

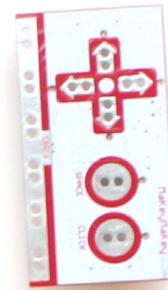
Family Creative Learning

FACILITATOR GUIDE

familycreativelearning.org

June 2017





THIS GUIDE BELONGS TO:



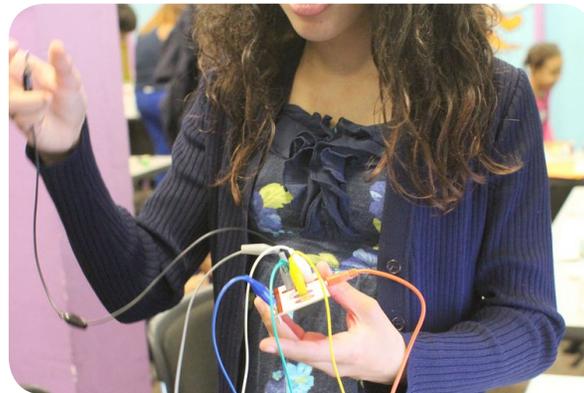
What is Family Creative Learning?

Family Creative Learning is a workshop series that engages children and their parents to learn together—as designers and inventors—through the use of creative technologies. We designed these workshops to strengthen the social support and expertise of families with limited access to resources and experiences around computing.



Learning Together

As they create projects together, families learn how to support one another in their learning from asking questions, giving feedback, and persevering through challenges.



Engaging in Making

Children and their parents engage in design-based activities using creative technologies, like Scratch and MaKey MaKey, to create their own personally meaningful projects.



Building Connections

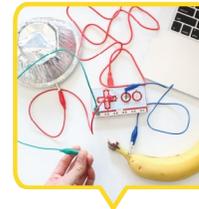
Children and their parents build relationships with facilitators and other families in their community by sharing meals, engaging in inter-family activities, and sharing their projects.

How does Family Creative Learning work?

There are five two-hour long workshops across five weeks.

Families design and invent their own projects using Scratch and MaKey MaKey technologies.

Day 1	Scratch basics	Building on creating an...
Day 2	MaKey MaKey	Learning w/ others
Day 3	Brainstorming projects	Being creat...
Day 4	Creating Family Projects	Working to...
Day 5	Community WCA	Sharing...



Whole families with children, primarily 7-12 years old, are invited to workshops.



At the end of the workshop series, families have both learned to create their own technologies and have access to a supportive network of people in their community.



Each workshop is divided into four parts: Eat, Meet, Make, and Share.



Workshops feel like big holiday dinners: They center around food and family and include times when children and parents are together and separate, but everyone contributes.

Why Families, Creativity, and Learning?

Everyone Can Play a Role

With technology permeating so many aspects of our lives, parents wonder what they can do to support their children. We want parents to see the kinds of roles they can play from providing encouragement, asking questions, and giving feedback as they work on projects together. At the same time, because children are curious and savvy with technology, children can also play roles supporting their families to learn new things about technologies.

Learning by Creating

We believe learning happens best when people are designing and inventing projects that they care about. As they design and build projects, they also develop interests, generate ideas, and overcome challenges. And when using Scratch and MaKey MaKey, families learn to think creatively and computationally as they express their ideas and design their projects. In our workshop activities, the process of building the project is just as important as the product.

Building a Learning Community

Learning doesn't happen in isolation and neither does this workshop series. The workshops are all designed to support community learning and connecting within and across families. Ultimately, by better strengthening relationships between community center staff, volunteers, and families, this program aims to build a community of learning to support the development of young people and their families as creative thinkers and inventors.

Why Engage Families in Creating and Expressing Themselves with Computing?



Technology increasingly mediates the ways in which we connect, work, and learn. Rather than using and interacting with technology alone, such as playing video games and watching videos, young people can make their own technology—leveraging computing by programming or building their own applications and digital media that they and others can interact with.

As they build their own computational creations, they learn to think computationally. To program their projects, they must learn to break down complex ideas into simpler ones, problem solve, and reuse and build on top of other's ideas. These are ideas and practices that are relevant beyond computing and can be useful to everyone.

And when they design projects, they can develop perspectives and understandings about the world they live in—when they design and invent, they start to see that the world is also designed and can become critical of it. More importantly, they can start to see themselves as designers and creators of their world. See page 15 to learn more about what else families are learning.

About the guide

This guide is for educators, community center staff, and volunteers interested in engaging their young people and their families to become designers and inventors in their community. In this guide, you will find our design rationale for the overall program framework as well as our documentation to illustrate how we implemented the program. We understand that every community is different and we encourage you to adapt and remix this program. The guide is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

About the team

This guide is written and designed by Ricarose Roque and Saskia Leggett. The guide reflects numerous Family Creative Learning workshops led by Ricarose Roque, who is an assistant professor at the University of Colorado Boulder. She started this project as part of her graduate work at the Lifelong Kindergarten research group at the MIT Media Lab. These workshops were implemented in partnership with Franklin Onuoha and other community partners from the South Boston Computer Clubhouse and the Joseph M. Tierney Learning Center. The design thinking has significant contributions from Luisa Beck, Xiaodi Chen, Saskia Leggett, Karina Lin, Richard Liuzzi, Rupal Jain, Ana Medina, Erica Rabner, Cindy Yang, and Nicholas Giacobbe with guidance by Mitchel Resnick and Natalie Rusk. Jaimie Chung, Noalee Harel, Saskia Leggett, Brian Keegan, Abdulrahman Ibidi, Cindy Yang, and Anthony Vazquez captured the photos throughout this guide. Mike Petrich and Karen Wilkinson gave feedback on an early draft. Michelle Chung contributed to our conversations around the role of documentation. We want to thank our many community partners and volunteers who facilitated these workshops and, especially, the families who ate, met, made, and shared with us.



in this guide

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Imagining

What will your experience look like?

First things first

Take a moment to answer these questions before you dive in!

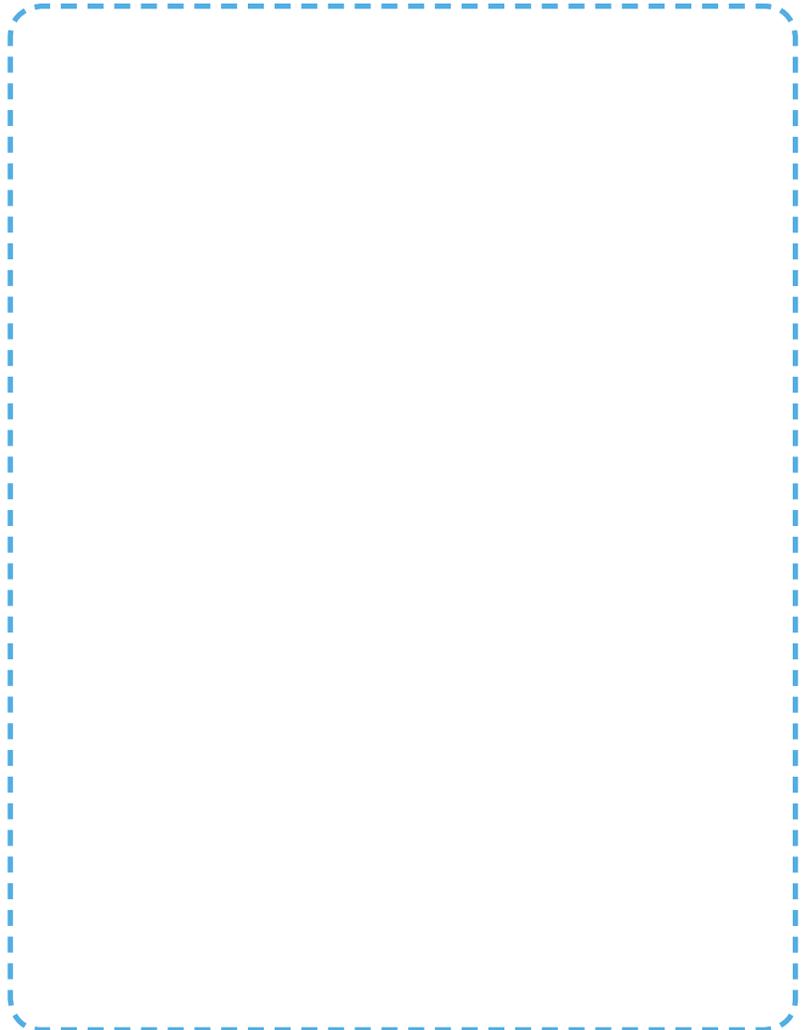
1 What does creative learning mean to you?



2 Why are you interested in engaging your community in creative learning?



3 What are your goals?



Our tools: Scratch & MaKey MaKey

Scratch

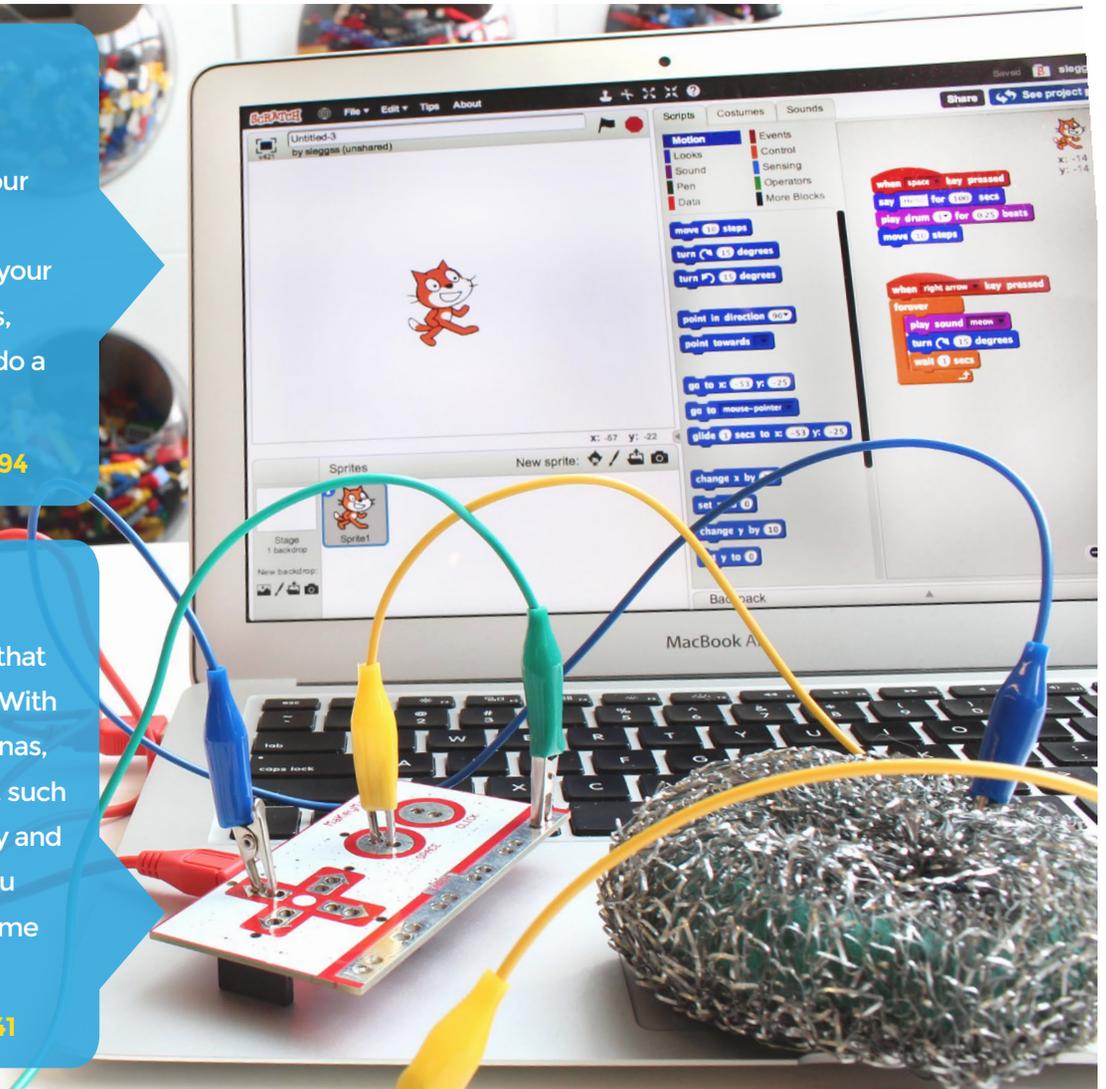
With Scratch (<http://scratch.mit.edu>), you can program your own interactive stories, games, and animations and share your creations with others in the online community. Scratch uses puzzle piece-like blocks that you drag and drop to program your creation. Blocks manipulate on-screen objects, called sprites, which perform whatever the blocks command—sprites can do a dance, tell a story, or play music.

Watch this video to learn more: <http://vimeo.com/65583694>

MaKey MaKey

MaKey MaKey (<http://makeymakey.com>) is an invention kit that allows you to turn any conductive item into a keyboard key. With MaKey MaKey, you can connect conductive items, like bananas, steel sponges, and people, to specific keyboard key presses, such as the space bar or arrow keys. When you pair MaKey MaKey and Scratch projects with sprites that respond to key presses, you can make banana pianos, musical staircases, or Play-Doh game controllers. The possibilities are endless!

Watch this video to learn more: <http://vimeo.com/60307041>



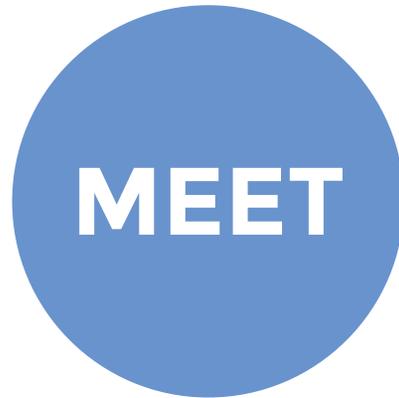
Why pair them together?

With Scratch, you can create any interaction on a computer screen. With MaKey MaKey, you can control a computer with everyday materials. When Scratch and MaKey MaKey are used together, families can create both digital and physical experiences. Additionally, the two tools enable multiple entry points and ways to work together on a project. If one family member is interested in building physical materials, they can focus on MaKey MaKey while other family members focus on Scratch. Projects with MaKey MaKey and Scratch expose all family members to the possibilities in both physical and digital making.

What to expect at each workshop

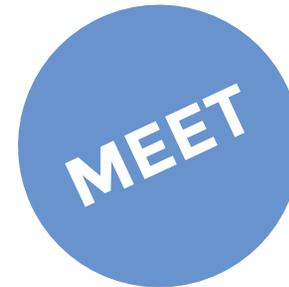
	How will families create?	How will families connect?
1	Exploring Scratch	Building community, creating and sharing values
2	Exploring MaKey MaKey	Learning with and from others
3	Brainstorming projects	Being creative together
4	Creating Family Projects	Working together
5	Community Showcase	Sharing with family and friends

Each workshop is divided into **four** parts:





Having dinner together allows families time to connect—and for some, their only chance to eat together. It engages families with an activity that they are familiar with—eating together—before jumping into a new activity with technology. Providing dinner also makes it more feasible for busy families to attend. Food comes from a restaurant suggested by families.



