

# Creating a **Makerspace**

**Insight** and **Inspiration** for starting one in your school



# Let's Make a Makerspace\*

*\*It's easier than you think!*

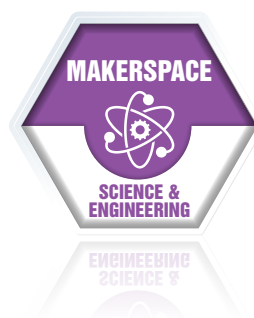
## Picture this...

A place where students are thinking hard. Working with their hands. Talking with each other. They're in pairs or in groups. They're asking questions – not looking for answers, but seeking how to get to the answer. They're focused, engaged, challenged. *They're learning.*

This is the educational makerspace. A place inside your school – a dedicated room, space in the library, or a corner in your classroom – where students create, invent, build, tinker and *make*.

They can make almost anything, using all kinds of instruments and components. That's because makerspaces:

- offer an array of activities, such as woodworking, art, sewing, electronics, robotics, or prototyping
- provide activities empowering students to take greater control of their learning
- support the teaching of any discipline – not just STEM or STEAM courses
- have very few, if any, rules (other than those for safety and civility)
- are a culture, community and an educational approach as much as a place





# inspiration

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# What Are We Building?

Inside your school, you're evaluating what you have and shaping a plan around it. As you explore the makerspace world, you might find it a little overwhelming. Which is better for your school – an innovation lab or creativity center? STEAM room or tinkering shop? Makerspace or hackerspace?

## *Types of* **Makerspace** *solutions*

**Mobile  
Makerspaces**

**Innovation  
Labs**

**STEM/  
STEAM Labs**

**Hackerspaces**

**Prototyping  
Spaces**





# innovate

The multitude of terms used to identify, describe, and define a makerspace all generally mean the same thing.

What happens inside the space is what matters. Following are some of the most typical activities you'll find in a maker environment:

- Arts and Crafts
- Horticulture (indoor or outdoor)
- Metalworking
- Music
- PC / Electronics
- Programming / Coding
- Robotics
- Textiles / Sewing
- Woodworking

Interestingly, most makerspaces try to incorporate many areas of interest. You might blend music with robotics or woodworking. Or combine sewing, art, and computing.

So much of what happens in the makerspace is interdisciplinary in nature. The key is to develop the space around the activities, creating a flexible environment where students feel free to design, build, problem-solve, and collaborate.

## School Specialty 21st Century Safe School™

Imagine a place where students are motivated to explore and discover.

A place designed to help you engage with your students, improving both their capacity to learn and their outcomes. School Specialty has dedicated itself to advancing that one simple idea into reality in every school we touch: The 21st Century Safe School™.

It's a place where students are inspired. A place where they feel welcome, and connect with educators and classmates alike. A place of mental, physical, social, and emotional security, where students feel safe and confident to explore, grow and, ultimately, succeed. Using all we know, and all we sell, School Specialty works with you to create the learning environments where this transformation can happen.

*Imagine what we'll do together*



# Why You're Hearing About **Makerspaces**

The maker movement started gaining traction in the U.S. around 2008. Now, more and more forward-looking schools and school districts are harnessing the power of this movement by creating makerspaces. And for good reason: They're ideal for helping today's students learn.



*vision*





## Deeper Learning Happening in Makerspaces

### 21st Century Skills

Makerspaces promote creativity, critical thinking, collaboration, and communication with peers. 21st Century Skills are necessary for students to succeed in the fast-paced, technology-driven careers of tomorrow.

### Hands-on learning

Doing something, rather than merely listening to a lecture, helps students hold on to knowledge. Learning is strengthened when students present their work and teach other students their process of making. A 2015 University of Chicago study showed that students who physically experienced scientific concepts understood them more deeply – and scored better on tests.

### Authentic learning

Providing relevant learning experiences that mirror real-life problems helps students “get” concepts. ***Much of what’s made in a makerspace is a solution to some kind of real-world need.***

