



**ISSUE 1 - VOLUME 8 - 2024** 

PLEASE FORWARD TO THE SCIENCE COORDINATOR

#### **CRITICAL MINERALS KIT BY TESEP**

Introducing the New TESEP Australian Critical Minerals Kit. Comprising of 26 minerals used in our high-technology lives. Includes extensive teaching material including 3D renders/virtual images, detailed mineral facts and background, student questions and stories. This kit is made in Australia.

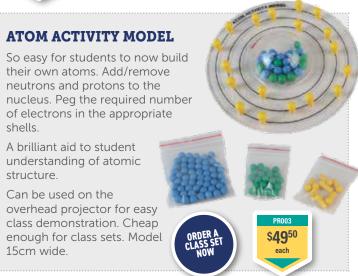


#### **WATER STILL, 4L**

**Produce distilled water** at your convenience. This compact and sturdy water still is simple to operate. No filters or consumables required.







#### **MOLECULAR ORBITAL SET**

This set helps visualise the shapes of atomic and molecular orbitals. Contains enough individual parts to build 14 distinct

models

Each model comes with a transparent base for display.



#### **MATERIALS TEST KIT**

In wooden case with removeable plastic cover. Case is 17cm x 17cm.

Iron, Steel, Aluminium, Wood, Polythene, Brass, Rubber, Copper, Wool, Nylon, Cork, Lead, Zinc, Carbon, Glass, PVC, Cotton, Cardboard, Perspex and Nickel.



#### **AUSTRALIA ROCK KIT AND PLATE** TECTONICS POSTER

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







Prices do not include GST





#### NON-CONTACT THERMOMETER, -50°C TO 500°C

A safe way to measure temperatures in hard to reach places. Simply aim the built in laser at the target and read the temperature from backlit LCD screen.



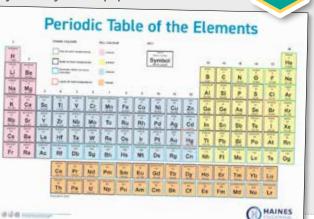
# CORROSIVE CABINET, POLYETHYLENE, 100L

This high density polyethylene safety cabinet designed for storing up to 100 litres of Class 8 Corrosive Substances. With center divider so you can store all your acids and bases together. Designed and manufactured in Australia and in conformance with the Australian Standards.



# HAINES PERIODIC TABLE CHART, 120X85CM

A must have for every Science class and large enough to be seen from the back of the classroom! **Made in Australia from recyclable synthetic paper**.



#### **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



Prices do not include GST

#### **RADIATION CANS, SET/3**

Investigate how colour can influence absorbing and radiating energy. This set of three 500mL metal cans are finished with black, white, and silver exteriors. Stoppers accommodate a thermometer (not included).



# BIODEGRADABLE NITRILE GLOVES, 200/PACK

Made from synthetic rubber these eco friendly gloves offer the ultimate hand and environmental protection.

| SIZE  | DESCRIPTION         | UNIT    | PRICE \$ |
|-------|---------------------|---------|----------|
| BNGS  | Small Nitrile       | box/200 | 19.00    |
| BNGM  | Medium Nitrile      | box/200 | 19.00    |
| BNGL  | Large Nitrile       | box/200 | 19.00    |
| BNGXL | Extra Large Nitrile | box/200 | 19.00    |



# MICROSCOPE, DIGITAL WITH SCREEN, 1200X

This digital microscope with up to 1200X zoom enables you to inspect and get a close-up view of your biological-related object.



#### **ENERGY STICK**

BEST SELLER

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.



#### **SOLAR ECO-HOUSE KIT**

Construct a solar house and perform 10 experiments with this all-inclusive educational kit! This fascinating kit will ensure you find the answer to those key questions around solar energy.













Discover more about circuitry with this three lamp board. It includes both parallel and series circuits which can demonstrate the transfer of electricity in different orientations. The three mini receptacles are mounted on a clear acrylic base, and buss bars connecting the receptacles allow for quick changing from parallel to series and many combinations of the two. Instructions included.

\$22 each

#### 5 LAMP BOARD, PARALLEL & **SERIES**

An easily convertible five lamp board with both parallel and series circuits.



# LARGE DNA MODEL A super-sized plastic DNA model, pre-assembled and built to a scale of 10cm to 1nm. Stands over 60cm tall! \$**135**80

#### **ELECTRIC 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. A bulb and propeller is included for further applications. Batteries not included.

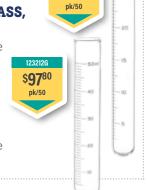
# \$1990

# TEST TUBE, GRADUATED, GLASS, 150 X 18MM, PK/50

Graduated test tubes, 3.3 borosilicate glass, with rim. Sold as a pack of 50.

#### TEST TUBE, GRADUATED, GLASS, 150 X 24MM, PK/50

Graduated test tubes, 3.3 borosilicate glass, with rim. Sold as a pack of 50.



\$5940

#### WATER FILTRATION KIT

Water goes on quite a journey to reach our taps, safe and ready to drink. One of the many important steps in the process is filtration. The kit introduces how water gets cleaned by building a simple filtration system and more.



Prices do not include GST



#### Visit our website www.haines.com.au

#### SLINKY SPRING, 80X80MM

Watch as it walks down stairs. 'bounces' back and forth between your hands and appears to defy gravity when dropped to the ground.



## GARDEN/SOIL TESTER,

The 3-in-1 marvel that lets you measure pH, \$2290 light, moisture at the each same time. No battery required, and easy to measure moisture value of soil, plants, garden, vegetables, trees and more.



#### 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)





Prices do not include GST

#### SPECTROSCOPE WITH **GRADUATED SCALE**

This direct vision student spectroscope, fitted with a high efficiency grating in the eyepiece produces a brilliant spectrum even in poor light.



**\$175** 

#### **DYNAMICS CART**

The IEC 'Dynamics Carts' are the best in the business and they last many years. They have inboard wheels to avoid tangles, they are the strongest and are most rigid, they offer the least rolling friction and are safer than others. MADE IN AUSTRALIA!

#### **NEWTON'S FAN**

The Newton Fan may be used in conjunction with most dynamic carts or trolleys to not only verify Newton's Second Law, but to also confirm that the law still applies when the mass or the propulsion force of the cart is varied.





#### **POWER MICROPHONE**

The power microphone has been designed to provide powerful signals in an easy and quick manner to your oscilloscope (BNC plug connects directly to a Digital Storage or Cathode Ray Oscilloscope.)



# LABWARE BEST PRICE GUARANTEE

\$5.50





#### LAB BOTTLE, GLASS, SCREW CAP

These transparent glass reagent bottles with screw-top lids are sure to keep your mixtures safe. Made from quality Borosilicate 3.3 Glass which resists chemical corrosion, and is resistant to sudden temperature changes.

| CODE     | VOLUME | UNIT | PRICE |
|----------|--------|------|-------|
| RBSC25   | 25ml   | each | 5.50  |
| RBSC50   | 50ml   | each | 6.90  |
| RBSC100  | 100ml  | each | 6.50  |
| RBSC250  | 250ml  | each | 6.90  |
| RBSC500  | 500ml  | each | 9.80  |
| RBSC1000 | 1000ml | each | 13.90 |
| RBSC2000 | 2000ml | each | 37.80 |
|          |        |      |       |



#### **RETORT STAND KIT**

A must for every lab.

1 x Retort stand (base is 200x140mm, rod is 600mm

- 1 x Bosshead
- 1 x Retort clamp, 4 prong (250mm in length, jaws open up to 76mm)





#### **BUNSEN BURNER KIT** (NATURAL GAS)

A must for every lab.

- 1 x Bunsen Burner (Nat. Gas)
- 1 x Bunsen silicon tubing
- 1 x Gauze mat, plain
- 1 x Tripod stand

Also available for LPG Burners see LC104L

\$560

#### PLASTIC LABORATORY TRAY

Multipurpose laboratory trays are suitable for a range of applications, including washing, sterilizying, and drying glassware and other laboratory instruments. Moulded from heavy duty plastic and resistant to most chemicals.



# MICROSCOPE, SENIOR, MONOCULAR

each 40 to 1000 x magnification, mechanical stage, achromatic, parfocal & parcentered objectives, variable light intensity, binocular head, 4 objectives, extra large body.



#### REAGENT BOTTLE, AMBER GLASS, **SCREW CAP**

| CODE      | VOLUME | UNIT | PRICE |
|-----------|--------|------|-------|
| RBSC100A  | 100ml  | each | 7.60  |
| RBSC250A  | 250ml  | each | 9.50  |
| RBSC500A  | 500ml  | each | 13.80 |
| RBSC1000A | 1000ml | each | 19.50 |
|           |        |      |       |



#### ADAM ELECTRONIC / **BALANCE 1200 X 0.1G**

Portable and durable balance, 1200g x 0.1g. With rechargeable battery and AC power and a large 15cm pan makes it ideal for educational settings.



