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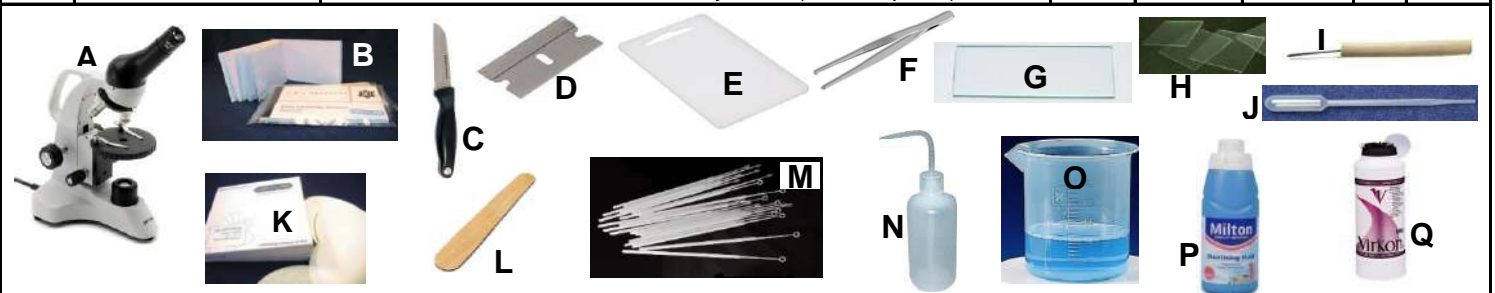
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Investigation 1 (3.1): To use a light microscope

Investigation 2 (3.2): To obtain a good specimen of plant tissue for viewing under the microscope (onion cells)

Investigation 3 (3.3): To obtain a good specimen of animal tissue for viewing under the microscope (cheek cells)

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	SB25042	(1, 2, 3) Microscope (coarse & fine focus x400 mag)	Each	144.96	178.30		
B	S-MIA100	(1) Lens Cleaning Tissue 100x150mm	Pk/100	4.85	5.97		
	SF-A12130	(1) Prepared Slide, Allium (onion) WM Epidermis	Each	11.48	14.12		
	SF-A12518	(1) Prepared Slide, Squamous Epithelium - from human mouth	Each	6.53	8.03		
C	SB48920	(2) Knife	Each	2.15	2.64		
D	SB37020B	or (2) Bohemian Blade (safety backed blade)	Pk/100	7.76	9.54		
E	SB48910	(2) Chopping board	Each	4.36	5.36		
F	SB44070	(2) Forceps, Fine Point 115mm	Each	1.74	2.14		
G	AML310.15X	(2,3) Microscope Slide, Plain 1.2mm thick	Pk/50	3.62	4.45		
H	AML320.15X	(2,3) Cover Slip 22 x 22mm	Pk/100	2.58	3.17		
I	S-BI0164	(2,3) Needle, Mounted on Wooden Handle	Pk/5	2.36	2.90		
J	A711116	(2,3) Dropper Plastic Graduated 3cm ³	Pk/500	7.84	9.64		
K	S-FLP150	(2) Filter Paper, Student Grade, 150mm Ø	Pk/100	4.30	5.29		
	CSA3794-M	(2) Iodine Solution 1% in Potassium Iodide	500ml	5.64	6.94		
L	ACM380.10	(3) Tongue Depressor - cheek cell scrapings	Pk/100	1.34	1.65		
M	S-ACM693.20XPK20	or (3) Inoculating Loop, sterile- cheek cell scrapings	Pk/20	3.58	4.40		
N	S-CH0180B	(3) Wash Bottle, Polythene 250cm ³	Pk/5	4.89	6.01		
	CSA5332-J	(3) Methylene Blue Stain (animal cell stain)	100ml	3.41	4.19		
O	S-BEAK1000	Beaker PPR 1000cm ³ (slide disposal)	Pk/5	8.92	10.97		
P	SC96125	Milton Fluid - Disinfectant (slide disposal)	1250ml	4.55	5.60		
Q	C222/0154/03	or Disinfectant - bacteria, virus, body fluids (slide disposal)	500g	33.08	40.69		



Investigation 4 (4.1): To investigate the digestion of starch by amylase

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
R	SP06520	Pen, Medium Permanent Black (label tubes)	Pk/10	21.79	26.80		
S	S-EDU1014	Test Tube, Borosilicate 125 x 16mmØ	Pk/100	50.90	62.61		
T	S-EDU762/1	Test Tube Rack, Wooden, 6-hole (20mm)	Each	6.40	7.87		
U	A711116	Dropper Plastic Graduated 3cm ³	Pk/500	7.84	9.64		
V	ABN110.40CPK10	Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
W	S-EDU1080	Bunsen Burner, LPG	Each	10.66	13.11		
X	S-EDU1081	or Bunsen Burner, Natural Gas	Each	11.06	13.60		
Y	S-704-016/1	Tubing, Bunsen Neoprene butt -end 600mm	Each	7.54	9.27		
Z	S-EDU080	Gas Lighter, Piezo Type	Each	7.60	9.35		
A1	S-TRSTD200/1	Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
A2	S-GUZCR150	Wire Gauze, Ceramic Centre 150 x 150mm	Pk/10	11.72	14.42		
A3	EDHWB-22	or Water Bath. Digital, 22 Lt capacity c/w Lid	Each	457.80	563.09		
A4	AT69/114/3	Thermometer, Spirit -10 to +110°C x 1°C.	Each	3.03	3.73		
A5	S-EDU770	Spotting Tile, 12-Well	Pk/10	14.26	17.54		
	CSA0642-M	Benedict's Reagent Qualitative	500ml	3.14	3.86		
	CSA0642-R	or Benedict's Reagent Qualitative	2.5lt	11.48	14.12		
	CSA0444-F	Amylase	10g	14.80	18.20		
	CSA8115-M	Starch Soluble (substrate)	500g	10.05	12.36		
	CSA3794-M	Iodine Solution 1% in Potassium Iodide	500ml	5.64	6.94		



Investigation 5 (5.1): To investigate the effect of exercise on heart rate

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	SCOM-03015	Pulse Monitor	Each	22.88	28.14		
B	SC80736	or Stopclock - Digital Timer, Counts Up/Down to 1 second	Each	13.37	16.45		
C	SP-PS-3200	or Datalogging PASCO Airlink - Connect sensor wirelessly via Bluetooth to iPad/iPhone or Android tablets/phones. Download free Sparkvue apps software at www.pasco.com/downloads . Requires Bluetooth 4.0	Each	88.79	109.21		
D	SP-PS-2186	PASCO Heart Rate Sensor - hand grip type	Each	181.68	223.47		


Student Experiment 6 (6.1): To investigate carbon dioxide in inhaled and exhaled air

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
E	SB70740	Respiration Apparatus	Each	10.97	13.49		
F	S-401-001	or Respiration Apparatus	Each	16.99	20.90		
G	S-EDU1016	or Test Tube, Borosilicate 150 x 24mm Ø	Pk/50	38.43	47.27		
H	S-CH0314H/2H	and Rubber Stopper, 2-Hole No.21 (for 24mm Ø test tube)	Pk/10	4.08	5.02		
I	SB55342	and Tubing, PVC Plastic 3mm (fits rubber bung hole)	5 Mt.	3.33	4.10		
	CRTSL0101612	Lime Water	2.5lt	11.34	13.95		

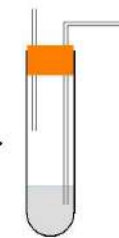
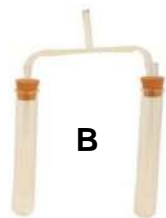
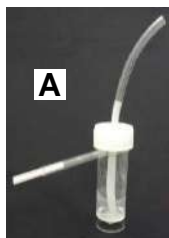
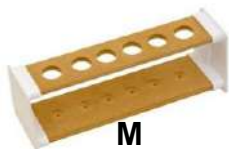

Investigation (7.1): To investigate how temperature affects respiration

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
J	SOH-CS200	Balance, Digital 200g x 0.1g c/w Mains Adapter	Each	51.31	63.11		
K	SP06520	Pen, Medium Permanent Black (label tubes)	Pk/10	21.79	26.80		
L	S-EDU1014	Test Tube, Borosilicate 125 x 16mmØ	Pk/100	50.90	62.61		
M	S-EDU762/1	Test Tube Rack, Wooden, 6-hole (20mm)	Each	6.40	7.87		
N	ABN110.40CPK10	Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
O	AT69/114/3	Thermometer, Spirit -10 to +110°C x 1°C	Each	3.03	3.73		
P	ACY126.12V	Graduated Cylinder Lennox 5cm ³	Each	2.49	3.06		
Q	S-607-020	Nanoheat Hotplate, digital with ceramic top. Preset temperatures will heat beaker of water and hold at either 30°C, 40°C, 50°C, 60°C, 70°C, 80°C or 90°C	Each	287.49	353.61		
R	EDHWB-22	or Water Bath. Digital, 22 Lt capacity c/w Lid	Each	457.80	563.09		
S	SRD34-2660	Ruler, Plastic 300mm	Each	0.99	1.22		
	CSA2939-M	Glucose	500g	5.96	7.33		
	SS42907	Yeast, Brewers	100g	7.41	9.11		



