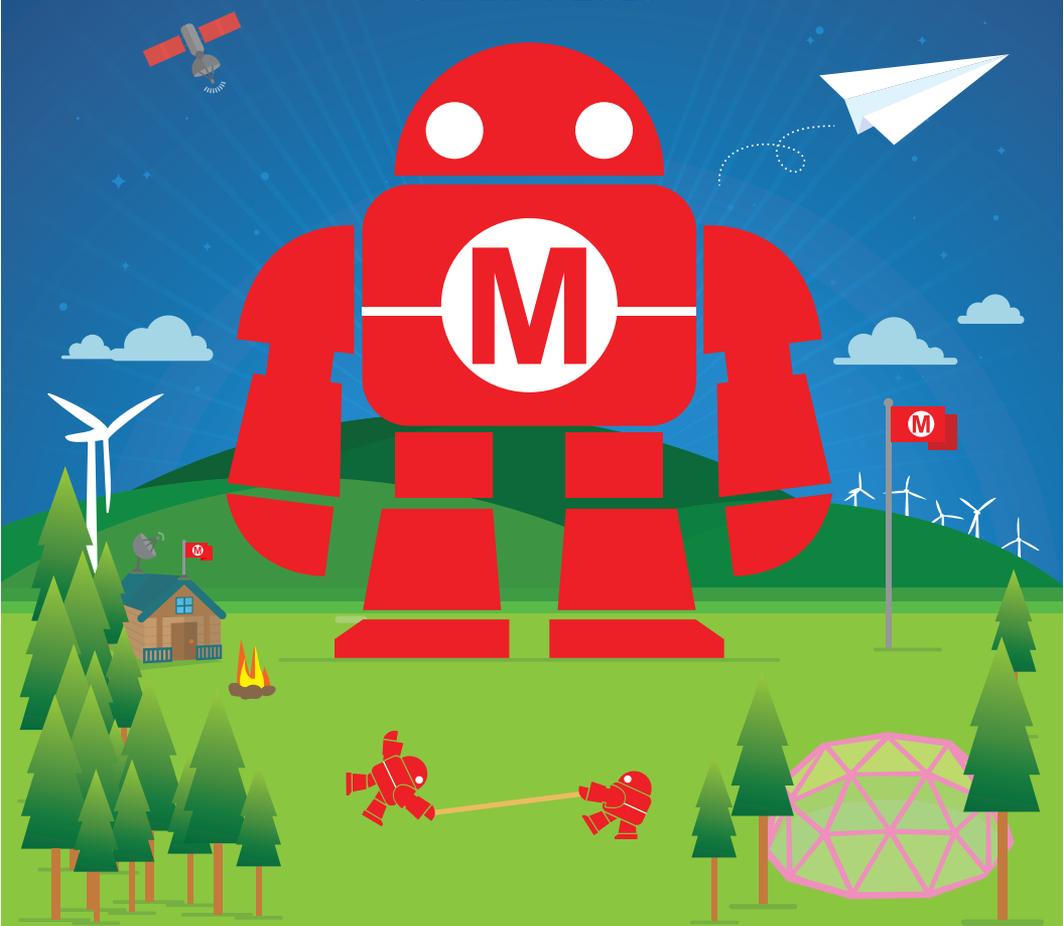


# Maker Camp

Make:

## Affiliate Site Playbook

Summer 2015



Explore + Make + Share

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# Maker Camp = Explore + Make + Share

30 days of videos, projects, and community for non-stop making action!

We organize each week around the pattern “Explore • Make • Share.”

Our Maker Camp programming gives campers unique opportunities to engage with Makers, go on epic field trips, and get to know each other better. Anyone can watch and ask questions. All Maker Camp videos are archived on [makercamp.com](http://makercamp.com) and **Make:**'s YouTube channel.



## Explore

Get your feet wet as you get inspired by what Makers do. Play around with the stuff, tools, and ways of making. Our introductory videos—hosted by our Maker Camp counselors—launch a day of curiosity, tinkering, taking apart, and putting together. This open make format provides prompts and skillbuilders that introduce the materials and methods relevant to the week's theme and/or the day's projects. Fascinating field trips happen once a week, often connected in some way to the week's theme, but not necessarily.

### Promo

#### Calling All Campers!

Invite kids from your community to make! Share your Maker Camp program hours and details on your website, and create a page for your affiliate site. Keep frontline staff informed.

### Prep

#### Check & Collect

Check out [makercamp.com](http://makercamp.com). Review the posted materials lists, scavenge what you can, then head to [makershed.com](http://makershed.com) and local stores for the rest. Send videos to us that we can include as part of our playlist.

### Explore

#### Daily Playlist

Watch the daily Maker Camp videos. Every day, the Camp Directors and Counselors provide context for the day and show how to do a project step-by-step. Ask questions live during our Meet the Makers.

### Make

#### Create Together

Prep the project in your space before campers arrive. When they do, share the step-by-step instructions and safety tips, tricks, improvements and hacks. Encourage the kids to stray from the original project as they are inspired to do so.

### Share

#### By the Campfire

Send in videos we can “Share out” in our daily playlist. Invite family and friends. Gather in person at your site and on the Maker Camp community. Add your comments, photos, and videos and check out what fellow campers made!

## Keep Projects Open-Ended

Past affiliates report that open-ended projects tend to be the most successful and inspire the most “making” outside of camps. In open-ended projects, campers have freedom to express their creativity and customize their creations. When there’s not an expectation of what a finished project looks like, campers found there was still more making or tweaking that they could do at home at the end of the session.

## Make

Our step-by-step projects branch out from the theme. Build the recommended project we call out in our daily video — or anything!

### Make ANY project, anytime

Our primary goal is for more kids to make, and to hear what you’re making, whether or not it’s the project we’ve chosen. You are welcome to tailor your making program to your campers, resources, and goals. Make any project on any day — even ones not on the Maker Camp 2015 list. Check out past Maker Camp sessions, [makezine.com](http://makezine.com), and the Maker Camp affiliate page for project ideas. Advanced Makers can take on our Camp Challenges. Encourage campers to keep creating on their own. We’ve identified projects we feel can result in a range of outcomes, that is, they have the potential for campers making their projects uniquely their own.



## Share

Consider including time for show-and-tell in your site’s camp day or with end-of-week showcases. Share around the Campfire, whether this is online, in real life, or cabin-to-cabin (opening up a hangout to another site.)

Our weekly themes each lend themselves to culminating showcases related to a narrative throughline, such as Maker Camp Air Show (for Flight.)

Take pictures or videos while your campers are making. Better yet, hand over the camera for campers to take pictures themselves! After each day of camp, post a set of photos to the Maker Camp community. While you are there, don’t forget to check out what other sites and campers are posting on the site and comment on things that wow you and your campers.

