KIT CONTENTS LIST FOR USE WITH: **Physical Science (Grade 9)**
6th Edition
BJU Press®

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Text Reference	Item Description	Item Quantity	Notes
	BJU Press Physical Science 9 Lab Manual *(BJ-SCI09-D)*	0	Purchase Student lab manual separately.
	BJU Press Physical Science 9 Teacher Lab Manual *(BJ-SCI09-E)*	0	Purchase Teacher's Edition lab manual separately.
	BJU Press Physical Science 9 Teacher's Edition *(BJ-SCI09-C)*	0	Purcahse Teacher's Edition separately.
	BJU Press Physical Science 9 Textbook *(BJ-SCI09-B)*	0	Purchase Student Testbook separately.
MULTIPLE	Chemical Splash Safety Goggles, Adult *(CE-GOGGLE1)*	1	We recommend both students and teacher wear chemically resistant goggles when using chemicals. Order extras as needed.
MULTIPLE	Digital Scale, 2000 g x 0.1 g *(BS-DB2000)*	0	Scale required for experiment; purchase separately. 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.
MULTIPLE	Gloves, Nitrile, Size Medium, Pair *(GS-GLOVNIT)*	1	We recommend both students and teacher wear chemically resistant gloves when using chemicals. Order extras as needed.
MULTIPLE	Lab Apron No. 1, vinyl, 6 mil *(CE-APRON1)*	1	We recommend both students and teacher wear a chemically resistant apron when using chemicals. Order extras as needed.
MULTIPLE	Ruler, 30 cm *(ME-RULER)*	0	Meterstick can be used to complete experiments.
1B	Weight Set, Slotted, 250 g *(BS-SLOTWT1)*	1	
1B, 11B, 12A, 14A, 15B, 17A	Digital Stop Watch, 2" *(ME-STOPWAT)*	0	Use a cell phone.
1B, 11B, 11C	Tennis ball *(GS-BALLTNS)*	0	Use any ball approzimate to a tennis ball.
1B, 12B, 13A, 13B	Spring scale, 2000 g/20 Newton *(BS-SCALE5)*	1	
1B, 15B, 17A	Right Angle Clamp *(CE-RCLAMP)*	1	
1B, 15B, 17A	Rod, steel, 0.25" x 10" *(GS-RODSTL)*	1	
1B, 15B, 17A	Support Stand, 4" x 6" base, 18" rod *(CE-STAND2)*	1	
1B, 1C, 2A, 2B, 6A, 9B, 15A, 18A	Graduated Cylinder, glass, 100 ml *(CE-CYGL100)*	1	
1B, 2B, 7A, 7B	Beaker, glass, 100 ml *(CE-BEI0100)*	1	
1B, 4A, 5A, 6A, 6B	Graduated Cylinder, glass, 25 ml *(CE-CYGL025)*	2	
1B, 4A, 6B	Graduated Cylinder, glass, 10 ml *(CE-CYGL10)*	0	Use the 25ml graduated cylinder in place of the 10mL graduated cylinder
1C, 3A, 15A	Beaker, glass, 250 ml *(CE-BEI0250)*	0	Use the 100ml or 400ml beaker in place of the 250ml beaker.

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1C, 6B, 7B	Pipet, disposable, 1 ml, 10 pack *(CE-PIPET)*	1	
2A	Cup, clear plastic, 9 oz, 3 pack *(CE-BEAKCUP)*	1	
2A	Toy car *(MC-TOYCAR)*	0	Activity requires scale model cars. Must be purchased separately to complete the experiment.
2A, 12A, 17A	String, heavy cord, 25' *(MC-STRING)*	1	
2B	Red Cabbage Indicator Jiffy Juice Kit *(KT-JIFFYJU)*	0	See Teacher's Guide for making the red cabbage juice.