Investigation 8 (8.1): To show that light is necessary for photosynthesis

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	AAL200.14	Aluminium Foil (to cover leaf)	Each	13.53	16.64		
B	S-EDU1016	Test Tube, Borosilicate 150 x 24mm Ø	Pk/50	38.43	47.27		
C	ABN110.40CPK10	Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
D	S-B170A	Forceps Blunt Point 150mm	Pk/10	13.53	16.64		
E	SC41920	Hotplate, Domestic Type 1500W	Each	27.95	34.38		
F	EDHHP-20A	or Hotplate, Laboratory Type	Each	202.65	249.26		
G	S-EDU1080	or Bunsen Burner, LPG	Each	10.66	13.11		
H	S-EDU1081	or Bunsen Burner, Natural Gas	Each	11.06	13.60		
I	S-704-016/1	Tubing, Bunsen Neoprene butt -end 600mm	Each	7.54	9.27		
J	S-EDU080	Gas Lighter, Piezo Type	Each	7.60	9.35		
K	S-TRSTD200/1	Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
L	S-GUZCR150	Wire Gauze, Ceramic Centre 150 x 150mm	Pk/10	11.72	14.42		
M	S-607-020	Nanoheat Hotplate, digital with ceramic top. Preset temperatures will heat beaker of water and hold at either 30°C, 40°C, 50°C, 60°C, 70°C, 80°C or 90°C	Each	287.49	353.61		
N	S-EDU009	Spotting Tile, Ceramic 150mm x 150mm	Pk/5	12.41	15.26		
O	A711116	Dropper Plastic Graduated 3cm ³	Pk/500	7.84	9.64		
	CRTSE0021608	Ethanol, Absolute - Duty Paid	100ml	13.86	17.05		
	CRTSE0651610	or Ethanol, Absolute - Duty Paid	500ml	58.80	72.32		
	CRTSI0331614	or Methylated Spirits Clear (IMS) 99% Ethanol - Duty Free <i>can only be supplied against form APT2 which is available from your local Customs and Excise office</i>	5lt	11.00	13.53		
	CSA3794-M	Iodine Solution 1% in Potassium Iodide	500ml	5.64	6.94		

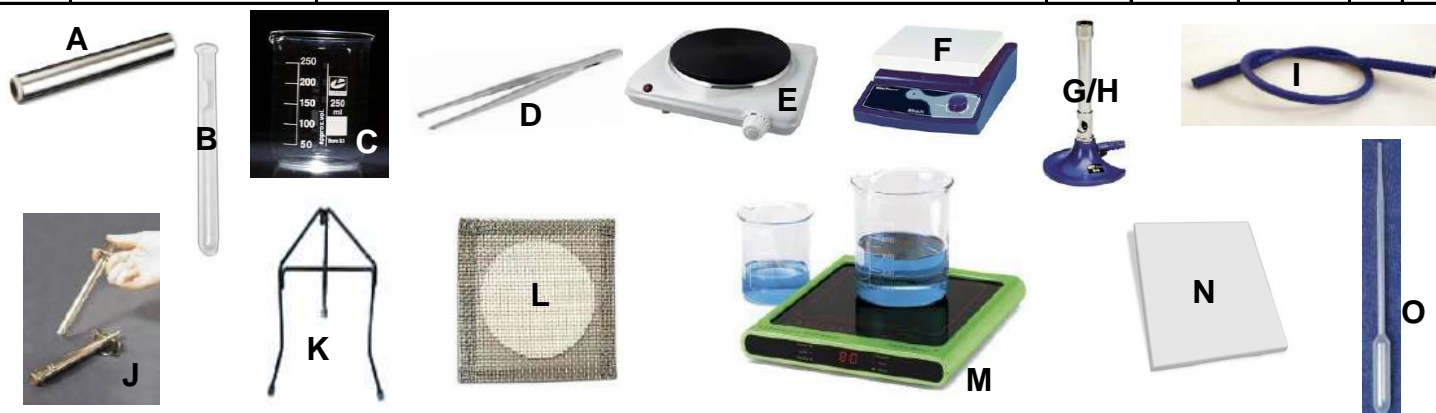
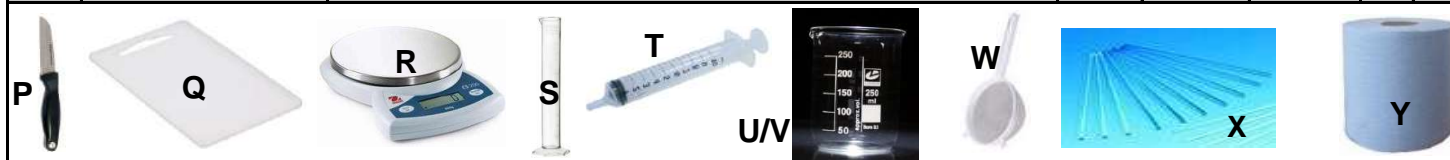
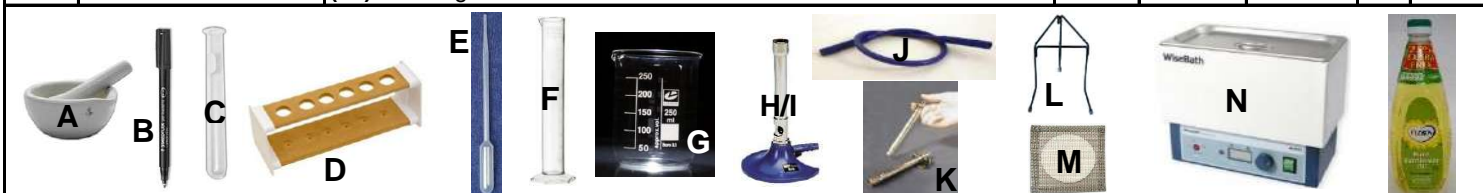

Investigation 9 (10.1): To extract DNA from kiwi fruit

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
P	SB48920	Knife	Each	2.15	2.64		
Q	SB48910	Chopping board	Each	4.36	5.36		
R	SOH-CS200	Balance, Digital 200g x 0.1g c/w Mains Adapter	Each	51.31	63.11		
S	ACY126.26V	Graduated Cylinder Lennox 100cm ³	Each	4.49	5.52		
T	SCASY225.40S	Syringe Plastic 10cm ³	Pk/10	2.75	3.38		
U	ABN110.40CPK10	Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
V	ABN110.50CPK10	Beaker, Lennox Borosilicate Glass 600cm ³	Pk/10	20.60	25.34		
W	SB48942	Sieve, Metal - 180mm	Each	2.55	3.14		
X	S-CH0755A	Stirring Rod - Length 150mm	Each	0.73	0.90		
Y	ACL725.15	Paper Towel Roll - 2-Ply, 197mm wide x 120 metres long	Pk/6	20.71	25.47		
	CRTSE0021608	Ethanol, Absolute - Duty Paid	100ml	13.86	17.05		
	CRTSE0651610	or Ethanol, Absolute - Duty Paid	500ml	58.80	72.32		
	CRTSI0331614	or Methylated Spirits Clear (IMS) 99% Ethanol - Duty Free <i>can only be supplied against form APT2 which is available from your local Customs and Excise office</i>	5lt	11.00	13.53		
	CSA7783-N	Sodium Chloride	1kg	7.28	8.95		
	SS-211030	Washing Liquid	433ml	2.11	2.60		



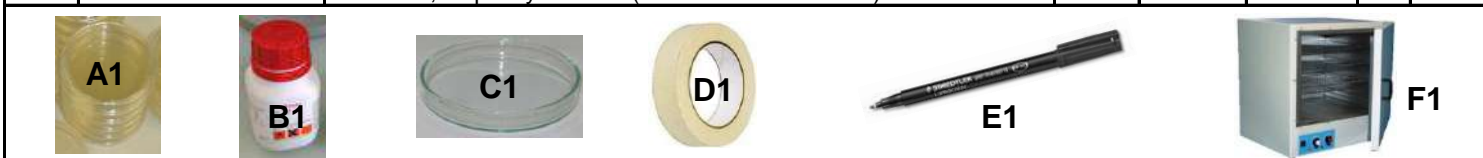
Investigation 10 (12.1): To test a food sample for starch
 Investigation 11 (12.2): To test a food sample for glucose
 Investigation 12 (12.3): To test a food sample for protein
 Investigation 13 (12.4): To test a food sample for fat

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	AMX150.25P	(10 ,11, 12) Mortar & Pestle 100mm (grind food sample)	Each	4.64	5.71		
B	SP06520	(10 ,11, 12) Pen, Medium Permanent Black (label tubes)	Pk/10	21.79	26.80		
C	S-EDU1014	(10 ,11, 12) Test Tube, Borosilicate 125 x 16mmØ	Pk/100	50.90	62.61		
D	S-EDU762/1	(10 ,11, 12) Test Tube Rack, Wooden, 6-hole (20mm)	Each	6.40	7.87		
E	A711116	(10 ,11, 12, 13) Dropper Plastic Graduated 3cm ³	Pk/500	7.84	9.64		
F	ACY126.12V	(10 ,11, 12) Graduated Cyinder Lennox 5cm ³	Each	2.49	3.06		
	CSA8115-M	(10) Starch Soluble (food sample)	500g	10.05	12.36		
	CSA3794-M	(10) Iodine Solution 1% in Potassium Iodide	500ml	5.64	6.94		
G	ABN110.40CPK10	(11) Beaker, Lennox Glass Borosilicate 250cm ³	Pk/10	14.74	18.13		
H	S-EDU1080	(11) Bunsen Burner, LPG	Each	10.66	13.11		
I	S-EDU1081	or (11) Bunsen Burner, Natural Gas	Each	11.06	13.60		
J	S-704-016/1	(11) Tubing, Bunsen Neoprene butt -end 600mm	Each	7.54	9.27		
K	S-EDU080	(11) Gas Lighter, Piezo Type	Each	7.60	9.35		
L	S-TRSTD200/1	(11) Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
M	S-GUZCR150	(11) Wire Gauze, Ceramic Centre 150 x 150mm	Pk/10	11.72	14.42		
N	EDHWB-22	or (11) Water Bath. Digital, 22 Lt capacity c/w Lid	Each	457.80	563.09		
	CSA2939-M	(11) Glucose	500g	5.96	7.33		
	CSA0642-M	(11) Benedict's Reagent Qualitative	500ml	3.14	3.86		
	CSA0642-R	or (11) Benedict's Reagent Qualitative	2.5lt	11.48	14.12		
	CSA0726-M	(12) Biuret Reagent	500ml	4.20	5.17		
	CSA1511-M	or (12) Copper (2) Sulfate (to make up a 1% solution)	500g	7.83	9.63		
	CSA7889-M	and (12) Sodium Hydroxide (to make up a 10% solution)	500g	6.04	7.43		
	SC96130	(13) Cooking Oil	1lt	4.96	6.10		