Everyone has a digital camera these days, so it’s easier than ever to crowdsource the task of documentation. Encourage campers to use a tag for your Maker Camp (for example, “makercampSF-2015”) as well as our generic “makercamp” in advance. You can also ask them to share pictures via email.

The network of all Maker Camp affiliates appreciates your sharing of

notes, write-ups, images, and videos from your time making together. Ideally you'd share these throughout Maker Camp during each day or at the end of the day on the Maker Camp community.

Share Maker Camp with the broader community. Ask campers to send links to friends (who can also join Maker Camp wherever they are!) Send regular updates to parents, your colleagues, administrators, community members, etc. Drop a line to the local press and other media outlets — they may come look at what your campers are making!

Give feedback on other campers' projects. Browse other camps' posts and pages. Give constructive feedback (always with good intentions!)

Record video. Bring a digital camera to all your camp sessions. A good microphone captures conversations and sounds of building, but it's not essential. You can always add voiceover or an energetic soundtrack over footage you capture.

Ask your campers what they would like to share on the community. Campers age 13 and older (or younger campers posting with their parent) can participate in the Maker Camp community anytime. This is a great way to extend Maker Camp beyond your site's scheduled program hours.



### Capture your experience

We suggest shooting some of the following elements to use in videos you share with the community (and get onto our main playlist!)

- Candid moments working together
- Projects in progress
- Sequences of stills: time-lapse
- How-tos. give back to the community and the Maker movement as a whole by having your campers record videos about how they did what they did
- Ask campers questions like:
  - What was fun?
  - What was challenging?
  - What tips do you have for others?
  - What was hard to do?
  - What was easier to do?
  - Did that surprise you?
  - How long did this project take?
  - How did you get started?
  - Were there any interesting — challenges?
  - spectacular failures?
  - behind-the-scenes drama?
  - What's next?



# The Maker Camp Experience

We have designed Maker Camp for novice Makers who are 8 to 12 years old. In Maker Camp, our Camp Directors and a team of counselors interact with the kids, introduce the week's theme, and provide daily updates on our site.

**Time.** Our video programming and expected build and share time for projects account for about two hours of programming per day. If your site has a day runs longer than that, you may want to sample from our extension ideas and project resource links.

Pro tip from another Affiliate: Do not try to do the full five days of Maker Camp if that doesn't work for you! Many sites cut down to two days per week and choose videos and projects to share with their audience. Choose a lineup that works for you.

**Videos.** While this year our programming is not "live," the site is alive in that interactions change each day. Videos unlock overnight so that there is fresh content every morning, like the chocolate in a holiday advent calendar. If you submit great content from your site, our on-screen camp staff will call out your achievements in our highlight reel. We also encourage you to make connections to other camps and campers, who are the "stars" — we want to make all of you and your work more visible.

**Interaction.** We have upgraded our online interface to a fun, interactive, make-believe map of our imaginary Maker Camp, populated by Makey and Makey's friends. The [makercamp.com](http://makercamp.com) website includes links to daily project instructions and activity prompts, streaming video playlists, a community where campers can upload projects and share project information.

Maker Camp is creating three different kinds of video content to inspire your campers to make.

- Daily video greetings from the camp directors.
- Projects / Maker Roundups encourage kids to see a lot of variety.
- Short videos on the Maker Mindset.

**Support.** We want to support our Maker Camp leaders and parents. We've prepared materials, such as this expanded playbook for camp leaders and parents to help your camp run smoothly. If there's something missing, we want to hear about it. We also plan to host live Q&A sessions before and during the camp to discuss projects and train for facilitation.



# Welcome to Maker Camp!

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

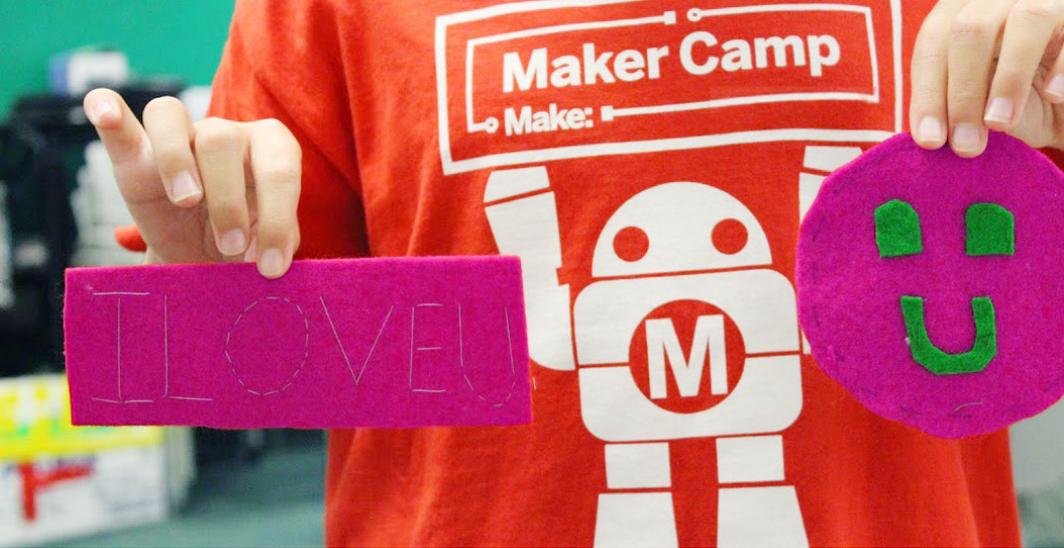
Get ready to take your campers on a great adventure deep into the friendly forests surrounding our imaginary camp. Via an online community and videos, Maker Camp includes project demos and opportunities to visit with Makers, Makerspaces, and places where wonderful things are made.

## What We Hope Kids Will Do During Maker Camp

- Try something new!
- Learn something new!
- Feel inspired to try out a lifestyle that celebrates and incorporates frequent making, crafting, and creating.
- Meet other campers at other sites.
- Share their projects with campers on the Maker Camp community page.
- Get comfortable using the web as a place to share, meet people, and hang out.
- Spend most of their time making and also playing outside: It's summer!
- Meet and interact with numerous Makers through conversation, demonstration, and hands-on interactions.

## What to Expect from Us

- Make the camp an all-around positive one for all participants.
- Show, teach, and play with campers as interactively as possible (on a large scale!)
- Convey a positive sense of the importance of following one's passion and becoming a Maker.
- Encourage kids to continue making!
- Support the goals of individual campsite facilitators.
- Maintain safety for all campers online and in the “real” world.
- Motivate each camper in his or her development of innate curiosity and love of learning in formal and informal settings as a way to grow as a creative Maker.
- Engage with campers and facilitators of all grades and backgrounds, treating all fairly and equally.



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 onramp for novice Makers, ages 8-12, 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 on our Camp Challenges 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 online and in person at affiliate sites like yours. Libraries, 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, Maker Media really wants 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 our success in this effort. Beyond growing the community, we want Maker Camp to be community-built, too, because we think that with all things the making is better when you do it together.