2B, 13B	Clay, modeling, 4 oz. stick *(GS-CLAY)*	1	Substitute for poster puddy (13B)
2B, 3A, 5A, 5B, 9A, 9B	Sodium Chloride, 30 g *(CH-NACL)*	0	Use household table salt in place of lab grade sodium chloride.
2B, 5A, 6A, 9B	Erlenmeyer Flask, 250 ml *(CE-FLAI250)*	1	You can get by with one flask by doing the steps of the labs in parts (5A & 9B)
2B, 6A	Baking soda, food grade, 1 lb or 450g *(CH-BKGSODA)*	0	Use baking soda purchased from your local grocery store.
2B, 6A, 15A, 15B	Electric Hot Plate *(CE-HOTELEC)*	0	Use a pan and stove to complete experiment.
2B, 6A, 15A	Heat-Resistant Leather Gloves *(CE-GLVLEAM)*	0	Use an oven mitt in place of these insulated gloves.
2B, 6A, 15A, 15B	Wire Gauze, ceramic center, 4" *(CE-GAUZE4)*	0	Use a hot pad.
2B, 7A, 7B	Measuring Spoons, Set of 6 *(CE-MESPOON)*	0	Use any kitchen measuring spoons to complete the experiments.
2B, 9B, 15A, 15B	Thermometer, Celsius, 12" *(ME-THER30B)*	1	
3A	Butane Gas Fuel Refill, 57 g (100 ml) *(UN-BUTFUEL)*	1	
3A	Butane Lighter, long reach *(CE-LIGHTBU)*	0	Optional to purchase separately. This item has a shipping restriction.
3A	Lithium Chloride, 30 g *(CH-LICL)*	1	
3A	Portable Micro Lab Burner *(CE-BURNLAB)*	1	
3A	Strontium Chloride, 10 g *(CH-SRCL2)*	1	
3A	Wooden Splints, 20 pack *(CE-SPLINTS)*	1	
3A, 5A, 5B	Copper II Chloride (cupric), 30 g *(UN2802)*	1	
3A, 5A, 5B, 9B	Potassium Chloride, 30 g *(CH-KCL)*	1	
3A, 7B	Calcium Chloride, 30 g *(CH-CACL2)*	1	
4A	Copper, metal electrode, 4" *(EL-ELECTCU)*	1	Substitute for the copper shot
4A	Iron, metal electrode, 4" *(EL-ELECTFE)*	1	Substitute for the iron nails
4A	Zinc, metal electrode, 4" *(EL-ELECTZN)*	1	Use Zinc (Atomic Number 30) in place of chromium chunk
5A	Candle, tea light *(OP-CANDTEA)*	0	Use any candle to complete the experiment.
5A	Erlenmeyer Flask, 100 ml *(CE-FLAI100)*	0	Use the included 250ml erlenmeyer flask in place of the 100mL to complete experiment.
5A	Graduated Cylinder, glass, 50 ml *(CE-CYGL050)*	0	Use the 25ml graduated cylinder
5A	Methyl Cellulose, 1.5%, 30 ml *(CH-METHCEL)*	1	
5A	Weighing Paper, 4" x 4", 500 sheets *(BS-WHPAPR4)*	0	Use a coffee filter in place of weigh paper.
5A, 5B	Vegetable Oil, 6 oz. (sold only in kits) *(CH-VEGEOIL)*	0	Use vegetable oil purchased from local grocery store to complete experiment.

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5A, 5B, 7A, 7B	Sodium Bicarbonate, 30g *(CH-NAHCO3)*	1	
5A, 5B, 9B	Wax pencil (marks glass) *(BE-WAXPENC)*	0	Use any marker.
5A, 6A	Spatula, stainless steel *(CE-SPATULA)*	0	Use any spoon or utensil.
5B	Starch, water soluble, 30 g *(CH-STARCH)*	0	Use cornstarch purchased from local grocery store to complete experiment.
