

## **Makerspace & Makergroups Resource List**

### **School Makerspaces (mostly Northeast Ohio)**

Case Western Reserve Think[box]  
The Richey Mixon Building  
11201 Cedar Ave., Cleveland, OH 44106  
(216) 368-3248  
<http://thinkbox.case.edu/home>

Chagrin Falls Exempted Village Schools  
Innovation Center  
400 East Washington Street, Chagrin Falls, Ohio 44022  
440-247-5500 x 4438  
<http://www.chagrinschools.org/InnovationCenter.aspx>

Cleveland Metropolitan School District  
MC2 STEM High School, 9th grade building  
601 Erieside Ave., Cleveland, OH 44114  
216-838-8550  
<http://www.mc2stemhighschool.org/>  
<https://clemobilefablab.com/>

Mentor Public Schools  
Mentor High School HUB Makerspace  
6477 Center St., Mentor, OH 44060  
440-974-5300  
<https://sites.google.com/a/mentorschools.org/mhsmmedia/home/HUBmakerspace>

Ohio University  
Instructional Innovation  
Ohio University  
Athens, Ohio 45701  
<https://www.ohio.edu/instructional-innovation/initiatives/makerspaces.html>

Strongsville City Schools  
Administrative Office  
18199 Cook Avenue, Strongsville, OH 44136  
440-572-6067  
<https://www.strongnet.org/Page/9943>

Washington Elementary  
Marlington Local Schools  
5786 Beechwood Avenue  
Alliance, Ohio  
Contact: Aubrey Horning  
330-823-7586  
<http://washingtonelementarysystem.weebly.com>

Western Reserve Academy  
The Wang Innovation Center  
115 College St., Hudson, OH 44236  
330-650-4400  
<https://www.wra.net/academics/wangcenter>

Willoughby-Eastlake School of Innovation  
32500 Chardon Rd., Willoughby Hills, OH 44094  
440-942-1525  
[http://www.weschools.org/SchoolOfInnovation\\_home.aspx](http://www.weschools.org/SchoolOfInnovation_home.aspx)

### **ITC Makerspaces**

NEOnet  
700 Graham Road, Cuyahoga Fall, OH 44221  
330-926-3900  
<https://www.neonet.org/>

### **Makergroups & Community Makerspaces**

Akron Makerspace (formerly Syn/Hak)  
48 S. Summit St., Akron, OH 44308  
330-597-3111  
<http://akronmakerspace.org/>

Cincinnati's Makerspace: The Manufactory  
12055 Mosteller Road, Cincinnati, OH 45241  
513-771-3605  
<http://themanufactory.us/>

Cleveland Public Library  
TechCentral Makerspace  
Louis Stokes Wing, Lower Level

525 Superior Ave.  
Cleveland, OH 44114  
216-623-2980  
<https://cpl.org/subjectscollections/techcentral/makerspace/>

Columbus Idea Foundry  
421 W. State Street, Columbus, OH 43215  
614-653-8068  
<https://ideafoundry.com/>

Kent State University at Tuscarawas  
330 University Dr., NE  
New Philadelphia, OH 44663  
330-339-3391  
[infousc@kent.edu](mailto:infousc@kent.edu)  
<http://libguides.tusc.kent.edu/makerspace>

Wayne College Makerspace  
1901 Smucker Road, Orrville, OH 44667  
330-683-2010  
<http://blogs.uakron.edu/waynec3/>

### **Websites:**

INFOhio MaKit  
<http://libguides.infohio.org/makerspaces>

Ohio Hackerspaces  
<https://wiki.hackerspaces.org/Ohio>

Renovated Learning, Diane Rending  
<http://renovatedlearning.com>

World of Making, Laura Fleming  
<https://worlds-of-learning.com>

### **Resource Books**

Invent to Learn: Making, Tinkering, and Engineering in the Classroom, Gary Stager

Lifelong Kindergarten: Cultivating Creativity through Projects, Passion, Peers, and Play, Ken Robinson and Mitchel Resnick

The Kickstart Guide to Making Great Makerspaces, Laura Fleming

Worlds of Making: Best Practices for Establishing Makerspaces for Your School, Laura Fleming

