

Maker Camp

playbook

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MAKER CAMP

Welcome!

On behalf of **Make:** we thank you in advance for creating the “in your neighborhood” part of Maker Camp. We will do our best to make sure that the “on-line” part is amazing!

At Maker Camp, our camp motto is “Explore-Make-Share.” Maker campers work together to build projects that stem from our whimsical themes. Maker Camp is intended to be an on-ramp for novice makers, so that they can speed into using the stuff, tools, and ways of making. We welcome Makers of all ages and skill levels: advanced Makers can take our projects to the next level or serve as mentors to those who are just getting started.

The most important part of Maker Camp is being part of a community, both on-line and in person at affiliate sites like yours. Libraries, museums, Boys & Girls Clubs, Computer Clubhouses, and other community centers around the world open their doors to become local hubs of creativity, invention, curiosity, and togetherness: making.



Why does a wonderful and learning-rich program like Maker Camp exist?

On its surface, Maker Camp is designed to be a boredom-buster. We offer a program for kids everywhere, and they can follow along from home or join a camp at a local organization. More deeply, we really want to help get more kids making. We think making is a great way to learn that appeals to kids at the top, middle, and bottom of the school ladder. Maker Camp is part of our effort to cast a wide net and haul in new stories from a million Makers. We want those Makers to come from new communities the Maker movement has yet to touch, and you play a huge role in this effort. Beyond growing the community, we want Maker Camp to be community-built, too, because as with all things, the making is better when you do it together.

We have written this play book for you, our Maker Camp Affiliate, to help you and your campers get the most out of your Maker Camp experience. We'd like to give you a sense of the Maker movement as a whole and give you some general characteristics of the projects and Makers you'll meet this summer, so that you can imagine and understand what to expect.

We'd like to hear how you have adapted these materials for your camp program. Let us know about your experience and how these materials worked or didn't work for your program, so that we can improve what we send to next year's Maker Camp Affiliates.

A MESSAGE FOR CAMPERS

Hello Campers



Maker Camp is a do-it-yourself online resource to help leaders like you organize a summer camp that engages children in making. We offer some project ideas and advice on how to keep it fun while encouraging creativity and tech exploration. Maker Camp is a template that you can adapt to your children's interests to make a camp that works for you and for them. We hope that Maker Camp inspires children to use their imagination and their hands to create and interact with the world around them..

This is our seventh year for Maker Camp. It has evolved over the years, as has the maker movement. Maker Camps take place in libraries, community centers, 4-H Clubs and Boys and Girls Clubs, summer schools and makerspaces. There are hundreds of them across all 50 states in the US and on six continents. Last year, about 75,000 children participated in Maker Camp.

On MakerCamp.com, you'll find projects that are appropriate for young makers. Many of you have developed your own projects as well. There is no fixed set of projects or activities in Maker Camp. The idea is to focus on making as a playful, social activity. Maker Camp provides enough support for anyone to get started. Once children begin doing things, they will find that others share their interests, and they can choose project based on their own interests and collaborate on projects with others. In a broader context, making provides experiences that help children become self-directed learners and good problem-solvers. It develops a sense of personal agency and self-expression. Making develops a mindset that will help them be productive and purposeful in the 21st Century.

I appreciate the work that you do to create the Maker Camp experience: finding a venue, getting the word out to families, organizing supplies and ensuring that each child has a positive experience as a young maker. You and your camp are part of a community that shares a lot in common. This work is vital to spreading the maker movement to more and more people (children as well as adults.) . What we do changes lives and changes the world for the better. I look forward to hearing from you about your Maker Camp.

— Dale Dougherty

Tips from Dale

Get physical.

How can you discover what's in the physical world around you? Do you see the differences between the natural world and built world? Take photos that you can share. Draw objects that you see around you. Ask where things come from or how old they are. Where are things made in your community? Explore on-line to see if you can learn more about them. Share your photos, drawings or maps.

Find a new favorite tool.

Tools exist for all kinds of applications. Given an area you're interested such as bicycles or music, what are some of the tools, both physical and digital, that you might want to learn to use? Choose a new tool and share it with us.

Do something you've never done before.

Sometimes we decide that we're not good at something and we never try to do it. Part of the DIY spirit is to try something you've never tried before, even if you're not particularly good at it. Think of it as an experiment. See if you like it. Try cooking or gardening or playing a musical instrument. Or try to fix something that's broken. Share this new skill.

Meet a Maker.

Get to know a Maker in your community. Learn what they do and how they do it. Write a story about this Maker and share it with us.

Make something.

You can make something for lots of reasons. You might make something that's a gift for someone else. It could be a cake or a greeting card, and you can add LEDs to either of them. You might make something creative that says something about who you are and what you like. It could be an article of clothing, as simple as a T-shirt or a wearable that lights up or plays music under the right conditions. You might design something that solves a problem — it could be a problem for you or a problem for others. Makers have been known to build devices to check on their pets or while others want a device to open the coop door in the morning for chickens. You could also build a device to monitor the quality of the water or air in your area. You might build something that's interactive such as a play toy, or a toy car or plane. Paper airplane launchers are popular, as are rockets.

Share camper projects on our G+ community with #MakerCamp.

