAR CLASSROOM DEMO SET**

SET/99, EXTRA LARGE

C200 \$165

DIOIIIIIE		I DIOWII	
LINKS			
Double Bonds	16	65mm length	
Turning Bonds	6	70mm length	
Small Bonds	120	16mm length	

#### SPECTROMETER, ENGLISH PATTERN

For introducing students to principal type of spectra, determination of wavelength, frequency of emitted light and for quantitative spectrometric measurement of angle of prism, refractive index of the prism material etc. Comprised of a cast base with an integral fixed pillar for the collimator support and a swinging telescopic arm with a spring loaded vernier.

• Includes a magnifying eye glass and a tommy bar for axis adjustment but without prism or diffraction grating



# \$155

SENIOR ORGANIC / INORGANIC SET

ELEMENT	QTY	COLOUR
Metal	42	Grey
Oxygen	72	Red
Sulphur	12	Yellow
Nitrogen	15	Blue
Carbon	45	Black
Phosphorus	18	Purple
Hydrogen	36	White

LINKS		
Medium	170	Grey
Long Flex.	100	Grey



#### **CONDUCTIVITY DEMONSTRATOR**

An apparatus allowing students to test the conductivity of various solutions

\$19





ELEMENT	QTY	COLOUR
Carbon	20	Black
Oxygen	6	Red
Hydrogen	22	White
Nitrogen	2	Blue
Sulphur	2	Yellow
Phosphorus	1	Purple
Halogen Cl	6	Green
Halogen F	6	Green
Metal	1	Grey

LINKS			
Medium	28	Grey	
Long Flex.	12	Grey	
Short	30	White	:





#### **PVT SYRINGE**

The PVT syringe can be used to quantify volume vs pressure and temperature vs pressure. Superior to the classical Boyle's Law syringe. Perfect for PV=nRT investigations.



#### PERIODIC TABLE MAGNETIC CARDS

Features the first 20 elements of the Periodic Table to illustrate the core concepts of atomic theory as you sequentially build the table. Cards can be used to illustrate the following major concepts: Families and Periods, Atomic Number and Mass, Isotopes, and Electron Shells and Valency.

Size: 10.8 x 14.8cm

• Includes Elements 1-20 plus Hydride (H-), 14 additional elements (4 H, 3 O, 2 CL, 1F, 2 Na, 2 K), 3Mg Isotopes, and Au & Pb

# **SPECTROSCOPES**

#### **METAL-PRISMATIC**

- For superior results
- Focus, adjustable slit, sharp lines



#### **PLASTIC**

- Brilliant images
- With wavelength scale





#### **CARDBOARD**

- With dffraction grating
- Strong cardboard tube





#### **STUDENT MINI VOLTAMETER**

- Neat compact unit
- Easy to use student voltameter
- Includes electrodes

V2000 \$69





#### **FLAME TEST BOTTLE, 50ML**

#### **QUANTAM CHEMISTRY**

Show cation flame colours quickly. Spray low concentration of solution directly into flame. NO MESS! NO CONTAMINATION!

**FLAME TEST BOTTLE RACK**  FTB002 \$18 each





\$1.460

#### **DIGITAL SPECTROPHOTOMETER**

Determination of chlorophyll, yeast and bacterial growth with this apparatus. Perfect for environmental studies with many applications.

- Quality digital multipurpose unit
- Includes: Teacher guide, manual, cuvettes



#### STUDENT COLORIMETER

For accurate determination of concentrations. Battery powered.

Includes: Instructions and test tubes



CO0101 \$110 With digital multimeter

■ 52 GILBERT PARK DRIVE KNOXFIELD VIC 3180



#### **DIGITAL COLOURIMETER**

A sturdy unit for the measuring of concentrations of solutions. The LCD display can provide either 'Transmission' or 'Absorption' measurements.