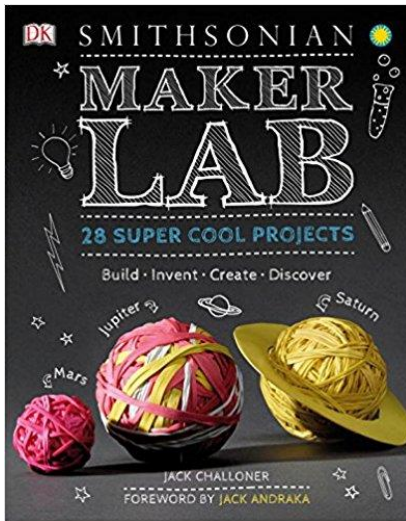
**Resource list compiled by:**

Fiona Casida, Tamra Dugan & Laurie Green (@themrsgeeky, [www.mrsgeeky.com](http://www.mrsgeeky.com))

## NEOnet Makerspace

NEOnet Makerspace			
<b>Furniture</b>			
<i>Demco</i>			
5	Imagination Station Colorful Dry-erase Table, 60" x 30"	\$238.00	\$1,190.00
4	Aero Series Activity Table 48" x 24"	\$188.00	\$752.00
9	Locking Casters for Aero Table 4/Pkg	\$31.00	\$279.00
1	7 Tier 22 Bin Rack Shelving	\$144.00	\$144.00
4	Sandusky Lee Bookcase, 5 shelves, 72" x 36" x 18"	\$260.00	\$1,040.00
20	Smith System Flavors Fixed-Height Stool, 28"H Seat	\$114.00	\$2,280.00
8	Smith System Flavors Stacking Chair, 18"H Seat	\$80.00	\$640.00
1	Shipping/Processing (Tailgate, Inside, Power Lift Delivery)	\$1,101.00	\$1,101.00
			<b>\$7,426.00</b>
<b>Equipment</b>			
<i>Walmart</i>			
2	150 Piece Wooden Block Set	\$13.50	\$27.00
1	Brother 1634D Serger	\$199.97	\$199.97
1	Brother SQ9285 Sewing Machine	\$199.97	\$199.97
2	K'NEX Imagine Super Value Tub	\$17.99	\$35.98
2	Tinkertoy Basic Set	\$29.99	\$59.98
1	Bostitch QuietSharp Pencil Sharpener	\$19.97	\$19.97
2	Lego Classic Large Brick Box	\$23.99	\$47.98
2	Fiskars Cutting Mat, 18x24"	\$16.99	\$33.98
2	Fiskars 8" Scissors	\$12.99	\$25.98
2	Fiskars Rotary Cutter	\$9.99	\$19.98
2	AdTech Hi Temp Glue Gun	\$7.99	\$15.98
			<b>\$686.77</b>
<i>Amazon</i>			
2	littleBits basic set	\$80.00	\$160.00
2	MakeyMakey	\$50.00	\$100.00
2	Raspberry Pi 3	\$90.00	\$180.00
1	Silhouette Cameo 3	\$249.99	\$249.99
1	ePhoto tshirt Heat Press	\$169.99	\$169.99
1	tripod	\$20.00	\$20.00
1	Canon digital camera	\$400.00	\$400.00
1	ChromaKey green screen kit	\$100.00	\$100.00
			<b>\$1,379.98</b>
<i>ozobot</i>			
1	bit classroom kit (18 ozobot bits and accessories)	\$1,199.00	<b>\$1,199.00</b>
<i>Sphero</i>			
10	Sphero SPRK+	\$129.99	<b>\$1,299.90</b>
<i>CDW</i>			
16	Acer N15Q13 Chromebook	\$599.00	\$9,584.00
3	iPad	\$199.00	\$597.00
2	iPad mini	\$399.00	\$798.00
			<b>\$10,979.00</b>
<i>Touchboards</i>			
1	AnywhereCart AC-MAX Chromebook cart	<b>\$1,533.75</b>	
<i>MakerBot</i>			
	Replicator + 3D printer	\$2,499.00	
	PLA filament pack of 10	\$430.00	
		<b>\$2,929.00</b>	
<i>Homemade</i>			
	Augmented Reality Sandbox ( <a href="https://arsandbox.ucdavis.edu/">https://arsandbox.ucdavis.edu/</a> )		
	lumber	\$75.00	
	screws, bolts, nuts, washers	\$40.00	
	paint	\$30.00	
	heavy duty casters	\$40.00	
	short throw LCD projector	\$900.00	
	Xbox Kinect	\$100.00	
	Computer with high end graphics card running Linux	\$1,000.00	
	200 lb. Santastik sand	\$200.00	
	AR Sandbox software (open-source/free)	\$0.00	
	metal pole/bracket for mounting projector/Kinect	\$20.00	
		<b>\$2,405.00</b>	<b>Total: \$29,838.40</b>

