

## Makerspace Materials

Item	Description	Website
<b>Makey Makey</b>	an invention kit for the 21st century. Turn everyday objects into touchpads and combine them with the internet. It's a simple Invention Kit for Beginners and Experts doing art, engineering, and everything in between	<a href="http://makeymakey.com">http://makeymakey.com</a>
<b>littleBits</b>	These are electronic building blocks that connect using magnets. These blocks allow you to create inventions large and small. Each bit is color-coded and has a distinct function. Great for developing critical thinking and fostering teamwork.	<a href="http://littlebits.cc">http://littlebits.cc</a>
<b>Cubelets</b>	Robot blocks that are connected together using magnets. No coding experience is needed. Snap the robot blocks together and the magnetic faces do the rest. Every unique arrangement creates a new robot with different behaviors.	<a href="http://www.modrobotics.com/cubelets">http://www.modrobotics.com/cubelets</a>
<b>Circuit Stickers</b>	Build circuits without soldering. Circuit stickers are reusable LED stickers that allow you to create paper circuits with any material that is conductive such as copper tape or electric paint. There are a variety of sensors and add-ons available.	<a href="https://chibitronics.com">https://chibitronics.com</a>
<b>Sphero</b>	An app-controlled robotic ball that can be programmed. The SPRK Lighting Lab app empowers anyone to program their robot. The visual block-based building interface makes learning the basics of programming easy and fun.	<a href="http://www.sphero.com">http://www.sphero.com</a>
<b>Squishy Circuits</b>	Create circuits safely and easily by using conductive and insulating play dough. Fun way to teach the basics of electrical circuits. Bring creations to life by adding LEDs, buzzers and motors. The dough can be made using everyday ingredients.	<a href="https://squishycircuits.com">https://squishycircuits.com</a>

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<b>LEGOs</b>	Great for all ages especially those students in preschool, elementary and middle school. Lego blocks can be integrated in a variety of subjects and are great hands-on learning tools. Lego Education has curriculum for all grades. Perfect for engineering units.	<a href="https://www.lego.com">https://www.lego.com</a>
<b>Snap Circuits</b>	As the name implies, Snap Circuit parts are modular based and snap together to form a variety of circuits and projects. Use the provided guide to make items such as FM radios, voice recorders, alarms, doorbells and more. Fun and easy way to learn about electronics and circuits.	<a href="http://www.snapcircuits.net">http://www.snapcircuits.net</a>
<b>Play-Doh</b>	This material is great for prototyping structures or for use in making squishy circuits. Making squishy circuits with Play-Doh is an easy and safe way to learn about circuits and electricity. This is also a perfect way to incorporate the Arts or STEAM into projects.	<a href="http://playdoh.hasbro.com">http://playdoh.hasbro.com</a>
<b>Goldie Blox</b>	Award-winning construction toys designed for girls. Through the integration of storytelling and STEM principles these products help to encourage more females to choose an engineering career path. Kits for all ages from preschool to adult.	<a href="http://www.goldieblox.com">http://www.goldieblox.com</a>
<b>Makeblock</b>	This is an open source construction platform where you can make a variety of robotic units ranging from a rover to a drone using modular parts. These kits provide hands-on learning for all ages and skills levels.	<a href="http://www.makeblock.com">http://www.makeblock.com</a>
<b>Dot &amp; Dash</b>	Robots that make learning to code fun and easy. These are real robots that teach kids programming while they play. Make the robots sing, dance and navigate obstacles using the free apps via a tablet or smartphone. Great for robotics competitions.	<a href="https://www.makewonder.com">https://www.makewonder.com</a>
<b>Qubits</b>	An easy to assemble, snap together toy that teaches students about modular design and geometric shapes. This is a great construction toy alternative that provides a fun way to create small and large structures. Great for developing engineering skills.	<a href="http://www.qubitstoy.com">http://www.qubitstoy.com</a>

