

KIT CONTENTS LIST FOR USE WITH: **Science: Matter & Energy (Grade 9)**

1st Edition

abeka®

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<u>Text Reference</u>	<u>Item Description</u>	<u>Item Quantity</u>	<u>Notes</u>
1, 19, 20, 22, 24, 26	Tape Measure, Steel, 3 meters <i>(ME-TAPEMEA)</i>		Use the half meter stick for measurements
1, 2, 13, 15, 16, 20	Digital Pocket Scale, 600 g capacity, 0.1 g precision <i>(BS-SPB600)</i>	1	
1, 2, 4	Ruler, 30 cm <i>(ME-RULER)</i>		Use the half meter stick for measurements
1, 2, 4, 19, 20, 21, 22, 24, 26, 28	Half-Meterstick, 50 cm, hardwood <i>(ME-METER1)</i>	1	Use the half meterstick for all Labs that require a ruler or tape measure.
1, 3, 5, 7, 13, 14, 16, 23, 29	Beaker, glass, 250 ml <i>(CE-BE10250)</i>	3	Use in place of the measuring cup in Lab 1, 50ml beakers in Lab 3 and 100ml beakers in Lab 16.
1, 7	Graduated Cylinder, polypropylene, 250 ml <i>(CE-CYPP250)</i>	1	Use in the place of the 500 ml graduated cylinder in Lab 7.
2	Graduated Cylinder, polypropylene, 25 ml <i>(CE-CYPP025)</i>	1	
2	Vernier Caliper <i>(ME-CALIPER)</i>		Use a metric ruler in place of caliper.
2, 30	Nail, 16D, bright box <i>(PT-NAIL16C)</i>	2	Use a nail as oddly shaped metal object in Lab 2.
2, 31, 33	Density Cylinders Set of 4 <i>(MC-DENSCYL)</i>	1	Density cylinder information provided on the website. Use for electromagnet cores Lab 31 and test objects Lab 33.
2, 7, 36	Paper Clips, small size, box <i>(GS-PCLIPSM)</i>	1	Use multiple paper clips for oddly shaped metal option in Lab 2. Use instead of BBs as hygrometer weight in Lab 7.
3	Beaker, glass, 50 ml <i>(CE-BE10050)</i>	3	Use 250 ml beakers instead.
3	Magnifier, double lens, 5X/10X <i>(OP-MAG10LG)</i>	1	Use instead of a microscope to view activity of talc powder on water.
3	Talc, 30 g <i>(CH-TALC)</i>	1	
3, 10	Food Coloring, 4 colors <i>(CH-FOODCOL)</i>	1	1 color included.
3, 19, 20	Digital Stop Watch, 2" <i>(ME-STOPWAT)</i>	1	
3, 24	Thermometer, Celsius, 12" <i>(ME-THER30B)</i>	1	
3, 26, 27	Mirror, glass plane, 4"x 4" <i>(OP-MIRROR3)</i>	1	Use the 3 flashlights for Lab 26 instead of a projector and mirrors. Use this mirror as a barrier in Lab 23.
3, 4	Petri Dishes, polystyrene, 90 x 15 mm, 2 pack <i>(BE-PETRI1)</i>	4	Use one of the covers for the plastic sheet in Lab 4.
3, 5, 15	Crucible & Beaker Tongs <i>(CE-TONG)</i>	1	Use in place of beaker tongs in Lab 3 & 5. Use to move alcohol lamp burner while it is hot. Use in place of oven mitts.
3, 5, 6, 9, 10, 11, 13, 15, 18	Alcohol Lamp Burner, Wickless <i>(CE-LAMP)</i>	1	Use instead of an expensive Bunsen burner and hotplate.
3, 5, 6, 9, 10, 11, 12, 13, 16, 32	Chemical Splash and Impact Safety Goggles, Adult <i>(CE-GOGGLE1)</i>	1	Recommended for teacher and student when using strong chemicals. Order extras as needed.