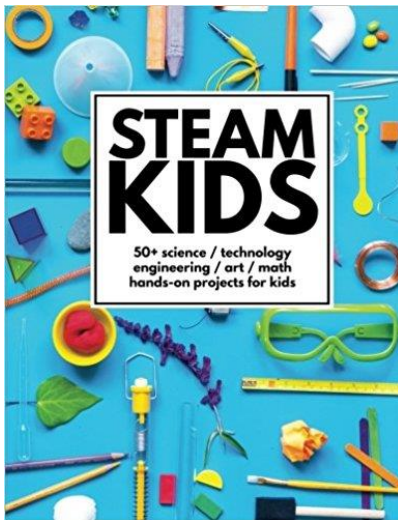
## Makerspace Resource Books



Maker Lab: 28 Super Cool Projects: Build \* Invent \* Create \* Discover

Jack Challoner

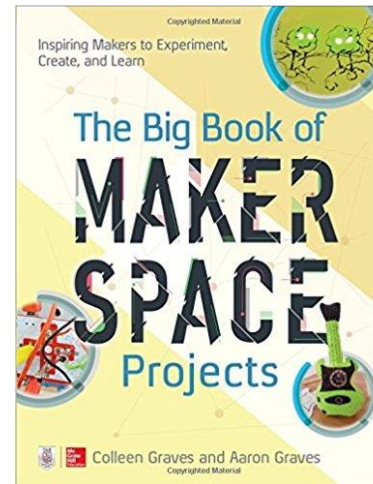
978-1465451354



STEAM Kids: 50+ Science / Technology / Engineering / Art / Math Hands-On Projects for Kids

Anne Carey

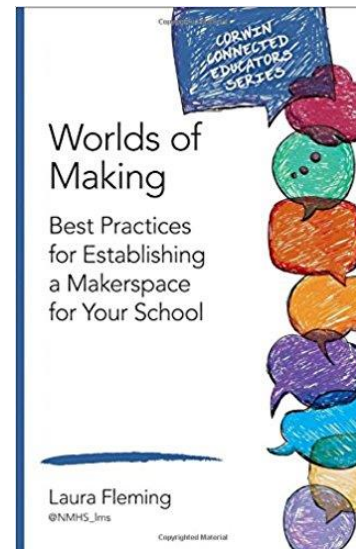
978-1537372044



The Big Book of Makerspace Projects: Inspiring Makers to Experiment, Create, and Learn

Colleen Graves

978-1259644252



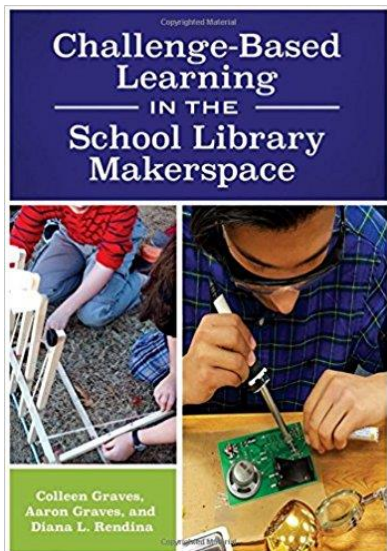
Worlds of Making: Best Practices for Establishing a Makerspace for Your School

Laura Fleming

978-1483382821



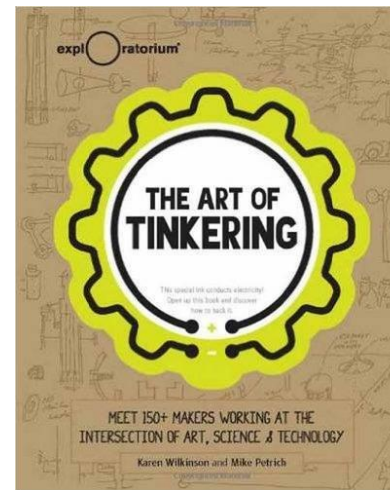
The Makerspace Librarian's Sourcebook  
Elyssa Kroski  
978-0838915042



Challenge-Based Learning in the School Library Makerspace  
Colleen Graves  
978-1440851506