It's not enough to just make something—it's also important to be able to tell others about your project and why it is great. After campers have made something, it's also important to share what they've made more widely. We hope they will see this in action during Maker Camp: thousands of Makers eager to share their work. What do you want people to understand about your campers' projects? Sharing ideas promotes learning and discovery and can inspire others. Makers want to hear stories, such as, "We did this because...." or "We started here, and we ended up here." Collect photos, sketches, prototypes, failed pieces of the projects: anything that tells the story of how and why your projects came to be. Share your stories of making on the Maker Camp G+ community! Remember to always tag your posts with #MakerCamp.

Celebrate each camp week.

On Fridays, we suggest you end each week with a big party or exhibition to celebrate the projects you and the campers made together, inviting parents and the community as well.

We have suggested a showcase event for each week of camp, and some added touches to make the event even more special. Your event can take the form of a small Maker Faire, a rapid series of slide-shows (a la Pecha Kucha or Ignite), or a short film screening.

Campers could run workshops to teach their parents and other guests any new skills they developed over the course of the week. During the event, be sure to congratulate each camper, and try to get at least one picture of a project he or she made. You'll want these for your debrief, website, scrapbook, etc.

Producing a culminating event or record of your week fits in well with the Maker movement—something that distinguishes our work in education is our emphasis on exhibition instead of competition. The pressure of a deadline and wanting to put your best work before others is adequately motivating without adding in the extra noise of battle or judges. The attention a project receives is all the evaluative feedback campers need to get a sense of accomplishment.

Congratulate and thank campers.

As soon as you can manage to do so after the end of your camp week or season, reach out to your campers to congratulate them on their good work. Thank everyone who participated in camp. Tell them again that you are very proud of your week(s) together. Share with them and their families links to photos and videos you captured.

Gather camper feedback.

Ask your campers to help you review what your camp accomplished. Turn it into a blog post or a video script. Before you lose touch with your campers, ask them if there's anything they wish they'd known before they started the camp season. Ask both campers and adults to give you feedback so that next year everyone can start the season ahead of the game.

Document your season.

Organize photos taken along the way and put them in a location that everyone can access. Several free tools help you manage your visual assets and keep them available in the cloud, like Flickr and Google Photos. Make the effort to get an image of every camper and/or project. When kids don't see themselves in the record, they will likely notice and may assume you don't appreciate their hard work.

Gather documentation your campers made of their projects.

Keep a record of all the projects that emerged from your Maker Camp in one place, like a web page on your website. Consider telling the story of your camp through a short, edited video, printed camp-wide memory books, project binders, photos in simple frames, a small album, a poster, or a slide-show. When posting images or video, license them as Creative Commons, post on the Maker Camp G+ Community, tagged with #MakerCamp.

Debrief & share best practices.

We hope to learn more about how we can support establishing more Maker Camp affiliate sites, and about what works and what doesn't. Write down notes about what you did, what worked especially well, and what you might change for next year. Share any new projects you added to the schedule (or any improvements on existing projects you made.) Collect data to share with us, like number of campers + adults, budget, successes, and improvements you'd like to see in future seasons. The Maker Camp Play book is intended to be a living document, evolving as the collective experience of the network and its community of Maker Camps grows. Please email your comments to makercamp@makermedia.com.

Add to the camp community.

The network of all Maker Camp Affiliates would very much appreciate your sharing some notes, write-ups, images, and videos from your time making together in Maker Camp. These help build the national and international community of makers, and we sometimes feature Maker Camp efforts on our makezine.com blog or even in **Make:** magazine. Ideally you would share notes, write-ups, images, and videos all throughout the duration of your Maker Camp, but if you just really didn't have time to do it along the way, take some time to share after the fact.

Plan ahead for next year.

Help your campers come up with ways to spread the word about Maker Camp after camp is done. Their friends may ask them how they can start a Maker Camp or get involved in the Maker movement. We realize that you need to plan out your Maker Camp program many months before we launch. We hope to have future Maker Camp sessions set longer in advance. Feel free to sample Maker Camp programming from years past to plan your programming, and then bring in our new videos and projects on an as-needed basis.

Keep on making!

We think making is the best way to continue involving your campers in the Maker movement after Maker Camp ends. Start by doing projects you may have missed over the past few weeks, and if you've exhausted those, tap into the projects featured in our earlier years or on our website.

Start a School Maker Faire

Build on your campers' interest and excitement for Maker Camp by starting your own Maker Faire. Educators use our website to kick-start their effort.

- [Creating Your Own School Maker Faire](#)

Watch for ways to branch out from Maker Camp into other programming for your site. When one of the affiliates had adults inquire about being able to participate, they added an all-ages Maker Lab once a month. Many schools have started their own Makerspaces and Maker Clubs after participating in Maker Camp. A few used the projects to launch a season of making that culminated in exhibiting at their local Maker Faire. You can even start a School Maker Faire if your site is a school or youth-serving organization.

BEFORE CAMP

Planing

Recruit your campers.

We're interested in reaching and inspiring young women, as well as kids who couldn't otherwise attend a camp. If your recruitment and outreach focuses on girls, low-income families, or any other groups who are not well represented in technology, we'd love to hear about it!

Gather materials.

While much of what you need might be already available in your home and/or organization, you may need to buy supplies for camp. We have materials lists for the starter projects from *Start Making!*, and suggested materials/sources for a camp supply kit on our affiliates' page.

Prepare your computers. Check YouTube and Google+.

Some Maker Camp projects will require software that may be new to you—and to your computers! Any computers your campers will use, Scratch, for example, will need to be pre-loaded with the necessary software. Find out who has administrative privileges to load software, and plan in advance. Don't forget to check if YouTube and Google+ work, too!

Test-run the projects as you have time.