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3, 5, 6, 9, 10, 11, 13	Deluxe Lab Hot Plate with Magnetic Stirrer <i>(CE-HOTSTR2)</i>	1	Optional to purchase separately; however, the included alcohol burner and stand can work as a replacement.
3, 5, 6, 9, 10, 11, 13, 15, 18	Denatured Alcohol Fuel, 16 ounces <i>(UN-ALCFUEL)</i>	1	
3, 5, 6, 9, 10, 11, 12, 13, 17	Lab Apron No. 2, heavy vinyl, 8 mil <i>(CE-APRON2)</i>	1	We recommend both students and teacher wear a chemically resistant apron when using chemicals. Order extras as needed.
3, 5, 6, 9, 10, 11, 13, 15, 18	Matches, pack of 32 <i>(GS-MATCHES)</i>	1	
3, 5, 6, 9, 10, 11, 13, 15	Ring Support, 4" <i>(CE-RING4)</i>	1	Use the ring and stand instead of tripod for Lab 11. Use the clay triangle with the support ring for Lab 13.
3, 5, 6, 9, 10, 11, 12, 13, 15	Safety Gloves, size 8 - 8.5 Medium <i>(CE-SGLOVEM)</i>	1	Always wear chemically resistant gloves when using chemicals. See the website to order extras as needed.
3, 5, 6, 9, 10, 11, 13, 15, 18	Support Stand, 4" x 6" base, 18" rod <i>(CE-STAND2)</i>	1	Use instead of tripod for Lab 11 and use stacked books, shipping box to hold construction paper in Lab 25.
3, 5, 6, 9, 10, 11, 13	Wire Gauze, ceramic center, 5" <i>(CE-GAUZE)</i>	1	
4	Mineral Oil, Klearol, 30 ml <i>(CH-MINROIL)</i>	1	Use in place of motor oil.
4	Pipet (medicine dropper) <i>(CE-DROPPER)</i>	1	
4	Vegetable Oil, 2 oz. <i>(CH-OIL2OZ)</i>	1	
4, 13, 14, 15, 27	Glycerin, 30 ml <i>(CH-GLYCERN)</i>	1	Use glycerin to make homemade soap bubble solution.
4, 27	Aluminum Pie Plate, 9" diameter <i>(PT-PIEPAN9)</i>	1	Use for the metal sheet in Lab 4 and re-use for the dish for the soap bubbles in Lab 27
5	Balloons, medium, 9" <i>(GS-BALLOMD)</i>	2	We recommend omitting Lab 5 Part II due to cost and hazardous chemicals.
5	Magdeburg Hemispheres <i>(MC-MAGBURG)</i>	1	These suction cups come in a plastic bag. Use instead of the two plungers.
5, 9, 10, 11, 15, 17	Beaker, glass, 1000 ml <i>(CE-BE1000)</i>	1	Use instead of 600ml beaker in labs 10, 11 and 17.
6	Clear 17oz bottle with cap <i>(CE-BTCL502)</i>	1	Use this bottle in place of a metal can. Pour hot (not boiling) water into the bottle.
7, 13, 14, 15, 16, 27	8oz Distilled Water in bottle <i>(CH-DISTH2O)</i>	4	Purchase distilled water from your local grocery store.
7, 13, 15, 18, 22	Test Tube Brush, small <i>(CE-TTBRUSH)</i>	1	
7, 13, 15, 18, 22	Test Tubes, large 16 x 150 mm <i>(CE-TTUBELG)</i>	4	
7, 20	String, heavy cord, 25' <i>(MC-STRING)</i>	1	
7, 21, 22	Spring scale, 1000 g/10 Newton <i>(BS-SCALE3)</i>	1	
9	Bimetallic Compound Bar <i>(MC-COMPBAR)</i>	1	
10, 11, 17	Beaker, glass, 600 ml <i>(CE-BE10600)</i>	1	Use 1000ml beaker instead.
11	Boiling (or Florence) Flask, 500 ml <i>(CE-FLOR500)</i>	1	Use instead of 1000mL round bottom flask.
11	Rubber Stopper, #6.5, solid <i>(CE-STOP06C)</i>	1	Fits 500ml flask.
11	Tripod Burner Stand, 6" <i>(CE-TRIPOD6)</i>	1	Use support stand and ring instead.
13	Clay Triangle, 2" pipe-stems <i>(CE-TRIANGL)</i>	1	Use to hold funnel in ring stand.
13	Copper II Sulfate (cupric), 30 g <i>(CH-CUSO4)</i>	1	
13	Filter Paper, 11 cm, 10 pack <i>(CE-FILTPAP)</i>	1	
13, 14, 16, 17	Stirring Rod, glass, 10" <i>(CE-STIR10)</i>	1	