Parents and children split up into two groups and “check-in” with facilitators. These check-ins help build inter-family connections, as parents get to know other parents and children to get to know other children. Over time, Meets can turn into a support group. Family members can ask questions and hear how other participants are doing. Facilitators can coach parents and children to recognize the kinds of roles they can take on during the workshops. It may seem counterintuitive to split children and parents up, but we find that it is very natural for families to spend time together and time apart throughout the workshops.



MAKE

Parents and children create their own projects using the Scratch programming language and MaKey MaKey invention kit. Using these technologies, families can create interactive experiences that build on their ideas and interests. Families focus on becoming familiar with Scratch and MaKey MaKey during the first two workshops, then move on to integrating the two technologies to create projects for the Community Showcase on Workshop 5.



SHARE

Families can learn from each other by sharing their projects, asking questions, and giving feedback. Sharing projects and answering questions help family members talk about their projects with others, get ideas for what to do next, and build confidence in their skills and plans. Talking about their experiences in the workshops helps families share their experiences with other family members, friends, and people in their social networks.

What are families learning?, PART 1

What are families learning when they co-create interactive projects using Scratch and MaKey MaKey in Family Creative Learning?

First, they learn **mathematical and computational ideas and practices**. For example, when they stack Scratch blocks together, they are learning about sequencing, or expressing a series of steps to produce an action. When they program a Scratch project to respond to key presses with MaKey MaKey, they are learning about events, or how one action can trigger other actions. And as they express their ideas into projects, they learn to break down complex ideas into simpler ones, to try things out after developing smaller parts, and to debug and fix issues as they arise.

Families also develop **perspectives about themselves and the increasingly digital and networked world around them**. They learn to see technology not as a black box, but as something they can control and use to express ideas. When they share their projects with others and see how others interact with their projects, they can see the ways in which working with other people can enrich their projects and learning. And when they design projects, they can see the ways in which the world around them is designed and they can begin to question it. These computational ideas, practices, and perspectives can be useful to express ideas and solve problems beyond computing.

As they work on projects together, families learn **valuable skills in communication and collaboration**. They can also leverage existing family learning practices which they use in other activities, such as homework help and helping around the house. Some parents are unsure how they can be helpful to support their children's use of technology. However, parents can play many roles, such as asking questions, providing encouragement,

and showing genuine interest. Additionally, families can develop new learning practices. For example, children are often more comfortable and curious with technology than their parents, and, in this context, roles are reversed. When they work on Scratch and MaKey MaKey projects together, children can act as teachers or facilitators in helping their parents learn how to use these technologies.

Finally, families **learn about creative learning**. In creative learning, people build things that they care about in a playful and exploratory way. We believe that learning is a social experience. Families learn from each other when they work on projects together, share their work, and give feedback. We want families to appreciate the process of learning by designing projects, pursuing their interests, working with others, and trying new things.



What are families learning?, PART 2

How can we “see” these learning moments as families participate in the workshops and co-create their interactive projects?

In Family Creative Learning, we see the learning moments we described in the previous page as authentically embedded in families’ interactions and project design process. These computational practices and collaborative skills are part of families’ experiences as they design their projects—and not the end goal of their Family Creative Learning experience. To understand how families are progressing during the workshops, we pay attention to three things: their projects, their interactions among families and facilitators, and the reflections families share with us—rather than using surveys or other formal assessment instruments. Use the questions below as “tools” to help you understand how your families are doing.

To understand how families are doing, we look at three things:

Projects

- Are they excited by and invested in their projects?
- How do their projects change over time?
- How do they talk about their projects?
- What kinds questions do they ask?

SAMPLE OBSERVATIONS

In an early project, a child stacks Scratch blocks together without much intention. In a later project, her uses of particular blocks to form sequences become more intentional.

During Share, a family excitedly describes their project and the details of how they used Scratch and MaKey MaKey to make it.

Interactions

- Are families having fun together?
- How are they working together? Is someone taking the lead or are they working cooperatively?
- Who is holding with materials and tools?

SAMPLE OBSERVATIONS

When deciding what to do next in their project, family members take turns asking each other what they want to do next and why before moving forward.

A child shows his father how to clip an aluminum pie plate to the “space key” on MaKey MaKey.

Reflections

- What do they say about themselves, about each other, and about the technologies we use?
- How do these perspectives change over time or apply to other contexts?

SAMPLE OBSERVATIONS

After using MaKey MaKey, one child says that when he looks at things in the world, he wonders what he can make with them.

One parent who spoke little English shared that she felt more empowered to participate in English-dominant situations after her experience in the workshops.

Suggested timeline

3 months prior

- Discuss your plans with your organization
- Determine spaces for the workshops
- Recruit facilitators
- Plan recruitment strategy for families
- Become familiar with Scratch and MaKey MaKey

2 months prior

- Recruit families
- Begin reviewing workshops and tools with facilitators
- Test your technology and talk to an IT person if necessary

1 month prior

- Continue recruiting families / remind recruited families
- Gather materials
- Finalize plans with your facilitation team
- Prepare your social media page

Workshop

- Workshop 1: Welcome and Introduction to Scratch
- Workshop 2: Introduction to MaKey MaKey
- Workshop 3: Designing Family Projects
- Workshop 4: Building Family Projects
- Workshop 5: Sharing at the Community Showcase

1 month after

- Reunion night with all the families



Facilitating

How can you support your learners?

Facilitating Fundamentals

Ask questions rather than giving answers

It may be tempting to give the answers to questions right away, but if it's possible, ask questions instead so that learners can arrive at their own answers. Even something as simple as "Can you explain what your program does? What do you want it to do?"

Build trust and relationships

Learning is a social process. Get to know your learners and help them get to know you. Learning new things requires learners to be open and vulnerable. Being around people that they know and trust can facilitate the learning process. (We believe it also retains families.)

Encourage exploration, experimentation, and risk-taking

Authentic enthusiasm goes a long way

Sometimes learners, especially beginners, can feel unsure about their projects. Some encouragement or cheerleading can help them feel good about their work and their next steps.

Use technical words cautiously

Be aware of the words you use. Avoid technical jargon. If you have to use it, use it as a learning opportunity to explain the jargon.

Be a connector

Connect learners with similar interests to each other and to relevant resources in the workshop.

Surface their interests

It can sometimes take time for people to know what they want to do. Create an environment that is open to many interests. Ask questions like "What do you like to do?"

Put yourself in their (unique) shoes

Hold the tools as a last resort

It's tempting to grab the mouse, but try describing the steps rather than doing it for learners. If you have to grab the tools, let them try it again for themselves after you show them and guide them along.

Mistakes and failures are welcome!

Rather than avoiding mistakes, encourage learners to be open to them. As you support them through it, help them see what they are learning in the process.

Who are facilitators?

What are facilitators and why do I need them?

Facilitators play important roles in developing a safe, welcoming, and creative environment. They help learners surface and pursue their own interests, rather than giving answers and driving projects in a particular direction. Facilitators are also design partners in putting together a smooth, fun, and successful workshop series.

What makes a good facilitator? Do they need to be tech whizzes?

We have found that strong social and emotional skills, such as being able to understand another's perspective and experiences working with children, are more valuable than a strong technical background. Facilitators are co-learners and co-creators with family members. They do not need to know answers as much as know how to guide learners to answer their own questions and realize their own ideas.

How facilitators help and guide learners can vary and depends on the learner. If the learner is fairly new, facilitators must work to help them feel welcome and comfortable with the materials and the activity, such as helping them get started. As facilitators get to know the learner and their interests, they may make suggestions or guide the learner towards resources that will help them pursue their project. And as the learner becomes more capable and achieves initial success, facilitators might give them encouragement and ask "what if" questions to challenge and deepen their thinking and their projects.

Throughout facilitation, it is important to know when to step in and out, giving enough space for learners to play with the materials and the tools. Even if learners seem to be making a "mistake," sometimes letting them experience the mistake—and supporting them to overcome it—can be a valuable learning experience.



Building your facilitation team

How can we prepare together?

You and your team will be spending lots of time together and will experience ups and downs as you implement the workshops. It's important to build a respectful and caring team. Before the workshops begin, we recommend getting to know each other as well as meeting regularly to review the workshop activities and adapt them to your setting.

How can we work together during the workshops?

Before each workshop, try to meet beforehand to discuss how you will implement it based on your team reflections and feedback from families. After each workshop, take about 15 to 30 mins to reflect as a team. What went well? What are you and your team unsure of? What can be improved? During the workshops, check in regularly with your facilitators. Ask how they are doing and how they think the workshop is doing—they are your eyes and ears!

What roles can different facilitators play during the workshops?

Encourage your facilitators to take the lead in parts of the workshop, such as taking photos, handling logistics (e.g. food ordering, setting up, etc.), calling parents to remind them about an upcoming workshop, and leading a portion of a workshop like Meet or Share.



How many will I need?

We recommend a facilitator for every three to four families.

Where can I recruit facilitators?

We recommend pulling from your community: teen mentors, professionals, college students, volunteers, and teachers.

How can I recruit them?

When recruiting facilitators, we encourage commitment by framing facilitating as learning opportunities—they will learn about youth engagement, technology, and designing creative learning environments, while at the same time building their collaboration and professional skills. Also, it is an opportunity to give back to their community.

Documenting the workshop experience

How can I make the most of my photo and video documentation?

A picture is really worth a thousand words. Here are some tips to help your documentation tell a thoughtful and compelling story.

Take shots from multiple perspectives. Help people understand the multiple ways people experience your workshop:



1 From the participant's view
(what are their hands doing?)



2 From the facilitator's view
(how are people interacting
with each other and the tools?)



3 From a designer's view
(how does the space and the
materials arrangement look
before anyone enters?)



4 From an on-looker's view
(what does it look like to
someone walking by?)

Assign one or two of the facilitators on your team to lead documentation. Ask a facilitator who has experience or generally enjoys taking photos to take the lead in documenting the experience. Work with them to make sure they are at the right place and time for interesting moments.

Follow some families closely. Pick one or two families and take photos/videos of their entire process, using multiple perspectives, from the moment they walk in, to when they are making their projects, and ending with the time they step away from the workshop space.

Why is documentation important?

Making learning visible*

The process of creative learning can reveal a lot about learning as much as their final project. Use your photo and video documentation to show how children and their parents are interacting, how they are using the tools and materials, and the kinds of conversations they are having throughout the workshop.

Sharing experiences with families

Families love photos and videos of themselves. Take photos and videos of families in action and share them on Flickr or a Facebook page. Families use these photos to also share their experiences with other family members and friends. Check out the Family Creative Learning Facebook page for inspiration.

Promoting workshops to stakeholders and colleagues

Rather than telling them, show them! Photo and video media posted on a website is also a great way to share the story of your workshops to community stakeholders such as funders, volunteers, and other families.

Encouraging reflection among facilitators

Photos and videos can be useful to reflect with your team about the workshop process. In addition to media, we encourage you to document your process. For example, create a shared Google Doc for the whole team and write down your plan for every workshop, what actually happened, and your team's reflections on each workshop session.



* We are inspired by the documentation practices of Reggio Emilia schools. Learn more in the book "Making Learning Visible" by Project Zero and Reggio Children.

A young boy with dark hair, wearing a red t-shirt, is focused on working on a project at a table in a classroom. He is using a red marker. In the foreground, there are various supplies: a roll of red tape, several yellow markers, a green container, and a pink container. The background is slightly blurred, showing other students and a bright window.

Preparing

What do you need to get ready?



Family information

What kinds of families attend?

Families come in all shapes and sizes. We welcome all families.

How old are the kids?

The workshops are especially suited for families with children primarily between the ages of 7-12 years old.

What if parents cannot attend?

If parents cannot attend, we encourage children to bring older siblings or any other adult caretaker who has often acted as a guardian or learning partner in the past.

What about really young kids?

For younger children, try offering daycare or a craft corner, which is facilitated by another adult in your organization.

What if families speak different languages?

When possible, try to find facilitators who speak the different languages of your families and provide translated materials. Sometimes children or other family members can help translate too.

Recruiting

We cannot stress enough how important and challenging recruitment is! Recruitment is important for families to understand what they are signing up for and the amount of commitment involved. You may already have your own recruitment techniques. Whatever recruitment strategies you choose, here are some important guiding principles:

- **Children should choose to be there.** We often recruit through children first, making sure they are excited and dedicated, then we begin to talk to their parents about the workshops.
- **Build relationships.** People are more willing to participate when they feel comfortable with the facilitators running the workshops. If you do not already have relationships with families, use recruitment to get to know them.
- **Follow up.** And then follow up some more! Talk to families a few times to remind them of the workshops. During the workshops, continue contacting families. Some may prefer text messages, but we still believe in good old-fashioned phone calls. You can make sure they understand the information and use this as a chance to build your relationship with them.
- **Be clear about commitments.** Make sure your families know that FCL is a series of workshops, not just a one time event. This program is for the whole family; parents and children should be available to attend all workshops.



Recruiting, cont.

Our recruitment strategies have included:

- Talking to children and parents face-to-face
- Asking previous families to recruit new ones
- Handing out printed flyers
- Hosting an open house or an info table
- Participating in community fairs
- Making announcements at assemblies
- Visiting classrooms and talking to students

Things you might say during recruitment:

TO CHILDREN:

- Like art, music, games, and stories? You'll learn to create your own.
- Bring your parents and family members so they can learn with you.

TO PARENTS:

- This program is a great learning opportunity for the whole family.
- Experience the educational benefits of creating with technology.
- Build your skills with creative technologies.

TO BOTH:

- No experience necessary with computers.
- Free food (and childcare for young children).

How will you recruit families?