Investigation 14 (13.1): To show that microorganisms are present in air

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A1	SM35101	Nutrient Agar Plates - prepared plates	Pk/10	10.48	12.89		
B1	CC70148-100G	or Nutrient Agar Powder	100g	40.70	50.06		
C1	APD102(15)	and Petri Dish, Sterile Plastic	Pk/20	1.89	2.32		
D1	ST2560	Masking Tape Roll 25mm	Each	1.76	2.16		
E1	SP06520	Pen, Medium Permanent Black (to label Petri dishes)	Pk/10	21.79	26.80		
F1	EMIN30	Incubator, Capacity 30 Litre (ambient +5°C to 70°C)	Each	746.00	917.58		



Investigation 15 (14.1): To investigate the frequency of a particular plant species in a habitat

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A2	SA69108	Key-Woodland Plants	Each	6.43	7.91		
B2	SA69117	Key-Grassland Plants 1	Each	6.43	7.91		
C2	SA69119	Key-Playing Field Plants	Each	6.43	7.91		
D2	SB20220	Clip Board (for fieldwork surveying)	Each	6.56	8.07		
E2	SB16102	Quadrat, Frame, 50x50cm (one-piece metal frame)	Each	15.95	19.62		



Investigation 16 (16.1): To measure the melting point of benzoic acid

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	AMX150.25P	Mortar and Pestle 100mm	Each	4.64	5.71		
B	S-EDU990T	Melting Point Apparatus, Aluminium Block Type	Each	20.56	25.29		
C	S-CH0882	Capillary Tubes - spot chromatography paper & plate	Pk/100	4.99	6.14		
D	SRD85-3198	Thermometer, Digital -50 to +150 °C x 0.1 °C	Each	26.95	33.15		
E	S-BASE160T	Base for Retort Stand 160 x 100mm	Each	9.11	11.21		
F	S-BASE200T	or Base for Retort Stand 200 x 125mm	Each	11.15	13.71		
G	S-CH0663B/Single	Bosshead for Retort Stand	Each	2.22	2.73		
H	S-RDMS0600	Rod for Retort Stand. Mild Steel. Length: 600mm	Each	4.34	5.34		
I	SC41920	Hotplate, Domestic Type 1500W	Each	27.95	34.38		
J	EDHHP-20A	or Hotplate, Laboratory Type	Each	202.65	249.26		
K	S-EDU1080	Bunsen Burner, LPG Bottle Gas	Each	10.66	13.11		
L	S-EDU1081	or Bunsen Burner, Natural Gas	Each	11.06	13.60		
M	S-704-016/1	Tubing, Bunsen Neoprene butt-end 600mm	Each	7.54	9.27		
N	S-153-512	or Silicone Rubber Tubing, Bunsen Burner. Roll 10mt.	10 Mt	42.79	52.63		
O	S-EDU080	Gas Lighter, Piezo Type	Each	7.60	9.35		
	CSA0664-L	Benzoic Acid	250g	14.72	18.11		

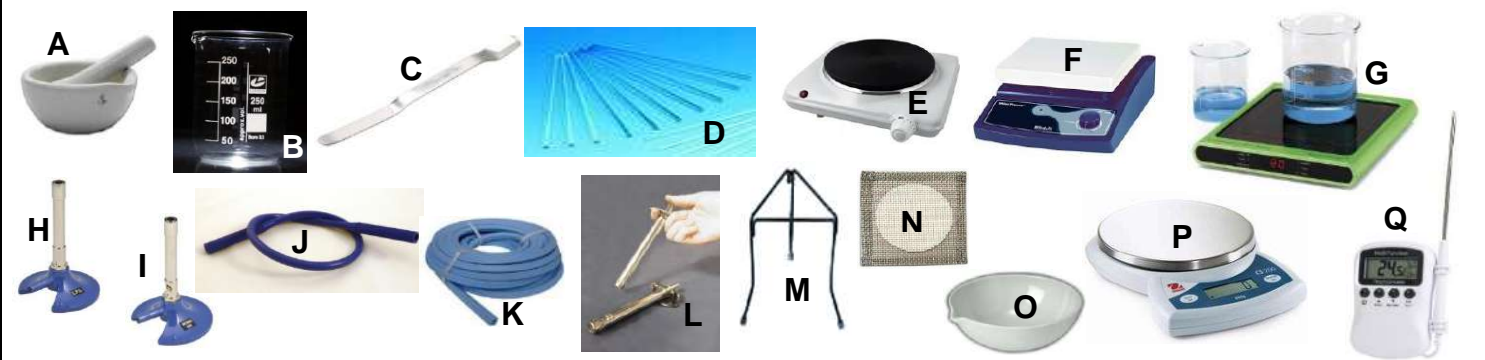

Investigation 17 (17.1): To make a mixture of iron & sulfur and then change the mixture into a compound of iron sulfide

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	AMX150.25P	Mortar and Pestle 100mm	Each	4.64	5.71		
P	S-EDU1016	Test Tube, Borosilicate 150x24mm	Pk/50	38.43	47.27		
E	S-BASE160T	Base for Retort Stand 160 x 100mm	Each	9.11	11.21		
F	S-BASE200T	or Base for Retort Stand 200 x 125mm	Each	11.15	13.71		
G	S-CH0663B/Single	Bosshead for Retort Stand	Each	2.22	2.73		
H	S-RDMS0600	Rod for Retort Stand. Mild Steel. Length: 600mm	Each	4.34	5.34		
Q	S-CLMP3P	Clamp, Rubber Jaw for Retort Stand	Each	6.09	7.49		
K	S-EDU1080	or Bunsen Burner, LPG Bottle Gas	Each	10.66	13.11		
L	S-EDU1081	or Bunsen Burner, Natural Gas	Each	11.06	13.60		
M	S-704-016/1	Tubing, Bunsen Neoprene butt-end 600mm	Each	7.54	9.27		
N	S-153-512	or Silicone Rubber Tubing, Bunsen Burner. Roll 10mt.	10 Mt	42.79	52.63		
O	S-EDU080	Gas Lighter, Piezo Type	Each	7.60	9.35		
R	SOH-CS200	Balance, Digital 200g x 0.1g c/w Mains Adapter	Each	51.31	63.11		
S	SB44330	Forceps Blunt Point 150mm	Each	2.51	3.09		
T	S-CH0554E	Clock Glass 100mm	Pk/10	6.07	7.47		
	SP47090	Iron filings Fine	200g	2.34	2.88		
	CSA8195-M	Sulfur Powder	500g	6.79	8.35		

Investigation 18 (18.1): To grow crystals of copper sulfate

Investigation 19 (18.2): To investigate the effect of temperature on solubility and to use the data obtained to plot a solubility curve

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	AMX150.25P	(18, 19) Mortar and Pestle 100mm	Each	4.64	5.71		
B	ABN110.40CPK10	(18, 19) Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
C	S-SPNUF140/PK10	(18, 19) Nuffield Spatula	Pk/10	9.90	12.18		
D	S-CH0755A	(18, 19) Stirring Rod Glass - Length 150mm	Each	0.73	0.90		
E	SC41920	(18, 19) or Hotplate, Domestic Type 1500W	Each	27.95	34.38		
F	EDHHP-20A	(18, 19) or Hotplate, Laboratory Type	Each	202.65	249.26		
G	S-607-020	(18, 19) Nanoheat Hotplate, digital with ceramic top. Preset temperatures will heat beaker of water and hold at either 30°C, 40°C, 50°C, 60°C, 70°C, 80°C or 90°C	Each	287.49	353.61		
H	S-EDU1080	(18, 19) Bunsen Burner, LPG Bottle Gas	Each	10.66	13.11		
I	S-EDU1081	(18, 19) or Bunsen Burner, Natural Gas	Each	11.06	13.60		
J	S-704-016/1	(18, 19) Tubing, Bunsen Neoprene butt-end 600mm	Each	7.54	9.27		
K	S-153-512	(18, 19) or Silicone Rubber Tubing, Bunsen Burner. Roll	10 Mt	42.79	52.63		
L	S-EDU080	(18, 19) Gas Lighter, Piezo Type	Each	7.60	9.35		
M	S-TRSTD200/1	(18, 19) Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
N	S-GUZCR150	(18, 19) Wire Gauze, Ceramic Centre 150 x 150mm	Pk/10	11.72	14.42		
O	ABF662.18P	(18) Evaporating Basin 80mm Ø (fits 250cm ³ beaker)	Each	1.89	2.32		
P	SOH-CS200	(19) Balance, Digital 200g x 0.1g c/w Mains Adapter	Each	51.31	63.11		
Q	SRD85-3198	(18, 19) Thermometer, Digital -50 to +150 °C x 0.1 °C	Each	26.95	33.15		
	CSA0288-M	Aluminium Sulfate	500g	4.54	5.58		
	CSA1511-M	Copper Sulfate	500g	7.83	9.63		



Investigation 20 (19.1): To separate a mixture of water and soil using filtration

Investigation 21 (19.2): To separate sodium chloride from a solution of sodium chloride in water