#### ADAM ELECTRONIC **BALANCE 6000 X 1G**

Portable and durable balance, 6000g x 1g. With rechargeable battery and AC power and a large 15cm pan makes it ideal for educational settings.



#### ADAM ELECTRONIC **BALANCE 3000 X 0.5G**

Portable and durable balance, 3000g x 0.5g. With rechargeable battery and AC power and a large 15cm pan makes it ideal for educational settings.



#### MICROSCOPE, SENIOR, BINOCULAR

An ideal senior microscope. \$665 Durable and ideal for student use. 40 to 1000 x magnification, mechanical stage, achromatic, parfocal & parcentered objectives, variable halogen light intensity, iris diaphragm, abbe condenser, binocular head, 4 objectives: 4x, 10x, 40x, 100x, extra large body and 3 year warranty.



Prices do not include GST





#### **SQUARE REAGENT PLASTIC BOTTLES**

Suitable for all kinds of liquid storage. Translucent, rigid and excellent contact clarity. The square shaped bottle allows for more compact storage and stacking.

#### REAGENT BOTTLE, SQUARE, NARROW MOUTH

Narrow mouth, square shaped reagent bottles made from durable HDPE with a screw cap.

| CODE    | VOLUME | UNIT | PRICE |
|---------|--------|------|-------|
| 3200030 | 30ml   | each | 2.30  |
| 3200100 | 100ml  | each | 2.90  |
| 3200250 | 250ml  | each | 5.20  |
| 3200500 | 500ml  | each | 8.50  |
| 3201000 | 1000ml | each | 11.90 |



#### REAGENT BOTTLE, SQUARE, WIDE MOUTH

Made from polypropylene

| CODE   | VOLUME | UNIT | PRICE |
|--------|--------|------|-------|
| 432060 | 60ml   | each | 2.80  |
| 432125 | 125ml  | each | 3.20  |
| 432250 | 250ml  | each | 5.20  |
| 432500 | 500ml  | each | 8.40  |
| 431000 | 1000ml | each | 11.60 |
|        |        |      |       |



#### STORAGE BOTTLE, PLASTIC

Made of HDPE and suitable for all kinds of liquid storage. Tamper evident leak proof cap.

## SQUARE HDPE, SCREW CAP, WHITE PLASTIC, BLUE CAP

| CODE    | VOLUME | UNIT | PRICE |
|---------|--------|------|-------|
| 783180  | 180ml  | each | 4.55  |
| 783500  | 500ml  | each | 6.50  |
| 783250  | 250ml  | each | 5.50  |
| 783900  | 900ml  | each | 7.20  |
| 7831200 | 1200ml | each | 7.90  |



#### WASH BOTTLE, BLANK LABEL

Chemical wash bottle with blank labels, 500ml capacity.

#### WASH BOTTLE, DISTILLED WATER Each empty wash bottle is

Each empty wash bottle is labeled for Distilled Water and features chemical information as well as hazard and safety information.



#### 







# LAB MANAGER





A general purpose laboratory magnetic stirrer & hot plate with 'Simmerstat' temperature control and high temperature alloy plate for even plate temperature. Comes with plain or PTFE-coated hot plate.



\$590

each

\$450

each

#### SAFETY GLASSES. **LABPRO**

Vented side arms. Large hard polycarbonate lens & arms. Hard scratch resistant coated

#### SAFETY GLASSES. **ARC VISION**

Made from hard coated polycarbonate lens and UV treated.

#### \$11680 Stores and dispenses safety glasses easily. Delivered 'flat





#### **CLINOMETER**

Australian made.

packed', requires assembly.

Teach students how to measure the angle of elevation of objects with the simple pull of the clinometer's trigger. Constructed of a tough, yet lightweight, plastic material. Clear instructions for use printed directly on instrument. Instruction sheet provided.



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

- Multimeter (CAT III)
- Sound/Light level/
- Temperature & Humidity meter
- Ideal for all your classroom applications



ELITEPCTS

\$475

#### **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,

Salinity Range/Resolution: 0-10 ppt, 0.10 ppt Temperature Range/Resolution: 0 to 60°C, 0.1°C

#### **INCUBATOR, 120L, FAN FORCED**

Incubator, 120L, 465 x 485 x 970mm external. Designed and manufactured in Australia. Economical, reliable and with a compact footprint, this benchtop incubator is the perfect inclusion to your lab's set-up.



Internal Dimensions (HxWxD mm):

External Dimensions (HxWxD mm): 465 x 485 x 970

**Temperature Range Ambient** +5°C to 60°C

Capacity (litres): 120

Shelves: 6

Flectrical (W): 290 Weight (kg): 45



#### 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.



#### **DIGITAL BENCH BALANCE**







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



#### **DISINFECTANT SURFACE WIPES**

A gentle, handy and convenient cleaning wipe that is great for everyday use. Kills 99.9% of bacteria. 280 sheets in a tub.







#### METRIC RULER, WHITE **ACRYLIC, 1M**

Ruler 1m, plastic (Acrylic)





#### METRIC RULER, **WOODEN, BRASS** ENDS, 1M

Ruler 1m, wooden, brass ends





#### METRIC RULER, STAINLESS STEEL.

Ruler 1m, stainless steel





#### **GAUZE MATS**



Wire, galvanised, 15cm square, plain



Wire, galvanised, 15cm square, ceramic centre\* \* asbestos-free, certification included



#### **BURETTES**

#### GLASS, PTFE stopcock, schellbach. CLEAR ACRYLIC 50ml. Class A

UNBREAKABLE, ptfe stopcock

ROTAFLOW, **GLASS** 50ml, class A







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



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

\$42<sup>50</sup>

This water bath is designed to rest on and be heated by an IEC Hot Plate or Hot Plate/Stirrer (not included). Heating may be accomplished by manual stirring or by using a magnetic spin bar in conjunction with a magnetic stirrer/hotplate. Contact us for IEC hot plate/ stirrer or thermometer.

- $\bullet$  Stainless steel for superior durability  $\vartheta$  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

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.









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

Clear glass, with dropper

| CODE  | VOLUME | UNIT | PRICE |
|-------|--------|------|-------|
| BS250 | 25ml   | each | 2.30  |
| BS500 | 50ml   | each | 2.60  |
| BS100 | 100ml  | each | 3.10  |

#### Amber glass, with dropper

| CODE   | VOLUME | UNIT | PRICE |
|--------|--------|------|-------|
| BS250A | 25ml   | each | 2.30  |
| BS500A | 50ml   | each | 2.60  |
| BS100A | 100ml  | each | 3.10  |

#### Spare dropper, for dropping bottle

| CODE  | VOLUME | UNIT | PRICE |
|-------|--------|------|-------|
| BS251 | 25ml   | each | 1.30  |
| BS501 | 50ml   | each | 1.40  |
| BS601 | 100ml  | each | 1.60  |

#### **DABCO - UNITRAY**

Ideal for storing dropping bottles.

| CODE   | VOLUME      | UNIT | PRICE |
|--------|-------------|------|-------|
| DUN102 | With insert | each | 6.50  |
| DUN103 | No insert   | each | 5.00  |



#### STULL DROPPING BOTTLE STORAGE TRAYS

| CODE    | VOLUME              | UNIT | PRICE |
|---------|---------------------|------|-------|
| TSB506  | 6 bottles 50/125ml  | each | 22.50 |
| TSB5012 | 12 bottles 50/125ml | each | 29.50 |





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

| CODE      | VOLUME       | UNIT   | PRICE | CODE   | VOLUME | UNIT   | PRICE |
|-----------|--------------|--------|-------|--------|--------|--------|-------|
| DB125S    | 125ml        | pkt/50 | 82.00 | DB1510 | 15ml   | pkt/10 | 16.00 |
| DB50S     | 50ml         | pkt/50 | 65.00 | DB1550 | 15ml   | pkt/50 | 74.00 |
| Stull cap | only         |        |       |        |        |        |       |
| SC002     | 125ml & 50ml | each   | 0.90  |        |        |        |       |



#### **NITRILE POWDER-FREE**

- Blue disposable nitrile powder-free
- · High chemical resistance

| CODE | DESCRIPTION         | UNIT    | PRICE \$ |
|------|---------------------|---------|----------|
| NGXS | Extra Small Nitrile | box/100 | 15.00    |
| NGS  | Small Nitrile       | box/100 | 15.00    |
| NGM  | Medium Nitrile      | box/100 | 15.00    |
| NGL  | Large Nitrile       | box/100 | 15.00    |
| NGXL | Extra Large Nitrile | box/100 | 15.00    |



#### **NITRILE LATEX, PAIR**

- A co-polymer of acrylonitrile & butadiene
- Flock lined & contoured for comfort
- Chemicals, oils, fuels & certain organic solvents resistant
- Puncture, cut & abrasion resistant

| CODE     | DESCRIPTION   | UNIT | PRICE \$ |
|----------|---------------|------|----------|
| AS229954 | Nitrile latex | pair | 12.90    |