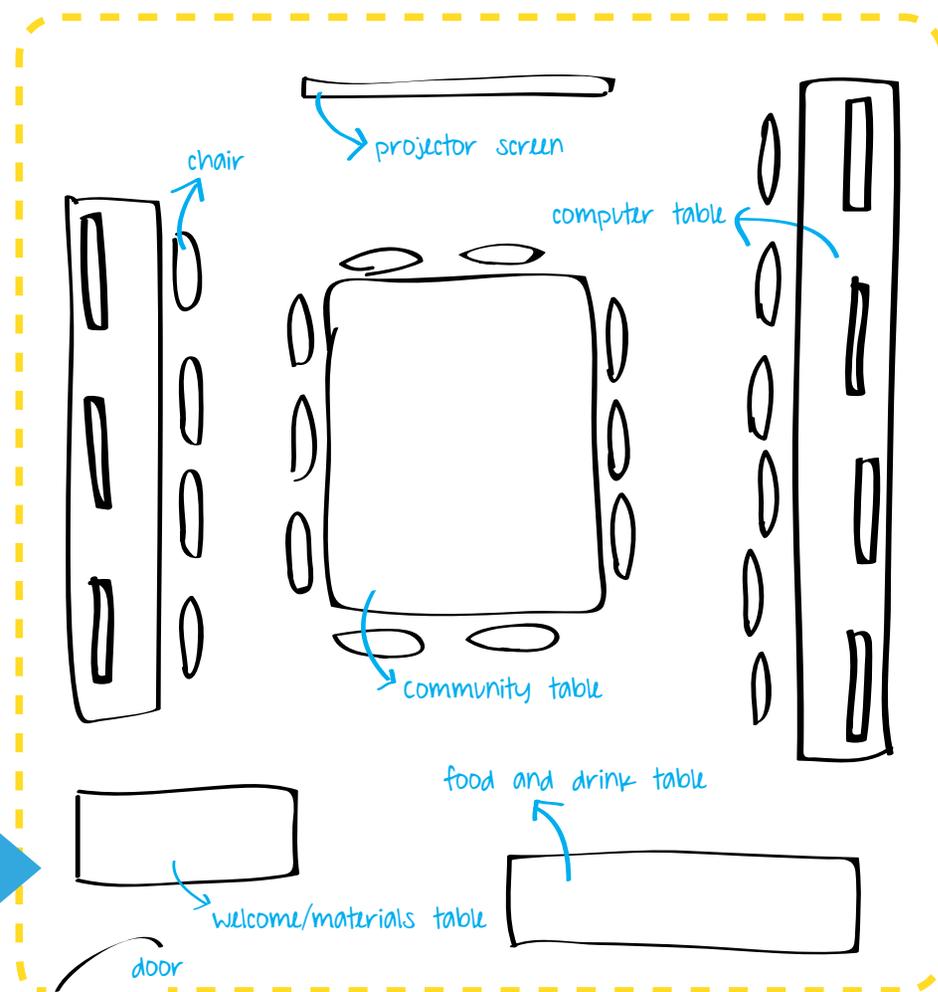
Spaces

Physical Space Layout

Family Creative Learning is a community experience. Arranging the room in a way that allows families to interact with each other is an important part of the experience.

Throughout the workshops, we provide two spaces for families. One space is the primary workshop space where most of the activities will occur. The second space is for parents to gather separately during Meet. During Workshop 1, we have parents and children Meet and Make separately. We have found that separating parents and children during Workshop 1 allows them the ability to create their own norms, discuss their needs, and reflect on their individual creative and sharing processes.

We recommend having a central communal table, individual computer stations, a separate table for food, enough space for facilitators to move around to every participant, and plenty of extra space to create projects!



Safe Space Principles

Feeling creative is not always easy. It's important to make sure that families feel comfortable making and sharing from the very beginning by talking about what makes up a "safe space" during the first workshop. During Workshop 1's Meet, we ask each other what each person needs to feel safe and we create our "community code" based on that conversation.

Materials

Before you get started, make sure you are prepared with the following materials:

TECH

- Computers with Internet access (enough for each family)
- A projector or large screen
- Laptops for individual use with parents
- Extra mice
- MaKey MaKeys (enough for each family)

FOR EATING

- Tablecloth
- Paper goods (plates, utensils, serving utensils, cups)
- Aluminum foil
- Trashcan

FOR CREATING

- Poster-sized paper or butcher paper
- Markers and crayons
- Conductive and non-conductive materials
- Craft materials (e.g. googly eyes, pipe cleaners, etc.)
- Design Journals

Facilitator Tip:

Keep your materials in the same place for easy set up and clean up after each workshop.



Design Journals

Design Journals are notebooks where families keep information about each workshop. The Design Journals are both for informing and reflecting: depending on the workshop, they may contain step-by-step guides to using Scratch or spaces to design and sketch. Use the Design Journals as opportunities for your families to keep track of their work and stay informed. See the appendix for a full copy of the Design Journal.



Workshopping

What happens each workshop?

1 Workshop 1

2

Creating: Exploring Scratch

Connecting: Community building, sharing and creating values



Parents and children will Meet and Make separately.

3

Families will:

4

EAT

Introduce themselves and their interests to other families and facilitators

MEET

Develop a shared community code and promote a safe and creative space

MAKE

Make their first Scratch project

SHARE

Share their first Scratch project

5

Welcome to Workshop 1! (Total time: 2 hours)

The first workshop is an important opportunity for families to begin to build a community and for them to get to know each other, the space, and the facilitation team. The majority of the workshop will be spent defining a Community Code and getting to know each other. The families will have a chance to get creative with Scratch, too.



Prep

Getting Ready

One week before your workshop:

- Gather materials
- Call parents to remind them of the workshop time and date
- Confirm your food order
- Check in with facilitators and designate roles for each person
- Secure an extra room for parents' Make and Meet time

Facilitator Tip:

Don't forget that this workshop is all about getting comfortable, exploring, and having fun!

Gathering Materials

FOR PARTICIPANTS

- Name tags
- Directional signs
- Design Journals

EATING

- Tablecloth
- Paper goods (plates, utensils, cups)
- Aluminum foil
- Trash can

ACTIVITIES

- Poster-size/butcher paper
- Markers and crayons
- About Me, About Us cards

TECH

- External projector
- Laptops and mice
- Camera
- Speakers (and music!)

Facilitator Tip:

Media release forms and Registration forms can be helpful to have on hand as well! See the appendix for details.

Prep

Arranging the space

Make sure your space has:

- A communal table
- A food table
- A welcome table
- A separate room for parents
- Poster-size or butcher paper
- Enough room for facilitators to move around and see everyone

Arranging for Community

Today is about building community. Having a communal table where families may congregate is a great way to set the tone for the remainder of the workshops. Ideally, the table would be in the center of the room, with computers around the perimeter. Since parents and kids will be spending time writing and drawing, arrange craft materials in the center of the table. Set up a separate welcome table for initial materials, like name tags and forms, close to the entrance of the room, so that families may access materials as they come into the room. Keep tech materials close at hand, just in case! Finally, allow enough room for facilitators to move around.

Arrange the big poster-size paper on a wall in the room for families to post their "About Me, About Us" cards (see page 35 to see an example).

What will your floor plan look like?

1

2

3

4

5

This is what our space looked like

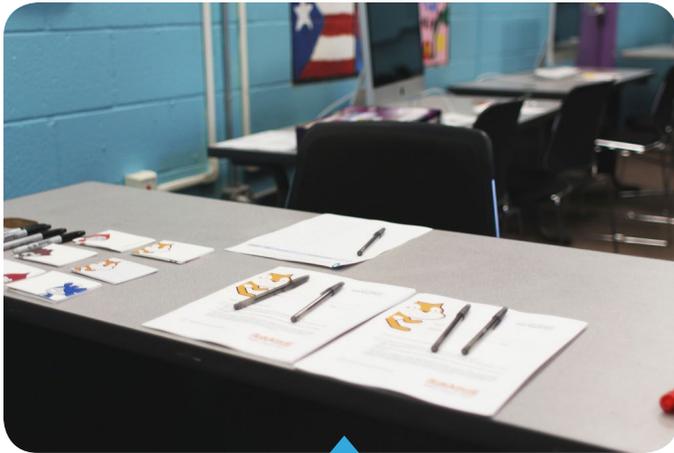
1

2

3

4

5



Set aside a table close to the door equipped with name tags, registration forms, etc. to welcome families and introduce them to the space.



During Workshop 1, we separated parents and children into two rooms to create separate Community Codes and become familiar with the workshop on their own terms.

Whether used for eating, making, or reflecting, the central table is a key part of building a community of collaborators!



The central table can be used as a versatile space for making if your group needs more room.



Welcome (15 mins)

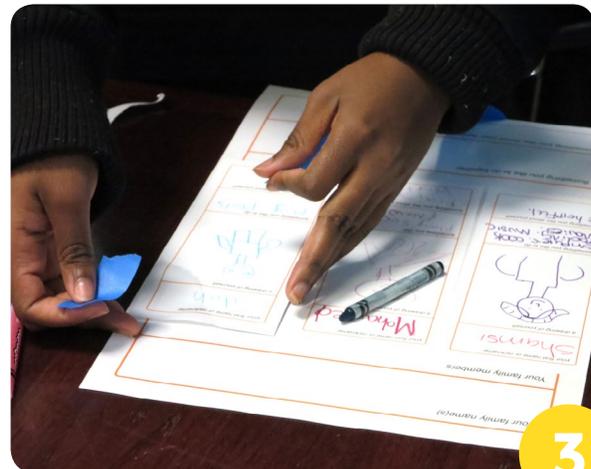
1. As families enter into the room, play music to set a friendly mood!
2. Use the welcome table to prompt them to create name tags and sign in (if necessary), then invite them to the communal table to eat.
3. As families eat, they may fill out "About Me, About Us" cards to represent themselves and their families.
4. When they are done, prompt them to tape their cards to the poster-size paper, arranged by family.

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About Me, About Us

"About Me, About Us" allows everyone to share their names, a drawing of themselves, something they like to do, and something they like about themselves. This activity serves many purposes: It signals that this program is not just about technology. It helps ease everyone into creating with materials that are familiar. Finally, it allows all families to share who they are and see who else is present.

1. At the communal table, we scattered markers, crayons, and About Me cards.
2. Everyone filled out their own About Me cards.
3. Families taped their About Me cards together and filled in their information about their families on About Us cards.
4. Families taped About Us cards up on poster-size paper.





Introduction to Family Creative Learning (15 mins)

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GET SETTLED

1. Greet everyone and thank them for coming to Family Creative Learning.
2. Introductions: Starting with yourself, go around the room and ask people to introduce themselves. Encourage people to speak loud and clear so that everyone can hear—you will all be spending lots of time together. It's important to know who's here! As they say who they are, ask them what they wrote down for what they like to do in their About Me cards.
3. Play a quick ice breaker (we find that icebreakers help ease nerves and add a bit of fun right away).
4. Introduce Family Creative Learning: Family Creative Learning is a workshop series that invites children and their families to design and invent together using creative technologies. Families will create projects while spending time together and getting to know other families that participate. We believe that people learn best when they are creating things they care about.

DEMONSTRATE SCRATCH & MAKEKEY MAKEKEY

5. Ask families what kinds of technologies they use and what they like to do with them. Point out that they'll learn to create their own technologies—not just use them. And in today's world, it is becoming more important to be able to create technologies, not just be able to use technologies.
6. Introduce the two tools as a live demo and/or using these videos:
 - Scratch (video: <http://vimeo.com/65583694>): Scratch is a programming language that enables people to create their own interactive media like stories, games, and animations.
 - MaKey MaKey (video: <http://vimeo.com/60307041>): MaKey MaKey is an invention kit that allows people to connect their physical world to their computer.
7. Show different examples of projects from both Scratch and MaKey MaKey, or point out the different examples in each of the videos. Emphasize that with Scratch and MaKey MaKey they can create almost anything!

Facilitator Tip:

Give your introduction a personal spin by answering the question: "Why am I here as a facilitator?"
Personal stories help build trust!

PREVIEW A WORKSHOP ROADMAP

8. Describe the time and commitment of the entire workshop series by showing the dates and giving a brief description of each workshop.
9. Describe the structure of each workshop and its four parts, Eat, Meet, Make, and Share: Every workshop will start with a meal. If possible, welcome food recommendations from families. After eating, facilitators will briefly check in with parents and children separately, then everyone will dive into the design activities. Finally, every night will end with people sharing their projects.



Divide parents and children into separate rooms to discuss How can we create a safe space for learning?

parents (30 mins)

INTRODUCE

1. Encourage parents to introduce themselves. Ask a little bit more about where they are from, what they do, and why they came tonight.
2. Share your story as a facilitator and learner, too! Why are you organizing this program? You might refer to your responses on page 9.

EXPLAIN

3. Explain why we have separated parents and kids: During every workshop, facilitators will check in with parents and children separately. This is an opportunity for parents to get to know other parents, ask questions, and share their thoughts without worrying about what their children will think. For Workshops 1 and 2, parents and children will make projects separately too.
4. Explain the parent role. Parents are their children's first and most important teacher. We want to equip them, not necessarily with expert technology skills, but rather with ways to support their children in their learning. We want parents to be active facilitators, rather than be passive observers of their children using and creating with technology.

CREATE

5. Introduce the Design Journals and fill out the 3 for 3 Word Questionnaire. Design Journals contain resources and serve as places for parents to reflect. Tell parents that we will share our responses in later workshops.
6. Co-create a Community Code. (See the next page for details.)

children (20 mins)

INTRODUCE

1. Encourage children to introduce themselves. Ask a little bit more about why they came tonight.
2. Share your story as a facilitator and learner, too! Why are you organizing this program? You might refer to your responses on page 9.

EXPLAIN

3. Explain why we have separated parents and kids: Every workshop, facilitators will check in with parents and children separately. Children can get to know each other, ask questions, and share their thoughts without worrying about what their parents will think. For Workshops 1 and 2, parents and children will make projects separately too.
4. Explain the children's role. In these workshops, everyone can play a role in supporting each other to learn and create with technology. Because children are so curious about technology and probably have more experience than their parents, they can support their family members in learning how to create with the technologies.

CREATE

5. Introduce the Design Journals and fill out the 3 for 3 Word Questionnaire. Design Journals contain resources and serve as places for children to reflect. Tell children that we will share our questionnaire responses in later workshops.
6. Co-create a Community Code. (See the next page for details.)

Facilitator Tip:

During the first workshop, parents often want more time to talk about the program. We give parents 10 more minutes while the children jump into their Scratch projects.

MEET

What our meet time looked like

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Creating a Community Code

Community Codes both build community and serve as a reminder to work with others in mind. Use these steps to create Community Codes with your families:

1. Introduce the concept of a Community Code: In order to learn together, we need to all be respectful of each others' needs.
2. Start with the idea of respect. How can we be respectful while others share their ideas out loud?
3. Move on to creating the rest of the Code. Try to refer to the concrete activities you'll be engaging in such as sharing projects, asking questions, giving feedback, and working with someone. Ask families how they would like to act in those activities and how they would like others to act in those situations.

Our 3 for 3 Word Questionnaires (page 6 in the Design Journal) asked parents and children to reflect on three words to describe their feelings towards technology, learning, and creativity.



Write 3 words to describe how you feel about **learning**:

Write 3 words to describe how you feel about **technology**:

Write 3 words to describe how you feel about **creativity**:

3 for 3 Word Questionnaire



Animating your name with Scratch



Remember, parents and children work separately during Make time.

parents (45 mins)

For most parents, this will be the first time they have ever interacted with a programming language. As a facilitator, you will help them learn the program step by step. Remember to use the step by step tutorial guide in the Design Journals! After they have mastered the basics of Scratch, they will animate their names.

INTRODUCE

1. Open up Scratch (<http://scratch.mit.edu>). Explain Scratch: Scratch is a free programming language and online community where you can create your own interactive stories, games, and animations.
2. Create Scratch accounts together and record login information in the Design Journals.

START SCRATCH-ING

3. Direct parents to the “Animate Your Name” tutorial in the Tips Window in Scratch or in their Design Journals. Explain what their task is: We are going to animate our names by playing with sounds, movement, and colors in Scratch. Show parents examples projects (<http://scratch.mit.edu/studios/203814>).
4. Walk parents through the first few steps together to become familiar with Scratch. If time is short, you may encourage them to just animate the two initials of their first and last name.
5. Encourage parents to share their projects on the Scratch website by clicking the Share button.

children (55 mins)

Some of the kids in the workshop may have already experienced Scratch; some may have never seen Scratch before. If kids move forward faster or get stuck, that’s okay!

