

KIT CONTENTS LIST FOR USE WITH: **Alpha Omega Publications**
Science LIFEPAK® Grade 12

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<u>Text Reference</u>	<u>Item Description</u>	<u>Item Quantity</u>	<u>Notes</u>
1,2,3	Digital Scale, 2000 g x 0.1 g (BS-DB2000)	0	BS-SCALE3 and BS-SCALE2 will allow you to do most of the labs without a balance. To do all of the labs, we recommend this digital scale as a faster, easier-to-use, and more economical alternative to a traditional mechanical balance.
1	Ethyl Alcohol, 95%, 30 ml (UN-ETHYALC)	0	Rubbing alcohol works acceptably to complete the lab.
1	Graduated Cylinder, polypropylene, 100 ml (CE-CYPP100)	1	Use for both 50 and 100 ml cylinders.
1	Oleic Acid, 30 ml (CH-OLEIC)	1	A cake pan will work for the tank.
1	Pipet (medicine dropper) (CE-DROPPER)	2	
1	Plastic Student Thermometer (ME-THERMPL)	2	
1	Razor Blade, single edge, 1 pack (CE-RAZOR)	0	Optional to purchase separately. Sharp scissors will work.
1	Slides, plain glass, 12 pack (MS-SLIDEPL)	1	
1	Talc, 30 g (CH-TALC)	0	Optional to purchase separately. Baby powder will work to complete the experiment.
1,2	Paper, special set, 10 sheets (GS-PAPERSP)	1	Includes the acetate sheet needed. Use 1 sheet and 3 different colored markers for 2', 4' and 6' diagrams. Can also use the drawing paper and tracing paper.
1,2	Rubber bands, 1.4 oz. bag (GS-RUBBAND)	0	Purchase separately from your local hardware store.
1,2,3	C-clamp, 2" (GS-CLAMP)	2	
1,2,3	Recording Spark Timer (MC-TIMERSP)	1	
1,2,3,4,5	Meterstick, 100 cm (ME-METER2)	1	Kits shipped outside the US do not include the meterstick.
1,2,3,5	Recording Timer Paper Tape (MC-TAPE)	1	We recommend an extra roll to do all the labs.
1,2,5	Ruler, 30 cm (ME-RULER)	1	You can also use this ruler to make the ramp for the collision apparatus in 1202 instead of buying the Collision in 2-D apparatus.
1,3	Spring scale, 500 g/5 Newton (BS-SCALE2)	1	Optional. Will work acceptably instead of a balance for 1201 and 1203.
1,3,4	Thermometer, Celsius, 12" (ME-THER30B)	1	Use 3 thermometers (1 of ME-THER30B and 2 of ME-THERMPL) instead of 15-30 for the lab in 1201. Move them to different levels in the room.
2	Collision in 2 Dimensions Kit (MC-COLL2D)	0	This is the apparatus shown in Section 4. You can make one with wooden blocks and the 12" ruler included.
2	Dynamic carts, set of 2 (MC-DYNCART)	1	This set includes everything needed to do these labs. The carts weigh about 2 pounds each. A skate will work as a substitute for some of the labs. Also, for masses we suggest using general household items rather than costly, large scientific masses.