Investigation 22 (19.3): To separate salt from rock salt using filtration and evaporation

Investigation 23 (19.4): To obtain a sample of pure water from sea water

Investigation 24 (19.5): To separate the dyes in a sample of ink using chromatography

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A1	ABN110.40CPK10	(20, 21, 22) Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
B1	AFK202.30CPK10	(20, 21, 22) Conical Flask, Lennox Borosilicate 250cm ³	Pk/10	15.36	18.89		
C1	S-CH0755A	(20, 22, 24) Stirring Rod Glass - Length 150mm	Each	0.73	0.90		
D1	S-FLP150	(20, 22) Filter Paper, Student Grade, 150mm Ø	Pk/100	4.30	5.29		
E1	AFT140.30F	(20, 22) Filter Funnel, Glass 75mm Ø	Each	5.28	6.49		
F1	S-EDU175/PK10	(20, 22) or Filter Funnel, Polypropylene 75mm Ø	Pk/10	7.11	8.75		
G1	S-BASE160T	(20, 22, 23) Retort Stand Base , 160 x 100mm	Each	9.11	11.21		
H1	S-BASE200T	(20, 22, 23) or Retort Stand Base , 200 x 125mm	Each	11.15	13.71		
I1	S-CH0663B/Single	(20, 22, 23) Retort Stand Bosshead	Each	2.22	2.73		
J1	S-CLMP3P	(20, 22, 23) Retort Stand Clamp, Rubber Jaw	Each	6.09	7.49		
K1	S-RDMS0600	(20, 22, 23) Retort Stand Rod , Mild Steel. 600mm	Each	4.34	5.34		
L1	S-CH0180B	(20, 22) Wash Bottle 250cm ³	Pk/5	4.89	6.01		
M1	ABF662.18P	(21, 22) Evaporating Basin 80mm Ø (fits 250cm ³ beaker)	Each	1.89	2.32		
N1	SC41920	(21, 22) Hotplate, Domestic Type 1500W	Each	27.95	34.38		
O1	EDHHP-20A	(21, 22) or Hotplate, Laboratory Type	Each	202.65	249.26		
P1	S-TRSTD200/1	(21, 22) Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
Q1	S-GUZCR150	(21, 22) Wire Gauze, Ceramic Centre 150 x 150mm	Pk/10	11.72	14.42		
R1	S-TSMS150/5	(21, 22) Tongs	Pk/5	7.47	9.19		

See images for Student Experiments 20-24 items on next page

Investigation 20 (19.1): To separate a mixture of water and soil using filtration. *Continued*

Investigation 21 (19.2): To separate sodium chloride from a solution of sodium chloride in water. *Continued*

Investigation 22 (19.3): To separate salt from rock salt using filtration and evaporation. *Continued*

Investigation 23 (19.4): To obtain a sample of pure water from sea water. *Continued*

Investigation 24 (19.5): To separate the dyes in a sample of ink using chromatography. *Continued*

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
S1	AMX150.25P	(22) Mortar and Pestle 100mm	Each	4.64	5.71		
T1	S-EDU1080	(21, 22, 23) Bunsen Burner, LPG Bottle Gas	Each	10.66	13.11		
U1	S-EDU1081	(21, 22, 23) or Bunsen Burner, Natural Gas	Each	11.06	13.60		
V1	S-153-512	(21, 22, 23) Silicone Rubber Tubing, Bunsen Burner. Roll	10 Mt	42.79	52.63		
W1	S-704-016/1	(21, 22, 23) or Tubing, Bunsen Neoprene butt -end 600mm	Each	7.54	9.27		
X1	S-EDU080	(21, 22, 23) Gas Lighter, Piezo Type	Each	7.60	9.35		
Y1	S-CH0876	(23) Jointed Glass Set, 27BU 14/23	Each	75.88	93.33		
Z1	ACC210-14	(23) Quickfit Joint Clip 14/23 Yellow	Pk/10	16.32	20.07		
Z2	AT69/114/3	(23) Thermometer, Spirit -10 to +110°C x 1°C.	Each	3.03	3.73		
Z3	S-C758-6	(23) Tubing, Rubber, N6.5 (fits Liebig Condenser)	10 Mt.	12.63	15.53		
	CSA0495-L	(23) Anti Bumping Granules	250g	13.77	16.94		
Z4	S-CH0882	(24) Capillary Tubes (for spotting liquid dyes onto paper)	Pk/100	4.99	6.14		
Z5	AW3001/640	(24) Chromatography Paper Roll, 30mm x 100 metres	Each	44.69	54.97		
Z6	AW3001/845	(24) or Chromatography Paper 200mm x 200mm	Pk/100	56.53	69.53		
Z7	ST10000	(24) Paper Clips (for chromatography paper)	Pk/1000	4.23	5.20		
Z8	SC25000	(24) Chromatography Tank 150mm x 100mm Ø	Each	20.18	24.82		
Z9	SC41960C	(24) or Gas Jar 150mm x 75mm Ø	Each	4.06	4.99		
Z10	SP06310	(24) Pen, Water Soluble Medium. Pack of 8 assorted colours	Pk/8	18.08	22.24		
Z11	SP06260	(24) Pen, Permanent Medium (Red, Blue, Green, Black)	Pk/4	9.96	12.25		
	CSA7783-N	(22) Sodium Chloride	1kg	7.28	8.95		
	CSA7787-S	(22) Sodium Chloride (Rock Salt)	3kg	8.00	9.84		
	CRTSI0331614	(24) Methylated Spirits Clear (IMS) - Duty Free (for permanent pen ink) can only be supplied against form APT2 which is available from your local Customs and Excise office	5lt	11.00	13.53		
	CC32201-2.5L	(24) or Propanone (for permanent pen ink)	2.5lt	17.53	21.56		
	CSA1572-M	(24) or Cyclohexane (for permanent pen ink)	500ml	10.58	13.01		



Student Experiment 25 (20.1): To investigate the pH of a variety of materials

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	S-EDU762/1	Test Tube Rack, Wooden, 6-hole 20mm	Each	6.40	7.87		
B	S-EDU1014	Test Tube, Borosilicate 125 x 16mmØ	Pk/100	50.90	62.61		
C	SC58034	pH Meter, Digital (pH electrode below also required)	Each	102.91	126.58		
D	SC58035	Electrode for pH Meter - BNC connection	Each	23.53	28.94		
E	ATD140.30X	or Universal pH Paper, pH 1-14 10 Books	Each	4.33	5.33		
F	ATD154.10	Narrow Range pH Paper pH 1.0-3.5 10 Books	Each	5.70	7.01		
F	ATD154.13	Narrow Range pH Paper pH 3.6-5.1 10 Books	Each	5.67	6.97		
F	ATD154.16	Narrow Range pH Paper pH 5.2-6.7 10 Books	Each	5.67	6.97		
F	ATD154.19	Narrow Range pH Paper pH 6.8-8.3 10 Books	Each	5.67	6.97		
F	ATD154.22	Narrow Range pH Paper pH 8.4-10.0 10 Books	Each	5.67	6.97		
	CSA2644-J	or Universal Indicator Solution, Full Range pH 1-14	100ml	3.36	4.13		
G	SSC-IN020	Universal Indicator Colour Charts pH1-14	Pk/10	7.70	9.47		
H	A711116	Dropper Plastic Graduated 3cm ³	Pk/500	7.84	9.64		
	CH9058	Ammonia Solution	2.5lt	24.57	30.22		
	CRTSH0121614	Hydrochloric Acid Solution 1M	5lt	13.30	16.36		
	SC96140	Vinegar	284ml	1.66	2.04		
	CRTSL0101612	Lime Water	2.5lt	11.34	13.95		
	CSA7775-N	Sodium Carbonate	1kg	5.30	6.52		
	CRTSS0391614	Sodium Hydroxide Solution 1M	5lt	8.82	10.85		


Investigation 26 (21.1): To investigate if mass is unchanged when a physical change takes place
Investigation 27 (21.2): To investigate if mass is unchanged when a chemical reaction takes place
Investigation 28 (21.3): To investigate the effect of the type of reactants on the rate of a reaction
Investigation 29 (21.4): To investigate the effect of particle size on the rate of a reaction
Investigation 30 (21.5): To investigate the effect of concentration on the rate of a reaction
Investigation 31 (21.6): To investigate the effect of temperature on the rate of a reaction
Investigation 32 (21.7): To investigate the effect of a catalyst on the rate of a reaction