INTRODUCE

1. Open up Scratch (<http://scratch.mit.edu>) and create Scratch accounts together. Record the login information in the design journals.
2. Explain Scratch: Scratch is a free programming language and online community where you can create your own interactive stories, games, and animations.

START SCRATCH-ING

3. Explain the activity: We are getting started with a simple activity in Scratch.
4. Direct kids to the “Animate Your Name” tutorial in the Tips Window in Scratch or in their Design Journals. Explain what their task is: Today we are going to animate our family names by playing with sounds, movement, and colors in Scratch. Show children examples of “Animate Your Name” projects in Scratch (<http://scratch.mit.edu/studios/203814>).
5. Walk children through the first few steps together to become familiar with Scratch. Then encourage them to finish the rest of the steps on their own.
6. Encourage children to share their projects on the Scratch website by clicking the Share button.

Facilitator Tip:

Make sure families’ browser screens are maximized so they may easily see the Tips Window.

MAKE

What our make time looked like

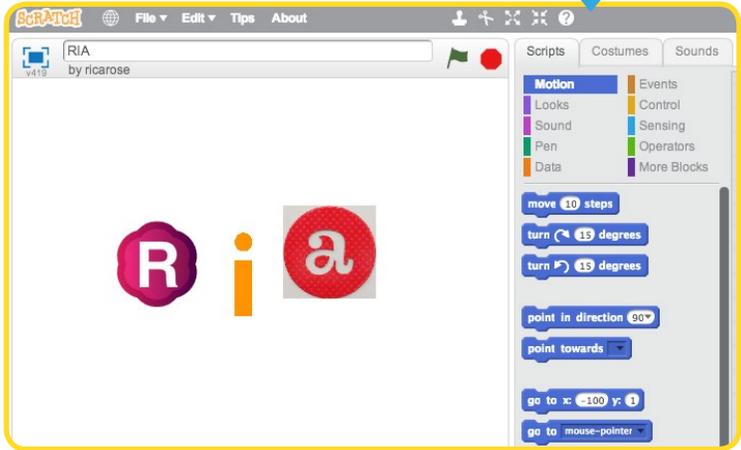
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Parents worked on laptops in a separate room, which aided the sharing process by making their projects portable. If laptops are not available, you can also share projects online.



Parents and children practiced using Scratch by creating interactive projects with their names. We encouraged families to play with color, sound, and movement in their first projects.

Your notes:



See sample projects at scratch.mit.edu/studios/203814



Bring parents and children back together to share their work!

(15 mins)

After parents return to the original room and get settled, introduce the concept of sharing, which is an important element of the workshop.

SET SHARING NORMS

1. Remind families that we do not have to be masters of Scratch (or any of the technologies). Being uncomfortable means they are learning! Their goal today was to explore Scratch and create something simple. The process of making is more important than the final product!
2. Before jumping into sharing, model ways to interact. Remind families to listen, be present, be enthusiastic, and to be supportive.

SHARE FAMILY WORK

3. Starting with parents first, go around the room and ask each individual to briefly share their work on their own computers (two minutes each). Parents will share on their laptops. As they share, ask:
 - What did you do and how did you do it?
 - Some questions you might want to use to probe: How did you add _____? What made you include _____?
 - If you had more time, what would you add/what else would you do?
4. Encourage others to give constructive feedback and ask questions.
5. Share the Community Codes that parents and children each made.
6. Celebrate everyone on learning to program their first Scratch project!

BEFORE THEY GO

Before families leave, make sure to celebrate everyone's accomplishments! Take a moment to congratulate the group. Then, preview what families will accomplish in the next workshop.

Facilitator Tip:

Try to share your challenges with Scratch when you first played with it.

Facilitator Tip:

Practice giving constructive feedback using a structure or ritual. In our workshops, we used a "clap" structure to clap once to ask questions, clap twice to give feedback, and clap three times to celebrate.

Your notes:

SHARE

What our share time looked like

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Before sharing projects, we discussed how to give positive feedback and modeled explicit examples and non-examples of feedback. We then invited families to go around the room and share their projects. As each person shared, the facilitators asked specific questions to push the creator's thinking.

Facilitator Tip:

Use a "Gallery Walk" structure to walk around the room as a group and view each person's computer.

What are **your team's reflections** on Workshop 1?

Green

What went well?
Who had positive interactions?

Yellow

What questions do you have?
What are you unsure of?

Red

What could be improved? Were
there any challenging interactions?

Workshop 1 Sound Bites

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Facilitator Tip:

During your team reflection after the workshops, use a specific structure to reflect on the workshop. We used “Red, Yellow, Green” to organize our thoughts. “Red” comments are challenges to improve for next time, “Yellow” comments are things you are unsure of, and “Green” comments are positive notes and observations about the workshop.



I wasn't really into the Red, Yellow, Green debriefing at the end of the night, but I saw us learning a lot from each other and improving the workshop at the same time.”

- A community center staff member



I would never have thought about how you program a computer—well, you just tell it to do stuff...it's kind of thrilling.”

- 51 year-old mother of one

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Workshop 2

2

Creating: Exploring MaKey MaKey
Connecting: Learning with and from others



Parents and children will Meet and Make separately.

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Families will:

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EAT

Reconnect while eating and learn about their explorations of Scratch

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MEET

Reflect and share how they use and see technology in their lives

MAKE

Make their first Scratch and MaKey MaKey musical instruments

SHARE

Share their first Scratch and MaKey MaKey musical instruments

Welcome to Workshop 2! (Total time: 2 hours)

Welcome to Workshop 2! Today families will become familiar with MaKey MaKey and connect it to Scratch to create musical instruments. They will reflect on the role of technology in their lives and how they learn from each other.

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Prep

Getting Ready

One week before your workshop:

- Gather materials
- Call parents to remind them of the workshop time and date
- Confirm your food order
- Check in with facilitators and designate roles for each

Facilitator Tip:

Try to find wacky materials that are both conductive and non-conductive to inspire families. If it's possible with your space, try using the walls and the floors too. When working with MaKey MaKey, every thing is a workshop material!

Gathering Materials

ACTIVITIES

- MaKey MaKeys
- Conductive and non-conductive materials
- Sample MaKey MaKey project
- MaKey MaKey "How To" Video
- Craft materials
- Design Journals

EATING

- Tablecloth
- Paper goods
- Aluminum foil
- Trash can

TECH

- External projector
- Camera
- Speakers (and music!)

Prep

Arranging the space

Make sure your space has:

- A communal table
- A food table
- A separate room for parents for Meet
- Areas where families can spread out for projects
- A MaKey MaKey materials table with separated conductive and non-conductive materials
- Enough space for facilitators to move around and see everyone

Facilitator Tip:

Consider asking families what foods they might like to eat.

Arranging for tinkering

We recommend setting up the physical space for Workshop 2 much like the physical space for Workshop 1: have a separate table to set up food, a communal table to gather and make, and areas where families may spread out in the room to work on projects. When setting up materials, separating conductive and non-conductive materials in advance makes explaining how MaKey MaKeys work much easier and helps families learn about the differences between the two kinds of materials.



On Workshop 2, we spread out and separated conductive and non-conductive items to use with MaKey MaKey.

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Welcome (15 mins)

Make sure to welcome families back to the workshop! Although you spent time during Workshop 1 setting up the atmosphere, today is a chance to get families back on board again. We suggest that you:

1. Remind families of the key points from Workshop 1, such as the kinds of projects we created and the Community Code.
2. Show your online group page like a Facebook page (and invite them to contribute).
3. Perform an ice breaker together.
4. Describe the activities for today.



Your notes:

Facilitator Tip:

We broke the ice with a “laughing meditation” - take turns sharing a laugh in a particular way (like a pirate, Santa, etc.), then everyone mimics that laugh.

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Divide parents and children into separate rooms to discuss How do we use technology in our lives?

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parents (15 mins)

Engage parents in a conversation about technology in their lives with these guiding questions:

1. **Looking back:** Ask parents how they felt about last week and ask if they have any questions. What was it like creating and sharing their first Scratch project? What was it like seeing their children's projects?
2. **Reflecting on technology:** Ask parents to share what they wrote down for "technology" in their 3 for 3 Word Questionnaires during Workshop 1 and facilitate a discussion about why they chose those words.

children (15 mins)

Engage children in a reflection about last week's workshop and their thoughts about technology in their lives with these guiding questions:

1. **Check-in:** Check in with children: How do they feel about last week? What are they excited about for this week?
2. **Looking back:** What was it like to see your parent's projects? If this is their first time with Scratch, ask them how they feel about creating and sharing their first Scratch project.
3. **Reflecting:** Ask children to share what they wrote down in their 3 for 3 Word Questionnaires during Workshop 1 and facilitate a discussion about why they chose those words.

Facilitator Tip:

After seeing what their kids were able to do with Scratch, some parents might feel inspired. Others might feel intimidated. Remind parents that their children have lots of experience with technology and have a fearlessness to try things out. With time and practice, parents will also be able to develop their Scratch skills. What matters right now is that they keep trying!

Facilitator Tip:

Parents might feel uncomfortable about having their kids explain things to them and/or knowing more than them. If so, remind parents that being able to explain your understanding to someone in a clear way is an important learning experience. When their children explain something to them, their children are learning how to organize their thinking and communicate their ideas. Encourage parents to use follow-up questions to help their children clarify their explanations.



Making MaKey MaKey instruments

parents and children (20 mins)



Parents and children work separately, but in the same space, during Make time.

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Though parents and children will still work separately today, they will be in the same room. You can use the same methods to show them how to combine Scratch and MaKey MaKey to create a musical instrument. Before you start, give parents and children a preview of what they will be making by demoing a few projects—a very simple example can be especially helpful and encouraging to show how easy it is to create something cool and meaningful. Emphasize to your families that it's okay if they don't understand how to use MaKey MaKey right away—just ask for help!

REVIEW SCRATCH

1. On a large screen or with a projector, open up Scratch.
2. Rather than reviewing the basic features of Scratch yourself, invite parents and children to help build a simple project that plays a sound when the space key is pressed.
3. One by one, ask a parent or child to help do one of the actions listed below. Encourage people to come up even though they are unsure how to do a particular action—you will do it together. After each person does one of the actions, give them a round of applause. The actions are:
 - Delete the Scratch Cat.
 - Add a new sprite. (Depending on which method they choose, such as importing through the Scratch library of sprites, you may want to quickly show the other ways to add a sprite.)
 - Add a backdrop. (Depending on which method they choose, such as importing through the Scratch library of backdrops, you may want to quickly show the other ways to add a backdrop.)
 - Play a drum sound. (You may want to point out that people can also add and record their own sounds in Scratch.)
 - Only play that drum sound when the Space key is pressed.
4. Demonstrate how the project responds to the Space key being pressed.
5. Explain to families that we often interact with computers through mouse clicks and key presses. However, in this workshop they will create their own ways to interact with the computer using MaKey MaKey and everyday materials.

Facilitator Tip

Children and their families will be at different levels of expertise and comfort with Scratch. For those who feel more comfortable and familiar with Scratch, encourage them to help others around them.



Making MaKey MaKey instruments

parents and children (20 mins)



Parents and children work separately, but in the same space, during Make time.

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INTRODUCE MAKEY MAKEY

1. Show a MaKey MaKey on its own (without connecting it to any objects).
2. Play MaKey MaKey's introductory video (<http://vimeo.com/60307041>) and/or share different project examples to set the stage and to show the range of things you can create.
3. Ask families what they think MaKey MaKey does.
4. Ask families if anyone would like to explain what "conductive" means. ("Conductive" materials allow electricity to pass through them.) What are some everyday objects that are conductive?

DEMONSTRATE SCRATCH AND MAKEY MAKEY

5. Clip an alligator clip to Earth and another clip to a key on the MaKey MaKey.
6. Clip one of the alligator clips to a metal object. Explain that metal is conductive.
7. While holding the metal part of the alligator clip attached to Earth, touch the other metal object. Show how the sound in the Scratch project is activated every time you touch the metal object.
8. Remove the clip from the metal object and connect it to a fruit. Continue to hold the metal part of the alligator clip attached to Earth and touch the fruit. Explain that fruit is conductive because it contains water (which is also conductive).
9. Clip the MaKey MaKey to something plastic like a plastic utensil, or another non-conductive object. Explain that the plastic object is not conductive.
10. Ask a volunteer to hold the metal part of an alligator clip connected to MaKey MaKey and, while holding the other clip, give them a high-five. Explain that people are conductive too because they are made of water, and water is conductive too!
11. Encourage the group to all hold hands and see if they are all conductive together with MaKey MaKey. Then, try holding on to other materials in the circle to see what happens!

See the next page for visual examples.

Facilitator Tip:

As the MaKey MaKey video plays or when you show your project examples, point out the different materials that are being used and how they connect to MaKey MaKey.

Facilitator Tip:

Some families struggle with the concept of completing a circuit from "Earth" to the key presses on the MaKey MaKey. Families will need some time to tinker with MaKey MaKey to understand it for themselves. Showing the different kinds of materials that can or cannot conduct with MaKey MaKey will help them develop their understanding.



Making MaKey MaKey instruments

parents and children (50 mins)



Parents and children work separately, but in the same space, during Make time.