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13, 15	Glass Tube, 5 mm, 12" long (CE-TUBEG12)	3	Tubing is already cut down. Cutting is not necessary, Part III of Lab 13. Use to make an elbow, U tube and blow pipe.
13, 15	Rubber Stopper, #1, 1-hole (CE-STOP01A)	1	
13, 15, 18	Test Tube Clamp (CE-TUBHOLD)	1	
13, 16	Sodium Hydroxide, 30 g (UN1823)	1	
13, 29	Funnel, glass, 75mm dia. (CE-FUNNGLS)	1	
14, 17	Sodium Chloride, 30 g (CH-NACL)	3	Purchase table salt (sodium chloride) from your local grocery store
14, 25, 26, 27	Construction paper, black (PT-PAPCSBK)	4	Use in place of poster board
14, 25, 26, 27	LED Flashlight, 25 Lumens (OP-LIGHT4)	3	Labs can be performed with flashlight(s) as the light source.
15	Calcium Carbonate, chips, 30 g (CH-CACO3)	1	Same as marble chips.
15	Calcium Metal, turnings, 10 g (UN1401)	1	
15	Candle, 4" white (OP-CANDLE)	2	Use candle instead of plastic rod for Lab 31
15	Hydrogen Peroxide 6%, 30 ml (CH-H2O2)	1	
15	Limewater, 500 ml (CH-CAOH500)	1	
15	Manganese Dioxide, 15 g (UN-MNO2)	1	
15	Spatula, stainless steel (CE-SPATULA)	1	
15	Test Tube Rack, 6 holes (CE-TTRACK1)		Optional to purchase separately. You can prop the test tubes up in a beaker.
15	Wooden splints, 5 pack (CE-SPLINTS5)	1	
15, 16	Hydrochloric Acid, 12 Molar, 30 ml (UN1789)	1	
15, 16, 17	5% Acetic Acid solution (Food-Grade Vinegar) (CH-VINEGAR)	1	
15, 24	Burette Clamp (CE-CLAMP)	1	
15, 32	Clay, modeling, 4 oz. stick (GS-CLAY)	1	1 color included. Use modeling clay to hold the candle in Lab 15.
16	Baking soda, 50 g (CH-BSODA50)	1	Use in place of ammonia for a base.
16	Beaker, glass, 100 ml (CE-BE10100)	3	Use 250 ml beakers instead.
16	Litmus Paper, blue, 100 strips (CH-LITBLUE)	1	
16	Litmus Paper, red, 100 strips (CH-LITRED)	1	
16	pH Papers, 1-14 range, 80 pack (CH-PHSTRIP)	1	
17	Copper, metal electrode, 4" (EL-ELECTCU)	1	
17	Sandpaper, 1 sheet medium grit (PT-SANDPAP)	1	
17, 30	Battery, 6 volt (EL-BATT6)	1	
17, 31, 33, 34	Alligator Clip Leads, 2 pack (EL-ALCLIP2)	5	
17, 32	Rod, steel, 0.25" x 10" (GS-RODSTL)	1	Use this steel rod in place of spoon if you do not have a metal spoon to copper plate.
20	Balloon, long, 10" (GS-BALLOXL)	1	

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20	Binder clip, small, single (PT-BINDERS)	1	Use in place of clothespin for Lab 20
20	Hall's Cart (MC-HALLCAR)	1	
20	Pulley with Table Clamp (MC-PULLY3)	1	
20	Straws, clear plastic (PT-STRAWCL)	1	
20, 21	5x8 poly bags, 1.5 mil (PK-BAG5X8)	4	Use bags to make weights for Lab 20 and 21.
20, 21	Sand, coarse, 1 lb (GS-SANDCRS)	2	Weigh sand into plastic bag to create desired weights for Labs 20 and 21
20, 21	Weight Set, Hooked 10 to 1000g (BS-WTHOOK1)	1	For Labs 20 & 21, make weights using the scale and plastic bags filled with sand.
21	Demonstration Balance (BS-BALARM)	1	
22	Friction Block, wood (MC-BLOCK1)	1	Friction block comes with hook already installed for Lab 22.
22	Wood Ramp, economy (MC-RAMP1)	1	
23	Ball, hard rubber, 1-3/4" (GS-BALLHRB)		We recommend omitting this lab due to cost.
23, 28	Van de Graaff Generator (EL-VANDEGR)		Optional to purchase separately. We recommend omitting 23 lab due to cost. Lab 28 is optional as specified by A Beka.
23, 31	Dowel, 3/8", 16" long (GS-DOWL375)	1	Use this larger diameter dowel to generate waves in Lab 23 and the wooden electromagnet in Lab 31.
24	Glass Tube, 20 mm glass, 24" long (CE-TUBE20L)	1	Tube comes packaged in a cardboard tube.
24	Rubber Stopper, #3, solid (CE-STOP03C)	1	
24	Tuning Fork, C, 512 cps (MC-TF0512)	1	
25	Prism, glass, 25mm x 75mm (OP-PRISM)	2	
26	Cellophane, 3 pack (GS-CELLO)	1	
27	Copper Wire, bare, #10, 2 ft (EL-WIRE10S)	1	Use in place of bubble wand for Lab 27
27	Diffraction Grating, 500 lines/mm (OP-DFG0500)	1	
27	Dishwashing Liquid Detergent, 15 ml (CH-DISHDET)	4	Use this to make homemade bubble solution
27	Lens, double concave, 150mm f/l (OP-LEN4C15)	1	
27	Lens, double convex, 150mm f/l (OP-LEN4X15)	1	
27	Polarizing Film Kit (OP-POLARIZ)	2	
27	Protractor, 6" semi-circle (ME-PROTRSM)	1	
28	Electroscope, Pith Ball Type (EL-ELSCOPE)		Items for Lab 28 not included as it is specified as Optional by Abeka. Purchase items separately.
29	Acetate sheet, 8"x11" (PT-PAPACET)	1	Acetate sheet is a clear 8" x 11" sheet
29	Dissecting Tray, Styrofoam, 8" X 10" (DE-TRAYS)	1	Use this styrofoam tray to catch iron filings
29, 30	Iron Metal Filings, 30 g (CH-IRON)	1	These filings come in a sink wrapped plastic vial to prevent spilling during shipping.
29, 30, 35	Bar Magnets, 1.2" ceramic, 2 pack (MG-BAR1C)	2	
30, 31, 34	Switch, knife type, SPST (EL-SWITCH2)	1	
30, 31, 35	Wire, enamel magnet, #28, 4 oz (EL-WIRE28M)	1	