We strongly recommend that you try making the projects you select for your Maker Camp in advance of doing them with your campers. This gives you a chance to test your tools and materials. But if you don't have time to test in advance, don't worry! You'll develop your Maker mindset by learning alongside your campers too.

Prepare your space.

Think about how your space and projects mix. Some projects are best done on a table with chairs, while others require lots of space to move around. Think about how you want to set up the materials for campers, and how they'll flow around the space for the projects.

Connect with Local Makers.

Check out some of your community resources, especially any makerspaces or hackerspaces near you!

BEFORE CAMP

Checklist

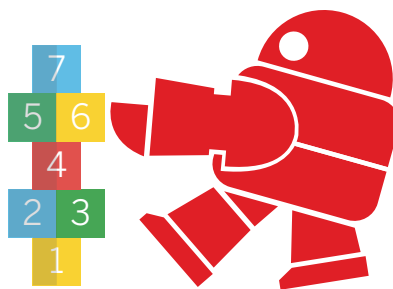
Every site has its own needs and desires, and of course each Maker Camp experience will be very different depending on the choices you make.

Checklist:

- ☐ Decide how to get kids signed up to be a part of your camp.
- ☐ Determine if you will divvy up your summer into week-long sessions or single drop-in programs.
- ☐ Use your promo pack to reach out to your community and promote Maker Camp at your site.
- ☐ Update your website with information for interested campers like program times, ages welcome, and details on how to take part.
- ☐ Create a web page or blog for your Maker Camp or organization.
- ☐ Collect items for reuse by creative campers.
- ☐ Gear up to document camp with photos, videos, notebooks, binders.
- ☐ Connect to other Maker Affiliate Sites like your own or which are nearby.

Check to see if you have:

- ☐ An Internet connection to access makercamp.com
- ☐ Computer, phone, tablet that can run our site, YouTube, Google+
- ☐ A large screen or projector and speakers to watch videos together as a group if you choose to access our video archive.
- ☐ Computers for your campers to use, if available.



CAMP FOUNDATIONS

What is Camp?

What things can we adapt from “real” summer camps? Here are some things we remember liking best about weeks at cabins nestled in the woods.

MEETING NEW FRIENDS

TRYING NEW THINGS

CHALLENGING YOURSELF

INDEPENDENCE

DEVELOPING GREATER CONFIDENCE

GETTING LOTS OF POSITIVE FEEDBACK

BEING OUT OF YOUR ELEMENT

ENJOYING THE OUTDOORS

ACTIVE PLAY

RESOURCEFULNESS (YOU'RE OUT IN THE WOODS)

ENCOURAGING, SUPPORTIVE, COOL COUNSELORS

EATING IN THE MESS HALL

GETTING ASSIGNED TO A RANDOM CABIN

CAMP CULTURE (CRAZY SONGS, CRAZY DRESS-UP, BEING OUTRAGEOUS)

ACCUULTURATION (BELONGING, WANTING TO COME BACK)



START MAKING!

Intro

Get Ready to Start Making!

We're thrilled to share exciting ideas and projects that you can use to help your campers start making. We want to inspire kids and camp leaders around the world to design and make creative projects, and in the process, learn new ways of solving problems, sharing ideas and collaborating with others.

Project Paths

We present six project paths, based on starter projects from our book *Start Making!*, that suggest a series of creative do-it-yourself (DIY) activities and sessions that introduce basics of circuitry, coding, crafting, engineering and more. Each project path lays out a step-by-step intro to a starter project such as making a light-up greeting card, a musical drawing, an illuminative bracelet and an art making robot. You'll also find suggested ways to keep making more projects within each project path that will allow you to take the making exploration deeper with more complex skills and wider with more diverse project ideas. You'll find facilitation tips and tricks throughout with creative and reflective prompts to guide you through designing this creative experience for your campers.

We encourage you to take these project paths and make them your own. We hope this guide will help you create more opportunities for young people to build confidence, camaraderie, and curiosity about science, technology, art, engineering, and math.

Start Making! is based on research by The Clubhouse Network at Museum Science of Boston in partnership with MIT Media Lab's Lifelong Kindergarten Group, with funding from Intel.

Download e-book here



START MAKING!

Project Paths



Light it Up

- ⇒ Origami Firefly
- ⇒ Electric Origami Box
- ⇒ Glowing Paper Pinwheel
- ⇒ Light-up Roto Copter
- ⇒ Paper Circuit Overlay
- ⇒ Paper Generator
- ⇒ Interactive Pop-up Book
- ⇒ Conductive Pens & Paint
- ⇒ Printable Conductive Ink



Make it Sing

- ⇒ DJ Paper Circuits
- ⇒ Magnetic Mazes
- ⇒ Makey Operation Game
- ⇒ Fruit Piano
- ⇒ Lemon Battery
- ⇒ Squishy Circuits
- ⇒ Electro Fishing Game
- ⇒ Conductive Mini-Golf
- ⇒ Mole-a-Whack Game



Paint with Light

- ⇒ Firefly Nightlight
- ⇒ Flickerbugs
- ⇒ Dazzling Kaleidoscope
- ⇒ Light Box
- ⇒ Marquee Letter
- ⇒ Rainbow Spectroscope
- ⇒ Stop Motion Animation
- ⇒ DIY Pinhole Camera
- ⇒ 3D Printed Pinhole Camera