- Internal red, yellow, green, and blue LED light sources with +/- 2% reproducibility.
- · Operate on 9V battery (included) or standard 240/12V AC (not included)
- Includes instructions, 6x cuvettes, 4x test tubes

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#### JUPITER MOLECULAR MODELS



C130 \$34

#### **SODIUM CHLORIDE MODEL KIT**



C140 \$34 each

# **DIAMOND MODEL**



C150 \$38

ZINC SULFIDE **MODEL KIT** 





\$38

C145

# **WATER MODEL**



C160 \$38

**FULLERENE MODEL KIT** 



#### **SPECTRUM DISCHARGE**

#### **SPECTRUM DISCHARGE TUBE**

To show spectral lines of pure substances. Glass tubes with central capillary portion of about 9-10cm long with electrodes sealed at both ends and connected to lead wires protected by metal caps.

Except for Neon and Helium, these can not be used as lamps. For intermittent use.

- There are 2 ways to run the spectrum tubes:
  - with a spectrum tube power supply (3785001); or
  - with a spectrum tube holder (SAB), induction coil (EM013301) and power supply (2633001).

DIMENSIONS			
Overall lengt	h: 260mm (L)		
CODE	DESCRIPTION	UNIT	PRICE \$
HL132601	Argon	each	36
HL133601	Carbon Dioxide	each	36
HL134601	Helium	each	36
HL135601	Hydrogen	each	36
HL136601	Krypton	each	36
HL137601	Mercury Vapour	each	36
HL138601	Neon	each	36
HL139601	Nitrogen	each	36
HL140601	Oxygen	each	36
HL141601	Sulphur	each	36
HL142601	Water Vapour	each	36
1052007	Spectrum Tubes Set	set/6	195
	(H, Hg, He, N, Ne, Ar)		







**FROM** 

\$36



SPECTRUM DISCHARGE TUBE

3785001

#### SPECTRUM TUBE EHV POWER SUPPLY

Extra high voltage power supply 220/240V AC 50/60Hz fitted with a removable mains cable. (Spectrum tubes not included).

SAFE • COMPACT • EASY TO USE

- Includes 1x stainless steel rod, 1x clamp to hold the lamp
- Base: 172 x 140 x 140mm (L x W x H)
- Rod: 320mm (L)

3785001 \$315 each

#### **SPECTRUM TUBE HOLDER, WITH TERMINALS**

An apparatus to hold & clamp a spectrum tube. The height of the clamp can be adjusted to fit them length of the spectrum tube.

- External power source (eq. 2633001) and rumkoff coil (EM013301) needed. These items are not included.
- Base: 172 x 140 x 140mm (L x W x H)
- Rod: 1000mm (L)

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SAB \$79.80

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#### **MAGIC GARDEN**

A cutout cardboard landscape of flowers, trees and mountains that becomes covered in colourful crystal blossoms when placed in the chemical provided. Add the magic liquid and watch your crystal garden grow 25cm. Includes:

- 1 x Plastic Tray
- Pieces to make a Carboard Landscape
- Magic Liquid to make the Garden Grow



#### **CRYSTAL GROWING KIT**

Crystals in nature can take thousands of years to grow, but you can create crystals in hours or just a few days with this crystal growing kit.

Grow your own sparkling crystal in the container provided.

Non toxic components.



#### **CHEMICAL CLOCK**

# RUN A CLOCK WITHOUT BATTERIES

Use Fruit Juice, Cola, even Soy Sauce to Generate Electricity! Includes:

- 1 x Clock Module
- 2 x Electrode Separator
- 2 x Water Column w/ Lid
- 2 x Zinc Electrode
- 3 x Wire w/ Crocodile Clip
- 2 x Copper Electrode
- 1 x Instruction manual

#### **NEWTONIAN PUTTY**

# STUDY MOLECULAR STRUCTURE

One of the most interesting materials to study! Comes in a screw top tub for easy storage and to prevent it from drying out. Truly amazing and great for experimentation. Non-toxic components.