- Soft & tear resistant, moulds to hands
- Easy to remove, naturally powder free

| CODE | DESCRIPTION | UNIT    | PRICE \$ |
|------|-------------|---------|----------|
| TGS  | Small TPE   | box/200 | 11.00    |
| TGM  | Medium TPE  | box/200 | 11.00    |
| TGL  | Large TPE   | box/200 | 11.00    |
| TGXL | ExLarge TPE | box/200 | 11.00    |

#### **LATEX POWDER-FREE**

- Original hospital grade
- White disposable powder-free
- Superior chemical resistant

| CODE | DESCRIPTION       | UNIT    | PRICE S |
|------|-------------------|---------|---------|
| LGXS | Extra Small Latex | box/100 | 15.00   |
| LGS  | Small Latex       | box/100 | 14.00   |
| LGM  | Medium Latex      | box/100 | 14.00   |
| LGL  | Large Latex       | box/100 | 14.00   |
| LGXL | Extra large Latex | box/100 | 14.00   |

#### VINYL POWDER-FREE

- · Excellent alternative to latex
- Superior chemical resistance
- Note: Should not be stored above 30°C

| CODE | DESCRIPTION     | UNIT       | PRICE \$ |
|------|-----------------|------------|----------|
| VGS  | Small Vinyl     | box/100    | 9.00     |
| VGM  | Medium Vinyl    | box/100    | 9.00     |
| VGL  | Large Vinyl     | box/100    | 9.00     |
| VGXI | Extra Large Vin | vl box/100 | 9.00     |



#### LAB COAT RACK - SINGLE RAIL

Portable single rail rack for keeping your lab coats organised and crease-free. Mounted on sturdy heavy duty lockable wheels. Adjustable height as well as extendable ends so you can hold more coats.

Size: 1280-1940mm(W) x 560mm(D) x 1335-2060mm(H) - adjustable ends and height.

- Holds up to 60 coats
- You never have to fold your coats again!
- Easily store your coats
- Count & sort
- Wheel them around easily
- · Hang them up to dry





# ELGACAN STAT DEIONISER, WITH 4 CARTRIDGES

Elgacan Stat deioniser, with 4 cartridges can produce up to 30L/ hr of high purity water for a wide range of laboratory applications. The deioniser is a cost-effective stand-alone system that provides low to medium volumes of primary or deionised grade water. Water quality is easy to monitor, with a colour coded resistivity indicator displaying treated water quality.





#### **ELECTRIC HEATING MANTLE**

Flameless heat, large contact area to glassware, even Heat distribution, rapid heating of contents, for continuous use, powder coated for chemical resistance.





#### **VACUUM PUMP WITH PRESSURE GAUGE**

The pump delivers 120mbar Ultimate Vacuum and 18 l/min flow rate. This pump is ideal for schools with no maintenance and no oil, simply plug and play.



#### 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



#### **SENIOR TROLLEY**

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

#### JUNIOR TROLLEY

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



# BENCH MATS CEMENT SHEET

- Asbestos-free
- Washable

DIMENSIONS

Small: 300 x 300 x 5mm (W x H x D) Big: 400 x 400 x 5mm (W x H x D)

# **BENCH MATS**MELAMINE-COATED

- Washable
- Easy Cleaning
- Unbreakable
- Non Scratch
- Non Absorbent

DIMENSIONS

Small: 300 x 300 x 15mm (W x H x D) Big: 400 x 400 x 15mm (W x H x D)



# SCHOTT DURAN®

GLASSWARE



- 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® Beaker Low form with graduation and spout

| ITEM CODE | CAPACITY | UNITS    | PRICE    |
|-----------|----------|----------|----------|
| D101      | 05.1     | Each     | \$8.60   |
| D1011     | 25ml     | 10 / pkt | \$80.90  |
| D102      | F0I      | Each     | \$8.40   |
| D1021     | 50ml     | 10 / pkt | \$79.10  |
| D103      | 100ml    | Each     | \$8.10   |
| D1031     | IOUITII  | 10 / pkt | \$75.80  |
| D104      | 150ml    | Each     | \$8.70   |
| D1041     | IOUMI    | 10 / pkt | \$83.40  |
| D105      | 250ml    | Each     | \$9.10   |
| D1051     | 250MI    | 10 / pkt | \$85.60  |
| D106      | 400ml    | Each     | \$10.70  |
| D1061     | 400ml    | 10 / pkt | \$100.30 |
| D107      | 600ml    | Each     | \$11.90  |
| D1071     | UUUIII   | 10 / pkt | \$112.10 |
| D108      | 800ml    | Each     | \$15.30  |
| D1081     | OUUIII   | 10 / pkt | \$145.30 |
| D109      | 1000ml   | Each     | \$18.40  |
| D1091     | 10001111 | 10 / pkt | \$173.60 |
| D110      | 2000ml   | Each     | \$33.70  |
| D1101     | 20001111 | 10 / pkt | \$318.90 |
| D111      | 2000001  | Each     | \$61.90  |
| D1111     | 3000ml   | 4 / pkt  | \$235.30 |
| D112      | 5000ml   | Each     | \$108.10 |





# SCHOTT DURAN® Erlenmeyer flask Narrow neck, with graduation



| ITEM CODE | CAPACITY | UNITS    | PRICE    |
|-----------|----------|----------|----------|
| D201      | 50ml     | Each     | \$11.00  |
| D2011     | 501111   | 10 / pkt | \$89.80  |
| D202      | 100ml    | Each     | \$10.60  |
| D2021     | 100mi    | 10 / pkt | \$85.60  |
| D203      | 250ml    | Each     | \$11.00  |
| D2031     |          | 10 / pkt | \$89.80  |
| D204      | 500ml    | Each     | \$13.50  |
| D2041     | 500111   | 10 / pkt | \$109.60 |
| D205      | 1000ml   | Each     | \$24.50  |
| D2051     | 10001111 | 10 / pkt | \$190.20 |
| D206      | 2000ml   | Each     | \$37.80  |



# SCHOTT DURAN® Erlenmeyer flask Wide neck, with graduation



| ITEM CODE | CAPACITY | UNITS    | PRICE    |
|-----------|----------|----------|----------|
| D301      | 50ml     | Each     | \$11.20  |
| D3011     | 501111   | 10 / pkt | \$90.80  |
| D302      | 100ml    | Each     | \$11.00  |
| D3021     | 1001111  | 10 / pkt | \$89.80  |
| D303      | 250ml    | Each     | \$11.80  |
| D3031     | 2501111  | 10 / pkt | \$96.00  |
| D304      | 500ml    | Each     | \$14.10  |
| D3041     | 5001111  | 10 / pkt | \$114.80 |
| D305      | 1000ml   | Each     | \$23.10  |
| D3051     | 10001111 | 10 / pkt | \$189.00 |
| D306      | 2000ml   | Each     | \$40.30  |
| D3061     | 2000MI   | 10 / pkt | \$329.00 |





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    | \$16.10 |
| D6011     | 1251111  | 4 / pkt | \$60.40 |
| D602      | 250      | Each    | \$15.30 |
| D6021     | 250ml    | 4 / pkt | \$58.10 |
| D603      | 500ml    | Each    | \$17.50 |
| D6031     |          | 4 / pkt | \$66.30 |
| D604      | 1000ml   | Each    | \$25.00 |
| D6041     |          | 4 / pkt | \$95.20 |















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

| ITEM CODE | CAPACITY | UNITS    | PRICE    |
|-----------|----------|----------|----------|
| D401      | 50ml     | Each     | \$14.20  |
| D4011     | 501111   | 10 / pkt | \$134.20 |
| D402      | 10000    | Each     | \$12.80  |
| D4021     | 100ml    | 10 / pkt | \$121.60 |
| D403      | 250ml    | Each     | \$14.90  |
| D4031     | 250ml    | 10 / pkt | \$141.40 |
| D404      | 500ml    | Each     | \$16.40  |
| D4041     | 5001111  | 10 / pkt | \$157.90 |
| D405      | 1000ml   | Each     | \$25.70  |
| D4051     | 10001111 | 10 / pkt | \$244.20 |
| D406      | 2000ml   | Each     | \$50.40  |
| D4061     | ZUUUMI   | 10 / pkt | \$477.30 |
| D407      | 5000ml   | Each     | \$287.70 |

| ITEM CODE | CAPACITY | UNITS    | PRICE     |
|-----------|----------|----------|-----------|
| D501      | 100ml    | Each     | \$71.00   |
| D5011     | Ioomi    | 10 / pkt | \$614.10  |
| D502      | 250ml    | Each     | \$81.20   |
| D5021     | 2501111  | 10 / pkt | \$697.60  |
| D503      | 500ml    | Each     | \$87.60   |
| D5031     | 5001111  | 10 / pkt | \$683.80  |
| D504      | 1000ml   | Each     | \$114.30  |
| D5041     | iooomi   | 10 / pkt | \$916.10  |
| D505      | 2000ml   | Each     | \$163.80  |
| D5051     | ZUUUMI   | 10 / pkt | \$1282.60 |