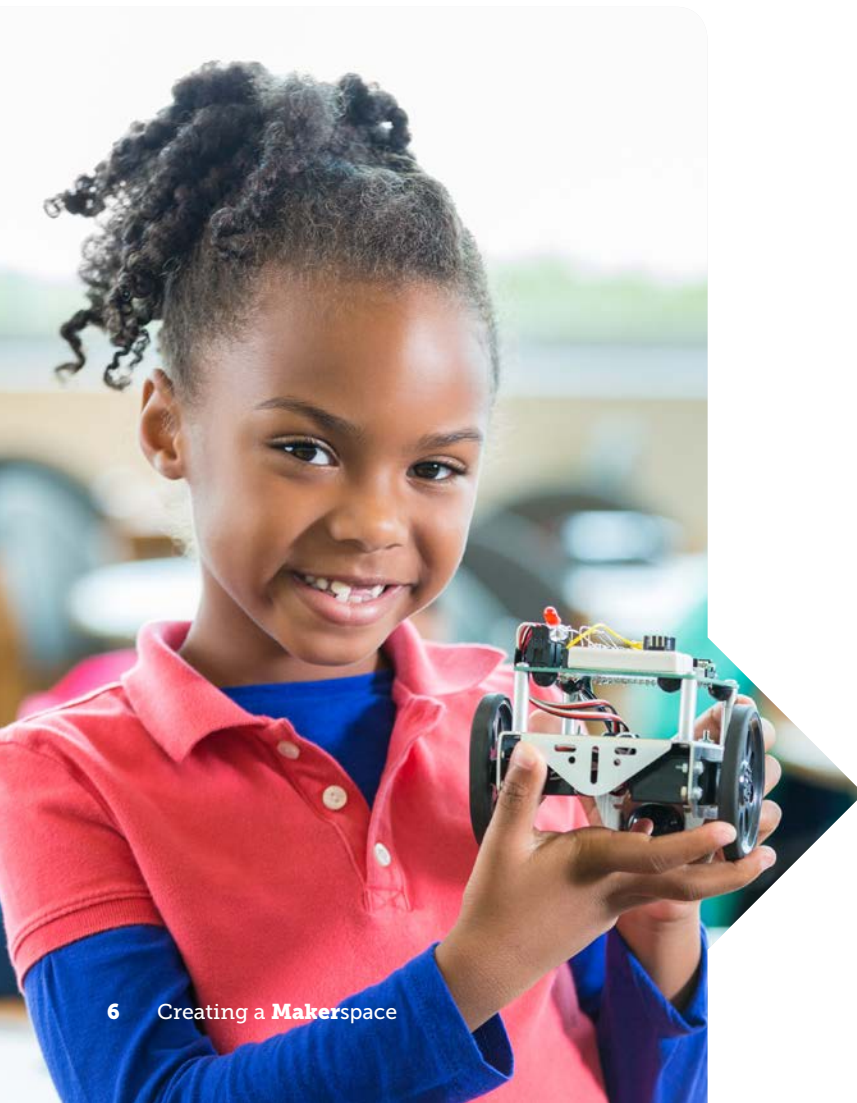
### Design thinking

It’s both a mindset and a process, culminating in a designed product. Along the way, the designer (student) has to think through every step, from understanding a need to testing a prototype. Making is design thinking manifest. The student often fails along the way. ***But with failure comes learning, and that’s the point.***

**“Physical Experience Enhances Science Learning”**  
by Carly Kontra, Daniel J. Lyons, Susan M. Fischer  
and Sian L. Beilock. The authors’ study showed  
physical experience improved test scores. April 2015.

# Makerspaces Work Wonders in Other Ways

Subject learning is just half the story. Makerspaces contribute mightily to developing all kinds of other skills and abilities. They break down barriers and build up identity. They help the shy and introverted engage with others. They've even been shown to improve student behavior. A well-planned making environment promotes *social and emotional learning*.



## This really happened

Researchers from MIT and Pepperdine created a "Learning Lab" makerspace inside a residential juvenile detention center. Teenagers chose and explored all kinds of self-directed design and construction projects.

The researchers found that "unusual uses of technology with unusual features of the learning environment results in interesting learning ... Many changed their views of themselves as learners. They became more daring and more expert in their work." One student remarked, just before his release from the detention center: "Who knew I had such talent?"

In four years, the learning lab had zero incidents of violence or destruction. By contrast, the center's traditional school averaged one such incident a day.

**Making helps students better regulate their emotions. When that happens, disciplinary problems decrease.**

"Climbing to Understanding: Lessons from an Experimental Learning Environment for Adjudicated Youth" David Cavallo, Seymour Papert Gary Stager. June 2004

*dream*



# problem solve

## A makerspace can level the playing field

The brainiest in class might find the maker tasks a huge challenge; similarly, the underachieving student might excel at those same tasks.

And that only begins to describe how a makerspace can promote equality and inclusivity.

Maker activity occurs in close proximity. So students get to experience each other's differences – in culture, background, language, socio-economic standing, and abilities. These differences must be accommodated. And quite often, perspectives are revisited and personal biases are removed.

In other words, makerspaces can make the world a little bigger.



# Oh Yes, You Can Make a Makerspace

It might seem a little daunting at first. Where do we put this makerspace? What should go in it? What's it going to cost? How do we get started? But all of these good questions have good answers — and we'll start you off here.



## You ask: How do I get started?

Typically, the project begins with a few people getting something going, being resourceful, building support over time and keeping an eye on the future.

We recommend devising an early plan, with a few essential actions:

- **Identify activities that are a good fit for your school.** Play to your strengths. Does your school have a particular aptitude in science, art, humanities, or vocational education? Who could help guide or lead certain making activities? By thinking through an inventory of education priorities and constraints you've got a guide to what comes next.
- **Scout potential spaces.** An empty classroom is a good start. There's also the library or media center to consider. Or an unused storage space on the property. Or the outdoors – making can involve gardening, landscaping design, and other outside activities. Walk the school with fresh eyes. Rule nothing out.
- **Figure out a realistic budget.** Start with a ballpark budget that you can expect to allocate this year and next. Plan the initial activities around what's realistic. And be sure to answer the key personnel question: Who will oversee the makerspace?
- **Forge ahead.** The three factors above can serve as your initial blueprint; there's no need to wait for perfection. In a starter makerspace, one or two activities done well is a victory.