#### **LEMON CLOCK**

DISCOVER THE SCIENCE OF BATTERIES

J938 \$ 11.50 per kit

Simply add your own lemon to turn this kit into an amazing lemon powered clock.

**HAND BOILER** 

**DEMONSTRATES CHARLES** 

Science experiment in the

palm of your hand. Contains

ethyl alcohol and boils from

the heat of human touch

upwards through the loop

in the glass. Made of glass.

and expands forcing it

# SENSORY WATER BEADS

Watch coloured beads expand in water.

Pour beads into 1L of water, allow to soak for 6-8 hours and watch the beads grow into spongy balls. Comes in 10g pack of assorted colours and sizes. Non-toxic components.



#### SIMPLE VOLTAIC CELL

Large simple cell. Complete with zinc and copper plates. Ideal for class demonstrations.

150 (L) x 10cm Ø



# P217 \$23 each



#### **PLASTICS TEST KIT**

Determine density, heat and flame resistance, flexibility and clarity. Suitable for up to 6 students.

- Includes 6x 5 types of plastics: PET, PVC, polypropylene, polystyrene, polyethylene
- Suggested experiment sheet included



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# **BIOLOGY**

# FOR THE VERY BEST IN SCIENCE, ORDER NOW FOR TERM 1!

**EXPLORE. DISCOVER. INNOVATE.** 

# VCE(L) \$295

#### VCE (L)

- Built-in LED illumination
- Widefield 10x eyepiece
- 3 objectives: 4x 10x & 40x
- 40x, 100x, 400x magnification
- Achromatic, parfocal & parcentered objectives
- Coarse & fine focus
- Iris diaphragm



#### STEREO DELUXE (L)

- Incident & transmitted light
- Widefield 10x eyepiece
- 2 objectives: 2x, 4x
- 20x, 40x magnification
- Parfocal & parcentered objectives
- Rubber eyecups



#### **ACCUPOT**

Designed by Jean Stokes of St. Michael's Grammar, this accurate potometer makes measuring transpiration rates a breeze. Ideal for individual student use.

- Portable and sturdy
- Tube graduated from 0.01 to 0.1ml
- Instructions included



Model is cut by vertical line towards level of ventricular septum and separates into 2 parts after the arch of aorta and superior venacava have been removed. Mounted on base. Numbered with keycard.

Size: 33 x 23 x 33cm (H x W x D)

#### **VISION DISK**

Students can measure field of vision, reading field, and peripheral vision using this unique device. Instructions included.



#### **MAGNIFIER**

Lens: 30mm Ø Triple, Mag: 5x + 5x + 5x = 15x





#### LED HANDHELD MAGNIFIER WITH **THREE LENSES**

This versatile illuminated hand magnifier set includes three interchangeable lenses at magnifications of 2.5X, 5X, and 16X to suit a multitude of applications. Largest lens diameter of

QM3519 \$22.70



CMS50C \$149

#### **FINGER TIP PULSE OXIMETER**

Compact, easy to use pulse oximeter. Obtain instant SPO2, pulse and Pleth Wave readings with the high visibility four-way OLED double colour display.

- Auto power off after 5 sec
- Transmittable real-time data to computers

#### STICK TO SCIENCE **PUNNET SQUARE**

Teach the important genetic concept of Punnett Squares. These 56 magnetic cards have red, white, pink and red and white flowers to show three types of

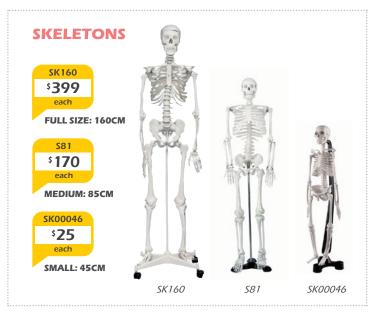
monohybrid crosses: complete dominance, incomplete dominance and codominance. Includes a detailed teacher's quide with sample questions.