Give it Form

- ⇒ Dome Den
- ⇒ Table-Top Tetrahedron
- ⇒ Self-Folding Paper Models
- ⇒ Papercraft Makey
- ⇒ Newspaper Baskets
- ⇒ Hero's Helmet
- ⇒ Rubber Band Man
- ⇒ 3D Doodler Pen
- ⇒ 3D Printed Makey



Change the Move

- ⇒ Strawbot
- ⇒ WaterColorBot
- ⇒ BrushBots
- ⇒ Papercraft Automata
- ⇒ Cardboard Automata
- ⇒ Marble Runs
- ⇒ Chain Reaction Machines
- ⇒ Kinetic Creatures
- ⇒ Milk Carton Robots



Sew the Circuits

- ⇒ Silly Switches
- ⇒ Nightlight Bracelet
- ⇒ Purring Pillow
- ⇒ Fairy Wings
- ⇒ Superhero Cape
- ⇒ I Love My Stuffedie
- ⇒ Sewable Circuitry
- ⇒ Soft Circuit Roundup
- ⇒ Plushie Game Controller

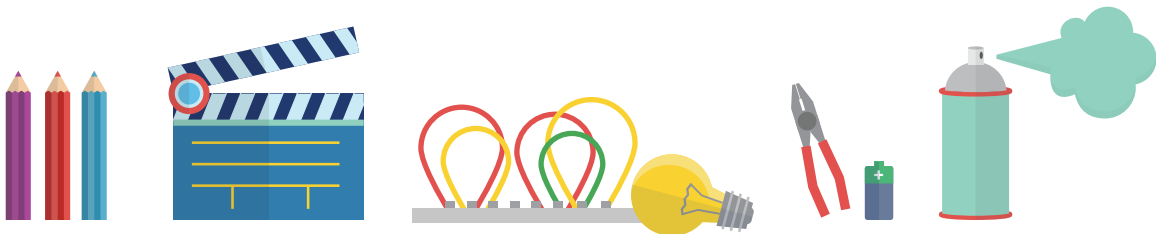
START MAKING!

Project Flow

We suggest you read *Start Making!* before you start making with your campers. The book describes how their projects typically flow, from getting ready for the project to sharing projects at the end, but feel free to adapt this flow in any way to make it work for your campers. You'll find many great ideas for leading projects with your campers that apply to all the different projects along the paths, and any other Maker projects you might lead.

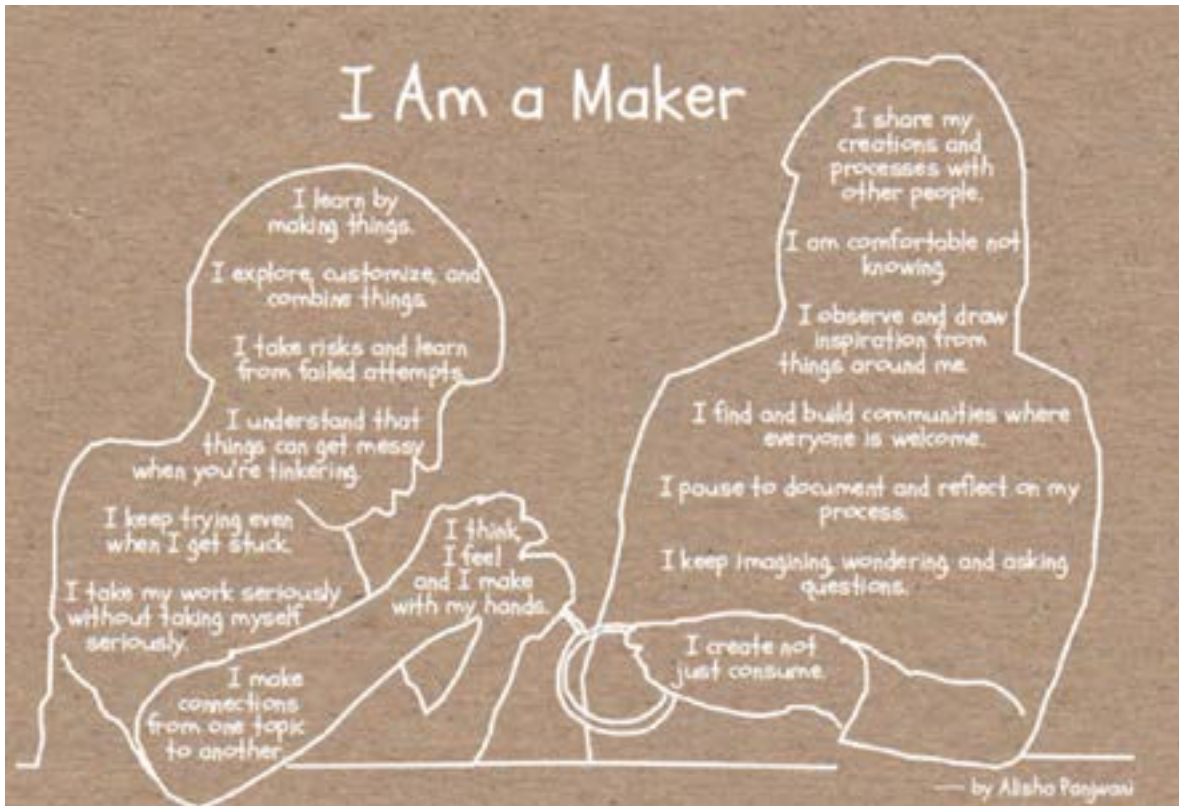
How the Projects Flow

- Setting up your space
- Making a starter project of your own
- Creating a fun, creative, and collaborative culture
- Introducing project goals and materials
- Demoing with your campers
- Building a first project and taking it further
- Facilitating to guide your campers through projects
- Building in tinkering and open making time
- Encouraging risk-taking and celebrating learning through failure
- Reflecting, documenting, and sharing through a Maker showcase



START MAKING!