#### **SCHOTT DURAN® Spares**

| ITEM CODE | CAPACITY                             | UNITS    | PRICE   |
|-----------|--------------------------------------|----------|---------|
| LB525     | Cap, lab bottle, blue,<br>GL 45      | Each     | \$5.80  |
| LB520     | Pouring ring, blue,<br>GL 45, pkt 10 | 10 / pkt | \$18.10 |

# **ADAM BALANCES**



#### **CB COMPACT RANGE**

The CB is a compact portable balance which is ideally suited for a variety of uses and applications. Its compact size facilitates effortless storage and transportation between classrooms.

| CODE      | ACCURACY     | UNIT | PRICE \$ |
|-----------|--------------|------|----------|
| CB501     | 500g x 0.1g  | each | 124.00   |
| CB1001    | 1000g x 0.1g | each | 148.00   |
| CB3000    | 3000g x 1g   | each | 124.00   |
| CBADAPTOR | 6vDC 200mA   | each | 45.00    |
|           |              |      |          |



| Pan size:                    |
|------------------------------|
| 130mm                        |
| <u>Dimension</u> :           |
| 45 v 160 v 205mm (H v W v D) |

# DUNE SERIES RANGE

The Dune series offers all of the necessary features for quick and easy weighing. Compact and easy to use, the Dune offers basic weighing at an unbeatable value! Streamlined design for basic weighing in the lab, classroom or field.

| CODE    | ACCURACY     | UNIT | PRICE \$ |
|---------|--------------|------|----------|
| DCT201  | 200g x 0.1g  | each | 133.00   |
| DCT2000 | 2000g x 1g   | each | 133.00   |
| DCT5000 | 5000g x 2g   | each | 133.00   |
| DCT302  | 300g x 0.01g | each | 327.00   |
| DCT601  | 600g x 0.1g  | each | 194.00   |
| DCT2001 | 2000g x 0.1g | each | 247.00   |

<u>Pan size</u>: 145 x 145mm <u>Dimension</u>: 40 x 208 x 147mm (H x W x D)



The CQT Core series is the best choice for simple operation and economy.

| CODE    | ACCURACY     | UNIT | PRICE \$ |
|---------|--------------|------|----------|
| CQT202  | 200g x 0.01g | each | 400.00   |
| CQT251  | 250g x 0.1g  | each | 223.00   |
| CQT601  | 600g x 0.1g  | each | 259.00   |
| CQT1501 | 1500g x 0.1g | each | 371.00   |
| CQT2601 | 2600g x 0.1g | each | 425.00   |
| CQT5000 | 5000g x 1g   | each | 247.00   |

Pan size:
120mm

Draft shield:
Round 130 x 90mm high

Dimension:
86 x 173 x 255mm (H x W x D)

#### **HIGHLAND RANGE**

With built in applications for parts counting, percentage weighing and totalization/ accumulation, Highland balances are packed with useful features.

| CODE      | DESCRIPTION   | UNIT | PRICE \$ |  |
|-----------|---------------|------|----------|--|
| HCB120    | 120g x 0.001g | each | 642.00   |  |
| HCB302    | 300g x 0. 01g | each | 575.00   |  |
| HCB602H   | 600g x 0.01g  | each | 618.00   |  |
| HCB1002   | 1000g x 0.01g | each | 680.00   |  |
| HCB2202   | 2200 x 0.01g  | each | 841.00   |  |
| HCB3001   | 3000g x 0.1g  | each | 575.00   |  |
| HCB6001   | 6000g x 0.1g  | each | 642.00   |  |
| Pan size: |               |      |          |  |

120mm

<u>Draft shield:</u> Round 132 x 90mm high

<u>Dimension</u>: 80 x 170 x 245mm (H x W x D)



#### **LUNA RANGE**

PRECISION RANGE

Pan size:120mm

Draft shield: Round 180mm x 110mm

<u>Dimension</u>: 344 x 220 x 340mm (H x W x D) 3 Year Warranty

#### EXTERNAL CALIBRATION

| CODE     | DESCRIPTION   | UNIT | PRICE \$ |
|----------|---------------|------|----------|
| LPB 223e | 220g x 0.001g | each | 1,416.00 |
| LPB 423e | 420g x 0.001g | each | 1,536.00 |
| LPB 623e | 620g x 0.001g | each | 2,008.00 |

#### INTERNAL CALIBRATION

| CODE     | DESCRIPTION   | UNIT | PRICE \$ |
|----------|---------------|------|----------|
| LPB 223i | 220g x 0.001g | each | 1,652.00 |
| LPB 423i | 420g x 0.001g | each | 1,772.00 |
| LPB 623i | 620g x 0.001g | each | 2,244.00 |



#### = ADAM CALIBRATION WEIGHTS

Balances require regular calibration to ensure accuracy. Inexpensive, they are the perfect partner for any balance in your lab. Stainless steel, OIML Class F1 weights.

| CODE    | DESCRIPTION | UNIT | PRICE \$ |
|---------|-------------|------|----------|
| F1CN01  | 1g          | each | 64.00    |
| F1CN10  | 10g         | each | 70.00    |
| F1CN20  | 20g         | each | 77.00    |
| F1CN50  | 50g         | each | 89.00    |
| F1CN100 | 100g        | each | 102.00   |
| F1CN200 | 200g        | each | 121.00   |
| F1CN500 | 500g        | each | 172.00   |
| F1CN1K  | 1000g       | each | 260.00   |
| F1CN2K  | 2000g       | each | 320.00   |
|         |             |      |          |



#### **DISPOSABLE POLYSTYRENE WEIGH TRAYS**



| CODE                                    | DESCRIPTION | UNIT    | PRICE \$ |
|---|-------------|---------|----------|
| WT21004                                 | 80 X 80mm   | pk/1000 | 148.00   |
| WT2250                                  | 80 X 80mm   | pk/250  | 43.00    |
| WT44                                    | 44 X 44mm   | pk/250  | 22.50    |
| *************************************** |             |         |          |



# **PHYSICS**

#### TUBULAR SPRING BALANCE, PREMIUM

#### **ACRYLIC, STAINLESS STEEL PARTS**

Longer scale enables easier reading and improved resolution.

#### DIMENSIONS

270 x 25mm (L x Ø)

| CODE | DESCRIPTION  | UNIT   | PRICE \$ |
|------|--------------|--------|----------|
| P300 | 10g / 0.1N   | each   | 17.50    |
| P310 | 20g / 0.2N   | each   | 17.50    |
| P320 | 100g / 1N    | each   | 17.50    |
| P330 | 200g / 2N    | each   | 17.50    |
| P340 | 250g / 2.5N  | each   | 17.50    |
| P350 | 500g / 5N    | each   | 17.50    |
| P360 | 1kg / 10N    | each   | 17.50    |
| P370 | 2kg / 20N    | each   | 17.50    |
| P380 | 5kg / 50N    | each   | 17.50    |
| P385 | 10kg / 100N  | each   | 17.50    |
| P395 | Complete set | set/10 | 160.00   |
|      |              |        |          |



- LONGER LASTING
- WIDE RANGE OF CAPACITIES





#### **HEAT ABSORPTION COMPARATOR**

A great little device cleverly designed to demonstrate heat absorption and radiation. Use 12 V to activate the globe (supplied) and tabulate and graph the results.



#### MAXWELL'S WHEEL

\$**85**90 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.



#### BANANA/BANANA LEADS, STACKABLE, 30CM

30cm with 4mm end, piggyback banana plug each end

| CODE    | DESCRIPTION | UNIT | PRICE \$ |
|---------|-------------|------|----------|
| P053B   | Black       | each | 4.20     |
| 0695002 | Blue        | each | 4.20     |
| 0695003 | Green       | each | 4.20     |
| P053R   | Red         | each | 4.20     |
| 0695005 | Yellow      | each | 4.20     |
|         |             |      |          |



#### HALF LIFE ANALOGUE

Perfectly safe way to study the topic of radioactivity. Practicals are difficult to organise because of the hazardous nature of the topic, but this apparatus offers students the opportunity to obtain realistic results. The student set contains ten trays and 500 small plastic cubes. The cubes have one face identified and represent radioactive nuclei

which have "decayed" when this face is uppermost.

Ten groups shake their set of nuclei and roll them out onto the bench. For each throw the decayed nuclei are counted and removed from the set. Excellent results for an exponential decay curve are obtained with increased awareness of the link between activity and the number of nuclei present.