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<b>Lego Mindstorms</b>	Programmable robotics construction set that enables you to build, program and control custom built LEGO robots. Kits contain software, hardware sensors and motors. The latest system is called the Mindstorms EV3 which allows you to create 17 robots.	<a href="https://www.lego.com/en-us/mindstorms">https://www.lego.com/en-us/mindstorms</a>
<b>K'NEX</b>	Snap together rod and connector building system. Sets include wheels, gears, pulleys, rods and K'NEX connectors that allow for unlimited creative construction. You can design and build everything from roller coasters to vehicles.	<a href="http://www.knex.com">http://www.knex.com</a>
<b>Minecraft</b>	Education edition is an open-world game that promotes creativity, collaboration and problem solving in an immersive environment. The virtual game enables players to build constructions out of textured cubes in a 3D generated world.	<a href="https://education.minecraft.net">https://education.minecraft.net</a>
<b>Scratch</b>	A free educational programming language that was developed by the Massachusetts Institute of Technology. Scratch is designed to be fun, educational and easy to learn. Create interactive stories, games, art, simulations and more using block-based programming.	<a href="https://scratch.mit.edu">https://scratch.mit.edu</a>
<b>Raspberry Pi</b>	A low cost, high-performance computer that was developed for computer science education. It plugs into a computer monitor and uses a standard keyboard. It enables people to program in languages such as Scratch or Python.	<a href="https://www.raspberrypi.org">https://www.raspberrypi.org</a>
<b>Arduino</b>	Is an open-source electronics platform based on easy-to-use hardware and software. It's intended for anyone making interactive projects. Arduino senses the environment by receiving inputs from sensors and can control lights, motors and actuators.	<a href="https://www.arduino.cc">https://www.arduino.cc</a>
<b>VEX Robotics</b>	A classroom robotics platform for middle school, high school and beyond. Used in robotics competitions, students can design and build a robot to play against other teams. It's a great way to incorporate game-based engineering education.	<a href="http://www.vexrobotics.com">http://www.vexrobotics.com</a>

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<b>Engino</b>	<p>Snap together 3D toy system invented by a former teacher and engineer. Kits includes snap-fit components such as gears, pulleys, motors, solar panels and more. Also included is a series of activity books and software.</p>	<a href="http://www.engino.com">http://www.engino.com</a>
<b>Ozobot</b>	<p>Smart, small programmable robot that operates with autonomous behavior using a photo sensor array. Robot is controlled via an app and can detect colors, lights and patterns. Other sensors on the robot include infrared proximity sensing.</p>	<a href="http://ozobot.com">http://ozobot.com</a>
<b>Keva Planks</b>	<p>Wooden planks designed to allow students to design and build structures such as towers, bridges, catapults and more. Keva planks are a great solo or teamwork STEAM activity and help to encourage critical thinking skills.</p>	<a href="http://www.kevaplanks.com">http://www.kevaplanks.com</a>
<b>Bee-Bot / Blue-Bot</b>	<p>Robot designed for use by young children. Colorfully designed, easy to operate and friendly looking little robot was designed to teaching sequencing, estimation and problem solving. Includes a robot docking station for charging and curriculum for school.</p>	<a href="https://www.bee-bot.us">https://www.bee-bot.us</a>
<b>Bloxels</b>	<p>A hands-on platform for kids to build, collaborate and tell stories through video game creation. This is a video game development platform with easy-to-use physical and digital tools. Students decide what the game looks like and how it is played.</p>	<a href="http://www.bloxelsbuilder.com">http://www.bloxelsbuilder.com</a>
<b>Ardusat</b>	<p>Is an open source, Arduino based Nanosatellite based on the CubeSat standard. It contains a set of Arduino boards and sensors. It is the first open source satellite which provides access to space. Choose from a number of projects to perform on their Experiment Hub.</p>	<a href="https://www.ardusat.com">https://www.ardusat.com</a>
<b>Hummingbird Robotics</b>	<p>Turn anything into a light-up, moving, sensing robot. Kits allow for the creation of everything from kinetic sculptures to animatronic robots. Included in some kits are LEDs, motors, servos and sensors.</p>	<a href="http://www.hummingbirdkit.com">http://www.hummingbirdkit.com</a>