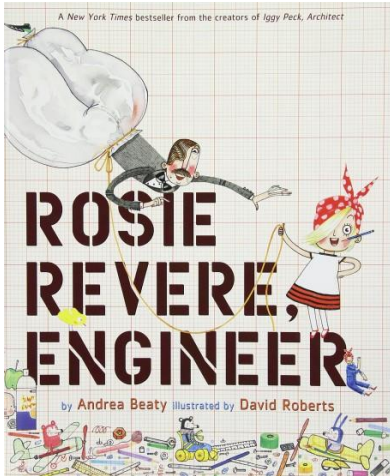
The Kickstart Guide to Making GREAT Makerspaces  
Laura Fleming  
978-1506392523



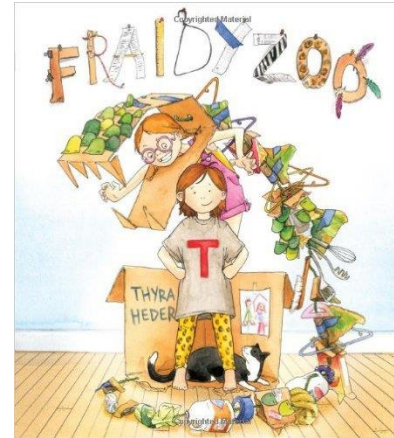
The Art of Tinkering  
Karen Wilkinson  
978-1616286095



## STEM/Makerspace Picture Books

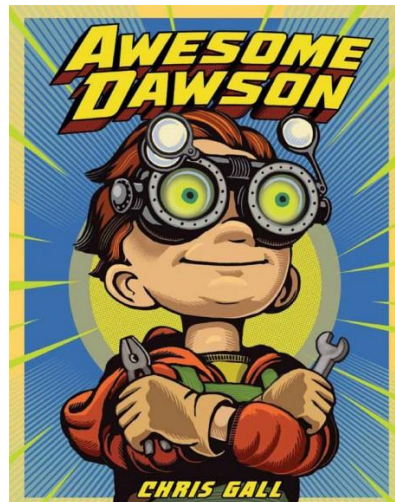


**Rosie Revere Engineer** by Andrea Beaty is more than just a book about an engineer who happens to be a young girl; it is about not being afraid to be different, especially when being different is amazing. It's not always easy to march to the beat of your own drummer, and Rosie has a hard time at first but after a pep talk from a special mentor everything changes.

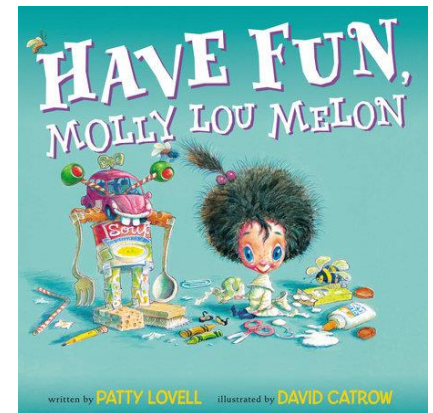


**Fraidy Zoo** by Thyra Heder is a wonderfully creative book about a family who creates zoo themed costumes from A-Z in an attempt at guessing which animal at the zoo their youngest child is afraid of. The homemade costumes captures the spirit of the maker mentality and after reading this students are off to create her own. Perfect right? The book is also a really great lesson about fears and how your family can be your support if you allow them to.

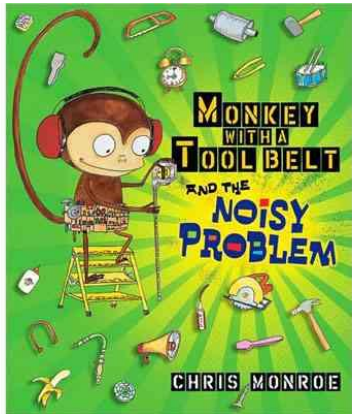
**Awesome Dawson** by Chris Gall was an instant hit with students. Dawson is an amazing little boy who invents new things from other people's trash. Dawson is just like other children who try to find ways to get out of their chores so he can get back to the important work of play. He's one step ahead of most kids though and invents a robot to take care of this chores, but things don't go as awesome as he hoped. That's when he must re-invent himself into a superhero to save the day.