Who is a Maker?



We believe everyone has the potential to be a maker: to be inspired to imagine, create, and share personally meaningful projects. Empower your campers to identify themselves as makers. We recognize that kids are much more likely to see themselves as makers when they feel part of a creative community.

Because you are running a Maker Camp, we're guessing you agree. A maker makes things; it's that simple. Robots, rockets, 3D prints, animation, furniture, fashion—the list is as endless as our imaginations. Maybe you'd like to build vehicles in the shapes of cupcakes, or whole worlds out of wooden toothpicks. Being a maker isn't some distant goal your campers will only achieve after years of work. They can start making right now.

START MAKING!

Your Role



As a facilitator, your role is to create a welcoming environment in which people feel encouraged to imagine new ideas and bring them to life through creative hands-on explorations. Rather than directly instructing, your focus as a facilitator is on providing a safe and inviting space in which makers can experiment and learn from their own explorations. You will find more facilitation tips and ideas as you explore each project path

START MAKING!

Guiding Principles

To support creative learning and making experiences, we suggest four guiding principles. These principles grew out of research by the Lifelong Kindergarten group at the MIT Media Lab, and they form the core of the learning model.

PRINCIPLE 1:

SUPPORT LEARNING THROUGH DESIGN EXPERIENCES.

PRINCIPLE 2:

HELP YOUTH BUILD THEIR INTERESTS.

PRINCIPLE 3:

DEVELOP A SENSE OF COMMUNITY.

PRINCIPLE 4:

FOSTER AN ENVIRONMENT OF RESPECT + TRUST.



START MAKING

Creative Competencies

Our project paths are designed to encourage young people to develop their own ideas, to experiment, and to innovate. Teaching young people the activities themselves is not the primary goal. Rather, the goal is to enable young people to develop their own projects and to foster motivation and confidence in their ability to learn.

Through these projects, you can help campers develop creative competencies. Here are the five key competencies that we identified as outcomes for young people who participate in creative learning and making!

Identify as a creator or maker.

Young people develop positive attitudes toward creating hands-on projects.

Develop confidence in creative expression.

Young people feel capable of bringing their ideas to life by designing, experimenting, iterating, and persisting through failures.

Acquire technical tool literacy.

Young people become familiar with a variety of tools and technologies that they can use to make projects.

Become aware of STEAM.

Young people become aware of ideas and concepts that bridge science, technology, engineering, art, and math; showing curiosity to learn more.

Learn collaboration and networking skills.

Young people actively engage in collaborating and helping others.

TIPS + TRICKS

Staying Safe

We cannot emphasize enough safety's importance. Model safe behavior in your own actions, and organize your workspace to be tidy and spacious with enough room to move around freely and without danger. Clear pathways to tools, exits, and safety equipment. Keep the space well lit and ventilated. To help your camp be a safe and positive place to hang out and create, your campers should have a shared understanding..

PURPOSE:

WHAT ARE WE DOING HERE?

EMERGENCY:

WHERE IS THE FIRST AID KIT?

TOOLS:

HOW DO WE USE THEM SAFELY?

As safety becomes second nature to your campers, they'll feel more at ease when using tools, knowing they've done all they can to protect and prepare before lifting a tool or clicking its power switch. Accidents happen when proper steps aren't taken. Millions of people make with dangerous equipment every day without incident.

Post clear and visible warning signs on all equipment and where necessary. Provide personal safety equipment such as goggles, ear plugs, gloves, etc. to those who don't have their own.

Accidents may happen. When and if they do, let's hope they are all minor. Keep a well-stocked first-aid kit visible and easily accessible throughout your space.

Common safety rules can be summarized briefly as:

- Protect yourself. Dress right. Shield eyes, hands, and feet.
- No loose clothing, jewelry, long hair near machinery.
- Use tools correctly. Train and prepare.
- Don't startle or distract anyone using a tool.
- Report all injuries. Report all injuries.

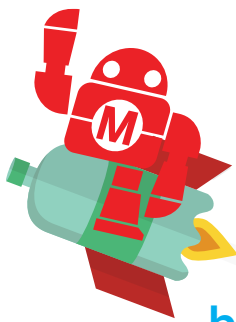
TIPS + TRICKS

Keep it Campy

Summer is a unique time of year for most of your campers: months of unstructured time and free play, and Maker Camp fits right into the spirit of the season. There's no reason you can't sample some of the best parts of traditional summer camp.

You can have fun with the metaphor of summer camp itself by introducing campy elements and giving them a Maker twist:

- Get outside, or bring the outside in. Take advantage of WiFi and long Ethernet cables. Collect natural materials to have on hand and add ambiance. Pitch a tent in your space.
- Stay playful with active games, get-to-know-you icebreakers, and funny personal nicknames.
- Give your camp a unique identity and celebrate your name and logo with T-shirts, flags, and swag.
- Read books off makezine.com's list "[Summer Reading for Maker Kids](#)."
- Camp Legends! Post pics of what you made onto the Maker Camp community to create a Camper Wall of Fame!
- Campfire and Mess Hall songs. Blast favorite Maker-themed sing-a-longs while campers work on their projects.



