



Materials and Tools for Electronic Textiles 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 ear plugs, 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
Copper tape; 5mm	2 50-ft rolls	SparkFun Electronics
3V 20mm coin cell batteries	40	SparkFun Electronics
LilyPad coin cell battery holder, switched, 20 mm	20	SparkFun Electronics
Conductive thread, thin	2 50-ft rolls	
Basic red and/or yellow 5mm LED	40 total	
LilyPad LEDs (not micro)	12 packages of 5 each (available in variety of colors)	SparkFun Electronics

Surface-mount LEDs (SMD LED 1206 size)	4 strips of 25 (one of each color: green, blue, red, and white)	SparkFun Electronics
Cotton/polyester sewing thread	2 spools	
9" X 12" felt in asst. colors	1 package of 50	
Distilled white vinegar	1 32-oz container	
Coarse grit sandpaper	10 sheets	
Small binder clips	25	
Rubber bands	25	
Fabric glue	1 tube	
Needle set – 3/9 sizes – 20 needles	5 sets	Adafruit has needles appropriate for conductive thread
Needle threader	2 packages of 3	
Safety Items (required; supplied in the purchased kit)	Description	Notes
Latex-free disposable gloves	1 box of 100; medium	



Ear plugs; disposable w/o cords	1 box	
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
Scissors	1 pair for each class member	
Rulers	1 for each class member	
Pennies (cull for after 1982)	1 roll	
Paper towels	1 roll	
Blank paper	20 sheets	

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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	
Rotary Tool	2 for class	One brand is Dremel®
Rotary Tool Accessory Kit	2 for class	
Digital Multimeter-basic (<i>How to Use a Multimeter</i> video is included)	2 for class	SparkFun Electronics
Adhesive magnetic strip (tape)	1 small roll; ½" wide	