**Have Fun Molly Lou Lemon** by Patty Lovell is all about how Molly Lou Mellon uses her imagination when other children use toys that do all the playing for them. When a new neighbor Gertie moves in Molly Lou Mellon stays true to herself even with Gertie's super cool toys and even shows her new friend how to use her imagination.





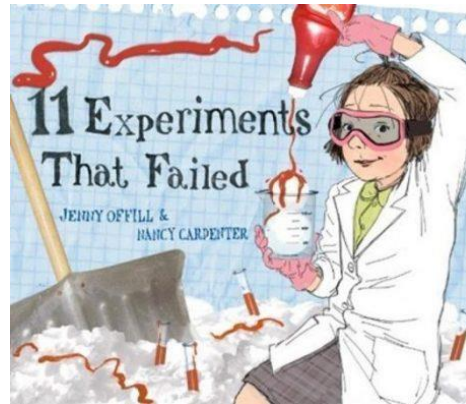


Monkey with A Tool Belt and The Noisy Problem by Chris Monroe is a hilarious book about a monkey who is not only handy with his tools, he is also a fantastic problem solver. The perfect combination to demonstrate to young readers what STEM is all about. He creates, builds, and fixes the noisy problem. Do not try to read this in a hurry because each page deserves a long long look at every single detail.

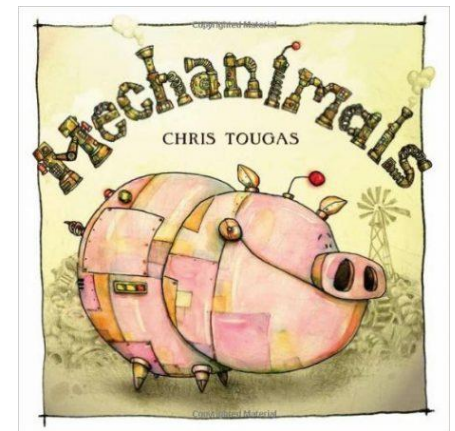


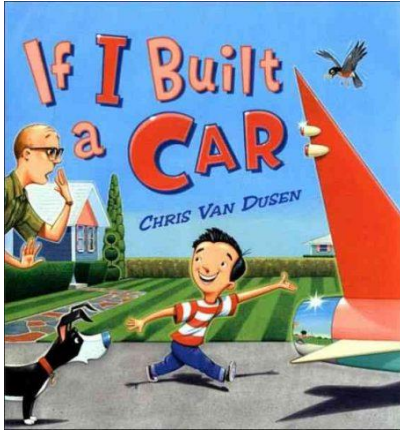
The Most Magnificent Thing by Ashley Spires is an important addition to this list because while the end product is important, this story focuses on the process of creating, and failing. Making amazing things is awesome but it's not always an easy road and this book tackles the idea that failing, and trying again is part of the creation process.

11 Experiments That Failed by Jenny Offill is hilarious. The book follows a young scientist as she conducts 11 terribly misguided experiments around her home, all with terrible and hilarious consequences. Besides the dry humor, the best part of this book is that each experiment follows the scientific method!



Mechanimals by Chris Tougas isn't just about a farmer who builds robot animals when his are swept away in a tornado, it's about overcoming adversity. What is a farmer supposed to do when his animals are gone? Certainly not admit defeat, use what you have and create something new! What an incredible lesson in resourcefulness, problem solving, and determination. Awesome book!



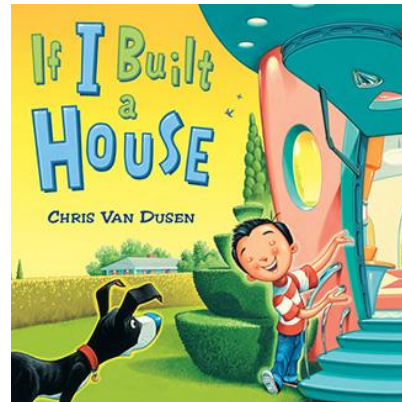


If I Built A Car by Chris Van Dusen is so much fun. A little boy takes you through the incredible car that he built and every awesome extra special feature it has. Like Andrea Beaty, Chris Van Dusen manages to create a fantastic rhyming book that is zips along so effortlessly that you wonder how they do it. The story is inviting and the illustrations invite readers to dive even further into the author's imagination.