#### BELL JAR WITH BUZZER, BATTERY OPERATED

When the buzzer is placed beneath the jar and a vacuum seal is created in the chamber, students will observe a total absence of sound. Once air is returned to the chamber, the sound of the buzzer can be heard once more. Activity requires a



vacuum pump, not included. Height 14cm, 10 cm Ø

#### **BICYCLE DYNAMO ASSEMBLY**

For showing slow AC on an oscilloscope or meter or for demonstrating the use of a dynamo in lighting a lamp. This apparatus has a cycle dynamo mounted on a base. Two 4 mm socket terminals are provided for the dynamo output.

#### **DOPPLER EFFECT APPARATUS**

The wavelength of sound is changed by the motion of the source. This apparatus helps students understand with effect easily. Twirl the unit above your head for students to clearly hear the Doppler effect. A great aid for explaining this significant scientific principle.







#### 9 Masses x 50g 9 Masses x 100g 1 Hanger x 50g 1 Hanger x 100g

Total = 500g

#### SLOTTED MASSES, STAINLESS STEEL

High quality stainless steel, does 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 guide.

#### DYNAMIC CART, METAL

Total = 1000a

#### 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 trolleys.

Size: 150 x 78 x 50mm, 600g per cart.



#### LESLIE'S CUBE TIN

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)



\$36

# \$3580

#### **RADIATION CANS, SET/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 metal cans with stoppers to accommodate thermometer (not included). Size: 23cm tall.



#### **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



#### Visit our website www.haines.com.au

#### **ELECTRIC MOTOR KIT, SET/6**

The kit comprises all the part required to build 6 model motors. Includes:

\$8950

- 12x magnets
- 6x armatures
- 6x mild steel yokes
- 6x support bases
- 6x support base
   6x shafts
- OX STIAITS
- 24x rivets
- 12x split pins
- 1x reel of 26SWG PVC tinned copper
- 2x reels of cellotape
- 300mm rubber tubing of 3mm bore



\$355<sup>80</sup>



What happens when 2 mounted tuning forks sound at the same/ different frequencies? Steel, set of two.



Requires Induction Coil & Power Supply. Instructions included.



Electrostatic Deflection









#### **AIR CORED, 660 TURNS**

INDUCTION COIL

To produce high voltage alternating current or pulses of high voltage current from a low

voltage direct current source. Suitable for use with gas-filled

discharge tubes, vacuum tubes

and for general laboratory work.

Requires 6-12V power source.

**30MM SPARK** 

Formed on a strong moulded plastic bobbin, it is used in several experiments or for any time a magnetic field is required of known field strength.

It contains 660 turns of copper wire and can carry about 5 amps maximum current.

#### **LENZ LAW APPARATUS**

This 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.

GEIGER COUNTER -DIGITAL

To detect and count high energy Alpha particles, Beta particles and Gamma rays, to count either continuously or over preset periods of 10sec, 60sec or 100sec. Comes with inbuilt GM tube and LCD display is powered by 3x 'AA' batteries. Socket provided for standard 240/12V.AC. Plug Pak can be used to run the unit.



# RADIOACTIVE SOURCES

Half lives displayed on individual disc sources. Isotopes

are exempt from individual licensing and require no special handling/storage or disposal.

| CODE    | DESCRIPTION               | PRICE \$ |
|---------|---------------------------|----------|
| 1093001 | Polonium 210              | 291.50   |
| 1093002 | Stronium 90               | 291.50   |
| 1093003 | Cobalt 60                 | 291.50   |
| 1093004 | Set/3 - Po, St, Cobox/100 | 825.00   |

#### **CLOUD CHAMBER, COLD PLATE TYPE**

This Cloud Chamber requires no dry ice or liquid nitrogen. It uses a specially designed cold plate that is capable of retaining a low temperature for about one hour by freezing the plate in a standard freezer.







# ELECTRICITY KIT, ECONOMY

A complete classroom set of basic electrical components.

Includes:

- 10x lamp holders, 10x bulbs
- 1x buzzer, 1x electric motor
- 5x switch, 3x battery holder

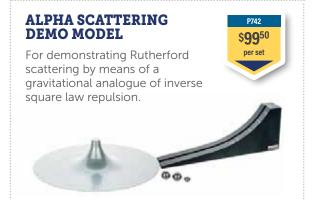
**GUINEA &** 

**FEATHER** 

CLASSICAL

DFMO

• 10x alligator leads



#### **POWER 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.







Note: Requires a vacuum pump, not included







#### **DEMONSTRATION METER, ECONOMY**

Simple galvanometer. Use it to demonstrate deflection due to small currents

Housed in a transparent wooden box to easily see key features.

Size: 8 x 10 x 19cm (L X W X H)

#### LOOP THE LOOP

Demonstrate transformation of potential into kenetic energy with this large size model for the whole class to see.

Size: 50cm high



#### HAND GENERATOR

Hand operated, housed in clear tough plastic case. Mounted lamp on the end can be used as a flash light.

Can be utilised with almost any experiment requiring up to 12V DC current. Use binding post to connect outside electrical circuit.



#### **LIGHT GUIDE**

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



#### REFRACTION TANK

Acrylic hollow tank with graduations. Ideal for refraction, reflection and wave demonstrations.

Size: 20cm diameter





# **CHEMISTRY**

#### SPECTROMETER. **ENGLISH PATTERN**

Comprised of a cast base with an integral fixed pillar for the collimator support and a swinging telescopic arm.



#### HAND BOILER

Glass hand boiler demonstrates Charles' Law. Item contains ethyl alcohol and is flammable, to be used under strict adult supervision.

> ELEMENT Hydrogen

Carbon



4

White

Black Black

#### **NOMENCLATURE CARDS**

Using this set of 140 + 4 blank write and wipe magnetic cards representing the most common cations and anions including polyatomic ions and multiple valency elements students can investigate not only the sometimes perplexing naming of compounds but the balancing of equations.



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

SET/99, EXTRA LARGE



|  |          | 10  | J    | Didok  |
|--|----------|-----|------|--------|
|  |          | 4   | 2    | Black  |
|  | Nitrogen | 1   | 4    | Blue   |
|  |          | 3   | 3    | Blue   |
|  |          | 4   | 2    | Blue   |
|  | Oxygen   | 10  | 2    | Red    |
|  |          | 6   | 1    | Red    |
|  | ELEMENT  | QTY | FACE | COLOUR |
|  | Chlorine | 2   | 1    | Green  |
|  | -1 .     | _   |      |        |

40

20

10

| ELEMENT  | QTY | FACE | COLOUR     |
|----------|-----|------|------------|
| Chlorine | 2   | 1    | Green      |
| Fluorine | 2   | 1    | Light Blue |
| Bromine  | 2   | 1    | Brown      |
|          |     |      |            |

| LINKS         |     |             |
|---------------|-----|-------------|
| Double Bonds  | 16  | 65mm length |
| Turning Bonds | 6   | 70mm length |
| Small Bonds   | 120 | 16mm length |
| Big Connector | 48  | 65mm length |

#### **DIGITAL COLORIMETER**

This Colorimeter is a high quality student Colorimeter for the measuring of concentrations of chemical solutions. The LCD display can provide either 'Transmission' or 'Absorption' measurements. Supplied complete with 6x cuvettes and 4x test tubes for samples, with selectable 0-4V or 0-5V analogue output signal for logging software.



#### **SENIOR ORGANIC / INORGANIC SET SET/230**



| 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 |

#### PH METER, **POCKET SIZE**

Ranges 0-14pH. 0.1 pH resolution. Waterproof.



# \$119



#### **BUFFER/STORAGE SOLUTION**

HANNA®' buffer solutions are prepared according to precise formulas and are standardized with a pH meter calibrated according to the NIST standards.

| CODE     | DESCRIPTION              | PRICE \$ |
|----------|--------------------------|----------|
| HI7004L  | pH 4.01 (500ml)          | 35.20    |
| HI7007L  | pH 7.01 (500ml)          | 35.00    |
| HI7010L  | pH 10.01 (500ml)         | 35.20    |
| HI70300L | Storage Solution (460ml) | 35.20    |
|          |                          |          |



#### SENIOR ORGANIC SET

**SET/66** 



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

| LINKS      |    |       |
|------------|----|-------|
| Medium     | 28 | Grey  |
| Long Flex. | 12 | Grey  |
| Short      | 30 | White |





#### **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





#### **METAL- PRISMATIC**

For superior results, focus, adjustable slit, sharp lines.



#### SPECTROSCOPE. **GRADUATED SCALE**

Plastic, direct vision student spectroscope, fitted with a high efficiency grating in the eyepiece.



#### **CARDBOARD**

With dffraction grating, strong cardboard tube



#### **STUDENT MINI VOLTAMETER**

Neat compact unit, easy to use student voltameter. includes electrodes







#### 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** 

10 PLACES





#### **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.



#### JUPITER MOLECULAR MODELS









#### SODIUM CHLORIDE MODEL KIT







#### DIAMOND MODEL KIT



ZINC SULFIDE MODEL KIT



#### WATER MODEL KIT





**FULLERENE MODEL** KIT



### **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.



With digital multimeter

#### **STUDENT COLORIMETER**

For accurate determination of concentrations. Battery powered. Includes: Instructions and test tubes.