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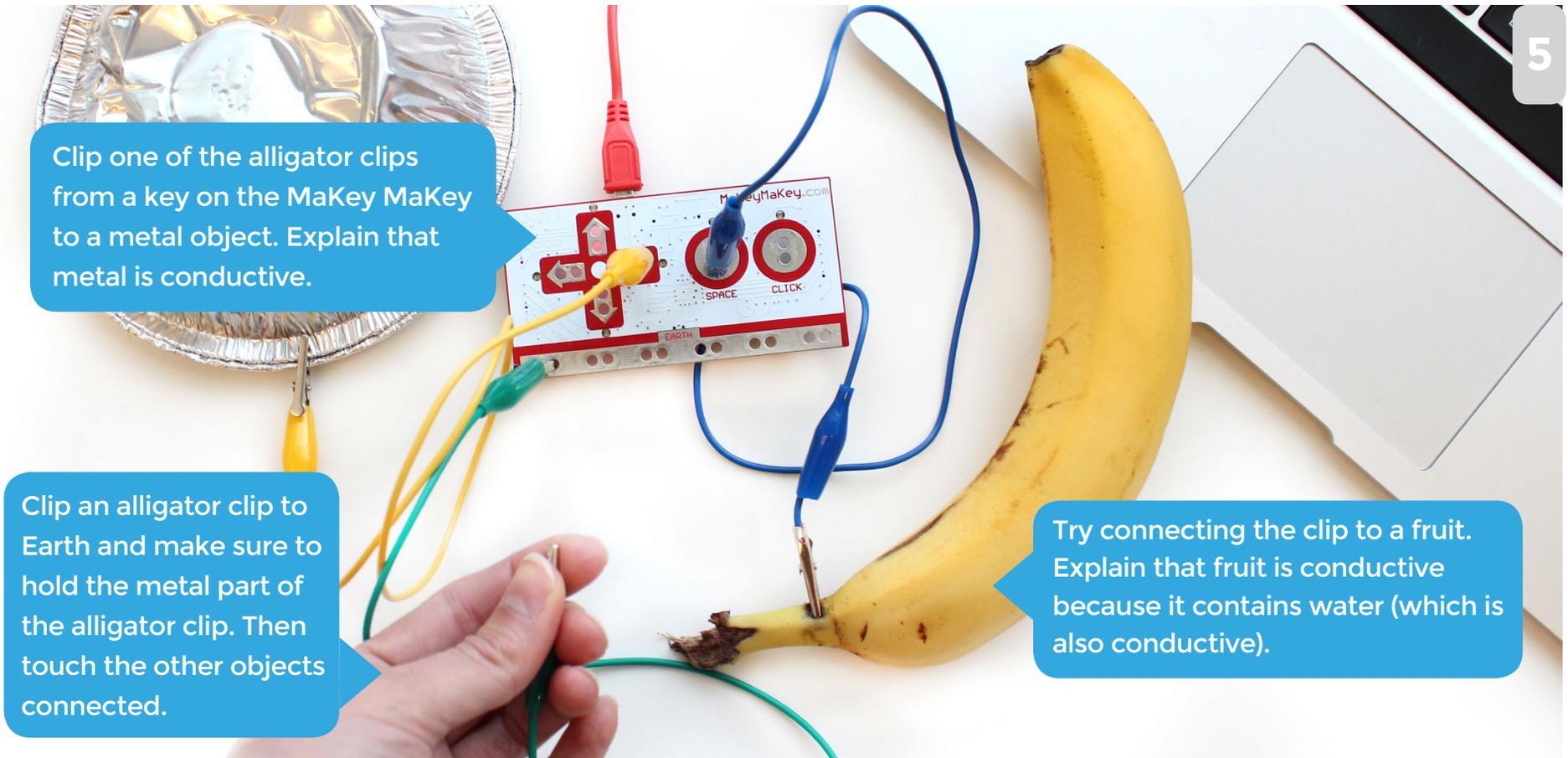
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CREATE

1. For this Make session, have parents and children continue to work separately. However, since there is a new tool to learn, pair them up with a peer. In other words, pair each parent with another parent and each child with another child.
2. Invite them to create their own Scratch and MaKey MaKey "instruments." Show them how to make a few sounds in Scratch, then attach materials with MaKey MaKey. Direct them to the Workshop 2 guides in the Design Journals for more help.





What our make time looked like

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When helping someone with MaKey MaKey, we first tried to explain things verbally, but sometimes we had to physically show how to connect things together. To make sure that parents and children had a try, we also stepped back to let them do it themselves while we watched and assisted.



To show how conductive people are, families held hands to complete a circuit with MaKey MaKey.



Facilitator Tip:
We turned non-conductive materials into conductive materials by wrapping them with aluminum foil.

Watch an intro video to MaKey MaKey at <http://vimeo.com/60307041>



Bring parents and children back together to share their work!

(20 mins)

Because families made physical things with MaKey MaKey, their projects might be delicate or hard to move. We suggest walking around to each project in a “gallery walk.”

REVIEW SHARING NORMS

1. Remind families that they do not need to be “finished” and can just show what they were able to do and talk about what they would do if they had more time.
2. Remind families that they can celebrate each others work by offering positive comments and asking questions.

SHARE PROJECTS

3. At each project, ask families to share their project and describe what it does.
4. Encourage the other families to ask questions. You might need to start off the questions. You can ask the project creators:
 - How did you do _____?
 - What inspired your creation?
 - What would you do if you had more time?
5. To encourage feedback from other families, you could prompt them to think about ways to help improve the project’s interactivity, ease of use, and media such as sounds and graphics.
6. Celebrate everyone’s work with applause!

BEFORE THEY GO

Before heading out, preview next week’s workshop: brainstorming and preparing for showcase projects. Encourage families to start thinking about their designs.



Facilitator Tip:

We care more about their creative process more than the final product! Remind families that they do not need to be “finished” when we share. Ask them to share what they were able to do and what they would have done if they had more time.

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What are **your team's reflections** on Workshop 2?

Green

What went well?
Who had positive interactions?

Yellow

What questions do you have?
What are you unsure of?

Red

What could be improved? Were there any challenging interactions?

Workshop 2 Sound Bites

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MaKey MaKey was really cool because I never connect computers to stuff in the open world.

- 9 year old boy



Using Scratch and MaKey MaKey together allows people to play with the digital and physical world—opening multiple entry points for families to create projects.

- Facilitator

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Workshop 3

2

Creating: Brainstorming projects
Connecting: Working with others



Parents and children will Meet separately and Make together.

3

Families will:

4



Brainstorm themes for the Community Showcase while eating



Parents: reflect on how they are creative; Children: share skills



Brainstorm and get started on their family's Community Showcase project



Share their family's ideas and a draft of their project for the community showcase

5

Welcome to Workshop 3! (Total time: 2 hours)

During this workshop, parents and children will brainstorm and get started on family projects for the Community Showcase during Workshop 5. This is also the first workshop that families will be working together. As a facilitator, pay attention to their dynamics. Every family is different. Some families can work well together on one project, but for other families, you may need to suggest working separately on multiple projects.



Prep

Getting Ready

One week before your workshop:

- Gather materials
- Call parents to remind them of the workshop time and date
- Confirm your food order
- Check in with facilitators and designate roles for each

Gathering Materials

ACTIVITIES

- Writing utensils
- Craft materials (including paper)
- MaKey MaKeys
- Design Journals
- Separated conductive and non-conductive materials

EATING

- Tablecloth
- Paper goods
- Aluminum foil
- Trash can

TECH

- External projector
- Camera
- Speakers (and music!)



Welcome (25 mins)

ENCOURAGE

After families have had some time to get settled with their dinner, take a moment to:

1. Congratulate them on all their hard work and the progress they have been making with Scratch and MaKey MaKey.
2. In the first two workshops, some people may have felt some struggle or frustration. Remind them that feeling uncomfortable is a sign of learning and they should not get discouraged!

PREVIEW

Give families a road map of the workshop. We suggest saying:

3. After we Meet, we're going to start working on our family projects for the Community Showcase in two weeks.
4. Unlike the last two workshops, we're going to work on projects with your other family members, by brainstorming themes for the Community Showcase and the kinds of projects they might want to make.

BRAINSTORM

Engage families in brainstorming themes for the Community Showcase. By the end of Eat, they should agree on a theme!

5. Ask them about events they go to as a family, such as fairs, carnivals, and shows. What kind of event do they want to put together for their friends and family?
6. Encourage them to use the Notes section in their design journals to draw out ideas.

Your notes:



Divide parents and children into separate rooms to discuss When and how are we creative in our lives?

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parents (15 mins)

Engage parents in a conversation about their thoughts on the last workshop, about creativity, and working with their children:

1. **Looking back:** Ask parents how they felt about last week's workshop and ask if they have any questions. What was it like creating and sharing their first MaKey MaKey project?
2. **Reflecting on creativity:** Ask parents to share the words they wrote down for "creativity" in the 3 for 3 Word Questionnaire and facilitate a discussion about why they chose those words. What kinds of creative activities do they like to do personally and with their families? What do they think helps someone to be creative?
3. **Preparing to work together:** In today's Make, parents and children will work together on a project for the Community Showcase. While parents may be tempted to sit back or take control, encourage parents to be collaborators by sharing ideas and helping with the project creation.

children (15 mins)

Help children see each other as resources by engaging them in a skill-sharing activity:

1. **Check-in:** Check in with children: How do they feel about last week? What are they excited about for this week?
2. **Scratch skill-share turn and talk:** Pair up children (we suggest thinking about pairings beforehand). Ask children to take turns sharing something they can do in Scratch.
3. **Group share:** After children finish sharing with their partners, return together as a whole group (or in small groups of 4). Go around the group and ask children to show their skills one by one using the projector (or looking at each other's computers).
4. **Preparing to work together:** In today's Make, parents and children will work together on a project for the Community Showcase. Encourage children to see their parents as collaborators by sharing ideas and taking turns with the tools.

Your notes:



Brainstorming projects parents and children (60 mins)



Parents and children work together in the same space.

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BRAINSTORM PROJECTS

Now that a theme has been established for the Community Showcase, what kinds of projects could families create?

1. Ask families to draw out project ideas together and talk about how they might create them with Scratch and MaKey MaKey. You might want to set up creative constraints such as size, types of interaction with the MaKey MaKey, kinds of materials, etc.
2. Pay attention to the family collaboration dynamics that emerge, and note which families may be having trouble working together.
3. After 5 or 10 minutes go around the room and ask families to share one idea they are most excited about. As families share their ideas, encourage other families to provide suggestions. You might provide suggestions on how to implement their project idea with Scratch and MaKey MaKey.

START MAKING

1. As families get started on their projects, go around the room along with the other facilitators and help families turn their ideas into concrete projects.
2. Continue to pay attention to family dynamics. For some families who have some trouble converging on an idea or path forward, try listening to all family members and help them achieve a compromise.

Facilitator Tip

Some families may have trouble generating ideas. Ask them what they enjoy doing together. Make some suggestions using “What if…” statements. Families can use the “Notes” section in their Design Journals to write down ideas.



Facilitator Tip:

Not all families can work well together—and that’s okay! Rather than forcing them to, if it’s possible, set up some laptops or open computers in case families need to split up into multiple projects. If they do decide to work separately, have them sit next to each other.

Family Stories

Workshop 3, Part 1 How we brainstormed

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FABIANA
+ MARISA



Meet Fabiana, 13, and her mom Marisa. Fabiana and Marisa originally planned on building a piano because Fabiana is taking piano lessons. The challenge of hooking up the piano's many keys, however, moved them to reconsider their project. Fabiana suggested a drum kit, while Marisa suggested a guitar. They decided to create a project with both a guitar and drums.



MADDIE
+ JAMES

Meet Maddie, 7, and her dad James. Maddie was immediately inspired by a ping pong game she found in the Starter Projects section of the Scratch website, and excitedly began working on a game controller with Play-Doh. James jumped on board to support his daughter's vision.

Family Stories

Workshop 3, Part 2 Working together

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FABIANA
+ MARISA

Fabiana's experience with technology and Marisa's eagerness to design led to a natural division of labor. Marisa worked on putting together craft materials, cutting up cardboard, and designing the instruments. Fabiana was in charge of programming sounds in Scratch. And together, they wired up the instruments to MaKey MaKey.

While Maddie's idea drove the direction of their project, the two negotiated about how to best work together. Maddie jumped into building her controller as her dad looked into the ping pong project's Scratch code. James found that the original project responded to mouse clicks, and decided that their idea would work best by changing the project to respond to key presses.



MADDIE
+ JAMES



Bring parents and children back together to share their work!

(20 mins)

Because families made physical things with MaKey MaKey, their projects might be delicate or hard to move. We suggest walking around to each project in a “gallery walk.”

REVIEW SHARING NORMS

1. Remind families that they do not need to be “finished” and can just show what they were able to do and talk about what they would do if they had more time.
2. Remind families that they can celebrate each others’ work by offering positive comments and asking questions.

SHARE PROJECTS

3. At each project, ask families to share their project and describe what it does.
4. Encourage the other families to ask questions. You might need to start off the questions. You can ask the project creators:
 - How did you do _____?
 - What inspired your creation?
 - What would you do if you had more time?
5. To encourage feedback from other families, you could prompt them to think about ways to help improve the project’s interactivity, ease of use, and media such as sounds and graphics.
6. Give a big round of applause!

BEFORE THEY GO

Announce that there will be more time at the next session to continue working on projects. Encourage families to invite friends and family to the Community Showcase in two weeks. If possible, hand them printed flyers about the Showcase to invite their friends and family.

Facilitator Tip:

Families are most likely not done with their projects. Continue to remind them it is perfectly fine to share works in progress. In this Share, it is especially important to engage families in providing feedback for each other to push their projects forward.



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What are **your team's reflections** on Workshop 3?

Green

What went well?
Who had positive interactions?

Yellow

What questions do you have?
What are you unsure of?

Red

What could be improved? Were there any challenging interactions?

Workshop 3 Sound Bites

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There's a symbiotic relationship between the parent and the child. Now they appreciate each other in different ways.”

- Facilitator



My son thought I couldn't do anything on the computer. When he saw that I made something, he was surprised. Even though it was just a little bit, he said 'How did you do that? You made that?' He was amazed.”

- 31 year old mother of 3

1 Workshop 4

2

Creating: Creating family projects
Connecting: Being creative together



Parents and children will Meet separately and Make together.

3

Families will:

4

EAT

Think about how they will present their projects at the community showcase.

MEET

Parents: reflect on creating and learning; Children: share + try projects

MAKE

Continue making their family projects for the community showcase.

SHARE

Share their family projects for the community showcase.

5

Welcome to Workshop 4! (Total time: 2 hours)

During this workshop, families can continue to work on their projects. At this time, their ideas and work process should generally be settled. Because this is also the last workshop with a Meet session, it is a good time for families to reflect on their entire experience.



Prep

Getting Ready

One week before your workshop:

- Gather materials
- Call parents to remind them of the workshop time and date
- Confirm your food order
- Check in with facilitators and designate roles for each

Gathering Materials

ACTIVITIES

- Writing utensils
- Craft materials (including paper)
- MaKey MaKeys
- Design Journals
- Separated conductive and non-conductive materials

EATING

- Tablecloth
- Paper goods
- Aluminum foil
- Trash can

TECH

- External projector
- Camera
- Speakers (and music!)

Arranging the space

During this workshop, you might want to set each family's work space as it would be set up for the Community Showcase so families know what to anticipate. You might arrange the room differently to facilitate flow and movement for families and their guests or you might find a larger space to use.



Welcome (15 mins)

ENCOURAGE

1. Remind families that this is the last workshop to work on their projects.
2. Encourage families to aim for simplicity and remind them that their projects do not have to be elaborate. Emphasize that everyone will love them!
3. Encourage families to think about the overall presentation of their project. Do they want to make a sign? Do they need to write up instructions? Might they add some background music or sound effects?
4. Encourage families to take a step back and see what else they would like to accomplish in their project.
5. Remind them to ask questions if they need any help!

Facilitator Tip:

Some families may be feeling overwhelmed by finishing their project in time or sharing their work with other people. Remind them that the Showcase is a celebration of their experience and people will be blown away by their projects. You might consider offering an extra workshop for families who want more time to work on their projects.



Your notes:

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Divide parents and children into separate rooms to discuss What was it like to learn creatively with your family?

Split parents and children up as usual. This is the last Meet session—it is a great opportunity for parents to reflect on their experience as a whole and for children to prepare for the Community Showcase.

parents (15 mins)

Engage parents in a conversation about their experience with these guiding questions:

- 1. Looking back:** What was challenging about working with your family? What worked well? In case you observed any collaboration issues from Workshop 3, you might want to bring them up here and ask them how they felt about it.
- 2. Reflecting on learning:** Ask them to share the words they wrote down for “learning” in the 3 for 3 Word Questionnaire. Why did they choose those words?
- 3. Reflecting on Family Creative Learning:** Ask them to look at all three of their responses in the 3 for 3 Word Questionnaire. Having gone through Family Creative Learning, are there words they would change? Are there words they would keep? Why?

children (15 mins)

Encourage children to practice sharing their projects to get ready for the Community Showcase, where they’ll be talking to guests about their work:

- 1. Check in:** How do they feel about last week? What are they excited about for this week? In case you observed any collaboration issues from Workshop 3, you might want to bring them up here and ask them how they felt about it.
- 2. Set up:** Ask children to set up their projects for sharing.
- 3. Split up:** Divide children into two groups.
- 4. Gallery walk:** Describe the process for their gallery walk: one group will share their projects while another group participates in the walk. Encourage those participating in the walk to ask questions. After the first group finishes sharing, the two groups will switch.