#### **Additional Titles:**

- Iggy Peck, Architect
- Ada Twist, Scientist
- What Do You Do With an Idea?
- What Do You Do With a Problem?
- The Three Little Pigs: an architectural tale
- Roberto: the insect architect
- Beautiful Oops!
- The Boy Who Loved Math
- On a Beam of Light
- Ish
- Look at That Building!
- Young Frank, Architect
- Papa's Mechanical Fish
- Galimoto

If I Built A House by Chris Van Dusen is even BETTER than If I Built A Car. This book inspires children to create house plans for themselves and imagine their own dream house. The details in the illustrations are captivating, and the little inventions included in the house make you wonder what you would invent for your house. Great book to spark the maker mentality in all readers.



## **Early Chapter Makerspace/STEM Books**

- Calpurnia Tate, Girl Vet (Jacqueline Kelly)
- Zoey and Sassafras (Asia Citro)
- 7x9= Trouble! (Claudia Mills)
- Trouble Next Door (Karen English)
- The Toothpaste Millionaire (Jean Merrill)
- Phineas L. MacGuire... Erupts! (Frances O'Roark Dowell)
- Sophie Simon Solves Them All (Lisa Graff)
- Frank Einstein and the Antimatter Motor (Jon Scieska)
- Franny K. Stein, Mad Scientist (Jim Benton)
- Ruby Goldberg's Bright Idea (Anna Humphrey)

## **Chapter Makerspace/STEM Books**

- Chasing Vermeer (Blue Balliet)
- The Phantom Tollbooth (Norton Juster)
- The Number Devil (Hans Magnus Enzensberger)
- Secret Coders (Gene Luen Yang)
- The Invention of Hugo Cabret (Brian Selznick)
- The Friendship Experiment (Erin Teagan)
- Nick and Tesla's High-Voltage Danger Lab (Bob Pflugfelder)
- The Green Glass Sea (Ellen Klages)
- The Boy Who Harnessed the Wind (William Kamkwamba)
- Deadly (J. Chibbaro)
- The Disappearing Spoon (S. Kean)
- Eye of the Storm (K. Messer)
- Astrotwins (Mark Kelly)
- Planesrunner (Ian McDonald)
- Breakthrough (Jack Andraka)
- Dark Life (Kat Falls)
- Ender's Game (Orson Scott Card)
- Fuzzy Mud (Louis Sachar)
- The Maze Runner (James Dashner)
- The Testing (Joelle Charbonneau)
- Annihilation (Jeff Vandermeer)
- Ashfall (Mike Mullin)
- Peeps (Scott Westerfeld)
- Quarantine (Lex Thomas)
- Robopocalypse (Daniel Wilson)

# Building Challenge Cards

Build your own house.

Make a face.

Make a funny robot.

Build the fastest car.

Build the tallest tower.

Make a table and a chair.

Make something that flies.

Build an animal.

Build a bridge.

Build a maze.

Make some  
yummy food.

Make a  
space ship.

Build something  
with your eyes  
closed.

Make your name.

Make a garden.

Build a rainbow.





# Drawing Challenge Cards

Design your  
dream car.

Draw an ugly  
monster.

Draw a yummy  
dinner.

Design an amazing  
roller-coaster.

Look out of  
the window,  
draw what you see.

Draw a furry  
animal.

Draw something  
with wings.

Design a useful  
machine.

Draw the cover of  
an awesome  
book.

Draw a crazy  
garden.

Design an outfit  
for a super hero.

Draw a giant  
castle.

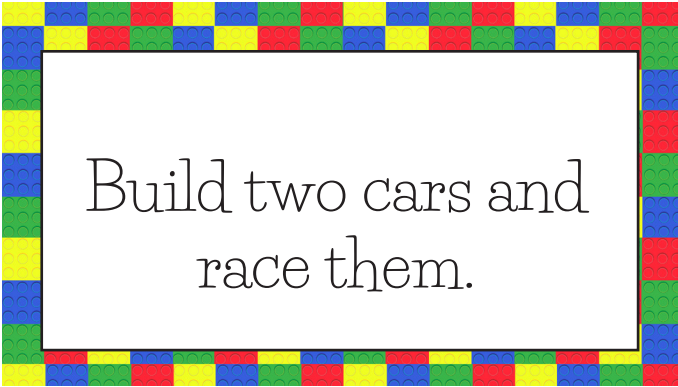
Draw your own  
face.

Draw a creature  
with six legs.

Draw the flag of  
an imaginary  
country.

Design a space  
ship.