We have written this playbook for you, our Maker Camp Affiliate, to help you and your Maker 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.

**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 are likely already available in your home and/or organization (see the next few pages for lists), you may need to buy some. Mosey over to Maker Camp's trading post on Maker Shed [makershed.com/collections/maker-camp](http://makershed.com/collections/maker-camp) where we make it easy to order supplies for your camp program. We offer 10% off most products for all Maker Camp affiliates with checkout promo code CAMROCKS2015.

### **Prepare your computer(s.)**

Some Maker Camp projects will require software that may be new to you—and to your computers! Any computers your campers will use for 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! We explain daily projects in the hangouts, and we post instructions for every project.

**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.

**Connect with Local Makers.** Check out some of your community resources, especially any Makerspaces or hackerspaces near you. For this, it may be helpful to take a look at this blog post about finding local allies for your effort: [makezine.com/2014/11/25/makers-on-the-map/](http://makezine.com/2014/11/25/makers-on-the-map/)

### **Camp Kit**

Selected Maker Camp affiliates receive a starter box to get going with making. We've kept this year's selection simple and abundant, responding to prior years' feedback about what was most useful and what went unused.

Makey Makey

Strawbees Maker sets

Learn-to-Solder Pins

lots of LEDs

batteries (coin cell CR2032)

copper tape (for paper circuits)

paper motors

spectroscope filters

2+ issues of Make Magazine

3+ other books on making

2 Maker Camp T-Shirts

1 T-Shirt stencil

Promotional: Buttons, Stickers, Posters

## Things to Do Before Your Camp Begins

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.



- Decide how to get kids signed up to be a part of your camp.
- Figure out how you'll introduce the kids to one another each day.
- 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 webpage 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.
- Check makercamp.com and email regularly for updates.
- Using the goodies you got in your promo kit, set up incentives for your campers.
- Connect to other Maker Affiliate Sites like your own or which are nearby.
- Tell your colleagues (especially those who get incoming calls/emails, the front desk, and reception) what's happening so that they can answer questions about Maker Camp.
- 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)
  - Computers for your campers to use, if available.
  - Gather materials you'll need that don't come in the affiliate box. See the next page.
- Start making with your campers anytime you like!  
No need to wait for us.

# Who is a Maker?

We believe that everyone is a Maker. 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.

Here are some of the things we've noticed about Makers. We include them for your own understanding, but you might find it helpful and interesting to discuss some or all of these concepts with campers.



# 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, earplugs, 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.

To write your rules, adapt another set of rules to the idiosyncrasies of your setting. Add more as you go along. (Campers reveal new rules all the



time!) 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.

We go into these basic rules in greater detail in the Makerspace Playbook, available at [Makered.org](http://Makered.org).

# Gather Your Maker Materials

It's hard to make anything without having something to make with! Our projects this year have been selected to be interesting and challenging while also being cheap. Materials you'll need for the projects include:

## Big Stuff

- a computer
- a camera / camaphone
- kit contents, including MaKey MaKey

## Craft Store

- awl (or thick tapestry needle)
- balloons
- chalk
- clothespins
- construction paper (including black)
- craft sticks (popsicle and tongue depressors)
- cutting mat (optional)
- decor: rhinestones, baubles, beads, stickers, pipe cleaners, pom poms, tissue paper
- fabric paint
- felt: various colors
- glitter (for Galaxy Slime)
- glue: liquid and stick, white and clear
- hobby/craft knife
- hot glue gun with glue sticks (big and small)
- marbles, a bagful
- modelling clay
- needles and pins: various sizes
- rotary cutter (optional)
- ruler/yard stick
- safety pins
- ribbon: various weights and colors
- thread
- tweezers (optional)
- yarn: various colors

## Grocery Store

- aluminum foil
- bamboo skewers
- dry beans/rice/pebbles
- liquid starch
- liquid water colors or food coloring
- plastic wrap
- straws
- trash bags
- twist ties
- wooden chopsticks

## Office Supply Store

- binder clips
- bubble wrap
- cardboard: all sizes (XL to small scraps)
- hole punch (single)
- markers: misc colors
- paper clips
- paper: various sizes, weights, colors
- pencils
- rubber cement (or rosin if you have it)
- rubberbands: misc sizes
- scissors
- thumbtacks/pushpins
- stickers or labels that are at least 3"
- batteries (AA, coin cell)
- cardboard tubes: all sizes (paper towel, toilet paper, mailing, poster)

## Other

- emery board (with spongey core) from drug store
- LEDs (electronics store, if you don't have enough in the affiliate kit)
- mylar thermal blankets (optional, for Trashion; found online/sports)
- spectroscope filter (kit)
- Strawbees (kit)
- copper tape (kit)

## Hardware Store

- eye screws
- fishing line (8-12 lbs)
- handsaw
- magnets
- nails: long and thin
- pipe insulation foam scrap
- paint: spray, acrylic craft
- pliers
- power drill with misc bits
- PVC pipe: misc lengths
- safety goggles
- screwdrivers
- string
- twine
- tape: duct, scotch, masking, packing, electrical
- wood: misc sizes and shapes

## Reuse/Household

- stiff card stock (or bottom of milk/juice carton)
- books: for stacking
- bowls: glass or ceramic, misc sizes
- disposable bowls: paper, for mixing
- card table (for magnet maze game)
- dominos
- doo-dads and toys, assortment, small
- plastic bottles: misc. shapes and sizes
- t-shirts: misc. sizes and colors. logos ok.
- tin cans: coffee, soup

## The Hunt for Junk

Many materials best suited for making are abundant and free. Stock up using our golden checklist for scavenged materials: have the items on-hand for an “invention bin” or “idea box.” Some sites set up a collection box and ask co-workers and friends to contribute.

All items should be unused or very thoroughly rinsed, clean, nontoxic, non-brittle (e.g. no glass) usable, and pre-sorted. Ask your scavengers to keep them separated in bags and baggies so that you won't have to re-sort the items. Unsorted items may end up in the trash unused!

Use your common sense: items with no obvious problems (for example, chicken wire, broken glass, TV sets, blades, rusty hardware wouldn't be good). Also, if there is any text or images (like the paper and the CDs) make sure that it's all rated-G! If items have weird or obscure logos on them, though, that's OK!

These are items from a list that first appeared as a blog post on makezine that aren't covered in the list on the page to the left. They are very optional!