Your notes:

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Continue to work on projects



Parents and children work together in the same space.

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parents and children (65 mins)

Families are going to be at different stages with their projects and they will express these stages in different ways. Some families may say that they still have a lot to do, while others will say they are finished. As a facilitator, you can help them negotiate these stages.

WORK ON PROJECTS

1. Organize yourself and your facilitators to check in with each family. Ask each family how they are doing and ask them to describe what they are hoping to accomplish before the showcase.
2. For families that feel that they still have lots to do, help them simplify their project.
3. For families who feel insecure about their project, you might need to help them see how much they have done with their project. Showing genuine enthusiasm and encouragement will help them see how great their work is.
4. For families that “finish” early, try to challenge them to go deeper. Ask them questions or generate “what if...” questions to expand their thinking and continue to deepen their engagement with their project.

Facilitator Tip:

Facilitation will help families to deepen their thinking and their projects. However, try to avoid “over-facilitation,” where too many facilitators are checking in with the same family. Organize each facilitator so that they are watching the progress of particular families.



Family Stories

Workshop 4 Ideas and Challenges

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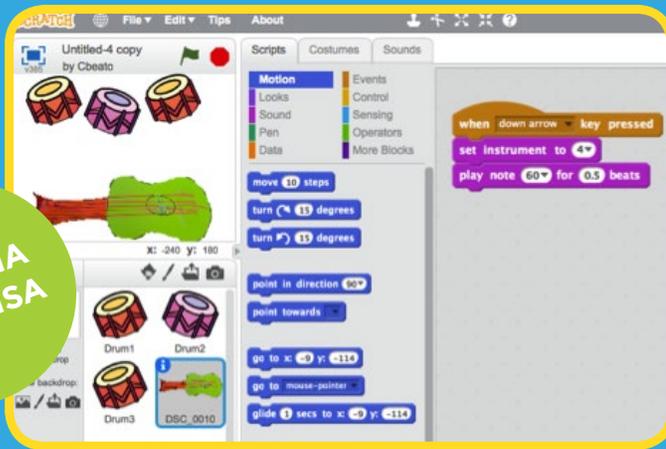
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FABIANA
+ MARISA



On Workshop 4, Fabiana and Marisa worked on a Scratch project to accompany their guitar and drums. Unable to find a guitar sprite on Scratch, they decided to take a picture of the physical guitar they made and import it as sprite in their project. Fabiana fashioned a steel sponge bracelet to connect to the MaKey MaKey Earth, so that she became “Earth.” This bracelet eliminated the problem of holding the alligator clip while playing their instruments at the same time.

In her excitement to build a controller, Maddie immediately made buttons out of Play-Doh on top of a clay base—which unfortunately made the controller a single conductive item. Although all four arrows were connected by individual cables, MaKeyMaKey would trigger all arrow keypresses at once whenever Maddie touched any of the buttons. Instead of starting over, we suggested that she take her individual buttons and place them on separate sides of a non-conductive box.



MADDIE
+ JAMES



Bring parents and children back together to practice sharing their work!

(25 mins)

Families may want to use this Share time to start practicing how they want to talk about their projects at the community showcase. It is also a good time to practice answering questions they may be asked. Their projects might be delicate or hard to move. We suggest walking around to each project in a “gallery walk.”

REVIEW SHARING NORMS

1. Remind families that they can celebrate each others’ work by offering positive comments and asking questions.
2. Remind families that we can always continue working on our projects. They should also talk about what they would have done if they had more time.

SHARE PROJECTS

3. At each project, ask them to share their project and describe what it does.
4. Encourage the other families to ask questions. You might need to start off the questions. You can ask the project creators:
 - How did you do _____?
 - What inspired their creation?
 - What would you do if you had more time?
5. Give a big round of applause!

BEFORE THEY GO

Continue to encourage families to invite their friends and other members of their family to the Community Showcase. In case some families do not finish, you may want to designate another time that you and other facilitators may be available to help them complete their projects.

Your notes:



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What are **your team's reflections** on Workshop 4?

Green

What went well?
Who had positive interactions?

Yellow

What questions do you have?
What are you unsure of?

Red

What could be improved? Were there any challenging interactions?

Workshop 4 Sound Bites

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For the kids, I think that they get a sense of solidarity amongst themselves. I think that the parents also get a shared appreciation for each other.”

- Facilitator



My son and I just both kept bouncing ideas off each other and it was just unbelievable. That’s what I love. He [my son] thought it was the greatest.”

- 43 year old mother of one

1

Workshop 5

2

Creating: Community Showcase

Connecting: Sharing with family and friends



Parents and children will Share together.

3

Families will:

4

EAT

Welcome family members and friends to the Community Showcase

SHARE

Share and talk about their projects to family members and friends

5

Welcome to Workshop 5! (Total time: 2 hours)

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This is a time for celebration! Your families have been working hard and the Community Showcase is an opportunity for them to share their work with other family and friends. It is also an opportunity to welcome new people into the environment you have all co-created and have them see what Family Creative Learning looks like.

Prep

Getting Ready

One week before your workshop:

- Prepare family project materials
- Call parents to remind them of the workshop time and date
- Confirm your food order
- Check in with facilitators and designate roles for each
- Prepare a gift or memento to give to families at the end, such as a photo collage

Gathering Materials

Since there will be guests who are unfamiliar with the workshops, you may want to include a printed flyer explaining Family Creative Learning. If you've been collecting media release forms to take photos and videos, have those handy for guests to fill out as well.

SHOWCASE

- Name tags
- Individual family name signs
- Flyer explaining Family Creative Learning
- Media Release forms (optional)

EATING

- Tablecloth
- Paper goods
- Aluminum foil
- Trash can

TECH

- External projector
- Camera
- Speakers (and music!)

Prep

Arranging the space

SPACE

Since there will be guests, there will be more people than usual at this workshop. Consider using a larger space or arrange your current space to allow for easy flow and movement.

We recommend setting up the space like an exhibition, with a distinct space for every family, so that guests can easily walk around and check out the projects. If you can, create signs with family names and place them above each family's space. If possible, set up a corner with Scratch, MaKey MaKey, and craft materials to allow guests to play with the tools too!

If you took photos and/or video during the workshops, you could have a running slide show in the background.

DECOR

Depending on the type of theme you chose for the Community Showcase, you might want to decorate the space to immerse families and their guests in the theme.

FOOD

If possible, provide some finger foods for guests and families to eat as they check out projects.

Summary of space needs:

- Separate spaces for each family
- Projector and running slide show of photos
- Decorative items
- MaKey MaKeys, craft materials, and computers with Scratch

Facilitator Tip:

Keep family dynamics in mind as you set up your Showcase. More outgoing families may work best towards the front of the space, while less outgoing families may work well in the middle of the room—so they're not quietly isolated in the back, but not who guests immediately encounter at the door.

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Welcoming everyone to the showcase (30 mins)

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SET THE STAGE

1. Explain what Family Creative Learning is and what projects families created. Since there are new people present, help them understand what families experienced and accomplished together in the last four weeks.
2. Do a live demo of Scratch and MaKey MaKey or share the intro videos to show how they work.
3. You may also want to provide a bigger picture, explaining that we live in a world where almost everything we do is done through technology. While many of us use and interact with technology, there has been growing attention on the importance of also being able to create and express oneself with technology. And families in this program created their own interactive technologies with Scratch and MaKey MaKey!

START THE CELEBRATION

4. Share photos or videos of what the experience was like for families.
5. Give families and guests a road map for the Community Showcase. Share how the time will be split up, what kinds of projects to expect, and what can they do. Encourage guests to try out all the projects and to ask lots of questions.





Community Showcase!

(90 mins)

SHARE

1. After most guests have arrived, go around the room and introduce each family.
2. Facilitate a gallery walk to see each project or have families share using the projector.
3. Ask each family to share and talk about their projects and the process they went through to create them. How did they come up with their idea? What is something in the project that they are especially proud of?
4. Encourage questions from all attendees.
5. Give a big round of applause for each family!

CELEBRATE

Before the end of the showcase, take a moment to personally recognize every family for all their hard work and creativity.

1. Say a few words about how they progressed and worked together.
2. If possible, give each family a parting gift, like an action shot of the family working together or a collage of their experience.
3. Share next steps. If you have plans to continue engaging with the families in some capacity, share what your next steps are. If not, remind them that the Scratch and MaKey MaKey website have communities of people who create and share their projects online. They could also connect with new people with similar interests.

THE END!

Before all the families depart, take a group picture! Speak to families about ways they can keep in touch, follow up, and connect. Consider having a family reunion night one month after your Showcase. Remember to take your group photo and get in lots of hugs before everyone heads out!

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Facilitator Tip:

When recognizing families, talk about their learning and collaborative process more than their final product. Also, make sure to equally distribute attention across families so that others do not feel less recognized or appreciated. You may want think about a few sentences to recognize something special about each family beforehand.

SHARE

This is what our showcase looked like

Families and guests were invited to view projects gallery walk style.



Family SCRATCH Nights

May 9, 2013 - June 6, 2013



As a parting gift, the facilitation team presented each family with a printed collage, and verbally highlighted each family's achievements as they presented the gifts.



Our facilitators took portraits of each family.

During the gallery walk, each family shared their creations with the group as a whole. After, we took a photo of the entire group (one serious and one silly one!)



Family Stories

Workshop 5 Final Thoughts

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FABIANA
+ MARISA



“ My mom was happy that she could learn something new from me.

I felt proud that I helped her and there was stuff that she could do that I didn't know she could do.”

- Fabiana



MADDIE
+ JAMES

“ I prefer working with the kids. Like I said, because they have more of an imagination, you know, they'll give you a bit more direction of what to do...Just spending time together and working on things together is kind of cool.”

- James

What are **your team's reflections** on Workshop 5?

Green

What went well?
Who had positive interactions?

Yellow

What questions do you have?
What are you unsure of?

Red

What could be improved? Were
there any challenging interactions?

Workshop 5 Sound Bites

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It's a special experience that we've gone through together. When parents see me, there's always going to be that connection. The trust develops. They know they can come to me and ask me questions as a resource."

- Community center staff member and facilitator

**Congratulations,
you did it!**

Appendix



What you'll find in the appendix:



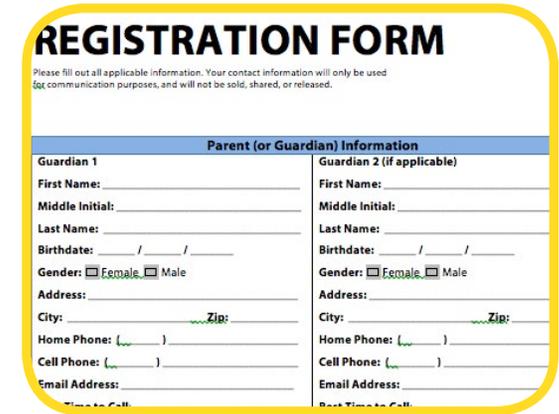
Glossary

A list of useful Family Creative Learning terms to know



Design Journal & Handouts

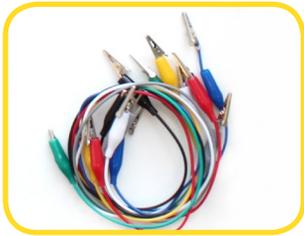
A full copy of the Design Journal and workshop handouts that are ready to print and use



Forms & Flyers

Registration forms, Media Release forms, and an FCL flyer

Glossary



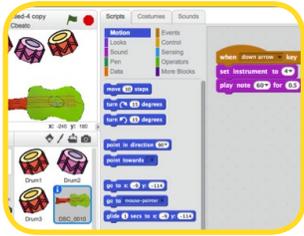
Alligator Clips

Alligator clips are conductive wires with manipulatable ends that clip and secure to small objects.



Community Code

The Community Code is a short list of norms that the group creates and decides upon together to maintain a safe and respectful environment.



Computational Thinking

Computational thinking refers to the concepts and practices that computer scientists and engineers use to create new ideas and solve problems.



Conductive / Non-conductive

Conductive items, like metal and water-based products, are capable of transmitting electricity. Non-conductive items, like plastic, cannot.



Creative Learning

Creative learning refers to learning through designing and inventing. As people make projects, they build ideas and develop their creative thinking.



Design Journal

Design Journals contain all accompanying Scratch and MaKey MaKey tutorials and materials for families to use during the workshops.



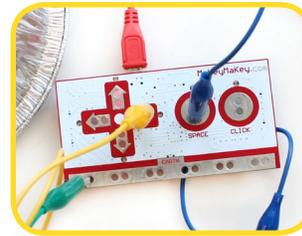
Facilitator

Facilitators are volunteers that help co-design, coordinate, and run the workshops. They are co-learners, co-creators, and cheerleaders for families!



Gallery Walk

A gallery walk is a structure for sharing multiple projects in one space, like a person would walk around a gallery to view multiple works of art.



MaKey MaKey

MaKey MaKey is an invention kit that allows you to connect the physical world to the computer by turning any conductive item into a keyboard key.



Scratch

Scratch is a free programming language and online community where you can create your own interactive stories, games, and animations.

Family Creative Learning Design Journal



Hi! My name is:

My Scratch Account

Scratch Website:
<http://scratch.mit.edu>

Name

Scratch Username

Scratch Password

Welcome to Family Creative Learning!



Family Creative Learning is a **5-week series of workshops** for parents and children to design and invent together using **creative computing tools like Scratch and MaKey MaKey**. Every night, families eat good food, meet other families, and make projects — while having fun and being creative together with computers.

What is Family Creative Learning?

Family Creative Learning is a 5 week workshop series where we invite parents and their children to design and invent together with Scratch and MaKey MaKey.

Who can come?

All family members are invited. Parents must accompany their children. The workshops are most suited to children ages 8 to 12.

Why participate?

We want families to experience having fun and being creative together with computers. As you learn to program in Scratch, you can develop your creativity, abilities to collaborate, and critical thinking—skills you need to be successful in today’s society.

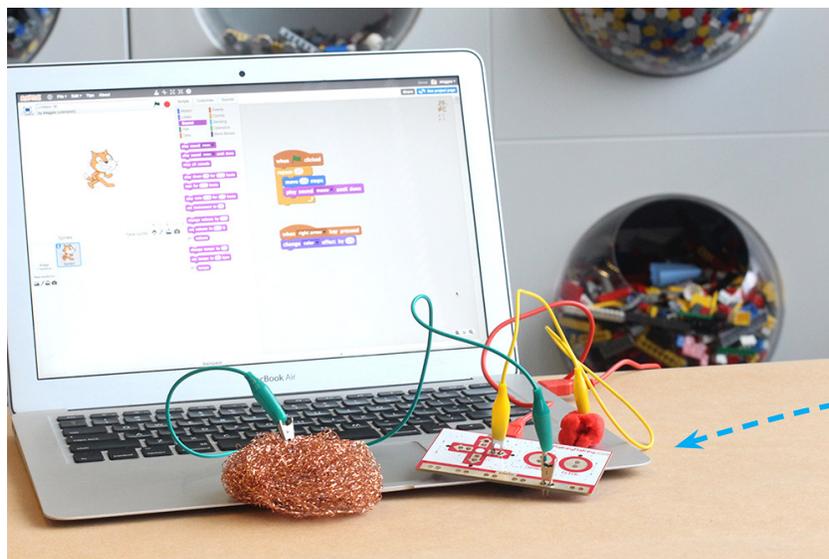
What does this cost?