# SOLAR HYDROGEN EDUCATIONAL (FUEL CELL) KIT

Invent your own clean energy applications using fuel cells and the power of the sun. Generate hydrogen in a completely sustainable process by using a solar panel to power water electrolysis. Convert hydrogen into electrical energy with the PEM fuel cell and power your applications. As a starting-off point for would-be inventors, the kit comes with a small electric motor and propeller blade.





#### HYDROCAR FUEL CELL KIT

Great entry-level fuel cell car kit. Demonstrates electrolysis of water into oxygen and hydrogen. Includes solar panel to power electrolysis process, experiment guide on CD, as well complete manual. Easy to build and operate, steers independently when meeting obstacles.

#### 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. Provided with loops welded to caps for electrical connection.

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  | 39.50    |
| HL133601      | Carbon Dioxide         | each  | 39.50    |
| HL134601      | Helium                 | each  | 39.50    |
| HL135601      | Hydrogen               | each  | 39.50    |
| HL136601      | Krypton                | each  | 39.50    |
| HL137601      | Mercury Vapour         | each  | 39.50    |
| HL138601      | Neon                   | each  | 39.50    |
| HL139601      | Nitrogen               | each  | 39.50    |
| HL140601      | Oxygen                 | each  | 39.50    |
| HL141601      | Sulphur                | each  | 44.50    |
| HL142601      | Water Vapour           | each  | 39.50    |
| 1052007       | Spectrum Tubes Set     | set/6 | 225.00   |
|               | (H, Hg, He, N, Ne, Ar) |       |          |



#### 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)



#### SPECTRUM TUBE HOLDER, WITH TERMINALS

An apparatus to hold  $\vartheta$  clamp a spectrum tube. The height of the clamp can be adjusted to fit them length of the spectrum tube. Use with Rumkoff coil.

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





A super absorbent polymer that soaks water and 'grows' before your eyes. Feels like real snow! Non-toxic -best to avoid carpets and fabrics as it may stick and be difficult to remove. Can be used over and over again. Makes about 2.5 litres of snow for every 100g of snow magic.

#### CONDUCTIVITY **OF SOLUTIONS DEMONSTRATION**

This kit consists of a moulded socket on a PVC cover, provided with binding posts for the connection of two wire cords. Two electrodes are internally connected to the lamp circuit to show how the current powers a lightbulb. Watch as you control how liquid can conduct electricity!



#### LEMON CLOCK

#### **DISCOVER THE SCIENCE OF BATTERIES**

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



#### **JUMBO TEST TUBES + STAND**

Sturdy & durable, encourages inquirybased investigation and hands-on observation.

Safe at temperatures from 10° - 80°C with 25/50/75/100ml calibration marks

Includes 6 test tubes, rack and Activity Guide.

Tubes measure 15 x 3.75cm (H x dia).





#### 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.

#### **RED CABBAGE INDICATOR JIFFY JUICE**

Forget boiling smelly \$2950 cabbages to extract pH indicator. Red Cabbage Jiffy Juice is bottled and ready to use. Just mix up the instant powder with water to make the Jiffy Juice indicator and measure the pH of common household substances.





#### MEMORY WIRE (NITINOL)

#### **CHANGES STRUCTURE** With teacher notes & lesson

ideas.



90cm CH932 \$40



#### KINETIC THEORY MODEL

The model's vibrating base excites the mini steel balls. As the power is increased – the energy of the balls increases and raises the foam block "ceiling" (simulating gas expansion).

#### **HOFFMAN VOLTAMETER, ACRYLIC**

#### NEW COMPACT PLASTIC, STAINLESS STEEL DESIGN

New design with all the classic features of a glass Hoffman Voltameter. Safer and easier to store, minus the breakages. Includes instructions and a pair of platinum electrodes (spares available).

Made in Australia. Size: 140 x 520mm.







# **BIOLOGY**





# MONOCOT SEED GERMINATION (MAIZE)

Model shows germination of monocot plant (maize) seeds of development. Size: 420 X 330 X 70mm (L x W x H)





#### **DICOT SEED GERMINATION (PEA)**

Model shows the germination of dicot plant (pea) seeds of development.Size: 330 x 230 x 50mm (L x W x H)



4 parts, extra large. 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.

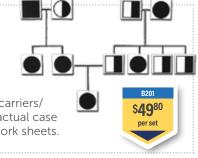
#### **TECH TRAY**

Polypropylene laboratory/dissecting tray. Hygenic, stackage, light weight, autoclavable with etched scale and anchor points (for securing specimens with string). Each tray is supplied with one disposable dissecting mat. 47 x 33.5cm



# GENETIC & INHERITANCE MAGNETIC CARDS

Investigate how genes work in families using these 36 magnetic shapes, representing males and females with the 3 possible genetic combinations (affected/carriers/unaffected). Includes teacher's guide with actual case studies, lesson outlines and reproducible work sheets.



#### **MAGNETIC HUMAN BODY**

Twice the life-science learning--skeletal system on one side and major organs and muscle groups on the other!
Creates a realistically detailed body.
Features multilingual Activity Guide with reproducible diagrams to label.





#### STAINLESS STEEL, POINTED FINE FORCEPS

| CODE | DESCRIPTION | UNIT | PRICE \$ |
|------|-------------|------|----------|
| DFP1 | 125mm       | each | 4.70     |
| DFP4 | 150mm       | each | 5.30     |
| DFP6 | 200mm       | each | 5.90     |
| DFP7 | 250mm       | each | 6.70     |

#### STAINLESS STEEL, BLUNT

| CODE | DESCRIPTION | UNIT | PRICE \$ |
|------|-------------|------|----------|
| DFP2 | 125mm       | each | 4.70     |
| DFP5 | 150mm       | each | 5.30     |

#### STAINLESS STEEL, CURVED

| CODE | DESCRIPTION | UNIT | PRICE \$ |
|------|-------------|------|----------|
| DFP3 | 125mm       | each | 5.20     |



# STAINLESS STEEL SCISSORS, FOR DISSECTING 130mm

| CODE | DESCRIPTION | UNIT | PRICE \$ |
|------|-------------|------|----------|
| DSS2 | Sharp/Sharp | each | 5.90     |
| DSS3 | Sharp/Blunt | each | 5.90     |
| DSS4 | Blunt/Blunt | each | 5.90     |

#### **DISSECTING KIT, 4 INSTRUMENTS**

Includes splinter forceps, scalpel handle, dissecting scissors and artery forceps. Note: the needle in image is replaced by Artery forceps.

#### **DISSECTING KIT, 7 INSTRUMENTS**

Includes 2 x scissors, scalpel handle # 4, scalpel blades, dissecting needle and 2 x forceps.







#### **TEST STRIPS**

| CODE      | DESCRIPTION                             | UNIT     | PRICE \$ |
|-----------|---|----------|----------|
| IS129-50S | Urine Test strips (Glucose 0-3000mg/dL) | pk/50    | 53.80    |
| IS130-50S | Urine Multi-Test strips                 | pk/50    | 110.00   |
|           | (Glucose, Protein, pH & Ketones)        |          |          |
| IS151-40S | Glucose test strips (0-0.1-0.25-0.5-2%) | pk/40    | 75.00    |
| 813340    | Control (taste test)                    | vial/100 | 10.50    |
| 813330    | Sodium Benzoate (taste test)            | vial/100 | 10.50    |
| 813335    | Thiourea (taste test)                   | vial/100 | 10.50    |
| 813325    | Ptc (taste test)                        | vial/100 | 12.30    |
|           |   |          |          |



#### **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 keycard. Dimensions: 380 x 240 x 480cm



#### **DNA MOLECULE MODEL**

This 12-layer model (one complete turn of the double helix) is designed for self-assembly. 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





#### **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

Dimensions (largest piece): 115 x 60 x 160mm (L x W x H)



# PREHISTORIC HOMINID SKULL

Matural size, Set/6

Review anatomical similarities.

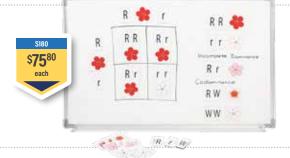
Set consists of:

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



#### STICK TO SCIENCE PUNNET SQUARE

The Punnett square is a square diagram that is used to predict the genotypes of a particular cross or breeding experiment.





#### BUDGET ANATOMICAL MODELS

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



#### **EYE**

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.



#### **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

#### RAT DISSECTION

This model is used for anatomical study, depicts a full frontal dissection for viewing major internal organs.

Mounted on base.

Numbered with keycard.