S180 \$42

Rr 🗬 RW · WW







This 12-layer model (one complete turn of the double helix) is designed for selfassembly. The model may be assembled on the stand for display, or laid flat for a demonstration of unzipping and replication. It is also possible to combine this DNA model with an RNA model to explain transcription and protein synthesis.

Size: 24cm (H)

- Includes colour-coded bases (G,C,A and T), deoxyribose and phosphate groups, as well as a display stand
- · On sturdy base



#### PREHISTORIC **HOMINID SKULL**

NATURAL SIZE, SET/6

Review anatomical similarities. Set consists of:

- Australopithecus afarensis
- Australopithecus africanus
- Homo erectus
- Homo sapien
- Homo habilis
- Homo neanderthalensis





#### ANIMAL KINGDOM SET

\$350 set/27

#### **27 SPECIES, WITH CASE**

Mimesis Whitered Leaf Butterfly: Bat: Mantis: Dragonfly: Butterfly : Centipede : Cockroach : Cicada : Tortoise : Dung Beetle : Cricket : Tadpole & Frog: Fish: Housefly: Ant: Ladybug: Honeybee: Crab: Conch: Starfish: Shrimp: Shell: Spider: Earthworm: Grasshopper: Chafer: Scorpion

#### **GIANT MAGNETIC** ANIMAL CELL

24 PARTS

Teach the internal structure of an animal cell, individual organelles and structures individually with this giant cell structures printed on raised foam magnets. Ideal for demonstration or student manipulation.

- Includes 4-piece animal cell, 14 dimensional organelles and Activity Guide
- Background information about each organelle and reproducible diagram



#### **DELUXE ANIMAL CELL**

ENLARGED 20,000X

Shows a detailed depiction of the animal cell and its structure. Includes the following organelles: nucleus, endoplasmatic reticulum, mitochondria, ribosomes, polysomes, and Golgi apparatus. Mounted on base with

Dimensions: 380 x 240 x 480cm



#### TYPICAL FLOWER DISSECTABLE

An enlarged idealised complete flower, teaching angiosperm pollination and fertilisation.

Dimensions: 370 x 250 x 310mm

 $(L \times W \times H)$ 

B001 \$65



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#### **BUDGET ANATOMICAL MODELS**

- Made Of Fibre Reinforced Polyester Realistically Painted
- •With Laminated Key Cards
- •Ideal For Health & Safety Science / Open Days



12 X 12 X 23CM, 6 PARTS, 5X

Sectioned horizontally and separates into upper half of the sclerotic membrane - 2, Retina with vitreous humour, lens, lower half of the sclerotic membrane. On base. Numbered with. English Key Card.



#### **EAR**

25 X 18 X 15CM, 3 PARTS, 2X

Shows external, middle and internal portion. Ossicles and labyrinth can be taken out. On base. Numbered with English Key Card.



#### **BRAIN**

19 X 15 X 15CM, 8 PARTS, **HUMAN NATURAL SIZE** 

Separated into 8 parts and placed on diaphragm. Showing the temporal and occipital lobes, brain stem, cerebellum and the basiler artery. Model shows blood vessels all over on brain.



#### SKIN

33 X 23 X 6CM, 70X, RAISED RELIEF

Shows section through three layers of the hair covered skin of the head. Also shows hair follicles with sebaceous, sweat glands, receptors, nerves and vessels. On base. Numbered with English Key Card.



#### **HEART**

14 X 13 X 28CM, 4 PARTS, 2X

Model shows the auricles, ventricles, cardiac valves, large vessels and cardiac muscles, the upper section of the aesophagus, the upper bronchi and the ascending aorta. Mounted on base. Numbered with English Key Card.



#### **TECH TRAY**

Polypropylene laboratory/ dissecting tray. Comes with mat. Hygenic and stackable.