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30, 32	Compass, magnetic, 1.5" (GS-COMPASS)	1	
31	Bolt, 0.5" x 2.5" (GS-BOLT2)	1	Use in place of multiple turn rods
31, 33, 34, 36	Battery Holder & Joiner, D Cell (EL-BATHOLD)	3	
31, 33, 34, 36	Battery, D, heavy duty, 2 pack (EL-BATTD2)	2	
32	Dowel, 1/4", 12" long (PT-DOWL250)	1	Use this smaller diameter dowl to build the terella in Lab 32
32	Insect Spreading Board, 12" x 4" (BE-INSECB0)	1	Use this styrofoam board (indent facing down) as the base for the terella and clay around the base to stabilize.
32	Lodestone Specimen 1 - 1.5" (RM-LODSTN)	1	Black stone packaged in a small zip-lock bag.
32	Styrofoam ball, 4" diameter, individual (GS-STYBAL4)	1	Use this 4" ball to make terella
32, 35	Bar Magnets, 3" Alnico I, 2 pack (MG-BAR3AL)	1	Use one of these magnets to build the terella in Lab 32.
33, 34, 36	Bulb holder, 1-bulb (EL-BULBHD1)	4	
33, 36	Bulb, screw style, 1.5-volt (EL-LAMP1.5)	4	
34, 35, 36	Digital Multimeter (EL-DIGMULT)	1	
35	Cardboard tube, 1-1/2" X 15" (PT-TUBE115)	1	Cardboard tube will need to be cut down for Lab 35.
35, 36	Galvanometer, -500 to 500 uA (EL-GALVAN1)	1	
35, 36	Galvanometer, -500 to 500 uA (EL-GALVAN1)	1	
36	Breadboard, 400 point, solderless, plug in (EL-BREADBD)	1	
36	Capacitor, 100 microfarad (EL-CAP100M)	1	Use for Lab 36 Part V; 100microF, 25V
36	Copper Wire, insulated, #24, 15' (EL-WIRE24H)	1	Use in place of jumper wires. This wire can be cut with scissors or wire cutters
36	Diode, 1 amp (blocking) (EL-DIODE1)	1	Similar to the resistors; small black cylinder.
36	LED, green, diffuse type, 5 mm (EL-LEDGRN)	3	Use these 3 provided LEDs instead of 7 segment LED display
36	MPF102 Transistor (EL-MPF102T)	1	This transistor will come in electronic sensitive device packaging.
36	Potentiometer, 1000 ohm (EL-POT100R)	1	Rotary style.
36	Resistor, 10K ohm, 1/4 watt (EL-RES010K)	1	Identified by colored rings: gold, orange, black, brown. Use for Lab 36 part V and part VI.
36	Resistor, 10 ohm, 1/4 watt (EL-RES010R)	3	Identified by colored rings: gold, black, black, brown. Use these 3 provided resistors instead of 7 segment LED display
36	Solar Cell, 1 volt, 400-500 ma (EL-SUNCELL)	1	

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.
4. Some products may differ from the web image (such as clay, food coloring, etc.)
5. Some items readily available at grocery stores or not offered by Home Science Tools are not included.
6. We guarantee that you will be happy with every purchase from HST. All products are covered by our 90-day money-back guarantee.

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