Nothing! This is a free event. All we ask for is your time and imagination! You must attend all five workshops in the series.

What happens each day?

Workshop 1	Workshop 2	Workshop 3	Workshop 4	Workshop 5
				
Exploring Scratch	Exploring MaKey MaKey	Brainstorming Projects	Creating Family Projects	Community Showcase

What creative tools do we use?

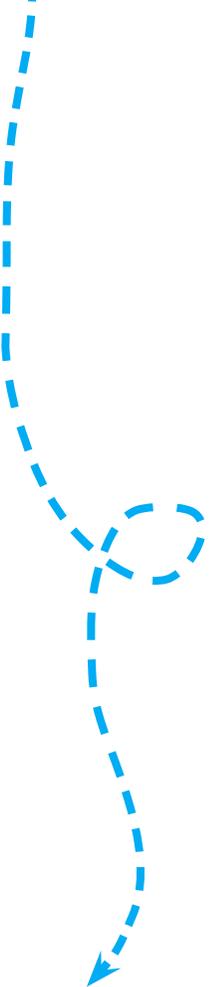


Scratch

With Scratch (<http://scratch.mit.edu>), you can program your own interactive stories, games, and animations and share your creations with others in the online community. Scratch uses puzzle piece-like blocks that you drag and drop to program your creation.

MaKey MaKey

MaKey MaKey (<http://makeymakey.com>) is an invention kit that allows you to turn any conductive item into a keyboard key. With MaKey MaKey, you can connect conductive items, like bananas and steel sponges, to specific keyboard key presses, such as the space bar or arrow keys.



Day One: Animating your name with Scratch

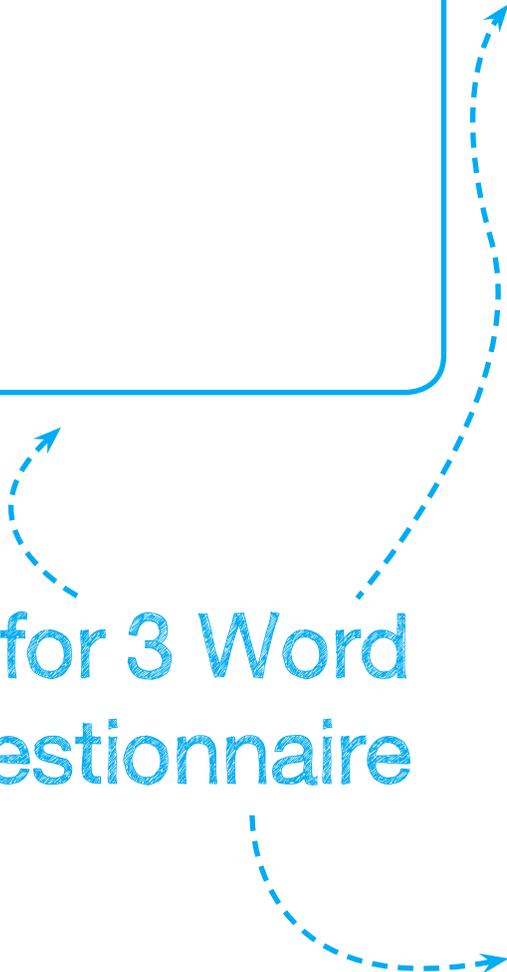


Write 3 words to describe how you feel about **technology**:

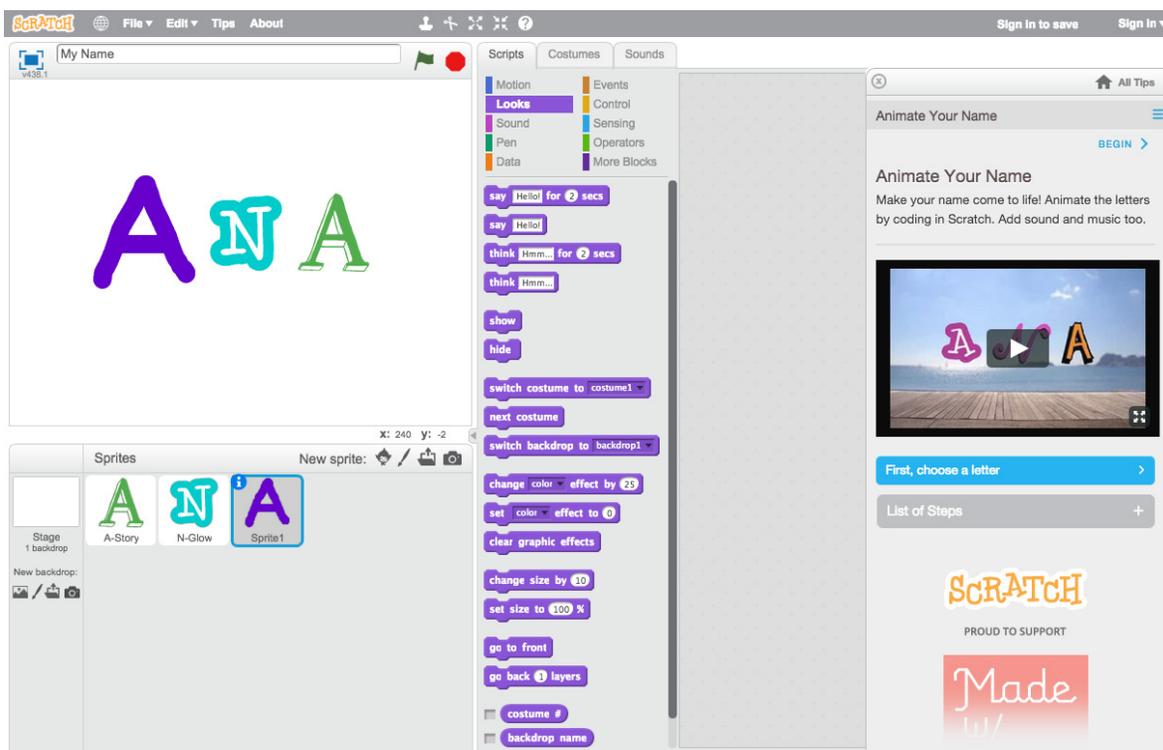
Write 3 words to describe how you feel about **learning**:

Write 3 words to describe how you feel about **creativity**:

3 for 3 Word Questionnaire



Animate Your Name Overview



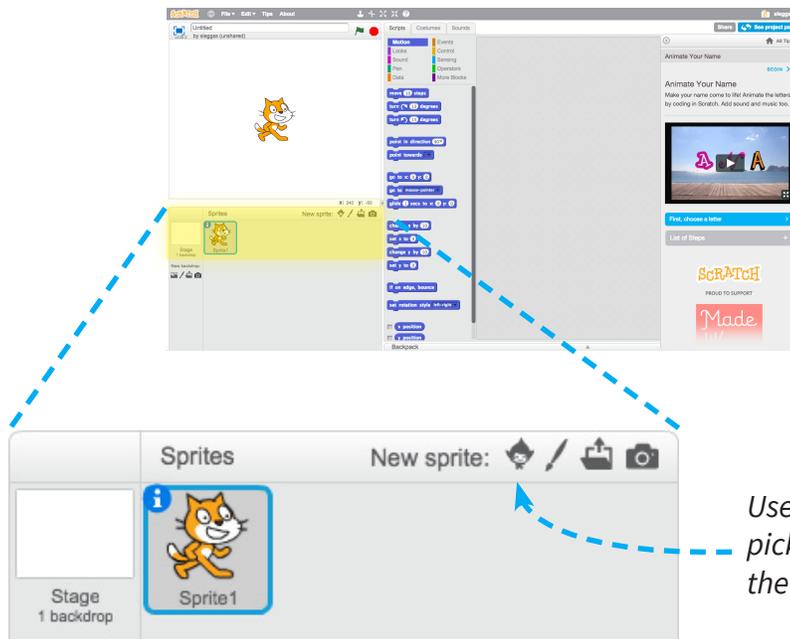
Follow the steps in the Tips Window or use this guide to make your name project. To open the Tips Window, click on the  icon or click the gray bar on the right side of the screen.

<http://scratch.mit.edu/name>

Choose the first letter

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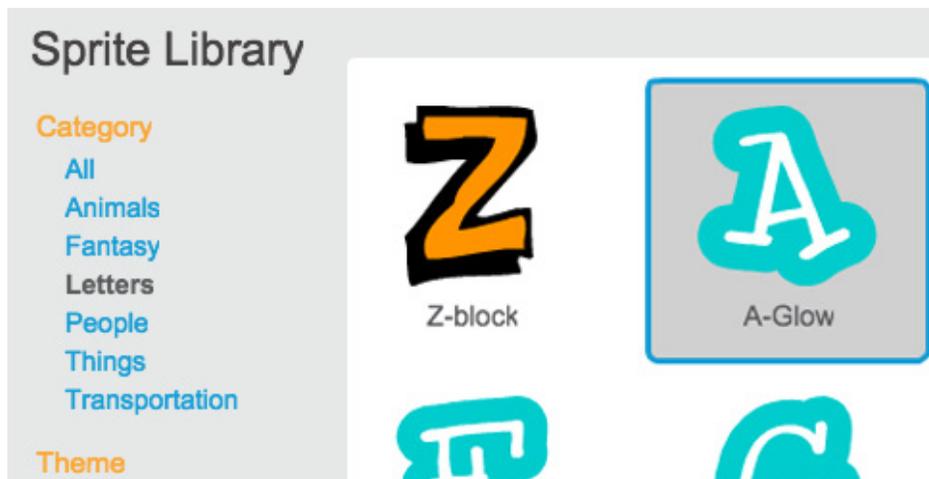
To start, choose the first letter of your username, initials, or favorite word by clicking on the **New Sprite** icon.



Use this icon to pick a sprite from the Sprite Library

2

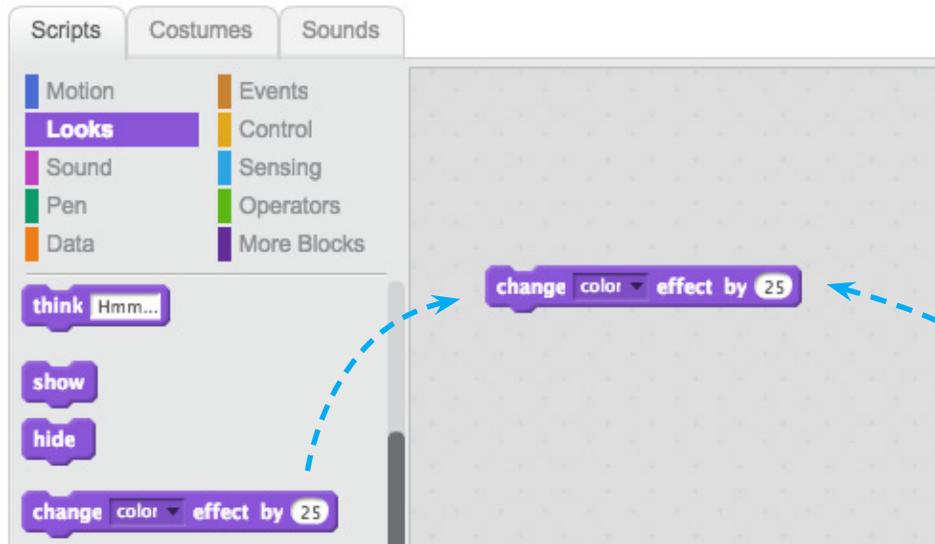
Then select one of the letters in the Sprite Library. After you click your letter, your sprite will appear on the Stage.



Add color effects

1

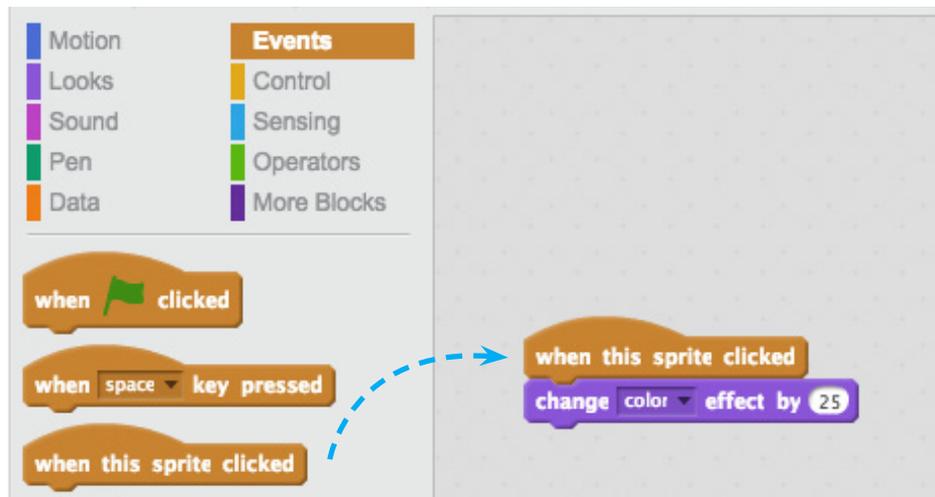
Make the letter change color whenever it's clicked. Click the **Looks** category, then drag a **change color effect** block into the Scripts area:



Click on the block to try it out!

2

Click the **Events** category. Drag out a **when this sprite clicked** block and snap it on top:

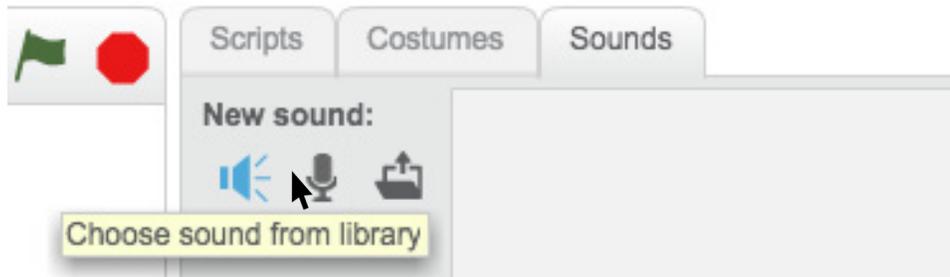


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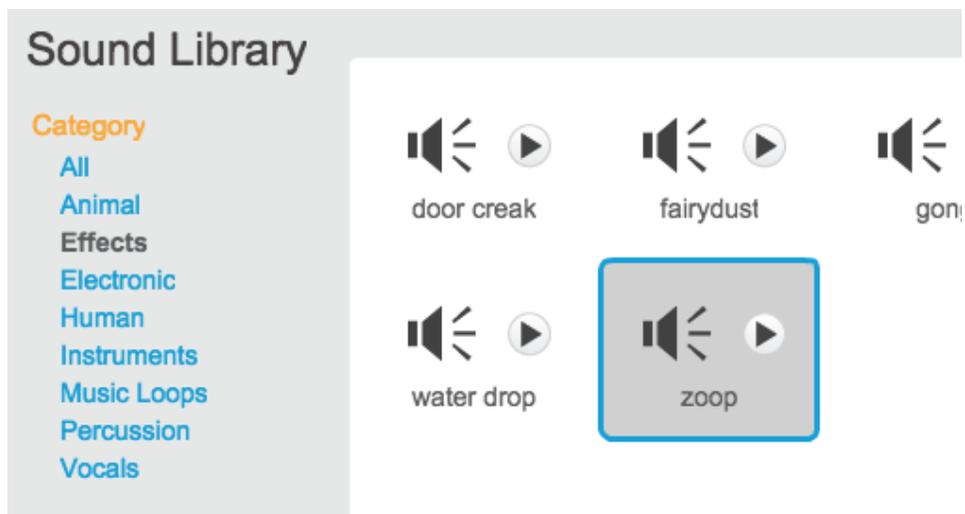
Click on your letter in the Stage to make it change color!