Image	Product Reference	Description		Price EX-VAT	Price INC-VAT	Qty	Total
A1	SOH-CL501	(26, 27) Balance, Digital, Battery Powered, 500g x 0.1g	Each	47.83	58.83		
B1	SC74108	(26) Food Storage Box 0.8lt 160x100x50mm	Each	1.95	2.40		
C1	SC66602	(26) Ice Cube Bags	Pk/20	3.14	3.86		
D1	AFK202.30CPK10	(27-32) Conical Flask, Lennox Borosilicate 250cm ³	Pk/10	15.36	18.89		
E1	S-CH0314L	(27) Rubber Stopper, Solid No.29	Pk/10	8.35	10.27		
F1	ATW150.13	(27) Tube Flat-Bottom, Glass 50x12mm	Pk/100	27.35	33.64		
	SC83806	(27) Thread	Each	2.98	3.67		
	CSA7783-N	(27) Sodium Chloride	1kg	7.28	8.95		
	CC35375-1L	(27) Silver Nitrate Solution 0.1M	1lt	98.95	121.71		
G1	SC40500	(28 - 32) Gas Preparation Kit - for O ₂ , CO ₂ and H ₂	Each	21.95	27.00		
		or					
H1	S-CH0314L/2H	(28 - 32) + Rubber Stopper, 2-Hole No.29 (for conical flask)	Pk/10	6.66	8.19		
I1	S-726-015	(28 - 32) or Buchner Flask 250cm ³ 24/29 neck	Each	7.25	8.92		
J1	S-RS21	(28 - 32) + Rubber Stopper, 1-Hole No.21 (for Buchner flask)	Pk/10	3.95	4.86		
K1	SC40385	(28 - 32) Dropping Funnel, Open Top 100cm ³	Each	18.19	22.37		
L1	S-C750	(28 - 32) Delivery Tubes 6mm. Set of 4	Each	8.39	10.32		
M1	S-C758-5	(28 - 32) Tubing, Rubber, N5 (fits glass tubing)	10Mt.	10.00	12.30		
N1	ADT002	(28 - 32) or Delivery Tube Plastic (stopper top for gas collection)	Pk/5	20.84	25.63		
O1	SC62220	(28 - 32) Pneumatic Trough, Glass, 200mm Ø x 100mm	Each	33.00	40.59		
P1	ACY126.26V	(28 - 32) Graduated Cylinder, Lennox Glass 100cm ³	Each	4.49	5.52		
Q1	SC80736	(28 - 32) Stopclock - Digital Timer, Counts Up/Down x 1 sec	Each	13.37	16.45		
R1	S-BASE160T	(28, 30, 31, 32) Retort Stand Base, 160 x 100mm	Each	9.11	11.21		
S1	S-BASE200T	(28, 30, 31, 32) or Retort Stand Base, 200 x 125mm	Each	11.15	13.71		
T1	S-CH0663B/Single	(28, 30, 31, 32) Retort Stand Bosshead	Each	2.22	2.73		
U1	S-CLMP3P	(28, 30, 31, 32) Retort Stand Clamp, Rubber Jaw	Each	6.09	7.49		
		See images for Student Experiments 26-32 items on next page					

Investigation 26 (21.1): To investigate if mass is unchanged when a physical change takes place. *Continued*
 Investigation 27 (21.2): To investigate if mass is unchanged when a chemical reaction takes place. *Continued*
 Investigation 28 (21.3): To investigate the effect of the type of reactants on the rate of a reaction. *Continued*
 Investigation 29 (21.4): To investigate the effect of particle size on the rate of a reaction. *Continued*
 Investigation 30 (21.5): To investigate the effect of concentration on the rate of a reaction. *Continued*
 Investigation 31 (21.6): To investigate the effect of temperature on the rate of a reaction. *Continued*
 Investigation 32 (21.7): To investigate the effect of a catalyst on the rate of a reaction. *Continued*

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
V1	S-RDMS0600	(28, 30, 31, 32) Retort Stand Rod, Mild Steel. 600mm	Each	4.34	5.34		
	CSA5117-G	(28, 30, 31) Magnesium Ribbon	25g	7.85	9.66		
	CSA9818-M	(28, 30, 31) Zinc Granular	500g	20.26	24.92		
	CRTSH0121614	(28, 30, 31) Hydrochloric Acid 1M	5lt	13.30	16.36		
W1	SOH-SKX622	(29) Balance, Digital 620g x 0.01g c/w mains adapter	Each	176.04	216.53		
X1	SS79000	(29) Cotton Wool Absorbent	500g	8.80	10.82		
	CSA5215-N	(29) Marble Chips (Calcium Carbonate) 2-4mm	1kg	8.10	9.96		
	CSA5213-N	(29) Marble Chips (Calcium Carbonate) 9-12mm	1kg	7.60	9.35		
	CRTSH0201611	(29) Hydrochloric Acid 3M	1lt	20.44	25.14		
	CRTSH0101614	(30, 31) Hydrochloric Acid 0.5M	5lt	13.23	16.27		
	CRTSH0201611	(31) Hydrochloric Acid 3M (dilute 50:50 for 1.5M HCl)	1lt	20.44	25.14		
Z1	ACY126.30V	(32) Graduated Cylinder, Lennox Glass 250cm ³	Each	6.65	8.18		
Z2	S-BHSHL07	(32) Beehive Shelf	Each	1.85	2.28		
	CSA3415-Q	(32) Hydrogen Peroxide 20 Volume 6%	2lt	6.36	7.82		
	CSA5199-M	(32) Manganese Dioxide	500g	12.77	15.71		



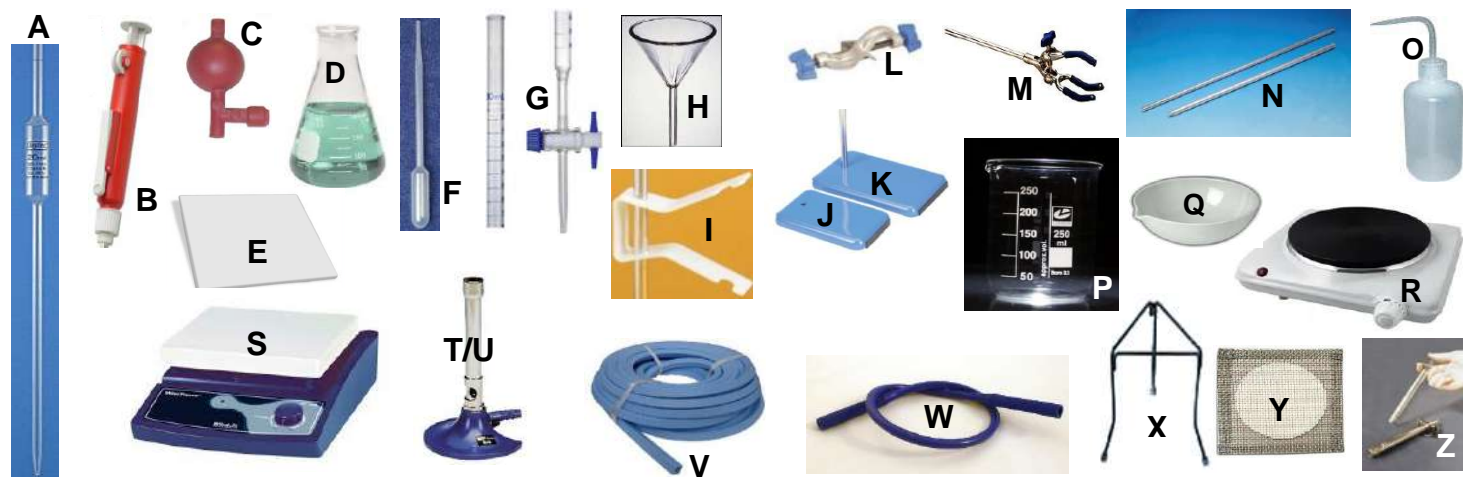
Investigation 33 (22.1): (A) To titrate hydrochloric acid (HCl) solution against sodium hydroxide (NaOH) solution and (B) then prepare a sample of sodium chloride (NaCl)

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	APM102.40VPK10	(A) Pipette, Bulb Type 25cm ³	Pk/10	34.49	42.42		
B	SC61800	(A) Pipette Filler, Pi-Pump. Capacity 25cm ³	Each	5.10	6.27		
C	S-C6586A/1	or (A) Pipette Filler, Rubber Bulb Type Capacity 100cm ³	Each	4.84	5.95		
D	AFK202.30CPK10	(A) Conical Flask, Lennox Borosilicate Glass 250cm ³	Pk/10	15.36	18.89		
E	S-EDU009	(A) Spotting Tile, Ceramic 150mm x 150mm	Pk/5	12.41	15.26		
F	A711116	(A) Dropper Plastic Graduated 3cm ³	Pk/500	7.84	9.64		
G	S-11780A	(A) Burette, Glass with PTFE Stopcock 50cm ³	Each	17.03	20.95		
H	AFT140.20F	(A) Funnel, Filter, Glass 35mm Ø (burette filing)	Each	4.37	5.38		
I	ASL755.12	(A) Burette Holder, Single - fits onto retort stand rod	Each	3.91	4.81		
J	S-BASE160T	(A) Retort Stand Base, 160 x 100mm	Each	9.11	11.21		
K	S-BASE200T	or Retort Stand Base, 200 x 125mm	Each	11.15	13.71		
L	S-CH0663B/Single	Retort Stand Bosshead	Each	2.22	2.73		
M	S-CLMP3P	Retort Stand Clamp, Rubber Jaw	Each	6.09	7.49		
N	S-RDMS0600	Retort Stand Rod, Mild Steel. 600mm	Each	4.34	5.34		
O	S-CH0180B	(A) Wash Bottle 250cm ³	Pk/5	4.89	6.01		
	CRTSH0121614	(A) Hydrochloric Acid Solution 1M	5lt	13.30	16.36		
	CRTSS0391614	(A) Sodium Hydroxide Solution 1M	5lt	8.82	10.85		
	CSA5355-J	(A) Methyl Orange Indicator	100ml	2.53	3.11		
P	ABN110.40CPK10	(B) Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
Q	ABF662.18P	(B) Evaporating Basin 80mm Ø (fits over 250cm ³ beaker)	Each	1.89	2.32		

See images for Student Experiment 33 items on next page

Investigation 33 (22.1): (A) To titrate hydrochloric acid (HCl) solution against sodium hydroxide (NaOH) solution and (B) then prepare a sample of sodium chloride (NaCl). *Continued*