## Turn the key, solve a problem

No matter your budget, the experts at School Specialty can help you come up with the right equipment and furnishings to roll out your school makerspace. Our turnkey solutions can cover all aspects of a starter makerspace, large or small.

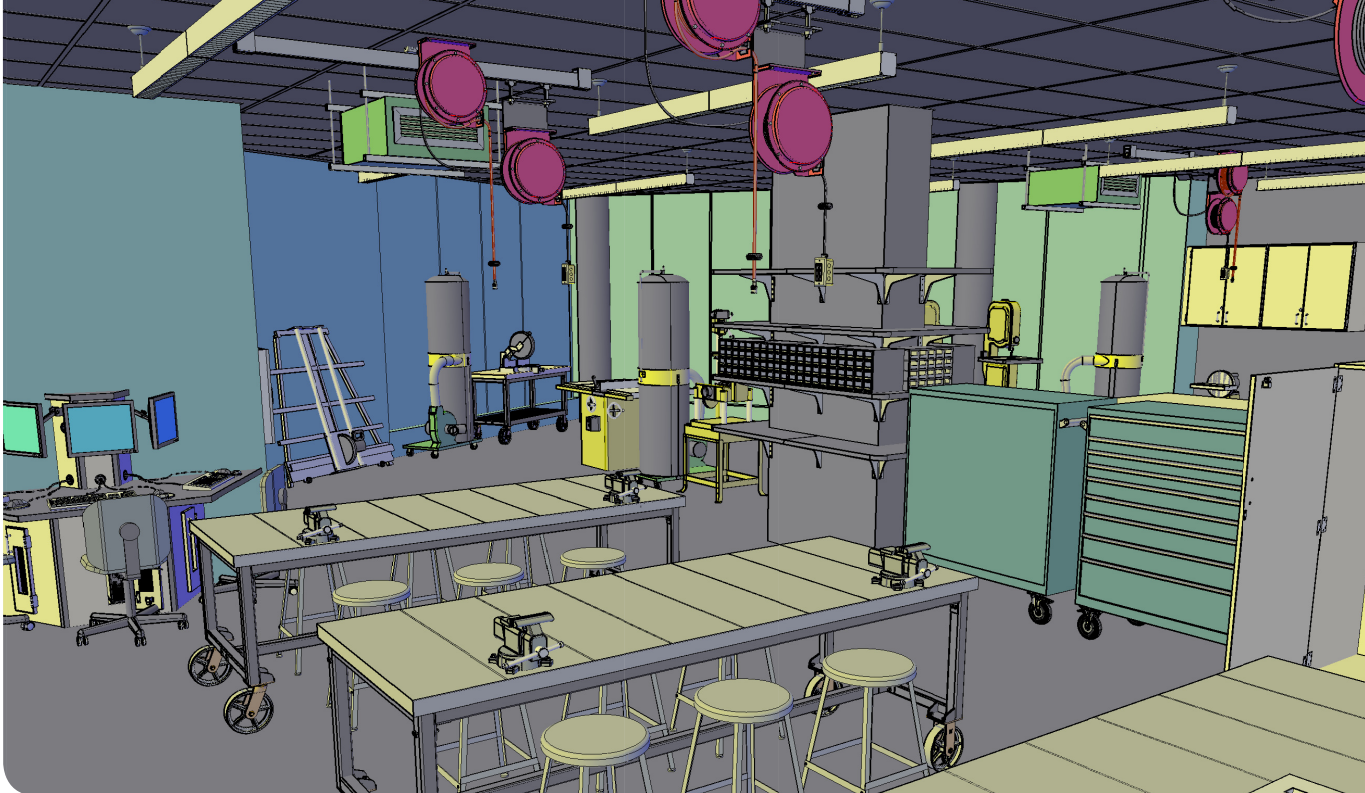
We help schools create and optimize flexible environments that help students learn. Since then, 6,000 schools are better equipped to develop 21st Century Skills in their students.

learn



## You wonder: Where can I get help?

- **Those who admire what you're doing.** School administrators, parents, teachers, the district office ... based on the experiences of other schools, you can count on having some champions in all quarters.
- **Those who want to give you things.** Some people and organizations who hear about what you're doing will want to donate tools and materials. That includes neighbors, parents, the local hardware store, and building contractors. You'll have more friends than you realize!
- **Those who want to give you money.** Beyond the school budget, simple fundraising activities can help generate dollars to buy equipment. You can set up an online giving page, targeting like-minded individuals and businesses. Once you're up and running, you might auction off student creations. Find a volunteer to help apply for grants.
- **Those who want you to succeed.** That includes us. School Specialty's consultants have guided educators through the creation of many makerspaces. Start with a free consultation; you can choose to continue on with as much or as little help as you'd like.



# Pre-Installation Fundamentals

There it is, in all its glory: An empty corner, or room, or outdoor shed. Square footage, ready for the taking (and later for the making). But before you run off to shop for stuff, think through a few fundamentals about that space.

