



Materials and Tools for Noise Makers Invention Kit

This materials and tools list is sufficient for 20 students to complete the activities in teams. The list can be used to purchase and/or supply tools and materials *without* purchasing the kit. Some suppliers are identified to aid in purchasing.

Materials and tools that are not supplied in the kit are listed separately and identified as *required* or *optional* to complete the activities.

All activities require safety items: safety glasses, disposable latex-free gloves, and disposable dust masks.

Materials and Tools (required; supplied in the purchased kit)	Size and Quantity	Notes
Shipping tape, clear	2 small rolls	Suggest rolls of 1.88 in. x 22.2 yd.
Cardstock	25 sheets of 8 ½" X 11"	Suggest 110 lb. weight
Rubber bands	1 package of 50, size 64	
Ear Buds	5 total (1 side of ear bud per pair of students)	Inexpensive; quality is not important
D cell batteries	10	
Pink erasers	10	
Paper clips	1 box, metal	
32 AWG enameled magnet wire, red	Four 4-oz spools for the class (1 lb. total)	Amazon



24 AWG enameled magnet wire (red)	One ½-lb spool	Amazon
18 AWG enameled magnet wire	One 1-lb spool	Amazon
Paper plates	10, 9"	
Styrofoam plates	10, 9"	
Mono jack, ¼"	5	
Mono audio cable, 1/8"	5	Amazon
½" x 1/8" neodymium magnets	60	
Music wire; 0.032"	20 3-ft. lengths	
Fishing line, monofilament	1 spool; 10 lb test	Amazon
Tin boxes, small	5	Like Altoids® boxes
Nails assortment		½" and 2"
Nails	10 3-in long	



220 grit sandpaper	1 package	
Masking tape	1 roll	
Electrical tape	1 roll	
iRig guitar adapter for iOS devices	1	Amazon
Soldering iron	2	Sparkfun
Soldering iron stand	2	Sparkfun
Lead-free solder	2 spools	Sparkfun
Tweezers	5	
Wire stripper/cutter	1	
Tin snips	4	
Alligator clip test leads	5	
Magnifying glass	5	



Magnetic compass	2	
Hot glue gun and glue	4	
Safety Items (required; supplied in the purchased kit)	Description	Notes
Latex-free disposable gloves	1 box of 100; medium	
Safety glasses	22 regular	
Safety glasses	3 over prescription safety glasses	
Dust masks; disposable	1 box	

Materials and Tools (required; <i>not</i> supplied in the purchased kit)	Size and Quantity	Notes
Cardboard and scrap materials		Commonly found in recycling bins; can be used for making instruments and for prototyping inventions
Scissors	1 pair for each class member	
Rulers	1 for each class member	
Hammers	4	Hammers help with ear bud take-apart & in building musical instruments



Screwdriver sets	4	Small screwdrivers help with ear bud take-apart
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Materials and Tools (optional; <i>not</i> supplied in the purchased kit)	Size and Quantity	Notes
Utility knives	5 for class	For cutting cardboard
Hand saw	4	Hand saws, if appropriate for the materials selected, may be helpful
“C” clamps	8	Clamps are helpful for holding wood and piping while cutting with hand saws
Needle nose pliers	4	Pliers may help with ear bud take-apart
PVC piping	1 bag of various lengths & diameters	For making instruments
Flexible tubing		For making instruments; Inner and outer diameter is not important
Wood	Various lengths and thicknesses	For making instruments