A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build two cars and  
race them.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something with just  
4 LEGO.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

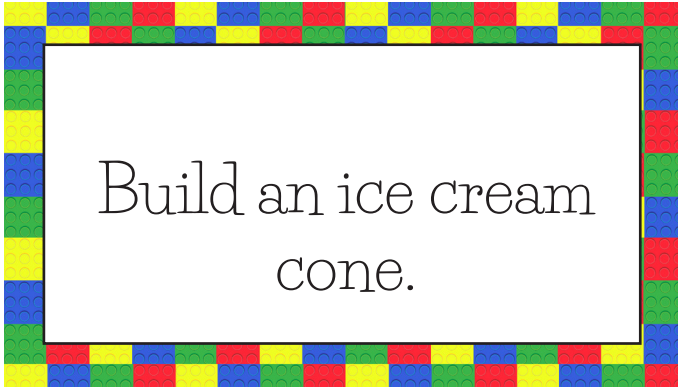
Build your name in  
LEGO.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

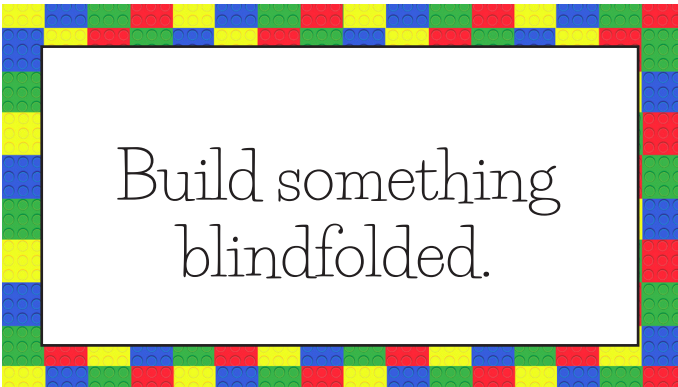
Build something using  
only yellow LEGO.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

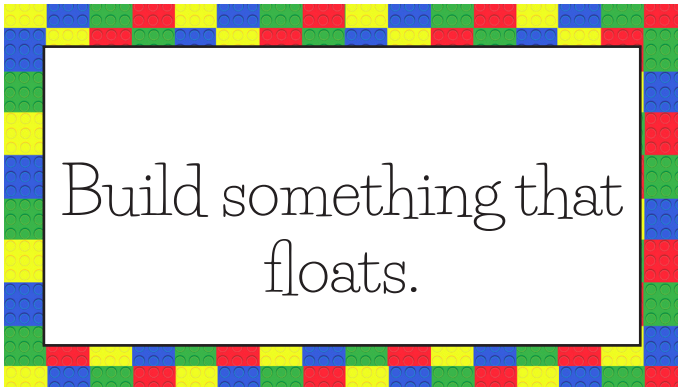
Build a castle.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build an ice cream  
cone.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something  
blindfolded.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something that  
floats.




A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build an animal.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something with one  
hand.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something in  
one minute.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something using  
only red LEGO.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build a spaceship.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build LEGO pattern  
using different colors.

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something that starts  
with the letter "T".

A decorative border made of small, colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build a pattern with  
different sized LEGO.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build a robot.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build a bridge.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

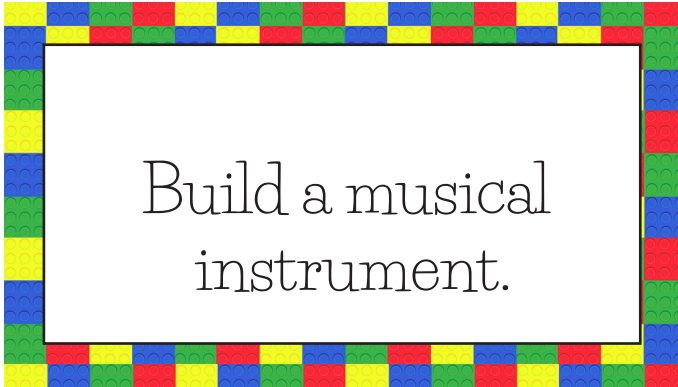
Build the tallest tower you  
can before it  
topples.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something you find  
in the forest.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.


Build a model of your  
house.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build a musical  
instrument.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build a LEGO pizza.

A decorative border made of colorful LEGO bricks in red, yellow, green, and blue, arranged in a repeating pattern around the text box.

Build something that  
flies.