

**KIT CONTENTS LIST FOR USE WITH: LIFEPAC®**

**Grade 11 Science**

**Alpha Omega Publications**

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<u>Text Reference</u>	<u>Item Description</u>	<u>Item Quantity</u>	<u>Notes</u>
7	Home LED Microscope (MI-4100LST)		We don't recommend buying a microscope just for this lab. It is used extensively in the 200-1000 series if you have younger children. Order separately
1,2,3,6,7	Digital Scale, 2000 g x 0.1 g (BS-DB2000)		We recommend this digital scale as a faster, easier-to-use, and more economical alternative to a traditional mechanical balance. It will work for all labs in this curriculum. Order separately.
1	Calcium Hydroxide, 30 g (CH-CA(OH)2)	1	Use to make limewater.
1	Erlenmeyer Flask, 250 ml (CE-FLAI250)	1	Also use instead of 125 ml flask.
1,2	Candle, 4" white (OP-CANDLE)		Order separately or find at local supply store.
1,2,3,6,7	Graduated Cylinder, glass, 100 ml (CE-CYGL100)	1	
1,2,5	Ruler, 30 cm (ME-RULER)		Use any ruler 30cm, order separately or find at local supply store.
1,2,6,7	Test Tube Brush, small (CE-TTBRUSH)	1	
1,2,6,7	Test Tube Clamp (CE-TUBHOLD)	1	
1,2,6,7	Test Tube Rack, 6 holes (CE-TTRACK1)	1	
1,2,6,7	Test Tubes, large 16 x 150 mm (CE-TTUBELG)	4	Do the experiments in series or use with small test tubes to get by with 4.
1,6,7	Graduated Cylinder, glass, 10 ml (CE-CYGL10)	1	
2	Battery Holder for D Cell (EL-BATTHLD)	1	
2	Battery, D, heavy duty, 2 pack (EL-BATTD2)		Order separately or find at local supply store.
2	Bulb Socket, 1-bulb (EL-LAMPSOC)	1	
2	Bulb, screw style, 1.5-volt (EL-LAMP1.5)	1	
2	Carbon Electrode Rod, 0.5" x 4" (EL-ELECTC)	1	A charcoal briquette will work.
2	Clay Triangle, 2" pipe-stems (CE-TRIANGL)	1	
2	Copper Wire, insulated, #24, 15' (EL-WIRE24H)	1	
2	Funnel, plastic, 65 mm dia. (CE-FUNNEL)	1	
2	Glass Tube, 20 mm glass, 12" long (CE-TUBE20S)	1	
2	Magnifying Glass, 2", 3X Lens (OP-MAGNIFY)		Order separately.
2	Paradichlorobenzene, 30 g (CH-MOTHCRY)	1	
2	Rubber Stopper, #2, 1-hole (CE-STOP02A)	1	