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
R	SC41920	(B) Hotplate Domestic Type 1500W	Each	27.95	34.38		
S	EDHHP-20A	or Hotplate, Laboratory Type	Each	202.65	249.26		
T	S-EDU1080	(B) Bunsen Burner, LPG Bottle Gas	Each	10.66	13.11		
U	S-EDU1081	(B) Bunsen Burner, Natural Gas	Each	11.06	13.60		
V	S-153-512	(B) Silicone Rubber Tubing, Bunsen Burner. Roll 10mt.	10 Mt	42.79	52.63		
W	S-704-016/1	or Tubing, Bunsen Neoprene butt-end 600mm	Each	7.54	9.27		
X	S-TRSTD200/1	(B) Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
Y	S-GUZCR150	(B) Wire Gauze, Ceramic Centre 150 x 150mm	Pk/10	11.72	14.42		
Z	S-EDU080	(B) Gas Lighter, Piezo Type	Each	7.60	9.35		



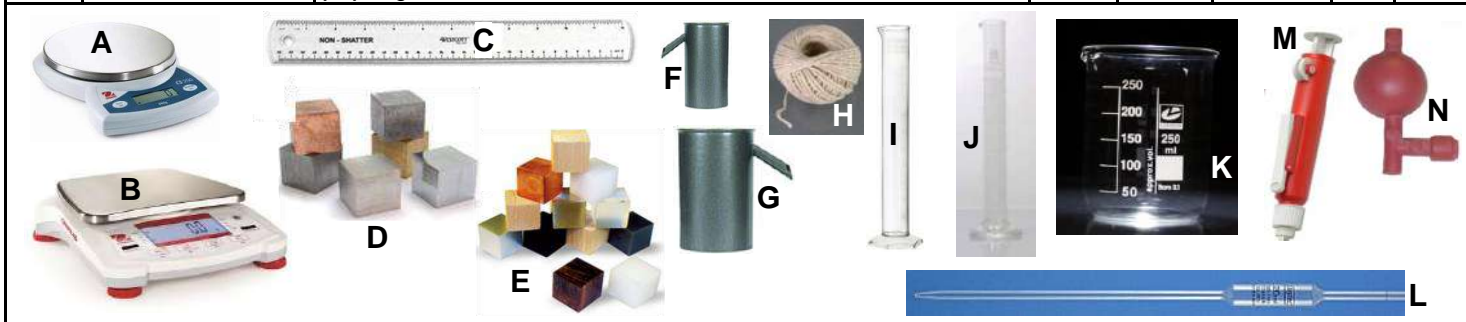
Investigation 34 (26.1): To investigate the conditions necessary for rusting to occur

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A1	S-EDU1014	Test Tube, Borosilicate 125 x 16mmØ	Pk/100	50.90	62.61		
B1	S-C314-15	Rubber Stopper, Solid No.15 (18 mm Ø test tube)	Pk/10	1.85	2.28		
C1	S-EDU762/1	Test Tube Rack, Wooden, 6-hole (20mm)	Each	6.40	7.87		
D1	SS79000	Cotton Wool Absorbent	500g	8.80	10.82		
	CSA1161-M	Calcium Chloride 6H ₂ O	500g	26.25	32.29		
E1	SC96130	Vegetable Oil	1lt	4.96	6.10		



Investigation 35 (29.1): To find the density of a regular solid
 Investigation 36 (29.2): To find the density of an irregular-shaped object
 Investigation 37 (29.3): To find the density of a liquid

	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	SOH-CS200	(35, 36, 37) Balance, Digital 200g x 0.1g c/w Mains Adapter	Each	51.31	63.11		
A	SOH-CS2000	(35, 36, 37) Balance, Digital 2000g x 1g c/w Mains Adapter	Each	51.31	63.11		
B	SOH-NV2101	(35, 36, 37) Balance, Digital 2100g x 0.1g c/w Mains Adapter	Each	119.00	146.37		
C	SRD34-2660	(35) Ruler, Plastic 300mm	Each	0.99	1.22		
D	S-EDU892	(36) Density Cube 20mm. Set of 6 (Brass, Lead, Steel, Copper, Aluminium, Iron)	Each	16.73	20.58		
E	S-EDU663A	(36) Density Cube 20mm. Set of 12 (Hardwood, Softwood, Brass, Sn, Zn, Cu, Al, Fe, Marble, Granite, Pb, Perspex)	Each	46.48	57.17		
F	S-PH0116	(36) Displacement Vessel, Small - 100 x 50mmØ	Each	4.01	4.93		
G	S-PH0118	(36) Displacement Vessel, Large - 225 x 125mmØ	Each	10.43	12.83		
H	SP14000	(36) Cord, White, 1mm Ø, 15 Metres Roll	Each	1.14	1.40		
I	AKART1572	(36, 37) Graduated Cylinder, PMP Clear Plastic 50cm ³	Each	4.08	5.02		
I	AKART1573	(36) Graduated Cylinder, PMP Clear Plastic 100cm ³	Each	4.62	5.68		
I	AKART1574	(36) Graduated Cylinder, PMP Clear Plastic 250cm ³	Each	7.67	9.43		
J	ACY126.22V	(36, 37) Graduated Cylinder, Lennox Glass 50cm ³	Each	3.86	4.75		
J	ACY126.26V	(36) Graduated Cylinder, Lennox Glass 100cm ³	Each	4.49	5.52		
J	ACY126.30V	(36) Graduated Cylinder, Lennox Glass 250cm ³	Each	6.65	8.18		
K	ABN110.30CPK10	(37) Beaker, Lennox Borosilicate Glass 100cm ³	Pk/10	13.04	16.04		
K	ABN110.40CPK10	(37) Beaker, Lennox Borosilicate Glass 250cm ³	Pk/10	14.74	18.13		
L	APM102.40VPK10	(37) Pipette, Bulb Type 25cm ³	Pk/10	34.49	42.42		
M	SC61800	(37) Pipette Filler, Pi-Pump. Capacity 25cm ³	Each	5.10	6.27		
N	S-C6586A/1	(37) Pipette Filler, Rubber Bulb Type	Each	4.84	5.95		
	CRTSM0331614	(37) Methylated Spirits, Blue (density of a liquid)	5lt	14.70	18.08		
	SC96130	(37) Vegetable Oil	1lt	4.96	6.10		



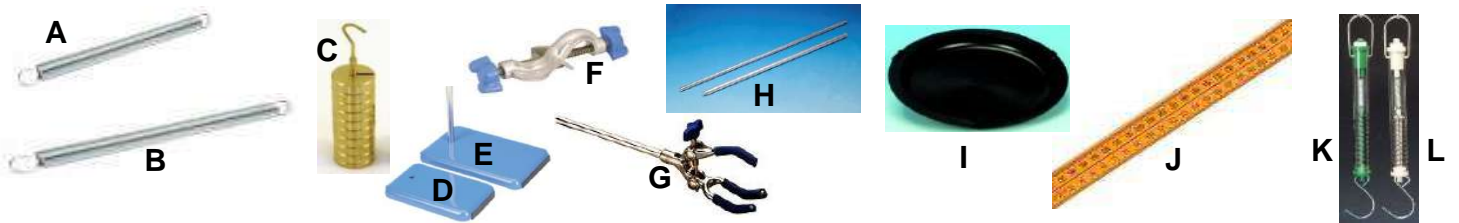
Investigation 38 (30.1): To use a data logger to measure the speed of an object
 Investigation 39 (30.2): To use a data logger to measure the acceleration of an object

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
	O	SP-PS-3200	PASCO Airlink - Connect sensor wirelessly via Bluetooth to iPad/iPhone or Android tablets/phones. Download free Sparkvue apps software at www.pasco.com/downloads . Requires Bluetooth 4.0	Each	88.79	109.21	
	P	S-TABLETT4	Tablet - Android with Bluetooth 4.0. Screen Size - 7"	Each	135.00	166.05	
	Q	SP-PS-2103	PASCO Motion Sensor	Each	120.23	147.88	
	R	SP-ME-6961	PASCO Basic Dynamics System	Each	416.66	512.49	
	S	SP-ME-1240	or Wireless Dynamics Smart Cart with Bluetooth connectivity. With wheel encoder- measure position, velocity, acceleration; 100 N Load Cell to measure pushes, pulls or collisions; 3-axis Accelerometer gives acceleration in any direction and the resultant acceleration; 3-axis gyro for measuring rotation. Requires Bluetooth version 4.2 or later	Each	240.44	295.74	



Investigation 40 (31.1): To investigate the relationship between the extension of a spiral spring and the applied force applied to it

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	S-LXSPRG/100	Spring Extension 100mm	Pk/10	4.85	5.97		
B	S-LXSPRG/150	Spring Extension 150mm	Pk/10	5.20	6.40		
C	S-PH0258D-NTN	Mass Set, Slotted, 10N (10 x 1N masses)	Each	43.60	53.63		
D	S-BASE160T	Retort Stand Base , 160 x 100mm	Each	9.11	11.21		
E	S-BASE200T	or Retort Stand Base , 200 x 125mm	Each	11.15	13.71		
F	S-CH0663B/Single	Retort Stand Bosshead	Each	2.22	2.73		
G	S-CLMP3P	Retort Stand Clamp , Rubber Jaw	Each	6.09	7.49		
H	S-RDMS0600	Retort Stand Rod , Mild Steel. 600mm	Each	4.34	5.34		
I	S-PH0303B	Scale Pan	Each	2.12	2.61		
J	S-RU06	Metre Rule, Wooden	Each	4.24	5.22		
K	S-ATSP0500	Spring Balance 500g/5N	Each	3.73	4.59		
L	S-ATSP1000	Spring Balance 1000g/10N	Each	3.77	4.64		



Investigation 41 (32.1): To build and test a device that transforms energy from one to another in order to perform a function; to describe the energy changes and ways of improving efficiency