You have a few to consider. Here are five of them.

**1. Leave room for work!** A common regret of school makerspace planners is they didn't set aside enough room for students to work. A general rule of thumb: 15 students need a total of 350 to 500 square feet of workspace, not counting storage. Don't have that much? You can start out with smaller projects that don't require a lot of big tools.

**2. Parcel out the footage.** There's making, and there's thinking/planning/collaborating. It helps to have separate areas for each. There's storage of supplies and storage of projects – one to be accessed quickly, the other to be safeguarded overnight. You'll need both. You will also want a little space to display projects – showing off the results will make students proud and build interest in your space.

**3. Provide some comfort.** Quality seating promotes good posture and lessens strain. Floor surfaces and mats make it easier to stand for long stretches. Task lighting keeps eyes focused, not strained. Simply put, your makerspace should be outfitted to feel good. Start by imagining who's doing what in there and what they'll need to be comfortable.





# explore & create

**4. Power up.** A former classroom or other space might not have the electrical capacity to accommodate multiple computers, fabrication equipment, and other technologies. Some electrical work might be in order. Beyond capacity is access, so it's good to plan for more electrical outlets than you think you'll need.

**5. Be safe. Always.** Once you've landed on activities and space, talk through safety with professionals. To be explored from the get-go: fire safety, adequate ventilation, first aid, and clear, well-publicized procedures. Especially important: Training on tools and machinery as well as on protective equipment.



## Here's a way to maximize space

Modular furniture that's easy to move and simple to set aside. And can facilitate work and provide storage. Some of it is just plain ingenious.



## Mobile Makerspace

### *Making here, there, and anywhere*

One kind of makerspace is different from all of the others: The mobile makerspace. On the grand scale, it's an outfitted RV or van. In most schools, it's a cart (or fleet of carts).

If you determine that your school is short on space, budget or both, a mobile makerspace is a good beginning. You can equip a cart with tools and supplies for all kinds of activities, then take to the hallways to conduct making sessions anywhere in the building.

You could choose to theme the cart's activity – prototyping with blocks and other materials, crafting with art supplies and textiles, experimenting with circuitry and electronics.

**Pro tip: Outfit the cart with a power strip, so students can plug in tools and devices from a central source.**

Mobile makerspaces bring one other big advantage: visibility. Give your cart a name, move it around, even take it for a presentation spin to display what students are making. Your makerspace idea will catch on.



# Digging Into the Details

The inside of an outfitted makerspace is kind of like the brain. You see evidence of left-brain logic and right-brain creativity. It's a place of balance – open and flexible to promote ingenuity, yet ordered and structured to prevent chaos.

Achieving this balance requires keeping technology, tools, and furnishings accessible and protected while giving students room to work and plan. And that begins with thinking through what might be inside that makerspace. One way is to envision three functions – each distinct, but also overlapping the others.

## 1: Brainstorming and Design

It's an area where individual thought and collaborative genius co-exist. Students can explore, research, sketch, imagine – but also work together to conceptualize, plan, and think. This zone might have any or all of the following:

- Comfortable seating, set apart or at collaborative tables
- Computers for research and ideation, some of which have CAD software
- Whiteboard or chalkboard (or even Smartboard)
- Surfaces painted with iron-flecked “magnetic” paint, allowing magnets to stick to them
- A resource library, with picture books for young kids and books about projects and tools for older students
- Plenty of pencils, markers, and paper for sketching

## 2: Making and Production

Here is what's needed to conduct the specific activities envisioned for your makerspace.

A few examples:

- **“Breakerspace” station:** An area for taking things apart – as part of construction or an activity by itself.
- **Prototyping / one-off manufacturing:** 3D printers of varying sizes and capabilities, with software
- **More prototyping / manufacturing:** Laser cutter to engrave or cut out a computer-designed schematic in all kinds of materials
- **Positioning tools:** Vises and clamps to secure projects for further work
- **Machining equipment:** Drill press, lathe, CNC machine, or milling machine

- **Art supplies:** Paint, glue, cardboard (especially suited for younger makers)
- **Sewing:** Machines and needles, fabric scissors, tape measures, steam iron
- **Electronics:** Computers, soldering iron, circuit boards, Arduino (open-source platform to write computer code to a programmable circuit board connected to a computer)
- **Other:** Scroll Saws (for metal and wood working), band saws, miter saws, belt sanders,
- **General tools:** Hammers, screwdrivers, wrenches

One other essential to a good production zone: **Plenty of table space.** Some projects require room – not only for materials, but because more than one student will be working on it!

challenge



# imagine

## 3: Storage

Often an after-thought, storage is key to how well your makerspace functions. And it can take up more space than you imagined. That's because storage has two dimensions:

- **Accessibility of tools and supplies.** Consider grouping them by activity and use, rather than type. You might separate them into materials that anyone can use, anytime; those that are used just one at a time; and those that require help or permission to use. Clear labeling and signage are crucial for ready access.
- **Project storage.** Bins and baskets are good for small projects. Larger workpieces need shelving, and movable furniture can help maximize space. You might also consider a display case, or area, so that those walking in or by the makerspace can see what's in the works!