### PACKAGING

- Paperboard boxes (such as cereal), flattened
- Small gift boxes (no bigger than a shoe)
- Cigar boxes
- Strawberry baskets
- Mesh bags from onions, avocados, etc.
- RINSED plastic caps from juice / milk / soda bottles in many colors
- Metal bottle caps
- Corks
- RINSED 2-liter soda bottles
- Small styrofoam food trays (to sculpt into wings or printing blocks)
- Medium-sized styrofoam pieces that can be built upon (bigger than a golf ball, smaller than a cereal box)
- Plastic eggs (like those used at Easter)
- Film canisters (or test strip containers from a glucometer—aask diabetic for these)
- Milk crates

### PICNIC SUPPLIES

- Small plates (paper or plastic)
- Utensils
- Toothpicks
- Plastic sheets

### CRAFTS & SEWING

- Dowels
- Bedsheet (any size) you've been meaning to get rid of.
- Fabric (swatches / scraps)
- Feathers
- Buttons
- Googly eyes

### OFFICE / SCHOOL SUPPLIES

- CDs and DVDs (duds / junk mail)
- Foam core (print shops often have misprints to donate)
- Whole, non-creased, pieces of paper that you were going to throw into the recycling bin (any color)
- Pens, sharpies, etc. (working)

### ELECTRONICS

- printers are especially popular for their many re-usable parts: fans, motors, etc.
- toys for circuit bending

### MISCELLANEOUS

- Old trophies
- Unwanted color Kodak slides
- Other evocative objects for crafty projects, but not too weird and unusable (“no dumping!”)
- Any decorative or buildable materials you have lying around in somewhat large amounts that you're not using, but that you think would be good for experimenting with

# SCAVENGE YOUR NEIGHBORHOOD!

LOOK AROUND! YOUR NEIGHBORHOOD CAN BE A TREASURE TROVE OF GREAT MATERIALS AND TOOLS FOR MAKING.

## CURBSIDE FREEBIES

Even though some of it can be tricky to snag when you're out on your bike, you'll want to find a way to carry the occasional piece of lumber or discarded electronics back to your home base.

## CONSTRUCTION SITE

No need to hop the fence after hours — the site foreman will gladly unload unwanted lumber, foam board, and other random bits and pieces. Just ask nicely.

## GARAGE SALE

Need a hammer and some nails? How about someone's stash of practically new craft supplies? Just remember to haggle — these sellers are trying to get rid of their old junk, and they want you to take it away!

## THRIFT SHOP

Grab your coin jar and spend your pennies on how-to books, tools, and cheap electronic gadgetry. You'll find aisles and aisles of value.

## SURPLUS STORE

Where else are you gonna find a box of turbo-encabulators with pre-fabulated amulite, surmounted by a malleable logarithmic casing whose two spurving bearings are in a direct line with the pentametric fan? Only at Colonel Scratchy's Military and Scientific Junk Emporium!

## DUMPSTER

One man's trash is another man's treasure. Get permission from the owner before diving in for cardboard boxes and wooden pallets, and always keep a sharp eye out for rats and rusty nails. Yuck!

# Keep Things “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:



**Maker Camp is mobile! Go outside!**

- Get outside, or bring the outside in. Take advantage of WiFi and long Ethernet cables. Collect natural materials to have on hand and add ambience. 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 schwag.
- 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 singalongs while campers work on their projects. Check out our playlist in the post “Maker Camp Singalong.”
- Mail call: We enjoy hearing from you if your campers are moved to write. Letters bring warm feelings to the entire Maker community.

**Share your ideas for camping it up on our community, linked to [makercamp.com](http://makercamp.com).**

## What is Camp?

What things we can 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)
- acculturation (belonging, wanting to come back)

# Get on Our Maker Camp Playlist

We want YOU to be a visible part of our Maker Camp videos. Contact [makercamp@makercamp.com](mailto:makercamp@makercamp.com) to have your site's work featured on screen during camp. Here are some guidelines to make your appearance is the best it can be!

## Setup

Frame yourself well on screen. Wherever you film, be intentional about what's behind you! Choose a simple background or an interesting one. Your background should add to your video, not detract attention from what's happening. If there is too much going on behind you, it might be difficult for your audience to focus on what you are trying to share.

For step-by-step demos, shoot the steps on a plain background that contrasts with your tools and materials. A plain white piece of butcher paper or brown "kraft" paper works well on surfaces with too much detail. Showing hands, especially kid hands, in the shot is great!

Make sure you verbally explain what you are doing as well as demonstrating it clearly with your hands. Text can identify your tools and materials to help those who are trying to follow along with what you're doing.

## Video Editing Software

iMovie

Windows Movie Maker

## Cameras

Smartphone cameras (not the best quality. It can work if you light the recording area well.)

GoPro

Digital video cameras

## Microphones

Good sound transforms an okay video into one that's over-the-top awesome. Record in a quiet area with minimal background noise. Or record a voiceover later in a quiet space or improvised sound booth.

### *Shotgun mic*

- Its directional recording area extends pretty far
- Good for recording specific sounds and ignoring other sounds in the room
- Commonly used on set to record TV shows and movies

### *Condenser mic*

- Often used for recording voiceovers
- Picks up very clean, crisp audio for voices
- Downside: you must buy a preamp to plug in and record on your computer

### *Zoom handy recorder*

- Self-contained recorder
- Has two mics
- Very good for picking up all the sounds in a specific area
- Clean audio with not a lot of background noise
- Using a shield on the mic helps dampen the effect of the wind



## Video Production Checklist

- Make sure the kids and adults who appear in your video have signed release forms.
- Check whether your camera and/or microphone are working properly. You don't want to record a video and miss out on all the sound!
- Minimize sound pollution as possible. Keep good sounds in, bad sounds out.
- If you add a soundtrack, make sure your music and sound effects are in the clear legally. (You don't want your video to be removed by the copyright cops!)
- Stay visible. Be sure the space you're recording in is well lit so that everything you are doing is clearly seen on screen.
- Set up lamps or other lighting as necessary. Avoid having a window or other light source behind you, as this will darken your face or make you into a silhouette.
- Practice a few times in front of the camera so you feel comfortable when you're recording yourself. Taking lots of takes and hoping you'll edit out all your mistakes will make your production harder. Keep things simple: it's easiest to just record and share your video.
- After you hit record, make sure to take a brief pause before speaking. Make sure to speak clearly and slowly so that everything you say is easy to understand.

# Affiliate Sites

Affiliate sites are physical places where campers can join their peers and participate in Maker Camp at a physical location such as a library, Makerspace, museum, summer school or program, camp, club, or family.

Affiliates provide a great experience in making for kids. Some of these live, physical camps run by our Affiliates align consistently with the online Maker Camp programming, others departed significantly from our suggestions, and that's just fine. We are most interested in getting more kids making. In 2014 Maker Camp expanded to nearly 500 affiliate sites in all 50 states and over 25 countries, and interest and involvement continues to grow. Maker Media provides this Maker Camp Playbook with suggested "curriculum" for each week and a starter box of some of the tools and materials needed to complete the recommended projects.

We post materials lists in advance. You'll have time to gather the supplies you'll need for the next day's project.