5B, 19A, 19B, 19C	Banana to Alligator Leads, 36" *(EL-BAN2ALL)*	1	
5B, 19A, 19B, 19C	Digital Multimeter *(EL-DIGMULT)*	1	The multimeter can easily be swtiched between voltage and amperage. A multimeter can be used in place of a conductivity meter for activity 5B
5B, 7B, 18A	Beaker, glass, 50 ml *(CE-BEI0050)*	0	Use the 100 mL in place of the 50mL to complete the expeirments.
6A	Filter Paper, 11 cm, 10 pack *(CE-FILTPAP)*	1	
6A	Funnel, plastic, 65 mm dia. *(CE-FUNNEL)*	1	
6A	Stirring Rod, glass, 10" *(CE-STIR10)*	0	Use a spoon.
6A, 10A	pH Papers, 1-14 range, 80 pack *(CH-PHSTRIP)*	1	
6A, 15B	Beaker, glass, 400 ml *(CE-BEI0400)*	1	
6B	Acetone, 30 ml *(UN1090)*	0	Use nail polish remover that contains acetone instead of this lab grade acetone.
6B	Beaker, glass, 150 ml *(CE-BEI0150)*	0	Use any glassware for disposal
6B	Biuret Reagent, 30 ml *(UN-BIURET)*	1	
6B	Mortar and Pestle, 80 ml *(CE-MORTAR)*	0	
6B	Test Tube Rack, 25 mm, 24 holes *(CE-TTR2524)*	0	Use a tall glass to hold tubes upright
6B	Test Tubes, small 13 x 100 mm *(CE-TTUBESM)*	1	
7A	Limewater, 500 ml *(CH-CAOH500)*	1	
7A	Rubber Stopper, # 6.5, 1-hole *(CE-STOP06A)*	1	Use 250ml flask for the gas generator
7A	Universal Indicator, 30 ml *(UN-UNIVERS)*	1	
7A, 16A	Vinyl Tubing, 4.8 mm, 5' long *(CE-TUBEPL5)*	2	
7B	5x7 ziplock bags, 2 mil *(PK-ZIP5X7)*	0	Use any plastic sandwich bag to complete experiment.
7B	Phenol red pH indicator, 30 ml *(CH-PHENRED)*	1	
8A	Colored Pencils *(BE-CPENCIL)*	0	Use any crayons, colored pencils, or markers to complete experiment.
9A	Sand, coarse, 1 lb *(GS-SANDCRS)*	1	
9A, 20A	Iron Filings, 12 oz. *(MG-IRONBLK)*	1	
9B	Magnesium Chloride, 30 g *(CH-MGCL2)*	1	
MULTIPLE	Meterstick, 100 cm *(ME-METER2)*	1	Metersticks not included in kits shipped outside of the US.
10A	Antacid Tablets, 12 pack *(CH-ANTAC12)*	1	Follow preparation instructions in Teacher's Guide.
10A	Beaker, polypropylene, 500 ml *(CE-BEA500P)*	0	Use kitchen sink in place of a large beaker.
10A	Cup, clear plastic, 9 oz, 3 pack *(CE-BEAKCUP)*	1	

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10A	Hydrochloric Acid, 12M, 30 ml *(UN1789)*	1	Follow preparation instructions in Teacher's Guide.
10A	Sodium Hydroxide, 30 g *(UN1823)*	1	Follow preparation instructions in Teacher's Guide.
10A	Wash Bottle, 250 ml, Narrow Mouth *(CE-WASHBTL)*	0	Optional wash bottle to clean pH meter.
10A, 10B	pH Meter, Digital, 0-14 pH range *(ME-PHMETER)*	0	pH probe can be substituted for Labdisc Gensci in Activites 10A and 10B. Refer to Teacher's Guide for alternatives to using Labdisc Gensci. All necessary materials for alternatives are provided and referenced in this kit.