Size: 610 x 300 x 50mm (H x W x D)



#### 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 cell 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.



#### **GLITTER BUG HAND WASHING KIT**

GlitterBug Potion is applied to students' hands and rubbed in all over, including the wrist. It dries invisible. When they wash their hands, the GlitterBug Potion will be removed with good handwashing technique However, the Potion will still be present on any areas that are missed by the washing, and this will show up under GlitterBug UV light.







#### **VCE (L) MICROSCOPE**

- Triple nosepiece
- Built-in light (LED)
- Achromatic, parfocal & parcentered objectives
- 3 Objectives: 4x, 10x & 40x
- Iris diagram
- Condenser
- Full size corse and fine focus





\$9980

\$199



#### STEREO DELUXE (L) MICROSCOPE

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





#### PREPARED MICROSCOPE SLIDES MITOSIS PHASES, SET OF 5

Metosis set of five, onion root tip. Packed in a 5's plastic box. Anaphase, metaphase, prophase, telophase and interphase.

# ONION ANTHER MEIOSIS, SET OF 12

Mixed set showing the different stages of meisos in an onion cell: Leptotene, zygotene, pachytene, prophase, diakinesis, metaphase, anaphase, telophase, prophase, metaphase, anaphase, telophase.

#### **BACTERIA, SET OF 6**

Three types of bacteria smear, bacterie bacillius, clostridium tetani smear, lactobacillus acidophilus smear, bacteria from human mouth smear, bacteria spores smear.

#### **MINI GRID**

Minigrid slide, 1cm square divided into 1mm divisions.



\$75



#### BOTANY, SET OF 25

Volvox W.M, Nostoc
W.M, 3 Spirogyra W.M, 4
Chlamydomonas W.M., Euglena
W.M., Yeast W.M, Mucor W.M,
Penicillium W.M, Monocot leaf C.S, Monocot
Stem C.S, Monocot Root C.S, Dicot Root C.S,
Dicot Stem C.S, Dicot Leaf C.S, Spirogyra
vegetative, Bacteria bacillus, Bacteria Coccus,
Onion stoma, Pollen germination W.M, Mitosis
onion root, Parenchyma, Pholem, Xylem,
Scalernchyma.

#### ZOOLOGY, SET OF 50

Mammal taste bud, mammal blood, meiosis locust, mammal artery, mammal vein, animal cell, euglena, mammal lungs, mammal appendix, mammary gland, mammal thymus gland, mammal adrenal gland, mammal pituitary gland, paramecium w.m, paramecium fission,w.m, paramecium Conjugation,w.m, mammal nerve, hydra w.m, hydra with Bud, w.m, skeletal muscle, mammal blastula, mammal hair, mammal ovary, fibro cartilage, simple cuboidal epithelium, stratified squamous epithelium, ciliated epithelium, adipose tissue, hyaline cartilage, mammal tooth, elastic cartilage, frog blood smear, smooth muscles, skeleton muscle, daphnia, sardiac muscle, spinal cord, esophagus, trachea, stomach, planarian, mammal skin, small intestine, duodenum, jejunum, large intestine, nerve cell, kidney, ureter, mammal rectum.



A clear composting container with three compartments for observation and experiments! This composting box lets you compare how quickly three different materials decompose in soil.







#### MICROSCOPE, DIGITAL, 1.3MP

Plug this portable USB microscope into your computer and watch everyday objects come alive in amazing detail on the screen, magnified 200 times their normal size.

#### **PLANT PRESS**

Large and sturdy plant press. Size: 250 x 250mm



# 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.



\$180

\$180

\$180



#### **VARIABLE VOLUME MICROPIPETTES**

Our series of micropipettes features color coded plungers for easy identification. Calibration conforms to DIN 12650 & EN-ISO 8655 standard ensuring high accuracy and precision. Calibration report enclosed with every micropipette.

| CODE  | DESCRIPTION  | UNIT       | PRICE  |
|-------|--------------|------------|--------|
| HAIM5 | Micropipette | 200-1000uL | 180.00 |
| HAIM4 | Micropipette | 50-200uL   | 180.00 |
| HAIM6 | Micropipette | 10-100uL   | 180.00 |

#### **BOXED RACKED TIPS**

Autoclavable micropipette tips. Free of lubricants, dyes and heavy metals. Non-sterile. 2 - 200 µl capacity. Supplied in rack of 96, Suitable for HAIM4 & HAIM6 micropipette.

| CODE   | DESCRIPTION UNIT                              | PRICE   |
|--------|---|---------|
| TIP58B | Racked Micropipette Tips, 2-200uL - 96 Tips   | 25.00   |
|        | Suitable for HAIM4 & HAIM6 micropipette       |         |
| TIP55B | Racked Micropipette Tips, 200-1000uL - 96 Tip | s 25.00 |



Suitable for HAIM5 micropipette



UNIT



PRICE

#### **LOOSE TIPS**

|        |                                 | *****               |       |
|--------|---------------------------------|---------------------|-------|
| TIP100 | Tips for micropipette           | 2-200uL - 1000pkt   | 39.00 |
|        | Suitable for HAIM4 & F          | IAIM6 micropipette  |       |
| TIP200 | Tips for micropipette           | 200-1000uL - 500pkt | 39.00 |
|        | Suitable for HAIM5 micropipette |                     |       |





\$8

\$10

each

#### **EMPTY UNIVERSAL MICRO** TIP BOXES

Made from high quality polypropylene, holds 96 tips. Transparent cover.

Suitable for autoclave.

| CODE  | DESCRIPTION                   | UNIT       | PRICE |
|-------|-------------------------------|------------|-------|
| B2506 | Universal empty micro tip box | 2-200uL    | 8.00  |
| B2508 | Universal empty micro tip box | 200-1000uL | 10.00 |

#### MARINE ANIMAL **KINGDOM**

This kit looks at species found in Marine Animal Kingdom. There are eight specimen blocks in this package, each preserved and encased in clear resin material. Specimens include: Pagurid, Spiral Shell, Lobster, Starfish, Cuttlefish, Fiddler Crab, Octopus, Scat Fish.



#### PARTS OF AN INSECT **SPECIMEN**

This kit focuses on the parts of an Insect. The block is made from clear resin so each part can be observed from every side to see the details! The specimen contained in the block is a Stag Beetle (Lucanus hermani).



#### ANIMAL KINGDOM SET

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



#### ARTHROPODS SPECIMENS COLLECTION

This collection includes six different arthropods and their characteristics. The species in this set include the Pillworm, Scorpion,

Locust, Spider, Shrimp and Millepede.



# **SCIENCE ESSENTIALS**





Build 5 different models: boat; propeller car; hydrofoil; airplane; helicopter. The propellers get the students to play and learn about energy stored in rubber bands as well as the principles of aviation.



### GIGO SOLAR CATAMARAN

This catamaran sails on solar or battery power.

#### Includes:

- 44 pieces, 6 experiments included
- The multi-functional motor combines a solar panel, gears and a battery
- A fan can be used along with the solar motor



#### **SOLAR POWER KIT 2.0, GIGO**

The special solar panel in this kit generates 3 volts of electricity in bright sunlight and its position can be adjusted. Comes with 120 pieces to build 10 models. The special solar panel in this kit can generate 3 volts of electricity in bright sunlight and it's positionable, so you can experiment by adjusting it to different angles thereby maximizing its exposure to the sun to generate more power.



#### **MIRACLE MIRROR**

This is a plastic hemisphere covered with aluminum. 14cm in diameter. The back side functions as a concave mirror and the front as a convex mirror. Reflections of the same object on opposite sides are dramatically different.

Blast a harmless vortex of air up to 6m towards any object or person. Powerful enough to blow out a candle from across the room! Safe and easy to assemble and use.

**AIR ZOOKER** 

Requires no batteries.



#### SIMPLE MACHINES, SET OF 6 MACHINES

This set of 6 wooden machines are elegantly designed and easy for students to use. A great resource to have in the classroom.







A set of three kits for all budding engineers! Build and experiment with these high quality construction kits. Ideal for all STEM appplications.







#### FOUCAULT'S PENDULUM

Easy to use, compact instrument. Built simple device with an executive wooden stand, conceived as an experiment to demonstrate the rotation of the Earth – while also making intricate patterns in the sand

Size: 55cm



#### **BALLOON HELICOPTER**

Inflate one of the balloons, pinch off the neck, attach the balloon to the rotor blades and watch this simple helicopter soar into the air! No batteries or jet fuel required!

Great demonstration of Newton's third law.



#### BALANCING BIRD

This eagle balances on almost anything - your finger, a pencil, or the edge of your desk. Students can change the eagle's centre of gravity by adding small pieces of tape or paperclips to have it to balance perfectly. Individually packaged with a stand. Approx. 16 cm wing span.



#### **GLUE GUN**

Trigger action glue gun dispenser. Uses 7/16" / 11mm diameter glue sticks.