### *An alternative to all the stuff*

If you're tiptoeing into the maker pool because of space or budget limitations, one way to get around the plethora of tools and supplies is to use ready-made kits.

Many of these focus on electronics. Some allow students to build anything using dozens or hundreds of parts. Others are more specialized – they lead to the creation of a robot, drone, or computerized thingamabob.

Kits may be self-contained, but they don't constrain the imagination. Maker kits are not like building a model airplane, with just one outcome. Rather, they tap into the students' creativity and provide the means to achieve all kinds of possible results.





# Idea Starters

## Furniture & Storage



### Classroom Select NeoClass Chair with Casters

- Contemporary polypropylene shell
  - 1 $\frac{1}{8}$ " 18-gauge steel legs
  - 2" nylon casters
  - 18" seat height
- Item# **1496384**



### Giant Planner Makerspace Table

- Mobile
  - Comfortably accommodates up to 10 people
  - Height adjustable from 24" to 34"
  - 90" L x 48" H
- Item# **1605685**



### Classroom Select STEAM Table

- Mobile
  - Includes 4 compartments with two adjustable shelves and locking doors
  - Tabletop grommet features 3 AC outlets, 2 USB ports and an Ethernet jack.
  - Wood grained laminate top
  - 47 $\frac{3}{4}$ " W x 47 $\frac{3}{4}$ " D x 30" H
- Item# **1603222**



### MediaSpace Small Table

- Height adjustable from 22 to 32 inches
  - Comfortably seats 4 to 5 people
  - Integrate a variety of technologies using optional HG flat panel monitor clamp arms, clamp mount outlet & USB charger or pop-up grommet outlet & USB charger
  - 60" W x 48" D
- Item# **1577144**



### Four Station Adjustable Workbench

- 4-station double-faced workbench
  - One side has a cabinet with doors and an adjustable shelf
  - The other side has 6 locking drawers with full extension glide
  - 64" W x 54" D x 31 $\frac{1}{4}$ " H
- Item# **1468336**



### Classroom Select NeoRok Wobble Stool

- Rounded base design allows individuals to rock and tilt in all directions
  - Lightweight and easy to transport
  - 12 $\frac{1}{2}$ " seat height (other sizes available)
- Item# **1496631**



### Classroom Select NeoClass Pneumatic Lift Chair

- Waterfall edge and ergonomic back of the polypropylene shell promote circulation and support
  - Top and bottom openings make carrying easy
  - 24" diameter 5-star base swivels 360°
  - 24" to 34" adjustable pneumatic height
  - Turn handle to adjust the 18" foot ring
- Item# **1598670**



### Moz Octagon Sectional Modern Furniture

- Interactive seating unit and gaming station allows for an endless variety of arrangements and activities.
  - Pull apart the 9 vibrantly colored segments, for individual, all-purpose stools
- Item# **1572552**





### Copernicus STEM Maker Station

- Mobile
- Store essential maker materials in one place
- Includes storage rack, tape/ribbon/string dispenser rack, double-sided overhead sign, hooks for hanging accessories/tools, large bottom shelf and multiple storage tubs

Item# **1498246**



### Large Mobile Tub Storage Cart

- Mobile storage solution
- Dock underneath a MakerSpace table and podium when not in use or use as a stand-alone unit
- Semi-transparent sliding/locking tambour doors
- 4 adjustable shelves
- Includes clear plastic tubs with lids to organize parts & tools
- 38" H x 29" W x 21" D

Item# **1588885**



### Cascade Mega-Cabinet

- Mobile storage unit
- Fifteen 3" tote trays included
- Organize, store and distribute materials
- Perfect for organizing parts and tools
- 42<sup>3</sup>/<sub>8</sub>" L x 19" W x 43.5/16" H

Item# **1605687**



### Wire Shelving Bin Units

- Chrome wire storage unit
- Heavy duty shelving — 400 lb capacity per shelf
- High density bin storage system features 8 shelves and 21 bins
- Heavy duty bins with open hopper fronts for easy access
- 36" L x 18" W x 74" H

Item# **1433946**



### High Rise Mobile Adjustable Standing Desk

- Height adjustable standing desk
- Mobile
- 29" to 44" Pneumatic height adjustability
- 30<sup>3</sup>/<sub>4</sub>" W x 22" D work surface can accommodate a variety of items

Item# **1588670**



### Visionary Curve Mobile Glass Markerboard

- Double sided magnetic safety glass accepts rare earth magnets
- Frame and trim are white powder-coated steel
- Wide base design for stability
- Locking casters
- 43.9" H x 30.6" W

Item# **1595174**



### Portable Whiteboard Partitions

- Noise-absorbing, accordion-style portable partitions
- Dry erase surface on one side, tackable fabric on the other side
- Heavy-duty self-adjustable casters (corner locking casters)
- 5' 9" W x 6' H
- Includes 3 panels