Share your ideas with us
by using **#makercamp** on Google+!

TIPS + TRICKS

Affiliate Project Tips

We learned so much from reading the responses to our Affiliate Survey. Here are some of the lessons learned by people who ran Affiliate Sites.

“ Test run the projects you choose before you do the project with your campers. This will help you make sure you can lead these with the number of staff and volunteers you have on hand. Adults help guide the kids through the projects and troubleshoot issues that come up. ”

“ I struggled with the difference between what I planned and what actually took place. What I’d imagined would go easily and smoothly, sometimes would be a challenge. These challenges often led to deeper learning and a different ending point to the project. The solution for these often was to go with it and not get frustrated. The children don’t care what I planned and will have a positive experience when they are engaged, learning and having fun. ”

“ Some of the best moments we had were when participants went ‘off- script’ and made modification or hacks during builds. Mostly this was achieved by really being open to encouraging them to explore their ideas within the given project, as well as providing positive feedback when they deviated, whether it worked or not. ”

“ After two weeks of registered camps, we decided to make the third week a “drop-in” day at our museum. This allowed us the ability to reach a much broader audience and expand the number of activities and experiences for the public. ”

TIPS + TRICKS

Working with Kids

Many of our affiliate sites could teach us a thing or two about working with kids. We've learned a lot from our collaborations with the Intel Computer Clubhouse Network, computerclubhouse.org. It has developed a great list of tips for people working on creative projects with young people. We adapted this page from the Mentor Handbook of the Computer Clubhouse. It's a useful reminder to those who are new to working with kids as well as folks who may need a refresher on how to let kids and their own interests and passions drive a project.

Be yourself.

Work with kids in a way that is comfortable for you.

Be reliable.

Kids should know when to count on you coming. Your absence will be noticed!

Be consistent.

Be consistent not only in your own attendance but in making sure that you treat all campers fairly and equally. Although you may find yourself engaged with an individual kid, try not to give the impression that you have a favorite. Be open to having others participate. The more consistent you are, the more campers will trust you and start to call on you for help and conversation.

Be approachable.

It is important for campers to know that you are available for questions. If you have a chance to work on your own projects, make sure that you are still open to the campers around you. Invite campers to take a look at what you are doing, or ask them for advice on your project. Make sure people know who you are and that you are there to help and to talk.



Be patient.

Everyone learns in different ways, yourself included. Be patient with your own learning and with the learning process of others. Sometimes this means stepping in to help, or stepping back to let campers work to solve a problem themselves. Be patient especially when showing someone how to do something that you may know how to do very well. Try not to do it for the camper, unless safety is an issue. Each person will go through a very different learning process and will take different amounts of time to learn something new.

Participate actively... and avoid lectures.

You are not here to be a textbook. Engage in your own learning while you are mentoring. Collaborate on projects and experiment.

Listen.

As adults we often don't take the time to really listen to the ideas and thoughts of young people. Take the time; you might find you learn amazing things. Show your interest and excitement, observe, and ask questions. Get to know kids, and let them get to know you.

Engage a camper in conversation. Ask questions. Offer to share something you know. However, understand that it will take time for the kids to begin to feel comfortable with you.

Treat all participants with respect.

Make sure everyone—young and old—feels welcome, important, and a part of the program. Learn names and greet each other by name. Show your interest in their projects—and in their presence. Respect the kids for who they are and where they are developmentally. Each person has different learning and communication styles.

Treat kids as individuals, not as a group.

We all come from diverse backgrounds and experiences. Take the time to get to know everyone individually. Avoid prejudging who they are, their skills, or their cultures. For some it may be through conversation, others through working on a project or showing you what they are doing. Get to know the campers, their interests, and the way in which they feel most comfortable interacting.

Go with the flow.

Be prepared for the unexpected! Bring ideas for what you would like to do, but be prepared to go with the flow of kids' changing ideas.

Discover and innovate together.

Don't be afraid to share your ideas, give advice, and be a resource for creative ideas and new knowledge, opportunities, and possibilities. Show a camper a new tool. Challenge them to try something new, or take on something new yourself.

Try saying:

- “Have you tried this?”
- “Do you know about this?”
- “Gee, I don't know the answer to that question—let's go find out together.”

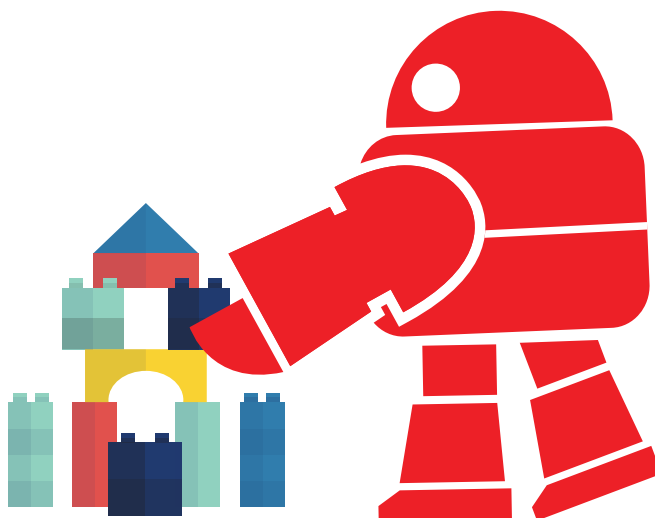
Figure out your own interests.

Experiment with our resources, work on your own project, and then share your ideas and excitement with campers.