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
M	S-PH1000A	Switch, Knife Single	Each	2.95	3.63		
N	SRD17-0385	Lead, with 4mm Stackable Plug - 50cm Long Black	Each	1.34	1.65		
O	SRD17-0380	Lead, with 4mm Stackable Plug - 50cm Long Red	Each	1.34	1.65		
P	SRD17-2873	Crocodile Clip (fits plug leads to connect to battery)	Pk/20	3.26	4.01		
Q	SP29930	Solar and Wind Energy Unit (mounted)	Each	29.77	36.62		
R	SRD37-0434	Solar Cell 74x45mm 0.45V 400mA (unmounted)	Each	6.90	8.49		
S	SRD37-0440	Solar Motor (unmounted)	Each	3.80	4.67		
T	SC46100	Lamp, Desk Flexible Arm Type (for solar cell) - bulb required	Each	10.58	13.01		
	SC46110	Bulb 40W SES for above Desk Lamp	Each	2.30	2.83		



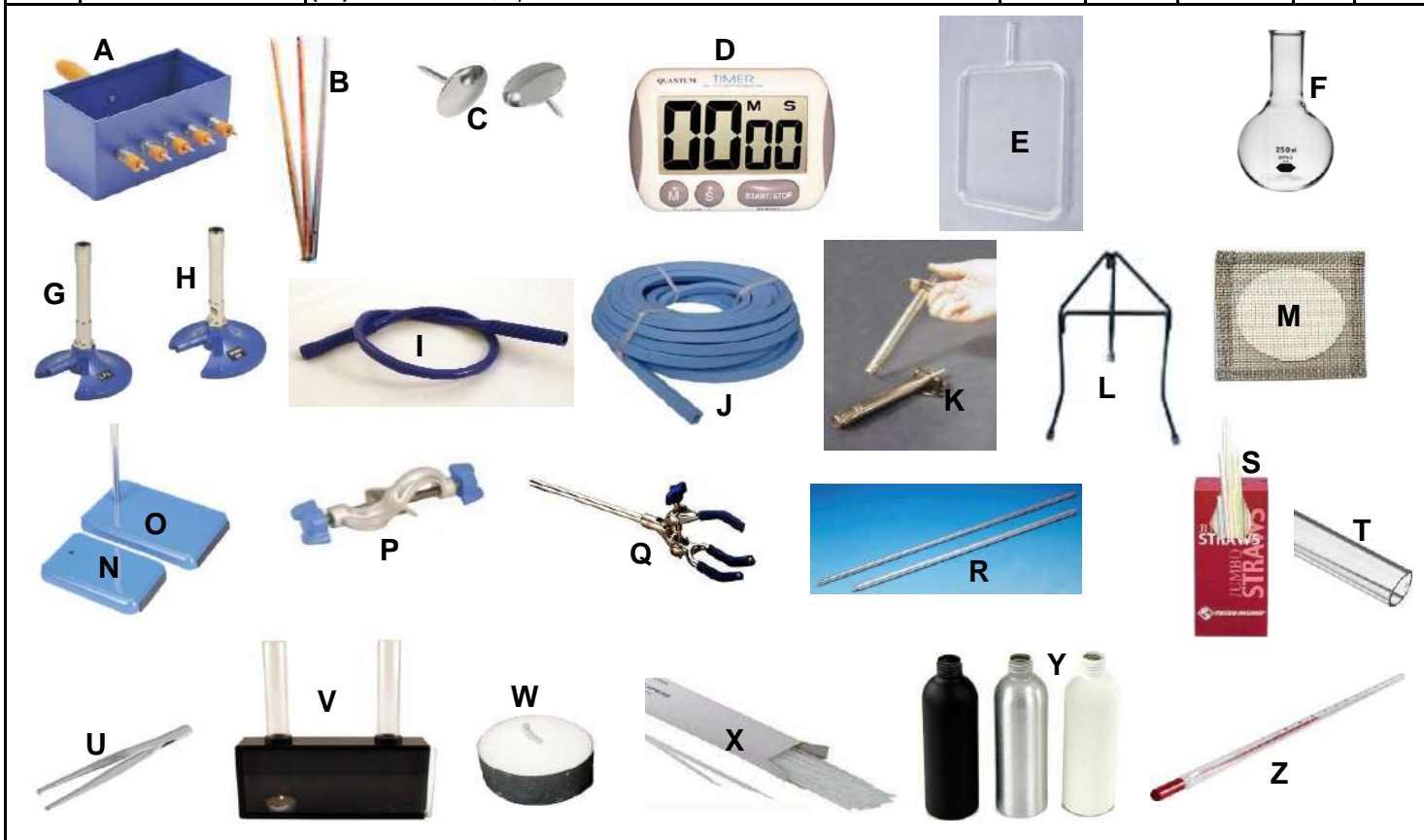
Investigation 42 (33.1): To show transfer of heat by conduction & to investigate the rate of conduction in different metals

Investigation 43 (33.2): To show convection currents in a liquid

Investigation 44 (33.3): To show convection currents in air

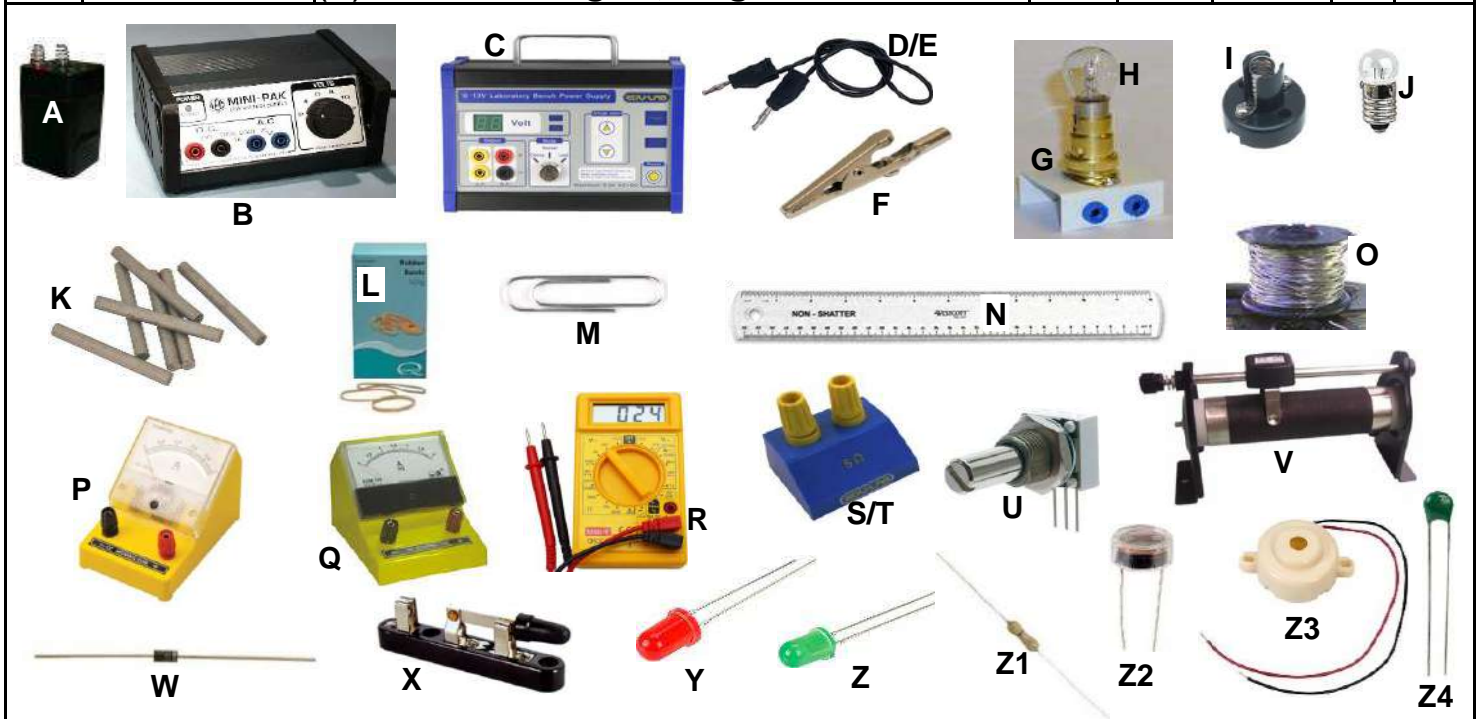
Investigation 45 (33.4): To investigate heat transfer by radiation