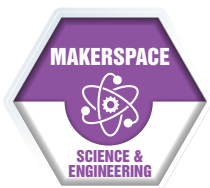
Item# **1581634**



### Balt iTeach Mobile Power Tower

- Includes two AC outlets and two USB outlets on each of four sides
- Four dual-wheel casters (two locking)
- Includes a cord winder for the 13<sup>1</sup>/<sub>2</sub> foot power cable
- Durable powder-coated steel frame
- Power is supplied with a single 3-prong plug
- 17<sup>1</sup>/<sub>2</sub>" W x 17<sup>1</sup>/<sub>2</sub>" D x 40" H

Item# **1576748**



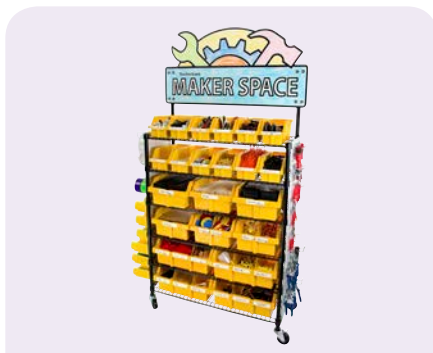
# Idea Starters

## Science & Engineering



### Cubelets Robot Blocks, Mini Makers Pack

- Robotic blocks can be combined to build thousands of different robots
  - Mini Makers Pack supports six groups of learners
  - Spans several grade levels and a variety of concepts
  - Engages different types of learners and fosters confidence, imagination, and a love of learning
  - Ages 4 and up
- Item# 1575471



### 1360727TeacherGeek Maker Cart

- Mobile Maker/STEM/STEAM solution
  - 40+ STEM projects and over 15,000 components
  - Sturdy tools to create any project
  - Suitable for K-12
  - NGSS Aligned
- Item# 2003056



### Wonder Workshop Tech Center

- 12 Dash robots & 12 Dot robots, includes other accessories, challenge cards and curriculum guide
  - Teaches robotics and coding
  - Serves 30+ students
- Item# 2002952



### CUBIT Robotics Voyager Kit

- Designed to inspire and nurture the next generation of inventors, creators, and builders through coding, robotics, and STEAM education
  - Cubit equips learners with the same instruments scientists and engineers use to measure such things as magnetism, spatial position, distance, temperature & light
  - Includes Cubit Workshop, the drag-and-drop coding program that controls and programs Cubit Smartware
- Item# 1596374



### Data Collectors & Sensors

- Set of independent computer-based modules
- A data logger, flash memory, and a sensor – all in one single smart unit
- Plug-and-play system allows for an easy, precise, and fun way of conducting classroom and field experiments
- 45 different sensors enable hundreds of different experiments



### Snap Circuits SnapTRICITY Kit

- Learn how electricity and magnetism interact, about magnetic fields, and how circuits affect electricity
  - Parts are mounted on plastic modules and snap together with ease-no tools required
  - Includes student guide, teacher's guide, and organizer box
- Item# 1360727



### GSC Electra Dough Classroom Pack

- Learn the basics of conductivity
  - Build simple circuits to illuminate LED lights and sound a buzzer
  - Salt content makes the moldable material conductive
  - Contains materials for 15 students working in groups of 3
- Item# 1492483



### STEAM Maestro Kit Conductive Materials and Circuits

- Three function (Input, Logic, Output), magnetic blocks (power, touch, music, and amplifier) combine together
  - Produce sound in 16 instrument styles
  - Anything conductive can be used to create sounds, including fruit, vegetables, people, plants, and more.
  - Lego®-compatible
  - Ages 5 and up
- Item# 2002337





### PCS Edventures Discover Mobile STEM LAB Grades 5-6

- Each module encourages independent student exploration while being educational and entertaining
  - Specialized PCS robotic controller—The Brain™
  - Full set of robotic components
  - Engineering building manipulatives from fischertechnik™ with advanced pneumatic parts
- Item# 1576674



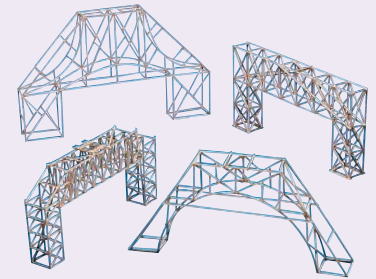
### Delta Science in a Nutshell Gears at Work Kit

- Investigate gear systems and learn how gears interact to transfer force and motion
  - Compare gears and pulleys and explore devices that show how they work together
  - Explore and discover science concepts and processes through self-directed inquiry and hands-on learning experiences
- Item# 750-2670



### Magformers S.T.E.A.M. Master Set

- Develop building and modeling skills
  - Click and connect 24 magnetic geometric shapes with 112 accessories including STEAM engine blocks
  - Learn about motion and engineering with gears, pistons, and sliders
  - Includes play sheets to build spaceships, walking robots, spinning towers, bulldozers, and trucks
- Item# 1557143



### School Specialty Basswood or Basswood Bridge Building Kit

- Helps students in the study of physics and its place in structural engineering
  - Design and construct wooden bridges, then enjoy the thrill of destructive testing
  - Includes building materials for 24 Bridges
- Item# 571178