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<b>HyperDuino</b>	This kit has everything needed to make interactive maker projects. Add lights and sensors to school projects, models and art installations. The HyperDuino can control a maximum of 12 LEDs and 12 touch sensors.	<a href="http://hyperduino.com">http://hyperduino.com</a>
<b>Makedo</b>	Cardboard construction system for 21st century thinking, making and play. Recycle cardboard into amazing creations. Makedo is a simple to use system of tools and connectors for re-purposing cardboard into everything from costumes to vehicles.	<a href="https://www.make.do">https://www.make.do</a>
<b>Intel Edison</b>	An ultra small computing platform that will allow you to work with embedded electronics. High speed processor with WiFi and Bluetooth on board. It's low power and small footprint make it ideal for maker projects.	<a href="https://www.sparkfun.com/products/13024">https://www.sparkfun.com/products/13024</a>
<b>Magformers</b>	Geometric magnetic building toys for children. Building blocks contain neodymium magnets and have a patented "always attracting" contact point. Create complex or simple structures or vehicles using specific kits. Durable construction.	<a href="https://www.magformers.com">https://www.magformers.com</a>
<b>OWI Robots</b>	Sells educational kits and class packs that range from solar walking robot to a robotic arm to a salt water fuel cell vehicle. Kits contain step by step directions with no solder assembly and some have class curriculum included.	<a href="http://www.owirobots.com">http://www.owirobots.com</a>
<b>Kinetic Sand</b>	Great medium for creating and molding incredible sand art. Kinetic Sand sticks to itself and not to your hands and is easily cleaned up. Helps to stimulate creative skills by allowing makers to create anything they can imagine. It's reusable and doesn't dry out.	<a href="http://kineticsand.com">http://kineticsand.com</a>
<b>Strawbees</b>	Prototyping toy for makers of all ages. Strawbees allows you to connect straws to each other and build small to large mechanical objects. You can always modify projects as you go because connectors are not permanent and can be adjusted.	<a href="http://strawbees.com">http://strawbees.com</a>

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<b>Electric Paint</b>	Electrically conductive paint and sensor hardware that allows makers to create circuits on almost any material including paper, wood, plastic and glass. Perfect for small scale projects, prototyping, interactive art and more.	<a href="https://www.bareconductive.com">https://www.bareconductive.com</a>
<b>Circuit Scribe</b>	Draw circuits on paper using circuit scribe conductive ink pen. Explore basic circuit concepts by drawing conductive drawings and creating paper-based switches. You are able to connect a variety of outputs to these circuits such as LEDs, motors and buzzers.	<a href="https://www.circuitscribe.com">https://www.circuitscribe.com</a>
<b>EverBlock</b>	Modular building system of oversized plastic blocks that facilitates the construction of all types of objects. Anything constructed can be easily taken apart and re-assembled again. No tools are required to install or disassemble blocks.	<a href="http://www.everblocksystems.com">http://www.everblocksystems.com</a>
<b>Do Ink</b>	Green screen software that makes it easy to create incredible videos and images on your smartphone or tablet. The app lets you combine photos and videos with an easy to use interface. Tell a story or creation a school production.	<a href="http://www.doink.com">http://www.doink.com</a>
<b>Sugru</b>	World's first mouldable glue that sticks permanently to materials like ceramics, glass, metal, wood and most plastics. Sugru turns into a durable, flexible silicone rubber that stays in place. Cures in 24 hours into durable rubber. Waterproof, flexible, heat and cold resistant.	<a href="https://sugru.com">https://sugru.com</a>
<b>LilyPad Switch</b>	A simple push button or slide switch that can be soldered, sewn or taped to circuits. Use as a on/off switch to control LEDs, buzzers, sensors and more. Switch is small enough to be integrated into wearable maker projects. It is even washable.	<a href="https://www.sparkfun.com/products/9350">https://www.sparkfun.com/products/9350</a>
<b>Google Cardboard VR</b>	A virtual reality platform developed by Google. The cardboard display works with your smartphone and utilizes the cardboard app to help you put VR content in your hands. There are videos and content created to work with this VR display.	<a href="https://vr.google.com/cardboard">https://vr.google.com/cardboard</a>

