

Molar Relationships & Stoichiometry— 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.	Who's Counting?	Magnesium Oxide	Decomposition of Sodium Chlorate	Mole Ratios	Micro Mole Rockets	Mole Creativity	How Big Is a Mole?	Mole Samples and Molar Mass	Stoichiometry Balloon Races	Stoichiometry and Solubility
Acetic acid, 1 M	A0095								150 mL		
Acetone	A0009			250 mL							
Aluminum foil	A0020							27 g			
Calcium acetate	C0262							3 g			
Calcium oxide	C0263							2 g			
Calcium turnings	C0008							40 g			
Charcoal, activated	C0202							12 g			
Copper wire, 18 gauge	C0148			400 cm				64 g			
Copper(II) chloride, 0.1 M*	C0382									125 mL	
Hydrochloric acid solution, 3 M	H0034				250 mL						
Hydrogen peroxide, 3%	H0009				250 mL						
Iron filings	I0011							56 g			
Iron nitrate, 0.1 M	F0047									250 mL	
Lead shot	L0090							208 g			
Magnesium ribbon	M0001	40 g							25 g		
Nitric acid, 3 M	N0049			10 mL							
Potassium sulfate	P0144							4 g			
Silver nitrate	S0274			25 g							
Sodium acetate	S0344							7 g			
Sodium bicarbonate	S0042								11 g		
Sodium carbonate	S0051							4 g			
Sodium chlorate	S0216		10 g								
Sodium chloride	S0061							3 g			
Sodium hydroxide, 0.1 M	S0149									250 mL	
Sodium phosphate, 0.1 M*	S0250									125 mL	
Sulfur	S0140							33 g			
Tin shot	T0016							119 g			
Yeast, active, dry	Y0008				2 g						
Zinc, mossy	Z0003				100 g			66 g			
Zinc oxide	Z0013							3 g			

*Dilute to 0.05 M.

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Glassware											
Beakers											
50-mL	GP1005				15						
100-mL	GP1010				15						
250-mL	GP1020				2	15					
600-mL	GP1030							1			
Erlenmeyer flask, 125-mL	GP3040				15					6	
Graduated cylinders											
10-mL	GP2005					15					
50-mL	GP2015									1	2
100-mL	GP2020										7
Stirring rods	GP5075				15						
Test tubes, 13 × 100 mm	GP6010			30		60					
General Equipment and Miscellaneous											
Bags, zipper-lock, plastic	AB1004								7		
Balance, centigram (0.01-g precision)	OB2059	3	3	3	3			1	3	1	1
Balloons	AP1900									6	
Bottles, plastic, 4-oz	AB1128								8		
Bottles, plastic, 8-oz	AB1129								3		
Calculator, scientific	AP5346							5			
Clay triangle	AP8331		15								
Crucible and crucible lid	AP8241		15								
Crucible tongs	AP8266		15								
Funnel	AP9151									1	
Labeling pens	AP1297				15						
Laboratory Techniques Guide	AP6248		15								
Make-A-Mole Kit*	AP6159						Optional				
Marker, permanent	AP1297								1		
Periodic table, notebook size	AP9020								15		
Piezo lighter	AP1576				5						
Pipets, Beral-type, graduated	AP1721				60				2		
Ring stand	AP8226	15									
Ring support, 3-inch	AP1320	15									

*Make-A-Mole Kit includes fabrics for a teacher demo mole and fiberfill stuffing for 30 student moles.

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General Equipment and Miscellaneous, cont'd.											
Rubber stopper, one-hole, size 00	AP2220				60						
Safety matches	AP2037					15					
Scissors, student	AP5394						5				
Spatula	AP8338		15	15	15				1		
Stirring rods, glass	GP5075			15							
Stirring rods, plastic	AP8150									2	
Test tube clamps	AP8217		15								
Test tube racks	AP1319					15					
Wash bottles	AP1668			15							
Water, distilled or deionized	W0007		✓	✓	✓						
Weighing dishes	AP1278	60							6		
Wire gauze, ceramic center	AP1188		15	15							
Wooden splints	AP4444				15	15					