### PCS Edventures Discover Drones

- Construct, fly, and learn the various systems of modular drones
  - Hands-on mechanical and engineering projects take to the sky, preparing learners for the future of UAV's (unmanned aerial vehicle)
  - Includes Drone educator Guide
  - No drone experience necessary
- Item# 1576679



### Mobilo Construction Set

- Build a tractor, tricycle, fork-lift truck, and more
  - Includes 15 construction cards and 424 building pieces
  - Strong plastic pieces are non-toxic, washable, contain no sharp edges, and clip together securely with a minimum effort
  - Ages 3 and up
- Item# 1506627



### Polydron Engineer Class Set

- Design and Technology product demonstrates engineering principles and the workings of simple machines
  - Inspire future engineers to create models of engines, fairground rides, and more
  - Includes comprehensive work cards to guide user
  - 250 pieces
- Item# 2005471



### Mindware Keva Maker Bot Maze

- Customize a pair of motorized bots and construct a maze for them to navigate
  - Strengthens understanding of design, strategizing, and proportion
  - 30 Planks, 8 half planks, 25 connectors, 2 motorized bots, 6 tumble blocks, and 3 bumper balls
  - Googly eyes, pipe cleaners, feathers, pom-poms, glue dots, tape, string, felt, and craft foam
- Item# 1565342



## Idea Starters

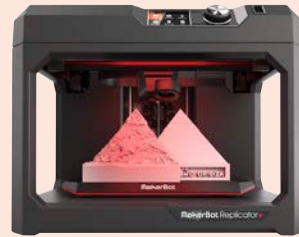
# Educational Technology



### Copernicus Mobile 3D Printer Cart, Premium Model

- Easily share printing equipment around the school
- Includes locking storage tubs, open tubs, adjustable spool holder, sliding laptop shelf, locking casters, and a 6-outlet power strip
- Accommodates 3D printers with a footprint of up to 26½" W x 24" D
- 36" W x 24" D x 59" H

Item# 1531318



### MakerBot Replicator+ 3D Printer

- Engineered and tested for fast, reliable printing
- Prints high-quality concept models faster, easier, and with a bigger build volume than 5th gen MakerBot Replicator
- Compatible with MakerBot's new Slate Gray Tough PLA Filament
- 20.8" L x 17.4" W x 16.2" H

Item# 1582551



### 3Doodler Create Full EDU Bundle

- Draw in 3D by extruding heated plastic filament that cools almost instantly into a solid, stable structure
- Compact and easy to use
- Includes 12 pens and an assortment of accessories, plastic refills, and teaching aids

Item# 1574120



### Diversified Woodcrafts Robotics Workbench

- Storage for three robots and supplies
- Maple plywood workbench has three separate storage compartments with a roll out shelf which holds up to an 18" square robot
- Each compartment has a separate drawer with a customizable foam insert to store tools (not included)
- ShopTop® non-conductive, ¼" thick splinter-proof top can be extended an extra 8"
- Moves easily on six 4" heavy-duty, locking casters.

Item# 1577408



### Copernicus Tech Tub2 Modular Cart

- Dual-handled cart holds four locking Premium Tech Tub2 (24 device capacity)
- Cable management
- Locking casters
- Power timer for charging and USB hub that syncs and charges iPads.
- 34" W x 19" D x 43" H.

Item# 1566456



### HamiltonBuhl® Spectra VR™ Virtual Reality Goggles

- Instantly transform your Apple or Android smartphone into a virtual reality world
- Snap your phone into the headset, put on the goggles and you are transported as images, sound, and movement surround you..

Item# 1568454



### HamiltonBuhl STEAM Education Green Screen Production Kit

- Green screen technology
- Create engaging and professional looking broadcasts, presentations and short movies
- Includes green screen, webcam, editing software, and instruction guide

Item# 2000877



### iOgrapher Basic Bundle

- Create quality videos with an iPad
- Ergonomic handles on both sides
- Features mounts for lighting and microphones
- Includes, case, lenses, tripod, and directional mic
- Use with iPad Pro 9.7 or 5th Generation 9.7

Item# 2001750





# Idea Starters

## Supplies & Safety Equipment



### Stanley Wood-Handled Rip Claw Hammer

- 16 ounces
  - High carbon steel head with a fully heat treated, polished bell face
  - Hickory handle
- Item# 1294294



### Safety Glasses

- Light weight with adjustable temples
  - Anti-scratch UV absorbing polycarbonate
  - Side shield lens for clarity and protection
- Item#1006037



### Titan Tape Rules, 4 Pack

- Four-pack of measures with quick-read markings in standard rule (SAE) and metric (MM) scales
  - One each in 12 ft, 16 ft, 25 ft, and 33 ft
  - Tough impact-resistant plastic cases
  - Ergonomic cushion grips for maximum comfort
  - Hands-free blade lock
- Item# 1511531



### Eveready General Purpose LED Flashlight

- LED bulbs produce bright white light
  - Ribbed casing for secure grip
  - Easy-to-operate push button switch
  - Requires one D battery, not included
- Item# 1589693



### Genuine Joe Dust Broom and Pan Combo

- 32" handled "L" grip
  - Easy lock 2-way handle that can lock in the upright position
  - Maximum angled bottom dust pan
  - Angled plastic broom
- Item# 1405234