The Maker Camp website includes a mapping tool to help campers find local affiliates in their community.



## We ask Affiliates to:

- Actively participate over the 6 weeks.
- Post videos, photos, comments of projects, and the overall experience.
- Provide feedback, comments, input about what works, what doesn't.
- Send an aggregate profile of their campers at their location (ages, gender, and photos.)
- Offer camp available to all free of charge, or for a reasonably low fee no greater than a non-profit camp.

## We may ask some Affiliates to:

- Participate in a post-Maker Camp focus group.
- Be willing and available to speak with press and other media.

We've started a separate community to discuss the successes as well as the trials and tribulations of leading camp. Check us out at [bit.ly/1BiReml](http://bit.ly/1BiReml) (that last letter is a lowercase L)

## Project Tips from Fellow Affiliates

We learned so much from reading the responses to the survey at the end of Maker Camp 2014. We share, below, 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”

“By letting the kids roll with ideas and use journals to write down or draw the thought process they were having—it led to so many different projects.”

“As we got more comfortable with some of the projects it became easier and we started doing stations for certain projects so we could provide more guidance in smaller groups.”

“If possible, let your campers take home the projects they work on at your site and continue exploring/ expanding on their creations at home. Keep in mind that some kids have more resources at home and with the help of their parents, they're able to do some more sophisticated projects. Keep your learning environment encouraging so that these differences aren't so readily apparent.”

**Libraries can display related books during sessions.**



# Maker Camp Projects Preview

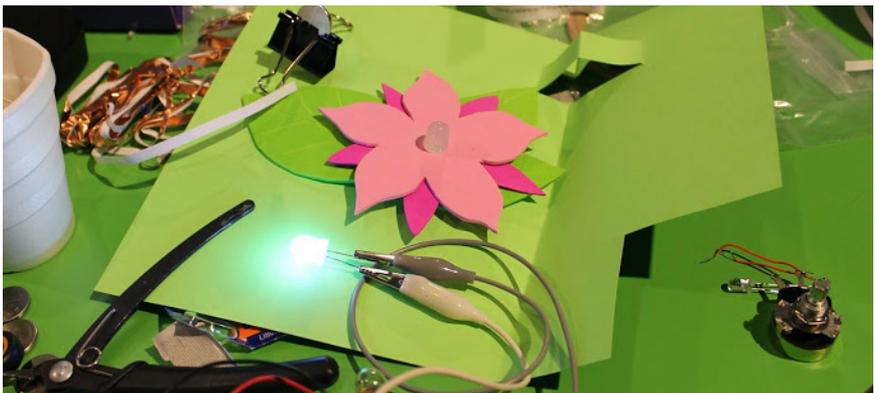
Maker Camp is evolving and improvisational. We've chosen projects for each week connected to the six "F" abulous themes: Fantasy, Funkytown, Farmstead, Fun & Games, Flight, Far-Out Future. We expect our "recommended projects" are relatively simple for Affiliates to lead and have easy-to-find materials. These will all have step-by-step project videos. The "additional suggestions" below came in from your fellow affiliates, who added projects to their lineup—ones they developed or found and which worked well with their campers.

**Find links to all projects suggested in this playbook here:**

**[makercamp.com/affiliate-program/info](http://makercamp.com/affiliate-program/info)**

**Please do not share this list with the general Maker Camp community. Hearing news of the next daily project is exciting for our maker campers, so please help us maintain that shared experience in our online community. We share projects with the affiliates early to allow more time for you to prepare for the groups of campers who come to your site.**

As you do these projects, take video and photos along the way to capture the process. We'd love to share your story of making. For projects we haven't yet featured on Maker Camp or makezine.com, we'd gladly develop your "research" efforts into an official project in future iterations of Maker Camp!





# Fantasy

July 6–10

Make:believe with the magic behind the movies, ending with a **Maker Camp Film Fest**. This week's theme fits in especially well with the summer reading programs sponsored by the Collaborative Summer Library Program (CSLP): Every Hero Has a Story, Unmask, and Escape the Ordinary.

## recommended projects

- Sketchbooks
- Quick Costumes
- Giant Cardboard Masks
- Full-Body Stop Motion Animation

## additional suggestions

- Animated GIFs
- Flip Books
- Scratch Animations
- Special Effects
- Movie Makeup (zombies, wounds)
- Props and costumes with the Peanut Butter Jar Vacuum Former
- Video Games with Scratch or Sploder
- Duct Tape Double (1-2-3)
- Puppets (finger, sock, or marionettes)

# Funkytown

July 13–17

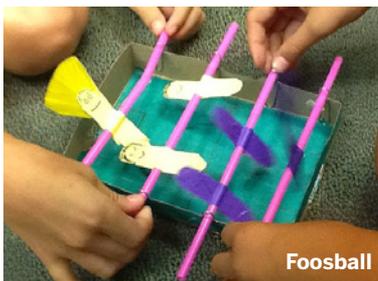
Make some instruments, then make some noise in the **Maker Camp Battle of the Bands** or Maker Camp Summer Concert.

## recommended projects

- Rain Stick
- Wind (Slide Whistle / Stick Kazoo)
- Percussion (Balloon Drum / Matraca)
- String (Canjo / String Bow)
- MaKey MaKey instruments (like Banana Piano)

## additional suggestions

- Cigar Box Guitar
- Cardboard Guitar
- Shrink-Wrap Guitar
- Taiko Drums
- Glove-a-phones
- Thumb Piano
- Theremin
- Turkey Baster Flute
- Metal Conduit Xylophone
- Torsion Drum
- Cardboard Box Autoharp
- Paper Clip Record Player (1-2-3)



## Farmstead

July 20–24

Maker Camp hosts **Hack the Hoedown** with sustainable energy, food, architecture, and craft that bridge across centuries.

### recommended projects

- Pinwheels (and Windcatchers)
- Paper Weaving
- Geodesic Dome
- Solar-Powered Oven

### additional suggestions

- Shake Ice Cream
- T-Shirt Yarn or Laptop Case (1-2-3)
- Hula-Hoop Rug
- Spaghetti Towers
- Global Cardboard Challenge
- MakeDo Cardboard Tips
- Seed Balls
- Needlefelting
- Clay Bowls
- Stamping Wood/Metal/Leather
- Giant Knitting /Finger Knitting
- Knot Tying
- Sunprints
- Butter in a Jar
- Gardening / Planting

## Fun & Games

July 27–31

Roll out the fun with games you make yourself, then challenge your friends with a **Maker Camp Cardboard Carnival**.