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	S-EDU174	(42) Ingenhausz Apparatus (conduction in metals)	Each	28.75	35.36		
B	S-PH0397	(42) or Conductivity Rods Set of 3 (conduction in metals)	Each	5.56	6.84		
C	SC80736	(42, 45) Stopclock - Digital Timer, Counts Up/Down x 1 sec	Each	13.37	16.45		
D	ST34241	(42) Thumb Tacks 10mm (conduction in metals)	Pk/100	2.34	2.88		
	CRTSP8121211	(42) Paraffin Soft White (Vaseline) (conduction in metals)	1kg	14.70	18.08		
E	S-PH0408B	(43) Convection in Water Apparatus 20x15cm	Each	13.08	16.09		
F	AFK122.30X	(43) or Round Bottom Flask Borosilicate Glass 250cm ³	Each	9.95	12.24		
G	S-EDU1080	(43) Bunsen Burner, LPG Bottle Gas	Each	10.66	13.11		
H	S-EDU1081	(43) or Bunsen Burner, Natural Gas	Each	11.06	13.60		
I	S-704-016/1	(43) Tubing, Bunsen Burner Neoprene 600mm-butt ends	Each	7.54	9.27		
J	S-153-512	(43) or Silicone Rubber Tubing, Bunsen Burner. Roll 10mt.	10 Mt	42.79	52.63		
K	S-EDU080	(43) Gas Lighter, Piezo Type	Each	7.60	9.35		
L	S-TRSTD200/1	(43) Tripod Stand, 200 x 125mm (height x top side)	Each	5.60	6.89		
M	S-GUZCR125	(43) Wire Gauze, Ceramic Centre 125 x 125mm	Pk/10	9.37	11.53		
N	S-BASE160T	(43) Retort Stand Base , 160 x 100mm	Each	9.11	11.21		
O	S-BASE200T	(43) or Retort Stand Base , 200 x 125mm	Each	11.15	13.71		
P	S-CH0663B/Single	(43) Retort Stand Bosshead	Each	2.22	2.73		
Q	S-CLMP3P	(43) Retort Stand Clamp , Rubber Jaw	Each	6.09	7.49		
R	S-RDMS0600	(43) Retort Stand Rod , Mild Steel. 600mm	Each	4.34	5.34		
S	SC51001	(43) Drinking Straw 3mm ID. (for KMnO ₄)	Pk/1000	3.95	4.86		
T	SC76006	(43) or Tubing, Glass 6mm Ø x 50mm. (for KMnO ₄)	Pk/30	11.22	13.80		
U	S-B170A	(43) Forceps Blunt Point 150mm	Pk/10	13.53	16.64		
	CSA6883-M	(43) Potassium Permanganate	500g	7.64	9.40		
V	S-P410	(44) Convection in Air Apparatus. (Chimneys)	Each	19.42	23.89		
W	SC24151	(44) Night Light Candles (convection in air)	Pk/50	5.95	7.32		
X	SC24160	(44) Tapers, Waxed (convection in air)	Pk/65	12.89	15.85		
Y	SP-TD-8570	(45) Radiation Cans, Set/3 - Black, White, Silver	Each	43.72	53.78		
Z	AT69/114/3	(45) Thermometer, Spirit -10 to +110°C x 1°C.	Each	3.03	3.73		



Investigation 46 (34.1): To classify materials as electrical conductors or insulators
 Investigation 47 (34.2): To investigate how the current flowing in a conductor varies with voltage and to determine the resistance of the conductor
 Investigation 48 (34.3): To investigate the operation of a diode
 Investigation 49 (34.4): To investigate the operation of a light-emitting diode
 Investigation 50 (34.5): To investigate the operation of a light-dependent resistor

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	SP69220	(46-51) Battery 6V PJ996	Each	3.99	4.91		
B	SP70360	(46-51) Power Supply 2, 4, 6, 8, 10, 12V AC & DC at 6A	Each	139.02	170.99		
C	S-605-055	(46-51) or Power Supply, 0-15V - 8.5A ac/dc, digital, lockable	Each	202.94	249.62		
D	SRD17-0385	(46-51) Lead, with 4mm Stackable Plug - 50cm Long Black	Each	1.34	1.65		
E	SRD17-0380	(46-51) Lead, with 4mm Stackable Plug - 50cm Long Red	Each	1.34	1.65		
F	SRD17-2873	(46-51) Crocodile Clip (fits plug leads to connect to battery)	Pk/20	3.26	4.01		
G	SP77845	(46, 48) Bulb Holder c/w 4mm Sockets and 12V 21W SBC Bulb	Each	11.15	13.71		
H	SP77030	(46, 48) Bulb SBC 12V 24W, Spare for above	Each	3.34	4.11		
I	SRD41-0070	(46, 48) or Bulb Holder MES	Pk/10	4.42	5.44		
J	SRD41-0105	(46, 48) and Bulb MES 6V 60mA (for above bulb holder)	Pk/10	2.58	3.17		
K	S-EL06886	(46) Carbon Electrode 100x5mm (test material)	Pk/50	29.60	36.41		
L	SC83180	(46) Rubber Bands Assorted Sizes. 100g (test material)	Each	3.09	3.80		
M	ST10000	(46) Paper Clip (test material)	Pk/1000	4.23	5.20		
N	SRD34-2660	(46) Ruler, Plastic 300mm (test material)	Each	0.99	1.22		
O	S-PH1064C	(47) Nichrome Wire 22swg (resistance wire)	125g	19.44	23.91		
P	S-PH1080AC6	(47) Voltmeter 0-6V dc	Each	10.09	12.41		
Q	S-AMTER2A	(47) Ammeter 0-2A	Each	9.54	11.73		
R	SRD85-0670	(47) Multimeter, Digital - 19 Ranges	Each	12.08	14.86		
S	S-PH1143C	(47) Resistance Coil 5Ω	Each	2.91	3.58		
T	S-PH1143E	(47) or Resistor Coil 20Ω	Each	2.81	3.46		
U	SRD68-2000	(47) Potentiometer 100Ω (variable resistor)	Each	15.17	18.66		
V	S-PH1144D-20	(47) or Rheostat 20Ω, 4.2A	Each	31.32	38.52		
W	SRD1N4001	(48) Silicon Diode 1N4001	Pk/5	0.61	0.75		
X	S-PH1000A	(48-51) Switch, Knife Single	Each	2.95	3.63		
Y	SRD55-0117	(49) LED 5mm Red	Pk/5	0.96	1.18		
Z	SRD55-0120	(49) LED 5mm Green	Pk/5	0.96	1.18		
Z1	SRDCR50-330R	(49) Resistor 0.5W 330Ω	Pk/100	2.95	3.63		
Z2	SRD58-0132	(50) Light Dependent Resistor (LDR)	Each	2.61	3.21		
Z3	SRD35-0115	(50, 51) Buzzer 3-30V dc	Each	3.16	3.89		
Z4	SRD61-0410	(51) Thermistor NTC 5KΩ@25°C, 300Ω@100°C	Pk/5	3.77	4.64		



Safety Materials

Image	Product Reference	Description	Pack Size	Price EX-VAT	Price INC-VAT	Qty	Total
A	S-EDU652	Safety Spectacles, Fixed Side-Arm	Each	2.16	2.66		
B	ASA962.10	Safety Goggles	Each	3.42	4.21		
C	S-506-055	Safety Visor	Each	33.09	40.70		
D	ASA350.20	Gloves, Disposable Polythene	Pk/100	2.23	2.74		
E	ASA382.15X	Gloves, Surgical Type, Small	Pk/100	2.72	3.35		
E	ASA382.20X	Gloves, Surgical Type, Medium	Pk/100	2.71	3.33		
E	ASA382.25X	Gloves, Surgical Type, Large	Pk/100	2.71	3.33		
F	SF-A79510	Gloves Leather Heat Resistant	Each	13.66	16.80		
G	ASA800.10	Dust Mask	Pk/50	3.22	3.96		
H	SC64962	Laboratory Coat Small 36/38"	Each	13.18	16.21		
H	SC64962A	Laboratory Coat Medium 40/41"	Each	13.18	16.21		
H	SC64963A	Laboratory Coat Large 42/44"	Each	13.18	16.21		
H	SC64965	Laboratory Coat X-Large 46/48"	Each	13.18	16.21		
I	S-EDU994	Safety Screen Perspex 3-Panel (225/300/225mm x 610mm high)	Each	64.41	79.22		
J	A5421726	Eye Wash Bottle, Empty. Capacity: 600cm ³	Each	14.13	17.38		
K	SC67120	Eye Wash Station Wall Mounting c/w 2 x 500cm ³ bottles	Each	37.78	46.47		
L	SC67210	First Aid Kit, 10 Person	Each	34.31	42.20		
L	SC67212	First Aid Kit, 20 Person	Each	50.56	62.19		
L	SC67215	First Aid Kit, 50 Person	Each	66.86	82.24		
M	SC67250	First Aid Cabinet Wall Mounting Lockable - with 20 person kit	Each	227.71	280.08		
N	SC67302	Fire Blanket	Each	16.48	20.27		
O	SF-L75796	Flammable Liquids Storage Cabinet 610x459x459mm - including carriage	Each	295.25	363.16		
O	SF-L76272	Flammable Liquids Storage Cabinet 915x459x459mm - including carriage	Each	356.37	438.34		
O	SF-L76296	Flammable Liquids Storage Cabinet 712x915x459mm - including carriage	Each	427.69	526.06		
O	SF-L76302	Flammable Liquids Storage Cabinet 915x915x459mm - including carriage	Each	448.06	551.11		
O	SF-L76314	Flammable Liquids Storage Cabinet 1220x915x459mm - including carriage	Each	529.56	651.36		
O	SF-L76326	Flammable Liquids Storage Cabinet 1525x915x459mm - including carriage	Each	567.40	697.90		
O	SF-L76338	Flammable Liquids Storage Cabinet 1830x915x459mm - including carriage	Each	590.69	726.55		
P	SF-L76855	Corrosives Storage Cabinet 610x459x459mm - including carriage	Each	323.77	398.24		
P	SF-L76867	Corrosives Storage Cabinet 915x459x459mm - including carriage	Each	369.11	454.01		
P	SF-L76880	Corrosives Storage Cabinet 712x915x459mm - including carriage	Each	448.84	552.07		
P	SF-L76892	Corrosives Storage Cabinet 915x915x459mm - including carriage	Each	468.60	576.38		
P	SF-L76909	Corrosives Storage Cabinet 1220x915x459mm - including carriage	Each	550.30	676.87		
P	SF-L76910	Corrosives Storage Cabinet 1525x915x459mm - including carriage	Each	589.44	725.01		
P	SF-L76922	Corrosives Storage Cabinet 1830x915x459mm - including carriage	Each	599.39	737.25		
NB: above corrosives cabinets are not suitable for hydrochloric, sulfuric or nitric acids as corrosion to door lock mechanism will occur							
Q	SF-A80196	Spill Kit (to absorb up to 3lts of chemicals spillage)	Each	63.01	77.50		
R	SC61800	Pipette Filler Pi-Pump 25cm ³	Each	5.10	6.27		
S	S-C6586A/1	Pipette Filler Rubber Bulb Type	Each	4.84	5.95		