11A, 17A, 22A	Protractor, 6" semi-circle *(ME-PROTRSM)*	1	
12A, 13A	Pulley with Table Clamp *(MC-PULLY3)*	1	
12A, 13B	Hall's Cart *(MC-HALLCAR)*	1	
12A, 17A	Weight Set, Slotted, 250 g *(BS-SLOTWT1)*	1	
12B	Friction Block, wood *(MC-BLOCK1)*	1	
12B, 13A, 13B	Weight, 500 g, with hook *(BS-WTE500)*	0	Refer to Teacher Guide for substitute of cups with screws and washers to make desired weights.
13A	Pulley, Double Tandem, 48mm *(MC-PULLY2)*	2	
13B	Wood Ramp, economy *(MC-RAMP1)*	1	
14A	Body Weight Scale, Economy *(BS-BODYSCL)*	0	Use a household scale
14B	Rubber band, size 16 *(PT-RUBBA16)*	0	
14B	Spool, wooden , 1" x 3/4" *(PT-SPOOL)*	1	
14B	Washers, 1" diameter, each *(PT-WASHBLK)*	1	
14B, 16A	Dowel, 1/8", 12" long (sold only in kits) *(PT-DOWL125)*	1	For peg, cut 1 cm piece from dowel
15A	Styrofoam Cup, 8 oz, each *(PT-STYRCUP)*	0	
15B	Deluxe Lab Hot Plate with Magnetic Stirrer *(CE-HOTSTR2)*	0	Use a stove and pan to complete experiment.
16A	Beaker, glass, 600 ml *(CE-BEI0600)*	0	Use any large containers
17A	Ring Support, 4" *(CE-RING4)*	0	Use the steel rod (GS-RODSTL)
18A	Buzzer, piezo-electric, DC *(EL-BUZZER)*	1	
18A	Tuning Fork, B, 480 cps *(MC-TF0480)*	1	
19A, 19B, 19C, 20B	Battery Holder for AA Cells *(EL-BATHAA1)*	3	
19A, 19B, 19C, 20B	Battery, AA, alkaline, 4 pack *(EL-BALK-AA)*	2	Use instead of a variable DC power supply
19A, 19B, 19C	Breadboard, 400 point, solderless, plug in *(EL-BREADBD)*	1	The hole row# are relative in the activity manual and can be adjusted. A smaller breadboard has been provided in the kit.
19A, 19B, 19C	Jumper Wire, pre-formed, set of 70 *(EL-JWPFSET)*	1	
19A, 19B, 19C	Resistors, set of 20, 0.25 watt *(EL-RESKIT1)*	1	
19B, 19C	LED, red, diffuse type, 5 mm *(EL-LEDRED)*	3	
20A	Bar Magnets, 1.2" ceramic, 2 pack *(MG-BAR1C)*	1	
20A	Card stock, 110#, 8-1/2" x 11", white *(PT-CARDSTK)*	1	

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20A	Compass, magnetic, 1.5" *(GS-COMPASS)*	1	
20A	Paper Clips, small, 100/box *(GS-PCLIPSM)*	0	
20B	Copper Wire, insulated, #24, 15' *(EL-WIRE24H)*	1	
21A	Construction paper, white *(PT-PAPCSWH)*	0	Use computer paper
21A, 21B	LED Flashlight, 25 Lumens *(OP-LIGHT4)*	0	
21B	Diffraction Grating, 500 lines/mm *(OP-DFG0500)*	1	
22A	Mirror, glass plane, 4"x 2" *(OP-MIRROR4)*	1	
22A	Round Push Pin, Blue, 1/8 inch, Individual *(PT-PINBLU)*	5	
22B	Candle, 4" white *(OP-CANDLE)*	1	
22B	Lens, double convex, 150mm f/l *(OP-LEN4X15)*	1	
22B	Optic Bench Lens Holder, metal *(OP-LENHLDS)*	1	
22B	Optic bench object marker *(OP-OBJMARK)*	1	
22B	Optic Bench Object Screen *(OP-SCREEN)*	1	
22B	Optic Bench Screen Holder *(OP-SCRNHLD)*	1	
22B	Optic Bench Supports, pair *(OP-SUPPORT)*	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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