### recommended projects

- Marble Run Roller Coaster
- Chain Reactions
- Cardboard Automata
- MaKey MaKey Magnetic Maze

### additional suggestions

- Marshmallow Launcher
- Hydraulic Judobots
- Squishy Circuits
- Critter Capsule
- BrushBots
- Spin Art
- Balloon Animals (or floating sculpture)
- Action Root Beer Pong (1-2-3)
- Popsicle Stick "Bomb"
- Mini Golf Course
- MaKey MaKey Game Controllers
- Custom Operation Game
- Shaun the Sheep Coding
- Board Game Design
- Domino Runs



## Flight

August 3–7

Take off in this make-off of all things that zip and zoom above our heads, culminating in the Flights of Fancy / **Maker Camp Air Show**.

### recommended projects

Paper Airplane & Launcher  
Cloud Trolley  
Kite Lab  
Rip Cord Chopper

### additional suggestions

Bullet Kites  
Marshmallow Launcher  
Staple Remover Catapult  
Fizzy Rockets  
Stomp rockets (even cheaper: Milk Jug Rocket Launcher or Puff Rocket)  
Compressed Air Rockets  
Wind Tubes  
Catapults, Trebuchets, Slingshots  
Shoemerang with Strawbees  
Boomerang (1-2-3)  
Paper Water Bomber (1-2-3)  
Parachute  
Paper Helicopter / Egg Drop Target

## Far-Out Future

August 10–14

Step into the future with personal fab projects using new materials, and strut your shiny stuff in Maker Camp's **Far-Out Fashion Show**.

### recommended projects

Trashion  
Lightup Origami Hat  
Rainbow Spectroscope  
Galaxy Slime

### additional suggestions

Cosmic Couture  
Paper Circuits  
LED Flower Bracelet, Shoes, Books  
Binder Clip Bling  
Wearables Kits  
Robotic / Animatronic hands  
Mechanical Finger  
BrushBots  
Artbot  
Oobleck (run on it, put it on a speaker)  
PET Bottle Purse (1-2-3)  
Shrinky Dinks  
Squishy Circuits

all linked on [makercamp.com/affiliate-program/info](http://makercamp.com/affiliate-program/info)

# Anytime Projects

## Great projects that don't fit into our 2015 themes...

Remember you are welcome to do any making activity 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.

First, try any of the "Suggested" projects under the weekly themes on the previous four pages. Then, consider some of these, sampled from favorites 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

- 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 videogame 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 online to see if you can learn more about these places. Schedule a tour at a chocolate factory, bakery, or other local Maker/manufacturer. Relive any of Maker Camp's 20+ field trips in our archive.
- 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 online. 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 & electronics from garage sales & 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 and 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 needlefelted objects. Learn to knit or crochet.
- Explore Steampunk.
- Make a robot, with or without electronics—cardboard + foil = fun!
- Combine art and science in STEAMY projects. Make an artbot, draw or paint with a pendulum. Grow rock candy or crystal gardens. Make a lava lamp. Build tops. Build a top around a felt-tipped pen.
- Manufacture 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, suminagashi)
- Coat a wall with phosphorescent paint.

- Draw patterns, like hypotrochoids (also known as spirographs), or build a giant spirograph generator with chalk and wheels.
- Take a trip to the toy store. Leave it empty-handed, with your head full of ideas for things you can make yourself.
- 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. For example: How would you make a giant snail? Could you attach it to a wheelbarrow, scooter, bike, or some willing adult's car?
- 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.
- Dig into the Garden. Grow your own food. Plant some seeds. Train a timelapse camera on your sprouts.
- Eat, Drink, and 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. Visit your local Makerspace or hackerspace.
- Power to the People! Convert a device to solar power. Power a blender by pedaling a bike.
- Get Rollin'. Remove a wheel from or add a wheel to something. Customize your bike. Put PoV LEDs on your spokes. Add noiseMakers: horns, bells, or a muffler. Top your noggin with a unihorn 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.



# Past Season's Projects

This is our fourth year of running Maker Camp. While the format has changed significantly, the projects we've featured in past camp seasons work well with many kids and are fully documented on [makezine.com](http://makezine.com) with step-by-step project guides.

2012	2013		2014
Animated GIFs	Balloon Blimp	Origami Ball	Arduino Theremin
Arduino Drum Pad Game	Banana Piano	Panjolele Cake Pan Ukulele	Audio Playbooth
Baking soda & vinegar rocket	Beating Heart Headband	Peanut Butter Jar Vacuum Former	Balance Board
Bling	Beetlebots	Pedal Phone Charger	Blocky Labyrinth
Board Game Creation	Bike Tail Pipe	Phenakistoscope	Custom Operation Game
Bookbinding	Build a Vibrobot	Print your head in 3D	Duster Bot
Coke Mentos Rocket Car	Cereal Box Robot	RC Watermelon Boat	Festo Fin Gripper
Compressed Air Launcher	Chladni Plates	Raspberry Pi	Found Sound
Electric Origami	CoffeeBot	Repeat After Me Memory Game	Hydraulics with Heron Fountain
Hardware Jewelry	Cyborg Yourself	Robot keychain	Makey Makey Dance Dip Revolution
Homemade Terrarium	Dice Popper	Rocket-Propelled Toy Car	Milk Jug Rocket Launcher
Junk Art Robots	Diddley Bow Guitar	Rope Bracelets	Milk Plastic
Kryptonite Candy	Digital Flipbook	Silk Screening	Mini Foosball Game
LED Throwie	Extreme LED Throwies	Smartphone Gaming Controller	Paper Animatronics
Marbled Paper	Folding Wing Glider	Solar Xylophone	Piezo Contact Mic
Marshmallow Cannon	Full-Body Stop Motion Animation	Sound-O-Light Speakers	Recycled Kaleidoscope
Mold Making	Giant Spin Art	Speed Vest	Shadow Puppet Theater
Needle Towers	Kitchen Floor Vacuum Former	Squishy Circuits	Shake Ice Cream
Polymer Clay	Kitty Twitty	Thumb Piano	Stroboscope
Potato Cannon	Learn to Solder	Touchless Tracking Interface	Toy Hacks with Sugru
Robot Bird	LED Color Organ	Toy Car Launcher	Zombie makeup
Rope Fun	LED Hula Hoop	Two Liter Motor Boat	
Squishy Circuits	Lego USB Flash	Unihorn Bike Helmet	
Stop Motion	Light up Wearables	Weathering Effects	
Vinegar and Baking Soda Rocket	Magic Photo Cube	Wind Triggered Lantern	
Woven Map Basket	Magic Wand	Yellow Drum Machine	
	MonoBox Powered Speaker		
	Musical Glove		

# Finding New Projects

At the end of last season, we asked affiliates where they got their alternate ideas when they added extra projects to their lineup.

Affiliates got additional project ideas using sources like: the Make website, the book "The Best of Instructables", past Make magazine issues (we've sent you a digital access code to our archive!), Howtoons, RAFT Bay Area, local museums, Thingiverse, Make It At Your Library, Science Buddies, DIY, Instructables, and by browsing Pinterest.

We'd love to share your successful projects with future camps.

