

PPS High School MakerSpace Ed Spec

PPS makerspaces are a place for students to experiment, discover, model, construct and design with the support of tools and technology not found in typical classrooms. Makerspaces bring STEM/STEAM to life through hands-on application of the skills developed in the classroom.

Program Area Facility Requirements (inc. Fixtures)	Area (SF)	Notes
Multifunctional MakerSpace	1200	w/overhead door to exterior
Fixed Perimeter Chem-Resistant Counter		15 Lineal Feet
Sink		
Wiremold w/multiple outlets above counter		
Unistrut w/cord reels for electrical and comp. air		
Storage Room w/power for rechargeable tools	100	
Close proximity to CAD/Engineering Lab w/min. 30 computers		This computer lab to have 770 Video cards, 2 gigabits, icore7 processors, Graphics card w/16 gigabits RAM to render 3d info.
<b>Total Area (SF)</b>	<b>1300</b>	

Furniture	Budget	Potential Uses	Notes
Moveable island w/locked storage and similar surface to tables used in Science	\$ 10,000	* Use for projects requiring making of objects, such as models of bridge, catapults, textile projects *demonstration station	Quantity: 4 seating 4 students per
Moveable textile station, w/sewing machine, sewing tools, accessories	\$ 1,331		(sew) + moveable station cos
Moveable storage cabinet for textile consumables	\$ 1,500		Quantity: 1
Adjustable Stools	\$ 4,650		Quantity: 31
Mobile, adjustable height nesting Tables	\$ 6,000		Quantity: 6 30x60
Mobile White Board	\$ 1,000		Quantity: 1 4x6
Moveable Project Storage	\$ 1,800	*Robotics *Animation	Quantity: 1
Moveable Consumable materials storage	\$ 1,800		Quantity: 1
Moveable locked hardware storage cabinet	\$ 1,800	*Vernier Probes *tools *equipment	<a href="http://www.vernier.com">http://www.vernier.com</a> Quantity: 1
Technology Cart	\$ 1,000		anthrow cart, Quantity: 1
<b>Sub-Total Estimate</b>	<b>\$ 29,881</b>		

Equipment	Budget	Potential Uses	Notes
3d Printer	\$ 2,500	prototyping	Ultimater 2
Equipment - Flash Forge Dreamer Dual Extruder	\$ 1,300		
Injection Molding	\$ 4,000		
Vacuum forming	\$ 1,000		Money Maker - Great for costumes for drama
Metal Casting (Grobet)	\$ 800		Exactly what Precision Cast Parts uses in their shop
Maintenance			
3d Scanner	\$ 400		Sense Scanners by Cubify
Laser Cutter/Engraver	\$ 17,000		Min. 40 watts, needs ventilation
Vinyl Cutter	\$ 6,600		24" cutters, Quantity: 2
CNC Router (4x4)	\$ 15,000		Not mobile
CNC Router (2x2)	\$ 10,000		
Woodworking tools (including accessories, such as saw horses, blades, etc.)	\$ 2,058	creating & building	
<b>Metal Working Tools (inc. welding table &amp; consumables)</b>	<b>\$ 4,656</b>	<b>creating &amp; building</b>	<b>needs more definition</b>
Metal Working - Welding Simulator	\$ 10,000		
Mobile Computer Lab (no more than set of 5)	\$ 15,000	*data collection, file sharing, collaboration, math modeling	Cost of mobile Unit
Computer Lab Stations (adjacent to Makerspace)	\$ 90,000	*Mastercam & Solid Works, AUTOCAD/Revit, Sketch Up & Rh	This computer lab to have 770 Video cards, 2 gigabits, icore7 processors, Graphics card w/16 gigabits RAM to render 3d info. (Per Station cost \$3000, min. 30 units )
Table Vices, C-Clamps, Bar Clamps	\$ 250	creating & building	
Power Tools (Drills, etc., rechargeable)	\$ 1,000		
Vernier tools for data capturing	\$ 1,000	*math modeling *data collection, *Vernier Probes *tools	Lab Pro, motion detectors, temperature probes, heart rate sensors, etc.
Portable Dust Collection System	\$ 2,500	*equipment	Delta cyclone portable Vacuum, Quantity:2
Reuseable Tools	\$ 3,000	router bits, sandpaper, etc.	See Makerspace Playbook p. 10
Consumable Tools	\$ 2,000	plastic, printing materials,	See Makerspace Playbook p. 11. NIC wood products
<b>Sub-Total Estimate</b>	<b>\$ 190,064</b>		

**Total FF&E \$ 219,945**