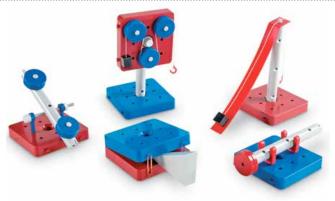
30cm glue refills suitable for most surfaces. Bonds Quickly. Pack of 10.





Shows cooling process of evaporation.

\$119<sup>50</sup>



#### SIMPLE MACHINES SET

# 63 PIECES, BUILD ALL 5 MACHINES AT THE SAME TIME!

Construct, examine and explain simple machines to develop a deeper understanding of how they make work easier.

Contains enough pieces to build a lever, pulley, inclined plane, wheel and axle, and wedge—all at the same time. Modify machines with 4x weights (2x 5g and 2x 10g) and 8 included rubber bands to explore effort, force, load, motion and distance. Labeled pieces assemble easily and separate to store.







#### **ELECTROSTATIC STICK**

Slide the rubber sleeve along the clear plastic stick and watch the foam balls fly. A vivid demonstration in electrostatics. 30cm long.





#### NEWTON'S CRADLE, LARGE

Demonstrate the conservation of momentum and energy via a series of swinging spheres. Ask students to explain what's going on. Extra large size.

Dimensions 180(l) x 150(w) x 190(h) mm.



# 101800 \$38 each

#### **RADIOMETER**

Experience this sphere powered by the sun! The vanes in the Radiometer alternate in dark and light colors. When the light strikes these vanes it transfers heat to each one, but not at the same degree. The lighter vane reflects the rays and the darker vane absorbs the rays.

#### **PLASMA BALL**

- Electrical current flows through negatively ionised gas to create the illusion of lightning
- Black back cover for increased lightning visibility
- Approx 20cm diameter
- Reacts to sound
- Lasts for up to 1000hrs



#### **COMPASS, POCKET**

Pocket Compass, 45mm dia., a format compass in aluminum case, marked in degrees, with N and S indication. Suitable for use as a plotting compass or for normal application. Colour of string may be different.





#### MAGNET VARIETY TEST PACK

#### 13 MAGNETS

A kit of magnets and accessories in a compartmental storage tray. Contents :

- 1x Horseshoe magnet, 6% chrome, 100mm, w/keeper
- 2x Ceramic bar magnets 75mm
- 3x Ceramic ring magnets, 38mm dia., face polarised
- 2x Plotting compasses,19mm dia.
- 1x Pack Iron Filing.
- 1x square iron
- 1x aluminium
- 1x zinc
- 1x copper metal



#### **BINOCULARS**

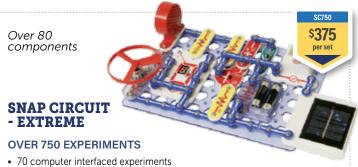
Full size, plastic body.

- Eyepiece with Rubber Cushion
- Sensitive Focus Knob
- 35mm ø Objective Lens
- Safety Neck Strap





#### Visit our website www.haines.com.au



- Study projects in solar power, electro-magnetism & vibration switches
- Uses 4 "AA" batteries
- Includes projects manual



The components and connector system are creatively designed to facilitate and optimize learning by engaging students in a meaningful way with exciting projects.

Includes electronic projects book and guide.

# SNAP CIRCUITS 300 EDUCATIONAL VERSION

300 electronic projects kit. With student and teacher guides, and a storage case.





# SNAP CIRCUITS 750 EDUCATIONAL VERSION

750 electronic projects kit. With student and teacher guides, and a storage case.





# SNAP CIRCUIT - JUNIOR OVER 100 EXPERIMENTS

- Uses 2 "AA" batteries
- Includes projects manual.
- Ideal for years 6-9

Over 30 components





#### **SNAP CIRCUITS - GREEN ENERGY**

Learn the basics of electronics and modern alternative energy. Explore clean energy concepts, such as electric cars, windmills, and hand-generated power. Includes full-color manual and separate "Think Green" manual that explains environmentally-friendly energy including geothermal, hydrogen fuel cells, wind, solar, tidal, hydro, and others. Perfect for environmentalists and future engineers!

Over 125 experiments & 45 parts



#### **BUZZ WIRE KIT**

Learn how to connect an electric circuit. Design different wire shapes with varying levels of difficulty. The aim is to move the metal wand along the wire maze, from one end to the other, without actually touching the wire.

#### Includes:

- Plastic platform
- Plastic accessories & metal plugs
- Electric buzzer
- Insulated electric wire
- Bendable metal wire
- Instructions
- AA size Battery holder (Batteries not included)



# 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.



# EARTH & SCIENCE



#### **MINERALS SET, 20 PC**

Samples of minerals all clearly labelled. In a neat wooden case (21x13cm). Asbestos free.





#### MINERALS SET, 20 PC

Teach the measurement of natural phenomenon. Seismograph recorder with attached support and suspended weight registers visual shock waves from simulated earthquakes.

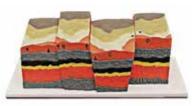
Size: 30 x 15 x 12.5cm



## FRACTURES, FAULTS & DISLOCATIONS MODEL

Excellent way to illustrate various structures related to fault planes and fractures. Shows cross section of five different structural features. The features are labeled and a numbered key is printed on the base.

Size: 47.5(L) x 30(D) x 22.5cm(H)





#### QUADRAT GRID 50 X 50CM, 10CM GRID

Quadrat Grid-50x50 with 10cm squares. For taking population survey on flat terrain. Size. 50 x 50cm with 10cm grid size. Stainless steel PVC Coating.



# ORBITOR MODEL, WITH LIGHT

Model demonstrates daylight, night, seasons and phases of moon. Sun, earth and moon revolve around one another on this gear driven model. Sun is 15cm in diameter. An illustrated guide is included.



#### **ROCKS SET. 49 PIECE**

Samples of igneous, metamorphic and sedimentary rocks. All clearly labelled. Rocks are stored in a neat wooden case (29x21cm). Asbestos free.





#### **VOLCANO MODEL**

Section showing flow of magma. Made of unbreakable material, coloured. Showing vertical section for students to view the path that magma takes on its upward course. Mounted on base and numbered with English Key Card.

Size: 420 x 406 x 203mm (L x W x H)





#### POLITICAL (GEOGRAPHICAL) GLOBE

Perfect desktop swivel globe for the classroom. 2-piece construction with a sturdy base.

Size: 28cm diameter



#### SIEVE, SET/3

Soil is made up of a range of particles from fine clay/silt to coarse sand and gravel. These particles can be separated and identified with the aid of mesh screens. Sorting sieves, mesh size: 5 (4mm), 10 (2mm) and 60 (0.25mm).



# SOLAR SYSTEM MODEL, WITH LIGHT

This 3D model allows students to study our solar system. Planets can be set by month to show their relative positions.

The 15cm sun is supported on a sturdy base with the outer most (dwarf) planet being 45cm from the sun. An illustrated guide is included with planet position tables.







#### **ANALOG WEATHER STATION**

Indoor analog weather station with attractive blue face and stainless steel housing. Includes thermometer, barometer and hygrometer for complete weather analysis. Wall mountable with a 19cm face diameter.



#### SECCHI DISC

200mm disc in four quadrants. Weighted and includes 20m of line. Determine water clarity.



#### **GENERAL FOSSIL COLLECTION**

The General Fossil Collection is perfect for illustrating the major life forms present throughout geologic history. These 15 fossils are a great way to visually introduce students to life forms from the prehistoric era, along with a geologic timeline included with the collection to match the fossil with the era.



# BACKPACK LAB WATER QUALITY EDUCATIONAL TEST KIT

HANNA chemical test kits and pocket testers provide teachers with a valuable tool in helping students assess the water quality of streams, rivers and lakes.



#### **CLOUD BOTTLE**

Amaze students with this easy to perform cloud demonstration. Add a few drops of water inside the bottle, add pressure. When you lift the lid a cloud will form inside the bottle.

A thermometer strip records the temperature changes during the demonstration. 26cm tall.





# UV LIGHT DETECTING BEADS, PKT/250

Expose the beads to UV light and watch them change colour. Great for use in UV expeirments. Pk/250.





#### UV TORCH, 21 LED, 395NM BLACK LIGHT

With this ultra-bright and efficient 21-LED torch you can brighten-up UV colour change beads, fluoresce glow-in-the-dark objects (even during the day), search for security markings, check out fluorescent minerals in rocks and much more.



# MOHS SCALE OF HARNESS - MINERAL COLLECTION

This collection is the traditional Mohs Scale which assigned a "hardness" to ten key minerals with talc #1 (the softest) and diamond #10 (the hardest). The first 9 minerals are included in this set. Nine specimens approximately 2.5cm x 4cm, number-coded.







#### **TURBIDITY TUBE**

Measure water transparency (turbidity) where a Secchi disk cannot be used. Turbidity in NTU is a useful operational test of water clarity and can be used as an early warning test for contamination. Size: 605mm length, 25mm diameter.

Measure marking range: 10-400 NTUs

Clear polycarbonate tube