Ideal projects should have many of the following characteristics:

- small / quick / fun
- cheap or free materials, or using reusable elements
- easy-to-get materials
- "the real thing" (not models of some other thing; not flimsy or otherwise unsatisfying)
- easy to do step-by-step, with some experimentation built in along the way (allows for open exploration)
- outcomes differ (kids see and know how they made it uniquely theirs)
- opens up to further, deeper activities
- lends itself to some exhibition or display or other way to share
- pushes beyond the expected, has some kind of Maker twist
- falls within our age range (mostly 8–12)
- allows individual expression and/or whole-group-collaborative
- gender neutral / inclusive
- safe — relatively speaking :)
- easy for new / inexperienced facilitators to lead
- works well in large groups, i.e. higher camper-to-facilitator ratio



Or, imagined another way:

<b>C</b>	Collaborative Community-Building
<b>A</b>	Adjustable to All Ages and Aptitudes
<b>M</b>	Materials that are easy-to-find
<b>P</b>	Playful Pushing beyond the Expected
<b>F</b>	Fun + Fast Free (or cheap)
<b>I</b>	Individual Inclusive
<b>R</b>	Range of Outcomes the "Real Thing"
<b>E</b>	Easy to Do Exhibition
<b>S</b>	Shareable Safe



The [makezine.com](http://makezine.com) blog series has helpful links.

- Mapping New Makers' Learning Paths
- Finding Starter Projects (series)
  - for New Makers
    - (Part 1: Make and friends)
    - (Part 2: project databases)
  - Free Software for Making
  - Project Sets
  - Deadline-Driven Design
  - Deep Dives
  - Teacher to Teacher

The non-profit Maker Education Initiative ([makered.org](http://makered.org)) has a very helpful resource library.

You know your camper audience best. Follow your hunch about which projects that will work well, and avoid those that you guess will flop.

Make sure the projects are age-appropriate (not too difficult for the younger kids or too easy for the older ones.)

Your fellow affiliates advise:

- Decide what level of knowledge of programming or circuits is within reach of your kids.
- Make sure you have enough materials for the amount of kids you expect.
- Novice Makers sometimes struggle with projects that require following precise instructions/measurements.
- When you demo, nurture creativity by providing more than one model for possible outcomes. A single model may stifle creativity.
- Cardboard-based projects are a hit!



# Snapshots: Maker Camp in Action

We asked a few of our sites to describe what a typical day and season looked like for them. We've shared these below.

## **Piscataway (NJ) Public Library**

*by Doug Baldwin, Emerging Technologies Librarian*

We get a significant grant for our program. The stipulations of the grant guide a lot of how we run our summer camp. In April, we hire our Maker coach for the summer, and she will be here doing 24 projects over an 8-week period. The projects are delineated into two tracks (12 projects for those in grades 3–6, and 12 for those in grades 7–12.)

This year our camp will run from June 22nd to August 14th. We organize our 8-week program as three sessions a week (Monday, Tuesday, and Thursday), where each session runs 2–4pm and features a single and different making project. The projects themselves are pre-chosen by us back in October since we have to submit all our projects and a line item budget for those projects to the grant funders as part of the grant renewal application. We knew which projects we are doing in the spring and ordered the supplies back then.

During each session, the Maker coach leads the kids/teens through the project with one of us on the summer camp team serving as an assistant to the coach. If projects run over, or more time is needed we provide open hours in our library Makerspace where they can come outside of the project time and work additionally on these projects. What we have seen is not only do they come back to complete uncompleted projects, but they come back looking to try something

different, modify it, or just try something different and crazy — all of which we obviously highly encourage.

Due to the overwhelming response we got last year, and the anticipated response we expect this year (both on the heels of last year's success coupled with our planning and participating in the first NJ Makers Day) we do have to use a registration system for our program since we provide all the supplies and want to serve as many of those kids/teens as possible. There is that part of me that would love to see it be a more open, drop-in type of format, but the parameters we work under with the funding makes that hard to do.

I might try to have a day that is more open and drop-in that might align more with the Maker Camp program design and get the best of both worlds

## **Neighborhood Camp in Arizona**

*by Julie Hudy, Maker Mom*

Every day, we took a look at what Maker Camp had to offer and decided as a group whether we were interested in making that day. We didn't have a lot of days when the campers didn't want to make that day's activities, but it did happen. Those days we went back to projects they either didn't finish or wanted to delve deeper into. Our campers had just gone to their first Maker Faire Bay Area. They were a group of new Makers. New Makers want to Make EVERYTHING they can as fast as they can. I want to make that, I want to make that... I called it

"make-vomit", which sounds gross, but it's really a great thing—I had to reel them back in a bit. Let's start easy and progress. I met this family a year ago. They had been following my son Joey's story and wanted to meet him. Turns out they live in our community. We started hanging out, and I used my power of persuasion to get them to Maker Faire Bay Area, and then at World Maker Faire in New York they displayed a project. They are full-speed ahead on making, so much so that they had to change a room in their house into a Make Room. Kids that are interested—and don't know they are—will take off!!

## Georgetown DC Public Library

*by Stacy Paull, Library Associate*

Each Maker Camp program is 2 hours long. Some projects are individual, some are group builds.

Steps 1, 2 and 3 usually only take 15-20 minutes:

- I start by telling the kids what we are doing that day.
- I explain or show, if I can, any scientific principles we will be using (for example: an electrical circuit.)
- I pass out or explain instructions for the project. This is the time we might watch a streaming or archived Maker Camp video, if the project matches what we are doing. Most of those projects were above our level in 2014, so this was infrequent.

For an hour:

- I give the kids time to work together to complete the task.

The rest of the time:

- The kids either use their complete thing in a competition: for example cars, airplanes, egg drop, Foosball tournament, Operation game tournament, who can play "Twinkle,

Twinkle, Little Star" the best, etc.

- If it is not the kind of project that lends itself to a competition, like library dominoes, some science experiments or art projects I give the kids an iPad or phone to make a little documentary about what they have created and how it works.
- Or if that is not appropriate, each kid presents their work to the other kids for viewing—for example, some arts and crafts projects or stop-motion videos.

Then, we finish. Some days we all finish together, and on others people leave whenever they finish their project. Sometimes this is a little early, sometimes a little late. Sometimes we don't get to the fifth step of sharing. Because we are in a library setting, kids can leave the program when they want. (All children are allowed to be in the library alone over the age of 8.) They just hang out in the children's room and read, use the computer, play board games, or attend another program, or just go home with their parent.

I upload the pictures or videos from the program after the program has ended. During programs, I encourage kids to go on the Maker Camp page at home to check out what we and other camps are doing.

On days that I am not sure the project will take the entire 2 hours, or for some reason whatever we are doing just does not work out, I have another project ready to go, and we do two projects that day.

On Fridays, some kids came to the library to watch the field trip if they wanted. These were sparsely attended events, but they may have just watched them at home.