Note: Pictured labware not included



#### SOFT FOAM CROSS-SECTION MODELS

MAKE BIOLOGY FUN WITH "HANDS-ON" SQUASHY "CROSS SECTION MODELS"

Complete with activity guides Each measure approx 13cm diameter

#### **ANIMAL CELL**

Teaching the parts of an animal

to your class is easy. The soft foam cell splits in half to show the key parts of an animal cell, including the nucleus, nucleolus, vacuole, centriole, cell membrane and more.



#### **PLANT CELL**

This model of a plant cell splits in half to provide a cross-section view and make teaching the parts of a plant cell easy.





\$69



#### **SIMULATED** FROG DISSECTION KIT

12 PARTS

Get as internal close-up of a frog without working on a real frog. Simulated dissection kit has removable, soft texture tissue that folds back to reveal a complete set of faux organs. A cross section shows intricate muscle structure.

Size: 320 x 340 x 115mm (L x W x H)

• Includes X-ray film, dissecting tray, child-safe tools (scalpel, tweezers and prod), and magnifying glass

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**SET/12** 

\$29.50



### **Great products at low prices!**





CODE	DESCRIPTION	UNIT	PRICE \$
IS129-50S	Urine Test strips (Glucose 0-3000mg/dL)	pk/50	49.3
IS130-50S	Urine Multi-Test strips	pk/50	110
	(Glucose, Protein, pH & Ketones)		
IS151-40S	Glucose test strips (0-0.1-0.25-0.5-2%)	pk/40	54
813340	Control (taste test)	vial/100	6.60
813330	Sodium Benzoate (taste test)	vial/100	6.60
813335	Thiourea (taste test)	vial/100	7.00
813325	Ptc (taste test)	vial/100	6.60

\$ 169 per kit

GLO220

\$85

#### **GLO GERM CLASSROOM KIT**

Teach importance of Hand Washing. Glo Germ consists of a lotion and powder which glows brightly when exposed to ultraviolet light.

- 1x 240ml Glo Germ lotion
- 1x 120ml powder
- 1x battery operated UV light
- Instruction manual

**REFILL LOTION, 240ml** 





#### **PUMPING HEART**

4-CHAMBER WORKING MODEL

A 3D working plastic heart model with clear chambers on a display stand. Squeeze bulb pump simulated blood through clear heart chambers just like real one.

Size: 140 x 140 x 175mm

• Includes instruction manual



# ANIMAL CELL ANATOMY

Teach the internal structure of an animal cell, individual organelles and structures individually.

- 150mm high with 24 detachable parts
- Detailed illustrated guide & info



#### PLANT CELL ANATOMY

Teach the internal structure of a plant cell, individual organelles and structures individually and see how they work

- 160mm high with 24 detachable parts
- Detailed illustrated guide & info



#### QUADRAT

 50 X 50cm with 10cm squares

Stainless Steel, PVC coating



# HUGE HANDS FREE MAGNIFIER

2X MAGNIFICATION

Foldable for safe and easy storage. Bottom frame is ruled to 10cm for measuring objects to be viewed

Excellent optics. Perfect for plastomounts, life specimens, semi permanent displays.





#### SKIN

Learn about the largest organ in your body. Comes with removable hair and skin layers with extra acne parts.

- 180mm high with 19 detachable parts
- Detailed illustrated guide & info



#### **DELUXE HEART**

Learn about the organ that pumps blood to your entire body! Covers the Aortic, Arch, Superior Vena Cava and more.

- 125mm high with 31 detachable parts
- Detailed illustrated guide & info

#### GARDEN/SOIL TEST METER

THE ULTIMATE PLANT CARE / SOIL METER

The 3-in-1 marvel measures pH, light and moisture of your soil at the same time. No battery required. Instructions included.

- Moisture range: 1-10
- PH range: 3.5 8.0
- Light range: 0-2,000 LUX





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