One of the best ways to be a role model is to share your own engagement in working with tools, people, and ideas.

Give off energy.

Show your excitement about what campers are doing, and your interest in learning from their work. Share your own excitement and engagement in your ideas, and your own work as a Maker.



START MAKING

Anytime Projects

You're welcome to do any making project on any day, even if you do not follow our schedule or recommendations! We have a nearly endless list of ideas for projects and project prompts.

Here are some favorite projects sampled by affiliate sites from past years and our master list of Maker Faire Greatest Hits:

- Learn to Solder
- Nerdy Derby
- LED throwies
- Make Play Day
- Tripwire
- Origami
- Sewing
- String Art
- BlinkyBugs
- Tapigami
- Lego building
- Submarines
- Magnet Motors
- Spool Racer
- Harry Potter wand
- littleBits
- Bottle Cap Magnets
- Soda Bottle Boats
- Water Balloon Squirter
- Paper Clip Mechanisms
- Miniature Golf Course

AND THEN IF YOU STILL WANT SOME IDEAS,
WE'VE WRITTEN UP THIS LONG LIST OF...
PROJECT PROMPTS



START MAKING

Project Prompts

The Hunt for Junk

It's the Maker Camp scavenger hunt! Collect bottle caps, cardboard tubes, boxes, and other useful stuff for your invention box.

Strike a Pose

Print Makey out and strike a pose with the mascot of Maker Camp! Use one of the paper Makey templates, cut and fold. Or use your 3D printer if you have one!

Playtime!

Make up a game, or scale up a favorite board game (a la Life- Sized Mousetrap or Giant Simple Simon on trampolines.) Control a video game on a large scale by using your Makey Makey.

Nature Hike

collect natural materials to use in your Maker Camp projects.

Peek Behind-the-Scenes

Find where things are made in your community. Arrange a visit or explore on-line to see if you can learn more about these places. Schedule a tour at a chocolate factory, bakery, or other local Maker/ manufacturer.

Singe Paper with a Magnifying Glass

(Have water handy, and know where your nearest fire extinguisher is!)

Go for a Walk in Your Neighborhood

Take a picture of or sketch a tree you think would make a nice to live or play in, under, or on.

Linger by the "Lake"

Make boats. Play with water. Skip stones.

Reclaim broken plates to design mosaic trivets

Or make "raster" art with square tiles.

Tool Treasure Hunt

Find a new favorite tool!

Brainstorm the project you'll exhibit at the next Maker Faire!

Demo Day

Teach someone how to do something you know how to do.

Make Yourself Known

Start your own blog to share projects you're working on. Start a portfolio, and share it on-line.

Open Your Own YouTube Channel

Frame your art (or photos of your projects) and put them up on the wall. Tell Make about what you've made!

Meet a Maker

Get to know a Maker in your community. Learn what they do and how they do it. Write a story or shot a video about this Maker and share it with us.

Make Someone Happy

Make a gift: It could be a cake or a greeting card.

Secret Summer Santa

In a group, give out boxes all the same size, and ask each camper to build something that fits inside it. Close them up, and mix up the boxes that come back. Open each one at a time.

Design Something to Solve a Problem

It could be your problem or someone else's.

Film a Video About Projects You Made

Record your soundtrack!

Show It All Off

Organize a School Maker Faire for your affiliate site.

Tinker with Toys

Collect easy- to-open, fixable vintage toys and electronics from garage sales and thrift stores.

Mutate Two Different Broken Toys Together

Dabble in circuit bending.

Travel into the Future

Find or design something we might still use in the year 2999.

Light Up + Glow

Collect glowing things. Paint with light with Glow Doodle.

Saved from the Landfill

make something composed mostly of recycled and reused items.

Transform a T-shirt

Turn your old T-shirts into a bag, a quilt, weaving loops, a skein of "yarn," or any one of dozens of other projects.

From Eggbeaters to Mops

Reuse something you found at home in a new way.

Fix-It Clinic

Make what's broken functional again.

Art Behind the Wheel

Transform your neighbor's jalopy into an art car.

Travel Back in Time

Make something that could have existed before the year 1900.

What Wool You Make?

Spin wool into yarn, or turn roving into needle felted objects.

START MAKING

More Project Prompts

Make Your Own Recycled Paper

with a blender, a screen, and an iron.

Marble Paper

Float inks on shaving cream, wallpaper paste, or even carageenan, and transfer the images onto paper. Or you can even marble on water! (Japanese style, sumi-nagashi)

Coat a Wall with Phosphorescent Paint

Draw patterns, like hypotrochoids (also known as spirographs), or build a giant spirograph generator with chalk and wheels.

Turn a Room into a Camera Obscura

You need a window and a wall, and some way to turn the whole room into a black box. You can also make a walk-in pinhole camera out of a giant cardboard box, such as that used to ship furniture, car bumpers, or large appliances.

Make it BIG!

Take something small and scale it up by a factor of 10 or 100. How would you make a giant snail? Could you attach it to a wheelbarrow, scooter or bike?

Do It Together

Add to a big [collaborative] art project. Hack Your Habitat. Make it your own. Add sensors and alarms to a room. Design and build some simple furniture. Build a cardboard city in your backyard or living room. Personalize its walls with murals and graffiti.

Create a Puppet Theater

Make fuzzy puppets, finger puppets, sock puppets, shadow puppets, or marionettes to populate its stage.

Get Rollin'

Remove a wheel from or add a wheel to something.