# Maker 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 community, currently hosted on Google+.

## [bit.ly/makercampcommunity](http://bit.ly/makercampcommunity)

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.



### Making an account & page

1. Go to [plus.google.com](http://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. Welcome people to your page with your first post.
  7. Add +Make to your Circles by clicking on the red "Follow" button.  
<https://plus.google.com/+Make>
  8. Add +Maker Camp community to your Circles by clicking on the "Join community" button.  
[bit.ly/makercampcommunity](http://bit.ly/makercampcommunity)



## IMPORTANT!

As with all online 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.

## 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.

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.

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 farflung Affiliate Site. An easy way to do this is to arrange a time for a one-on-one "cabin-to-cabin" Hangout using Google+.

# 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](http://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.



# A Message for Campers and You



This is a note from Dale Dougherty, the founder of Maker Media, the company that produces Maker Camp, **Make:** magazine, Maker Faire and Maker Shed. He is also Chairman of the Maker Education Initiative ([makered.org](http://makered.org)).

Camping has long been a tradition of summer that calls us to explore the outdoors, engage in fun activities and make new friends. Camping is a break from what we normally do in the course of the year. It can offer the chance to do something we've never done before. Overnight camps usually involve staying in cabins and gathering round campfires. Day camps are a more recent development, often featuring a special area of interest such as chess, computers, robotics or sports. Yet, no matter what kind of camp it is, or where it takes place, camp has to be fun and social.

Maker Camp is a whole new kind of camp, an online summer camp that is open to everyone. Maker Camp takes place wherever you are. You can do activities and share them with others. It is fun and feeds your imagination.

This is our fourth year for Maker Camp. Like last year, Maker Camp will introduce a new project every day—dozens of projects over six weeks. You'll meet Makers who create amazing things. You'll visit new places that few of us get to see. But this year's Maker Camp will be even better. The Maker Camp community makes it easy for you to participate and see what other campers are doing. We also have a much larger and more international network of affiliate camps, where campers are getting together in libraries, clubs, and Makerspaces.

Maker Camp hopes to foster the DIY (do-it-yourself) spirit. We want each camper to see how much there is that you can do and how much there is to explore all around you. Once you begin doing things, you meet others who share your interests, and you can collaborate to work on projects together. We call that DIT (do-it-together.) In fact, when Maker Camp comes to an end, you can extend the relationships beyond summer.

Maker Camp might not be located in a place surrounded by trees or near a lake. Yet it has many of the wonderful features of camping that will help you supercharge your summer. For instance, you might consider that the campfire is your computer. At Maker Camp, you will find an active, supportive community who get together to share their experiences. What each of us can do is pretty amazing yet what we can do together is even more amazing. Join us at Maker Camp to see for yourself.

— Dale Dougherty

## Maker Camp 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 online 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.



With lively, daily videos, fun projects, and an active online community, there's no shortage of ways to participate! We ask affiliates to do just a few things:

- Share videos, photos, comments of projects, experience.
- Provide feedback, comments, input about what works, what doesn't.
- Share aggregate data (non-individualized ages, gender of campers.)
- Be available and willing to speak with press / media about your campers' participation.

If you have questions at any time please don't hesitate to contact us at [makercamp@makercamp.com](mailto:makercamp@makercamp.com)

### 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's theme, 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 slideshows (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 & 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 webpage 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 slideshow. When posting images or video, license them as Creative Commons, and then post on the Maker Camp community, and email the link to [makercampinfo@makermedia.com](mailto:makercampinfo@makermedia.com).

## 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 Playbook 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 [makercampinfo@makermedia.com](mailto:makercampinfo@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](http://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.

## Share camper projects & ideas

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 community!

### 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, Maker Club, Makerspace

Build on your campers' interest and excitement for Maker Camp by starting a Maker Club or a Makerspace. Educators use our Makerspace and Maker Club playbooks to kick-start their effort. These three posts adapted from the Makerspace playbook can get you started.

- Funding School Makerspaces
- Safety in School Makerspaces
- Stocking up School Makerspaces

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.

Schools have started their own Makerspaces and Maker Clubs after participating in Maker Camp. A few used the sessions to launch a season of making that culminated in exhibiting at their local Maker Faire. New for this year, you can even start a School Maker Faire if your site is a school or youth-serving organization.

Contact us

[makercamp@makermedia.com](mailto:makercamp@makermedia.com)

# More from Maker Media

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! [youngmakers.org](http://youngmakers.org)

## Go to Maker Faire.

Events happen year-round and worldwide! Bring your kids to a flagship, featured, or mini event! [makerfaire.com](http://makerfaire.com)

## 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! [makerfaire.com/school](http://makerfaire.com/school)

## Read Make:

Each issue has dozens of projects like the ones you made in camp, and beyond. [makezine.com](http://makezine.com)

## Stay connected.

Makers like you share great project ideas, features, reviews, and more every day. [makezine.com](http://makezine.com)

## Explore Maker Shed.

The coolest, nerdiest bookstore, arts & crafts shop, electronics store, and more — all in one. We've got kits, sets, tools, and supplies. [makershed.com](http://makershed.com)



**Note: Use [makershed.com/collections/maker-camp](http://makershed.com/collections/maker-camp) where we make it easy to order supplies for your camp program. We offer 10% off most products for all Maker Camp affiliates with checkout promo code **CAMPROCKS2015**.**

# Fast Facts about Maker Camp

Theme	Week	Projects
<b>Fantasy</b> 	July 6–10	<i>characters, costumes, masks, animation</i>
<b>Funkytown</b> 	July 13–17	<i>instruments: percussion, wind, string, digital</i>
<b>Farmstead</b> 	July 20–24	<i>sustainable energy, food, architecture</i>
<b>Fun &amp; Games</b> 	July 27–31	<i>roller coasters, marble mazes, carnival</i>
<b>Flight</b> 	Aug. 3–7	<i>planes, launchers, kites, highwire</i>
<b>Far-Out Future</b> 	Aug. 10–14	<i>circuits, bots, crazy fashion, goo, plastics</i>

**Contact us:** [makercamp@makermedia.com](mailto:makercamp@makermedia.com)

[makercamp.com](http://makercamp.com)

[bit.ly/makercampcommunity](http://bit.ly/makercampcommunity)

[makercamp.com/affiliate-program/info](http://makercamp.com/affiliate-program/info)

Maker Camp is a camp for kids, both online and in your neighborhood that runs July 6th–August 14th. Our six weeks feature how-to project instruction, inspiring Maker profiles and interviews, skillbuilders, and epic field trips. Started in 2012, over a million campers from around the world added **Make:** to their circles and attended Maker Camp —then shared their experiences with other campers on the Maker Camp community. This year features all-new projects and Maker adventures.

## **Maker Camp is free for everyone online.**

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 online, and it's free!

