

Materials List				
		Quantity	Source	Cost
Experiment 1 - The Pendulum Lab				
1	nylon string	1 meter		
2	large paper clip	1		
3	large washers (1 or 2")	3	hardware store	.50
4	meter stick, broom handle or similar item	1		
5	duct tape or masking tape	1		
6	clock with sweep second hand or stop watch	1		
Experiment 2 - The Soul of Motion Lab				
1	bathroom scales (old-fashioned style with dial)	2		\$15
2	vehicle (pick-up truck, Kia Soul or other)	1		
3	30' measuring tape or similar	1	hardware store	\$10
4	stop watch	1		\$5
5	duct tape	1		
<i>(additional optional equipment if digital readers are used)</i>				
6	PASPORT 2-Axis Force Platform, PS-2142	2	pasco.com	\$459
7	Xplorer GLX	2	pasco.com	\$389
8	Force platform handle set, PS-2548	2	pasco.com	\$39
9	Force platform support rack (constructed of ordinary lumber. See illustrations for construction suggestions)		Hardware store	\$15

Materials List				
Experiment 3 - The Hot Wheels Lab				
1	Hot Wheels track (Builder Essential Gravity Pack)	1	Walmart or toy store	\$4
2	Hot Wheels or Matchbox cars	1 to 3		\$3-\$10
3	Track support frame (optional). Aluminum angle bar commonly available or wooden jig available from Novare .		Hardware store Novare Science & Math	\$12
4	stop watch	1		\$5
5	meter stick or machinist's rule	1		\$3
6	triple-beam balance, such as # 02-7600	1	arborsci.com	\$89
7	carpenter's level	1	Hardware store	\$10
8	sheets of paper (for leveling)			
9	masking tape	1 roll		
<i>(additional optional equipment if digital timer is used)</i>				
10	Combination digital timer and photogates such as # P4-1450	1	arborsci.com	\$279
11	support stand, such as # 66-4220	2	arborsci.com	\$18
12	clamp holder, such as # 66-8290	3	arborsci.com	\$17

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Experiment 4 - DC Circuits (per group)				
1	DC power supply, such as # P4-3450 . Discussion provided for using batteries as a low-cost alternative	1	arborsci.com	\$100
2	digital multimeter, such as # EL-DIGMULT	1	hometrainingtools.com	\$13
3	breadboard and wire kit, such as Twin Industries TW-E41-102B (stock no. 70012449 from Allied Electronics)	1	alliedelec.com	\$18
4	banana plug, such as the Emerson Connectivity Solution 108-0302-001 eg. 70090314	2	alliedelec.com	\$2
5	precision resistors, 1.1k, 1.5 k, 2.0 k, 4.7 k. (These should be 1% tolerance such as the metal film resistors available from Allied Electronics stock no. 70183632 , 70183635 , 7018363Z , and 70183646)	1 each	alliedelec.com	\$1.00
Experiment 5 - The Solubility Lab (per group)				
1	beaker, 250 mL, Item# CE-BEI0250	2	hometrainingtools.com	\$5
2	graduated cylinder, 100 mL, Item# CE-CYPP100	1	hometrainingtools.com	\$5
3	triple-beam balance, such Product # 02-7600	1	arborsci.com	\$89
4	laboratory scoop, such as Item# CE-SCOOP	2	hometrainingtools.com	\$2
5	beaker tongs such as Item# CE-TONBEAK	1	hometrainingtools.com	\$6
6	thermometer, such as Item# ME-THER30A	1	hometrainingtools.com	\$3
7	Bunsen burner, or alcohol burner item# CE-LAMP2	1	hometrainingtools.com	\$6
8	ring stand such as Item# CE-STAN5X8	1	hometrainingtools.com	\$13

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9	iron burner ring, 3 inch, Item# CE-RING3	1		hometrainingtools.com	\$6
10	burner pad, 4 inch wire gauze, Item# CE-GAUZE4	1		hometrainingtools.com	\$2
11	gas hose (if Bunsen burner is used)	1			
12	disposable weigh tray, Model No. BS-WHDSAL3	1 pack		hometrainingtools.com	\$8
13	table salt (non-iodized), approx 200 g				
14	table sugar, approx 200 g				
15	distilled water, approx 400 mL				
16	paper towels				
17	stir rod (if magnetic stirrers not used) Item# CE-STIR10	2		hometrainingtools.com	\$1
18	laboratory striker or butane lighter (most convenient are the lighters made for use with outdoor gas cooking grills) Item# CE-LIGHTER	1		hometrainingtools.com	\$4
19	safety goggles or glasses, one pair per student, Item# CE-GOGGLE			hometrainingtools.com	\$4
<i>optional equipment</i>					
20	magnetic stirrer, such as Item# CE-MAGSTIR	1		hometrainingtools.com	\$90

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Experiment 6 - The Density Lab

1	graduated cylinder, 250 mL Item# CE-CYPP250	1	hometrainingtools.com	\$20
2	beaker, 400 mL, Item# CE-BEI0400	1	hometrainingtools.com	\$5
3	triple-beam balance, such #02-7600	1	arborsci.com	\$89
4	aluminum samples, 3/4 in x 3/4 in angle, various lengths, 4.5 in to 7.5 in	4	hardware store	\$5
5	PVC samples, 1/2 in schedule 40; various lengths, 3.0 in to 6.0 in	4	hardware store	\$5
6	paper towels			
7	tap water			