Dig into the Garden

Grow your own food. Plant some seeds. Train a time lapse camera on your sprouts.

Eat, Drink + Be Makey

Bake pi pies. Turn your summer picnic fruit salad into a xylophone with Makey Makey. Create special cookie cutter shapes.

Connect to the Community

Find local Maker clubs or guilds. Or start a Maker club! Check listings at local museums, libraries, and community centers for cool Maker happenings.

Power to the People!

Convert a device to solar power. Power a blender by pedaling a bike.

Customize Your Bike

Put PoV LEDs on your spokes. Add noise-makers: horns, bells, or a muffler. Top your noggin with a unicorn bike helmet.

Mashin' Fashion

Hybridize your closet. Hack your clothes. It could be an article of clothing, as simple as a T-shirt. Make a wearable that lights up or plays music under the right conditions. Stitch some EL wire onto your backpack or jacket. Get inspired by Swap-o-Rama-Rama.

Take Control with Microcontrollers

Encourage your more advanced Makers to mess around with Arduino or Raspberry Pi.

Sketch the World

Draw objects that you see around you. Try turning yourself upside down to draw something.

Be You

Make something creative that says something about who you are and what you like.



CAMP COMMUNITY

Using Google+

Maker Camp is all about interactivity and participation! This summer, we primarily interact and share our projects using the Maker Camp Google+ community. Make sure to tag any posts with #MakeCamp too!

To get ready for the first day of Maker Camp, each affiliate site or camper should create a Google+ profile and follow **Make:** Once on Google+, campers can interact with other campers and friends (with comments and by clicking “+1”). Campers show off their creations with photos and videos in the community, and share these with friends, parents, and others.

Visit our G Plus Community

IMPORTANT!

As with all on-line communities, Google+ requires users to be at least 13 years old to create an account. Google monitors this requirement closely to protect kids under 13, so to prevent loss of accounts belonging to kids registered as younger than 13, please be sure that all campers creating or maintaining their own accounts are 13 or older. Kids younger than 13 can still participate in Maker Camp using your affiliate site's Google+ identity, or through a parent or other adult in their lives.

Making an Account + Page:

1. Go to plus.google.com.
2. Sign in to your Google account or create a new one.
3. Complete your +Profile if you haven't done so already.
4. Then, create a +Page for your organization.
 - Select “Pages” from the menu on the upper left.
 - Then, select “Get your page.”
 - Pick a category that best describes your organization.
 - Add descriptive information, such as your desired +Page name and website.
5. Complete your +Page. Make sure that your Google+ Page is complete and interesting before you start promoting it. This can help people discover you when they search. Fill out your whole profile, and include:
 - Pictures
 - A link to your website
 - A clear, detailed description in the “Introduction” section on the “About” tab.
 - Videos, if you have them: share links as posts and then also add to the “Video” section.
6. Add +Make to your Circles by clicking on the red “Follow” button. <https://plus.google.com/+Make>
7. Add +Maker Camp community to your Circles by clicking on the “Join community” button. bit.ly/makercampcommunity

Using your Camp Page

Many sites use their Google+ page to connect to other Maker Camp programs, as well as to connect to the greater Maker movement they're building with us. Document projects made by your campers, recruit new members, and maintain a schedule of sessions through your affiliate site's page.

Post frequently to keep your campers and their followers engaged.

The more you post, the more likely that people curious about Maker Camp will find you. But don't overwhelm your page by posting everything at the same time. If you post more than once daily, spread your posts throughout the day. Try different kinds of posts, questions, and shares to see what works best for you and your followers. Let any reaction to your content guide you and help you adjust. Have a look around the Maker Camp community to find out what other organizations are doing, and start following them.

Reaching out cabin-to-cabin.

Maker Camp is an international experience! With Maker Campers all over the country and the world, you can open up a conversation with a far-flung affiliate site. An easy way to do this is to arrange a time for a one-on-one "cabin-to-cabin" hangout using Google+.

HINT:

Use tags related to making (DIY, science, engineering, do it yourself, art, kinetic sculpture, hands-on, Make, Makerspace, Maker Faire, Young Makers, Maker Camp). These help those who do relevant searches find your page.

More from Make:

There's a whole world of making to explore, and so many ways to be a part of the Maker movement!

Start a Maker Club

Makers are everywhere. You may be surprised how easy it is to find them in your own school!

Maker Share: Portfolios

Our latest project, a community platform for makers. Create your Maker Portfolio, join a community mission, and connect with a global community of like-minded makers.

Go to Maker Faire

Events happen year-round and worldwide! Bring your kids to a flagship, featured, or mini event!

Read Make:

Each issue has dozens of projects like the ones you made in camp, and beyond.

Host a School Maker Faire

Our new program is intended for K–12 schools or districts to showcase students who make, and to recruit more novice Makers!

Explore Maker Shed

We've got kits, sets, tools, and supplies. The coolest, nerdiest bookstore, arts & crafts shop, electronics store, & more — all in one.

Contact us:

email: makercamp@makermedia.com

web: makercamp.com

Since it started in 2012, over a million campers from around the world have added **Make:** to their circles and attended Maker Camp — then shared their experiences with other campers on the Maker Camp Google+ community. This year features many Maker adventures.

Maker Camp is free for everyone on-line. Maker Camp is a great way for communities large and small to engage kids this summer with cool projects and activities. Everyone can join, no matter where they live, because Maker Camp is on-line, and it's free!



Make: education

Learning Tools for Makers
makezine.com/education