### School Health 106-Piece First Aid Kit

- 106 pieces for 25 students
  - Contains bandages, gauze pads, compresses, eye care products, ointments, wipes, tape, scissors, tweezers, and more
  - Includes long-lasting metal case for easy transport
- Item# 1391482



### Health Giant Vinyl Gloves

- Powder free
  - Pack of 100
  - Latex free
  - Other sizes available
- Item# 1570806



### Johnson & Johnson Band-Aid Adhesive Bandage Variety Pack

- Assorted shapes and sizes
  - Sheer/Wet Flex
  - Pack of 280
- Item# 1091791



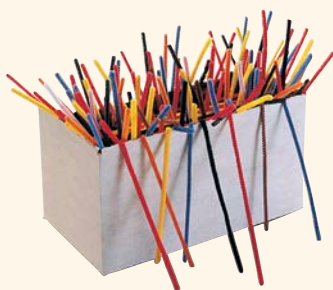
# Idea Starters

## Art & Supplies



### Pacon® Remnant Yarn Pack

- Assorted lengths and sizes of yarn
  - Mix of colors
  - 5 lbs
- Item# 413729



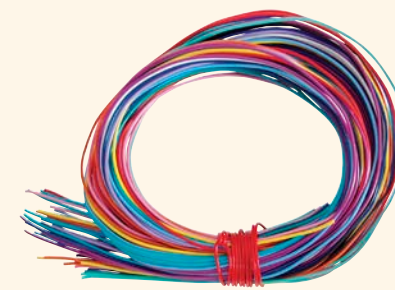
### Creativity Street® Stem Classroom Pack

- Variety of colors
  - Bendable chenille covered wires
  - Pack includes 1000, 1/8" x 12" standard size stems
- Item# 085907



### Creativity Street® Colossal Barrel of Crafts

- Assortment of feathers, pompoms, chenille stems, wiggle eyes, buttons, craft sticks, sequins, beads, and more
  - Long-lasting, reusable storage container
- Item# 070231



### Twisteez Versatile Craft Sculpture Wire

- Set of 50 pieces of 30" wire
  - Soft, pliable, plastic-coated copper wire that is easy to cut bend and twist
  - Can be shaped and reshaped over and over again
- Item# 427502



### School Smart® Washable School Glue

- Washable, non-toxic, launders out completely, even after it has dried
  - White in color and dries clear
  - Pack of 12, 8 ounce bottles.
- Item# 1565695



### Creativity Street® Colored Masking Tape

- Can be used for making collages, instant frames, artwork, color coding file folders or notebooks, and more
  - 1" x 60 yards with a 3" core
  - Strong and flexible crepe-finish tape
- Item# 1319021



### Assorted School Smart® Fine Line Permanent Markers, Set of 8

- Permanent markers, Set of 8
  - Assorted colors, non-toxic
  - Quick drying ink that is resistant to heat, water, and smearing
  - Works on acetate films, plastic, ceramic, and glass
  - 1.0 mm fine line
- Item# 1593078



### School Smart® Washable Markers Classroom Pack

- Conical tip washable markers
  - Includes 200 non-toxic markers
  - 25 markers each of black, red, blue, green, yellow, purple, orange, and brown
- Item# 086413





### School Smart® Trifold White Presentation Board

- 48" x 36"
  - Pack of 10 boards
  - One-ply corrugated material
  - Display makes special projects stand out
- Item# **1464947**



### Sax® White Drawing Paper

- 9" x 12" White Drawing Paper
  - 100% sulphite paper accepts dry media in addition to wet media including tempera, watercolor, and brushed-applied ink
  - 50 lb
- Item# **053925**



### Riverside® Construction Paper

- Assorted colors
  - 12" x 18"
  - Soft eggshell finish
  - 100% recycled vat-dyed groundwood pulp material
  - 76 lb acid-free paper
- Item# **248654**



### School Smart® Pointed Student Scissors

- 6¼" long precision-made pointed tip scissors
  - Designed for middle grade students
  - Pack of 12
- Item# **086343**



### School Smart® Air Dry Gray Clay

- Air dry — no firing required
  - Can be hand molded or thrown on a wheel
  - Paintable with tempera, acrylic, or watercolors
  - Softens easily with water
  - 25 lbs
- Item# **402813**



### Creativity Street® Craft Sticks

- 4½" x ¾" x ½"
  - Unpunched
  - Ready-to-use, no need to color or paint
  - Pack of 1,000
- Item# **085958**



### Pacon® Assorted Wood Pieces and Shapes

- Large assortment of wood shapes including knobs, wheels, and tubes
  - Smooth finish can be painted with tempera or acrylic paint
  - Box of 18 lbs
- Item# **1574164**



### Clubhouse Crafts™ Pony Beads Box

- Set of 2,300 beads in six assorted colors
  - 3 finishes: opaque, transparent, and pearl
  - Convenient divided storage box with lid
  - Work great with thick elastic stretch cord
- Item# **1592805**





# Creating a Makerspace

 School Specialty®

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