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2	Sand, fine, 1 lb. (GS-SANDFIN)	1	
2,3	Beaker, glass, 400 ml (CE-BEI0400)	1	Also use instead of a 250 ml beaker.
2,3	Watch Glass, 100 mm (CE-WATCHLG)	1	Fits 400 ml beaker.
2,3,4	Ring Support, 4" (CE-RING4 )	1	
2,3,4	Wire Gauze, ceramic center, 5" (CE-GAUZE )	1	
2,3,4,6	Support Stand, 4" x 6" base, 18" rod (CE-STAND2 )	1	
2,3,4,7	Alcohol Lamp Burner, Wickless (CE-LAMP )	1	Use instead of Bunsen burner.
2,3,4,7	Denatured Alcohol Fuel, 16 ounces (UN-ALCFUEL)		Optional. Order only if you don't want to purchase denatured alcohol locally for the alcohol lamp. Order separately or find at local supply store.
2,3,4,7	Ethyl Alcohol, 95%, 30 ml (UN-ETHYALC)		Optional. Order only if you don't want to purchase denatured alcohol locally for the alcohol lamp. Order separately or find at local supply store.
2,3,6	Beaker, glass, 600 ml (CE-BEI0600)	1	
2,3,6	Burette Clamp (CE-CLAMP )	1	You can get by with only 1 clamp instead of the 2 called for.
2,3,6	Thermometer, Celsius, 12" (ME-THER30B)	2	
2,3,6,7	Chemical Splash and Impact Safety Goggles, Adult (CE-GOGGLE1)	1	Both student(s) and teacher should wear goggles in all labs using chemicals. Glasses are not adequate protection.
2,3,6,7	Lab Apron No 3, plastic, 2 mil (CE-APRON3 )	1	Both student(s) and teacher should wear an apron in all labs using chemicals.
2,3,6,7	Safety Gloves, size 8 - 8.5 Medium (CE-SGLOVEM)	1	Always wear chemically resistant gloves when using chemicals. Order CE-SGLOVES for size 6, CE-SGLOVEM for size 8, CE-SGLOVEL for size 9, all the same price.
2,3,6,7	Stirring Rod, glass, 6" (CE-STIRROD)	1	
2,4,7	Aluminum, metal electrode, 4" (EL-ELECTAL)	1	
2,4,7	Copper, metal electrode, 4" (EL-ELECTCU)	1	
2,4,7	Iron, metal electrode, 4" (EL-ELECTFE)	1	
2,4,7	Sulfur, 30 g (UN1350 )	1	
2,4,7	Zinc, metal electrode, 4" (EL-ELECTZN)	1	
2,6	Cup, clear plastic, 9 oz (PT-CUP9OZ)		Use instead of buying three 250 ml beakers. Buy 6 packages if you don't have the 15 baby food jars needed. Order separately or find at local supply store.
2,6	Forceps, stainless steel (DE-FORCEP)		Can use a pair of tweezers. Order separately or find at local supply store.
2,6	Glass Tube, 5 mm, 3" long (CE-TUBEGLS)	1	
2,6	Rubber Stopper, #0, 1-hole (CE-STOPOXA)	1	
2,6,7	Glycerin, 30 ml (CH-GLYCERN)	1	
2,7	Filter Paper, 11 cm, 10 pack (CE-FILTPAP)	1	
3	Balloon Set of 9 (GS-BALLOON)	1	
3	Boyle's Law Apparatus Kit (MC-BOYLES)	1	Optional. This pre-made air pressure-volume apparatus is more expensive but simpler to use.
3	pH Papers, 1-14 range, 80 pack (CH-PHSTRIP)	1	

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3	Sulfuric Acid, 18 Molar, 30 ml (UN1830 )	1	
3	Syringe, 60 cc (CE-SYRING60)		Not required if you buy MC-BOYLES. Order separately.
3	Tape Measure, Flexible, 150 cm (ME-TAPE1 )		use any tape measure 30m/100ft. Order separately or find at local supply store.
3	Weight, 200 g, with hook (BS-WTE200)		You can also make your own sand-filled weights or use books of about equal mass. Not needed with MC-BOYLES. Order separately.
3,4	Copper II Nitrate (cupric), 30 g (UN1477A )	1	
3,4	Zinc Powder, 15 g (CH-ZNPOWD )	1	
3,4,6	Sodium Hydroxide, 30 g (UN1823 )	1	
3,6	Bottle, 250 ml (8 oz), natural HDPE plastic (CE-BTP250N)		Use for making and storing solutions. Can use baby food jars instead. Order separately.
3,6	Rubber Stopper, #6.5, 1-hole (CE-STOP06A)	1	This stopper will also work for the air pressure-volume lab in 1103. Plug one end with a dowel or bolt.
4	Bar Magnets, 1.2" ceramic, 2 pack (MG-BAR1C )	1	
4	Inoculating Needle with Looped End (BE-INOCUL )	1	
4	Lithium Chloride, 30 g (CH-LIACL )	1	
4	Magnesium Ribbon, 60 cm (UN-MG )	1	
4	Slinky, metal, extra large (MC-SLINKY2)		This extra long Slinky is best for this lab. It is required and used extensively in the 1200 series labs. Order separately or find at local supply store.
4,5	Friction pad, wool, 6x6" (GS-PADWOOL)		Any wool clothing will work. Order separately.
4,5	Paper, special set, 10 sheets (GS-PAPERSP)	1	Contains vinyl and acetate sheets and tissue paper needed.
4,6,7	Calcium Chloride, 30 g (CH-CAACL2 )	1	
4,7	Copper II Sulfate (cupric), 30 g (CH-CUSO4 )		Optional. Only needed if you do the electrochemical cell lab. Order separately.
4,7	Potassium Chloride, 30 g (CH-KCL )	1	
4,7	Sodium Carbonate, 30 g (CH-NA2CO3 )	1	
4,7	Spectroscope (OP-SPECTRO)	1	
4,7	Strontium Chloride, 10 g (CH-SRCL2)	1	
4,7	Wooden Splints, 20 pack (CE-SPLINTS)	1	
5	Nail assortment, 30 pieces (GS-NAILS )		Order separately or find at local supply store.
5	Styrofoam Ball, 2" diameter (PT-STYBAL2)	2	These balls are only 5 cm diameter but will work acceptably if you use small nails.
6	Alka-Seltzer tablets, 2 pack (CH-ALKASEL)		Order separately or find at local supply store.
6	Ammonium Nitrate, 30 g (UN1942 )	1	
6	Bottle, dropper, 30 ml (CE-BTGDR0P)		Use for making and storing solutions. Can use baby food jars instead. Order separately.
6	Ferrous Sulfate (Iron II), 30 g (CH-FESO4 )	1	
6	Glacial Acetic Acid, 30 ml (UN2789 )	1	We recommend reducing the amount of solution you make by half or a factor of ten, allowing you to do the lab with only one bottle of acid.

