

Thermochemistry— Master Materials Guide



Materials listed below are recommended
for a class of 30 students working in pairs.

Experiments and Demonstrations[§]

Chemicals	Flinn Scientific Catalog No.	Exploring Energy	Measuring Energy	Discovering Instant Cold Packs	Measuring Calories	Heat of Reaction and Hess's Law	Colorful Heat	Specific Heat	Cool Reaction	Whooosh Bottle	Flameless Reaction Heaters
Aluminum shot	A0262							60 g			
Ammonium chloride	A0045	80 g									
Ammonium nitrate	A0056			225 g							
Ammonium thiocyanate	A0213							10 g			
Barium hydroxide octahydrate	B0155							20 g			
Calcium chloride	C0016	110 g									
Hydrochloric acid solution, 1 M	H0057	300 mL				900 mL					
Iron filings	I0011										1 g
Isopropyl alcohol	I0019								25 mL		
Lead shot	L0090							60 g			
Magnesium oxide	M0013					6 g					
Magnesium ribbon	M0139					105 cm					2 cm
Nitric acid, 3 M	N0049										2 mL
Phenolphthalein solution, 1%	P0019										2 mL
Silver nitrate solution, 0.1 M	S0305										1 mL
Sodium bicarbonate	S0043	40 g									
Sodium chloride	S0063										2 g
Sodium hydroxide solution, 0.1 M	S0149										1 mL
Zinc shot	Z0021							60 g			
Glassware											
Beakers											
250-mL	GP1020						5				
400-mL	GP1025	15	30	15				3			
600-mL	GP1030							1			
Erlenmeyer flasks											
125-mL	GP3040				15				1		
250-mL	GP3045										1

[§]Many of these experiments and demonstrations will be adapted into student laboratory kits.
Consult your current *Flinn Scientific Catalog/Reference Manual* for kit availability.

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Glassware, continued											
Graduated cylinders											
10-mL	GP2005	15									
25-mL	GP2010					15				1	
50-mL	GP2015	15			15						
100-mL	GP2020		15	15				1			
250-mL	GP2025		15								
Test tubes											
25 × 150 mm	GP6035							3			4
Stirring rods	GP5075	15	15	15	15	15	1	3	1		1
General Equipment and Miscellaneous											
Bags, zipper-lock, plastic	AB1004	15									
Balance, centigram (0.01-g precision)	OB2059	3		3	3	3		1	1		1
Boiling stones	B0136							3			
Bunsen burner	AP8344										1
Calorimeter, metal, economy choice*	AP4533				15						
Calorimeter, small-scale	AP5928					15					
ChemCam video camera	AP4560										optional
Cold pack, instant	AP6267			2							
Deflagration spoon	AP1346										1
Filter paper	AP3104										1
Fire blanket	SE3006									1	
Fire extinguisher	SE3001									1	
Flameless ration heater	AP8695										2
Food coloring	V0003						1				
Forceps	AP8328		15			15					1
Funnel	AP3200									1	1
Gloves, Zetex,™ for low temperature	AP3240								1		

*AP4533 includes the calorimeter and lid, Erlenmeyer flask with collar, and food holder and pin.

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General Equipment and Miscellaneous, cont'd.											
Hot Hands Heat Protector	SE039		15								
Hot plate	AP4674		5–8					1			
LabPro Interface system	TC1500	optional	optional	optional	optional	optional					
LoggerPro Software	TC1421	optional	optional	optional	optional	optional					
Magnet	AP9041										1
Magnifier	AP6020										1
Marking pencil or pen	AP8921	15						1			
Matches	AP1935				15					1	
Meter stick	AP5384									1	
Metric rulers	AP4684					15					
Rubber stopper	AP2320								1		
Safety shield	SE225									1	1
Scissors	AP4396					3					1
Spatula	AP8336	15		15		15					
Specific Heat Set	AP9220							1			
Styrofoam® cups, 6 oz	AP1190	15	15	30				6			
Test tube clamps	AP8217							3			
Thermometer, digital —or— Temperature probe	AP4852 —or— TC1502	15	15	15	15	15		3	1		1
Wash bottle	AP1668					15			1		
Water, distilled or deionized	W0007	✓	✓	✓		✓		✓		✓	✓
Weighing dishes	AP1278	60		15		30					
Whoosh Bottle Kit	AP5943									1	
Wood splints	AP4444									1	