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<b>Hobby Motor - DC</b>	<p>These 130 size hobby motors can be used in a variety of interactive makerspace projects. They have a low voltage and generally operate in the 4.5 to 9VDC range. This range makes them perfect for using with Arduino</p>	<a href="https://www.adafruit.com/product/711">https://www.adafruit.com/product/711</a>
<b>Finch Robot</b>	<p>The Finch is a small robot designed for learning computer science and coding. It provides students with a physical representation of their code. On-board features include accelerometers, light and obstacle sensors.</p>	<a href="http://finchrobot.com">http://finchrobot.com</a>
<b>ArcBotics</b>	<p>Educational robots with the goal of making learning robotics easy, fun and open source. They offer a few different types of robots including Hexy the Hexapod and Sparki which was designed for use in classrooms. Learn about advanced robotics and servo operation.</p>	<a href="http://arcbotics.com">http://arcbotics.com</a>
<b>Lego Wall Baseplate</b>	<p>Build a LEGO wall in your makerspace by utilizing baseplates and connectors. These can also be used on horizontal surfaces such as custom LEGO tables. These baseplates are usually glued in place</p>	<a href="https://www.lego.com">https://www.lego.com</a>
<b>LightUp</b>	<p>Educational toy that teaches kids how to build circuits, learn to code and be inventive. Kits include magnetic circuit blocks that snap together. Use the drag and drop programming interface to control your creations and creative projects.</p>	<a href="https://www.lightup.io">https://www.lightup.io</a>
<b>PLY 90</b>	<p>The PLY90 is a connector that is a faster, better looking alternative to drilling and screwing projects together. These brackets are made from high strength aluminum alloy and can be quickly disassembled for moving or recycling projects.</p>	<a href="http://www.plyproducts.com">http://www.plyproducts.com</a>
<b>Vibration Motor</b>	<p>These vibrating motors are great for creating bristlebots. These bots are super fun to build and then race in your makerspace. You can also take apart an electric toothbrush to find one of these motors.</p>	<a href="https://www.pololu.com/product/2265">https://www.pololu.com/product/2265</a>

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<b>Piezo Buzzer</b>	<p>These buzzers can be added to a wide range of projects. Piezo elements convert vibration to voltage or voltage to vibration. This means you can use this buzzer for making beeps or use it as a sensor.</p>	<a href="https://www.adafruit.com/products/1740">https://www.adafruit.com/products/1740</a>
<b>Plastic Syringe &amp; Tubing</b>	<p>This is a great material to help with the study of hydraulics in action. Using a syringe and tubing you can create a hydraulic arm that operates with just air or liquids under pressure. This is a great way to help visualize how the system works.</p>	<a href="https://amazon.com">https://amazon.com</a>
<b>Sewable Battery Holder</b>	<p>If you are working on wearable maker projects, this sewable battery holder is one of the easiest ways to help power your project. This holder is meant to be used with (1) CR2032 coin cell battery</p>	<a href="https://www.adafruit.com/product/653">https://www.adafruit.com/product/653</a>
<b>Alligator Clips</b>	<p>Double-ended alligator clips are very useful in a variety of applications. You can use them for testing and prototyping.</p>	<a href="http://www.digikey.com">http://www.digikey.com</a>
<b>Rigamajig</b>	<p>A building kit for hands-on free play and learning. It's a collection of solid wooden planks, wheels, pulleys, nuts, bolts and rope designed to engage the creative spirit in children. There is no wrong way to assemble the parts.</p>	<a href="http://rigamajig.com">http://rigamajig.com</a>



## Makerspace Materials - Consumables

Item	Price	QTY	Total
Cardboard			
Duct Tape			
Painters Tape			
Transparent Tape			
Wood Craft Sticks			
Plastic Drinking Straws			
Paper Clips			
Binder Clips			
Hook & Loop			
Conductive Fabric			
Conductive Thread			
Paper Cups & Plates			
EVA Foam Sheets			
Foam Board			
Heat Shrink			
Neodymium Magnets			
Battery Pack			
Batteries			
Rubber Bands			
LEDs			

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Conductive Copper Tape			
EL Wire & Inverter			
Mod Podge			
Double-sided Tape			
Silicone Mold Material			
Fishing Line			
Bamboo Skewers			
Balsa Wood			
Model Magic			
Altoids Tins			
80/20 Aluminum Extrusion			
Graphite Pencil			
Solder (Lead Free)			
Super Glue			
Gorilla Glue			
Hot Glue Sticks			
Spray Adhesive			
Toothpicks			
Instamorph -Moldable Plastic			
PVC Pipe			
Acrylic Paint			

**Makerspace Materials - Consumables**

Zip Ties			
String / Yarn			
Fabric			
Brass Fasteners			
Paper - Craft / Construction			
Chipboard			