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6	Phenolphthalein Solution, 30 ml (UN-PHENOLS)	1	
6	Pipet, disposable, 1 ml, 10 pack (CE-PIPET )	1	Use instead of eye droppers.
6	Potassium Chromate, 30 g (UN-K2CRO4 )	1	
6	Potassium Permanganate, 30 g (UN1490 )	1	
6	Rubber Tubing, 4.8 mm, 2' long (CE-TUBERU2)	1	
6	Silver Nitrate, 2 g (UN1493 )	1	
6,7	Calcium Carbonate, chips, 30 g (CH-CACO3 )	1	Use in place of chalk.
6,7	Hydrochloric Acid, 12 Molar, 30 ml (UN1789 )	1	You can get by with only one bottle if you make only the volumes of dilute acid needed to do each lab. Otherwise buy 2 bottles or muriatic acid from the hardware store.
6,7	Rubber Stopper, #0, solid (CE-STOP0XC)	6	
7	Ammonium Hydroxide, 30 ml (UN2672 )		Optional. Use household ammonia if you have it. Order separately.
7	Ascorbic Acid, 5 g (CH-ASCORB)		Use vitamin C tablets if available. Order separately or find at local supply store.
7	Iron III (ferric) Chloride, 30 g (UN-FECL3 )	1	For heptahydrate form use 1.8 times the weight in book.
7	Lead Nitrate, 30 g (UN1469 )		Optional. Only needed if you do the electrochemical cell lab. Order separately.
7	Microscope Slide Set, Basic (MS-SLIDSET)		Order if the microscope is ordered. Order separately.
7	Mortar and Pestle, 80 ml (CE-MORTAR)		Optional. You can use a knife handle, etc. to crush the salt crystals. Order separately.
7	Sodium Nitrate, 30 g (UN1498 )		Optional. Only needed if you do the electrochemical cell lab. Order separately.
7	Sodium Tetraborate, 30 g (CH-NA2B4O7)	1	
8,9	Molecular Model Set, Small (CE-MODELSM)		Optional. Will help students visualize molecular structures. Order separately.

1. The products in this kit are intended for parent/teacher use to complete curriculum lab activities with students.
2. Some items are not designed for or intended primarily for children ages 12 and under.
3. Some materials and many chemicals we provide are dangerous and may be harmful if misused. With your purchase, you are assuming all responsibility for any injuries or damages resulting from the storage, use, and disposal of all materials and chemicals.
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