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2	Glass Tube, 5 mm, 6" long (CE-TUBEG6)	1	
2	Paper Clips, small, 100/box (GS-PCLIPSM)	0	Purchase separately from your local grocery store.
2	Rubber stopper, #4, 2-hole (CE-STOP04B)	2	
2	Spring scale, 1000 g/10 Newton (BS-SCALE3)	1	Optional. Will work acceptably instead of a balance for 1202.
2,4	Digital Stop Watch, 2" (ME-STOPWAT)	0	Use any cell phone or computer timer to complete labs.
2,4	Washers, 1", 5 pack (GS-WASHERS)	3	
2,5	Ball, steel, 0.5", pair (MC-BALLST1)	0	Optional to purchase separately; if you purchase the Collision in 2 Dimension Kit (MC-COLL2D), the steel ball is included.
2,5	Wood Ramp, economy (MC-RAMP1)	0	
3	Styrofoam Cups, 8 oz, with lids 5 pack (CE-CUPSTYR)	0	Styrofoam cups can be used to make a calorimeter in place of purchasing the apparatus.
3	Weight, 100 g, with hook (BS-WTE100)	0	Optional to purchase separately. Can make the weights using a spring scale, plastic bag and sand.
3	Weight, 200 g, with hook (BS-WTE200)	0	Optional to purchase separately in place of 300 g masses. Can make the weights using a spring scale, plastic bag and sand.
3	Weight, 50 g, with hook (BS-WTE050)	0	Optional to purchase separately. Can make the weights using a spring scale, plastic bag and sand.
3,4,5	String, heavy cord, 25' (MC-STRING)	1	
3,4,5,6	Support Stand, 4" x 6" base, 18" rod (CE-STAND2)	1	
3,6	Right Angle Clamp (CE-RCLAMP)	0	Optional to purchase separately. Not necessary if you come up with an alternate method of hanging the pendulum.
3,6	Rod, steel, 0.25" x 10" (GS-RODSTL)	0	Optional to purchase separately. May not be necessary, if you come up with an alternate method of hanging the pendulum.
4	Glass Plate, 5" x 5" (CE-GLASS5)	1	Only needed if you make your own ripple tank.
4	Slinky, metal, extra large (MC-SLINKY2)	1	A regular Slinky will not work well for these labs.
4	Sound Measurement Kit (MC-SOUNKIT)	1	
4	Spring, helical, 6' (MC-SPRING1)	1	
4,5	Burette Clamp (CE-CLAMP)	1	
4,5	Clay, modeling, 4 oz. stick (GS-CLAY)	2	Use as weights to make the torsion apparatus in 1204. Use paper strips as bands and straws as cross-rods.
4,5	Protractor, 6" semi-circle (ME-PROTRSM)	1	
5	Lens, double convex, 150mm f/l (OP-LEN4X15)	1	
5	Light, small beam penlight (OP-LIGHT3)	1	Use any small flashlight. A bright thin beam works best.
5	Mirror, glass plane, 4"x 4" (OP-MIRROR3)	2	
5	Optical Slit Kit (OP-OPTSLIT)	1	This set contains everything needed to do the labs in 1205.
5	Polarizing Film Kit (OP-POLARIZ)	1	
5	Prism, glass, 25mm x 75mm (OP-PRISM)	1	We recommend omitting the portion that uses a light pipe.
5	Refraction Box, semi-circle (OP-REFRAC3)	1	

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5	Rubber Tubing, 4.8 mm, 2' long (CE-TUBERU2)	1	
5,8	Battery Holder for D Cell (EL-BATTHLD)	1	
5,8	Battery, D, heavy duty, 2 pack (EL-BATTD2)	0	Purchase separately or from your local hardware store.
5,8	Bulb holder, 1-bulb (EL-BULBHD1)	1	Use for optical light source.
5,8	Bulb, screw style, 1.5-volt (EL-LAMP1.5)	1	Use for optical light source.
5,8	Copper Wire, insulated, #24, 15' (EL-WIRE24H)	1	
6	Friction pad, fur, about 4x5" (GS-PADFUR)	1	Use the included EL-STATKIT to complete this experiment.
6	Friction pad, silk, 6x6" (GS-PADSILK)	1	
6	Friction rod, glass, 0.25" x 10" (GS-RODGLAS)	1	Use the included EL-STATKIT to complete this experiment.
6	Friction rod, rubber (GS-RODRUB)	1	Use the included EL-STATKIT to complete this experiment.
6	Pith Balls, threaded, 2 pack (EL-PITHBAL)	1	Use the included EL-STATKIT to complete this experiment.
6	Static Electricity Study Kit (EL-STATKIT)	1	
8	Bar Magnets, 3" Alnico I, 2 pack (MG-BAR3AL)	1	
8	Compass, magnetic, 1.5" (GS-COMPASS)	1	
8	Iron Metal Filings, 30 g (CH-IRON)	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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