Add a sound

- 1 Click the **Sounds** tab, then click 

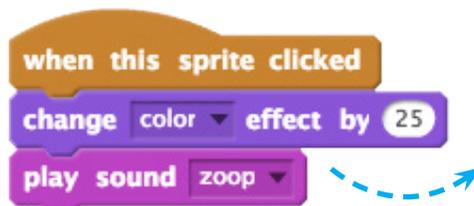


Select “zoop” or another sound:



- 2 Then, click the **Scripts** tab. Click the **Sound** category, and drag out a **play sound block**.

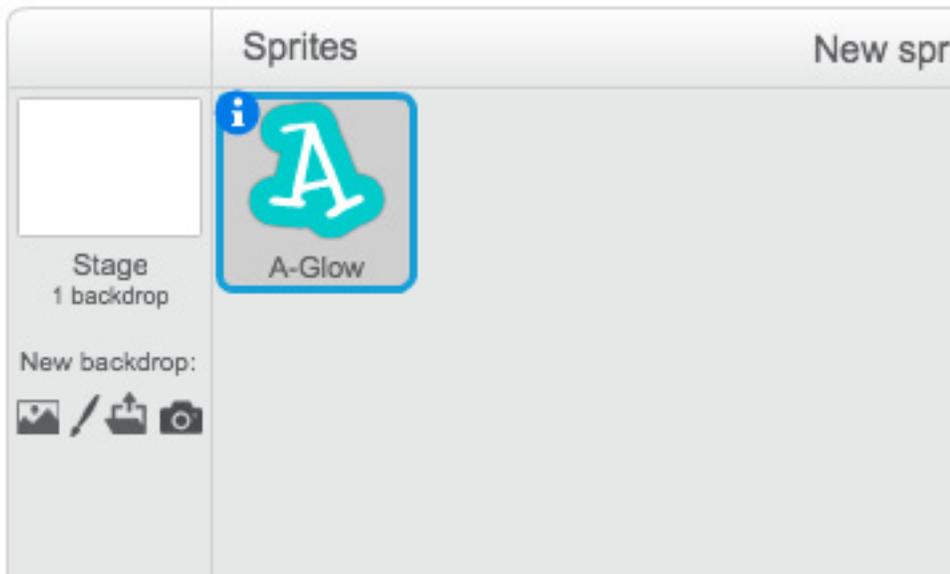
Snap that sound block onto the script, like this:



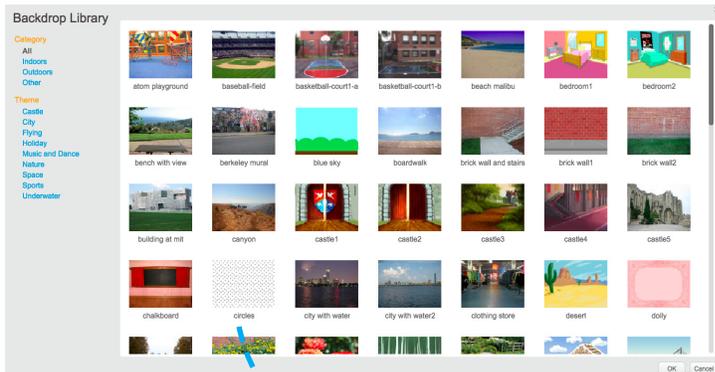
Now, if you click your letter sprite on the Stage, it should play a sound!

Add a backdrop

1 Click the  icon to open the Backdrop Library:

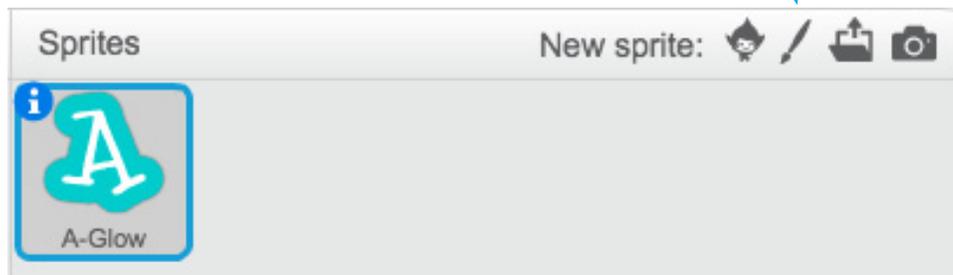


2 Choose the backdrop you want from the Backdrop Library, such as “circles.”



Add your next letter

- 1 To add the second letter of your name, make a new sprite. You can draw the letter by clicking the  icon:



You can draw using the paint tools:

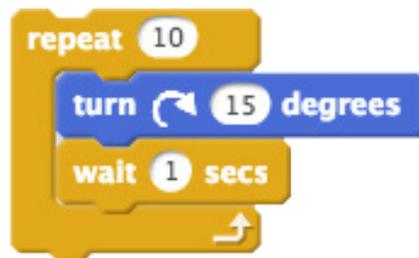


Or, type the letter using the text tool: 

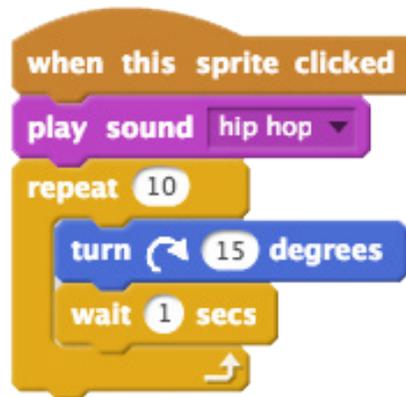
Want to choose the letter instead? Click the  icon to choose from the Sprite Library.

Make it spin

- 1 Animate the second letter of your name!
Click the **Motion** category, and drag out a **turn** block.
Click the **Control** category, and drag out a **wait** block.
Then, drag out a **repeat** block and snap it around those blocks:



- 2 To make it play music and spin whenever you click the letter, build a script like this:



Try different numbers to adjust the spin!

Tip: To reset the sprite's angle, click this block in the Motion category:



Finish your name

1

You're ready to add and animate the rest of the letters in your name!

Choose or draw the letters using the New Sprite buttons:



2

Try out other block combinations, like these:

GLIDE

Make your letter glide when you click it:



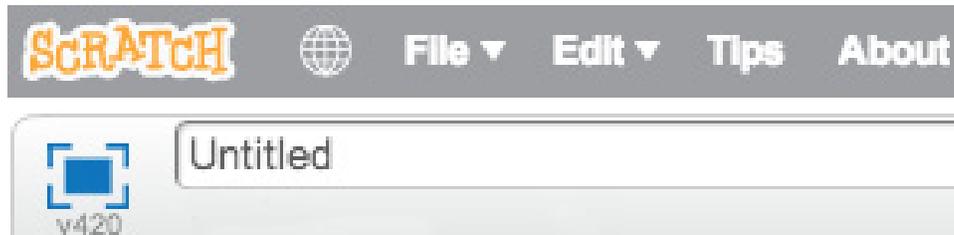
CHANGE SIZE

Make your letter grow and shrink when you click it:



Share your project

1 Type a title for your project.



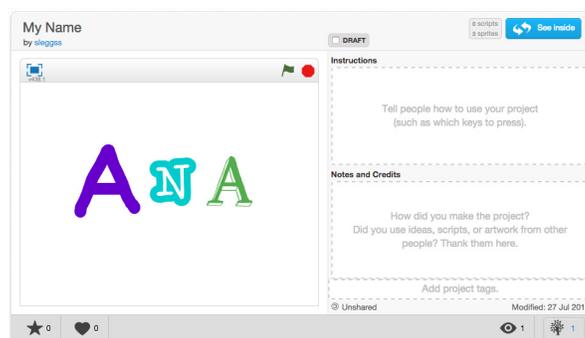
When you are ready to share your project with others, click the “Share” button at the top left of the screen.

(Tip: You’ll need to sign up for a Scratch account to share your project online.)

2 To add instructions, click “See project page.”

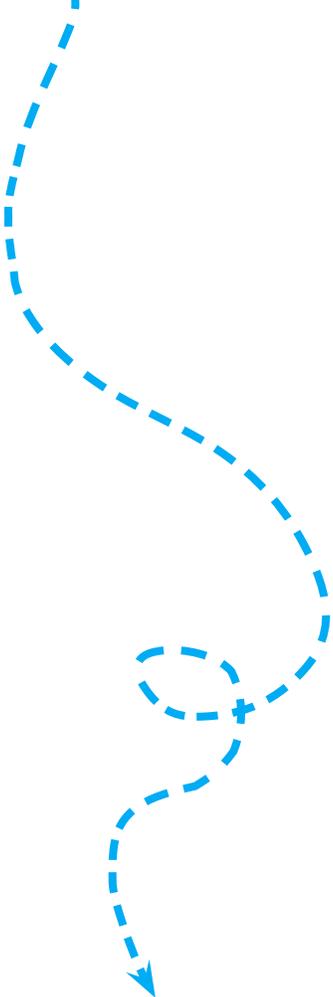


Or add them once you’ve shared your project:



My Notes

A large, empty rectangular box with a dashed blue border, intended for writing notes. The box is centered on the page and occupies most of the vertical space below the title.



Day Two: Make your own musical instruments

Eat

Reconnect with families and learn about their Scratch experiences

Meet

Reflect and share how you use technology in your daily life

Make

Make your first Scratch and MaKey MaKey instrument

Share

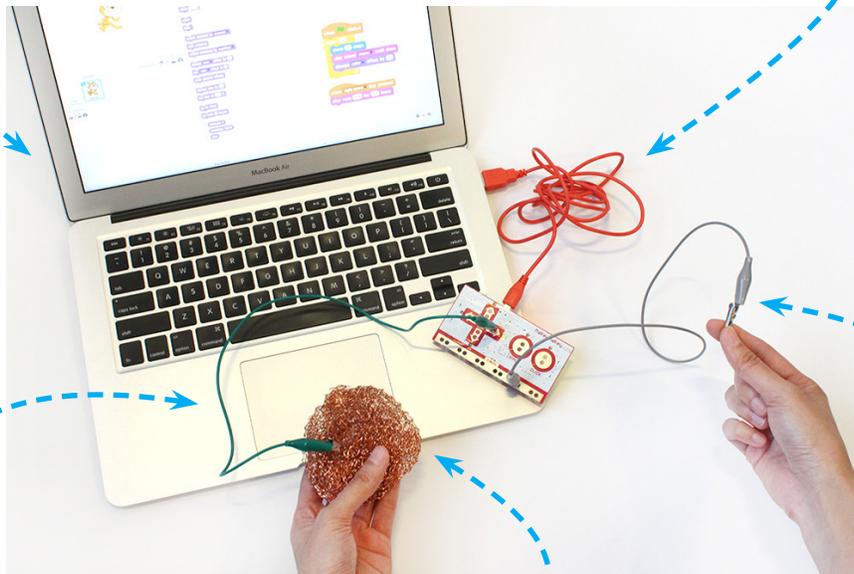
Share your Scratch and MaKey MaKey instrument

MaKey MaKey: The Basics

Create your own musical instruments by connecting Scratch, MaKey MaKey, and everyday materials.

1 Program a Scratch project to respond to key presses.

2 Hook up MaKey MaKey to your computer using the red USB cable.



3 Plug an alligator clip into the corresponding key in MaKey MaKey.

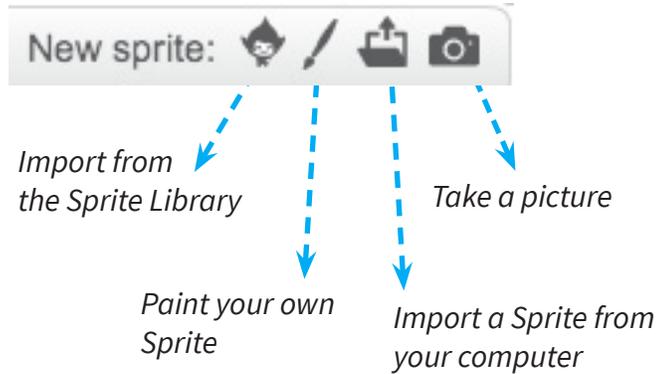
4 Plug the other end into a conductive object, like a metal sponge.

5 Plug in an alligator clip into Earth, hold the metal end of it, and touch your conductive object to play a sound!

<http://www.makeymakey.com>

Create notes

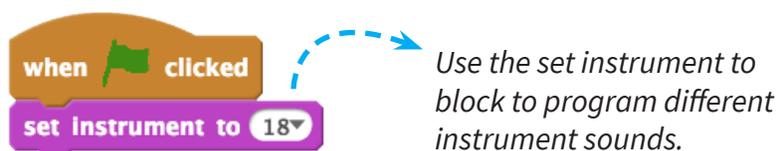
1 Create a new sprite.



2 Program notes to play with key presses.



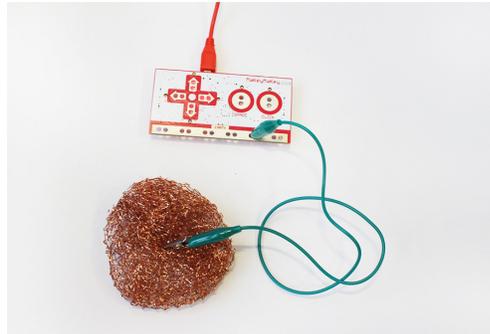
3 Experiment with other sound blocks!



Make music

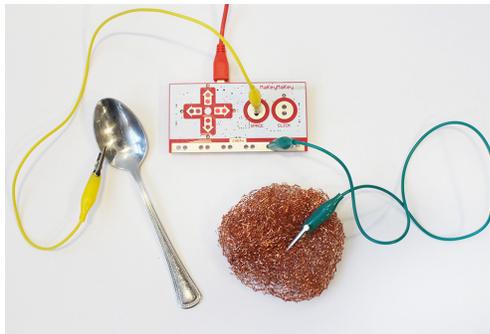
1

Connect one end of an alligator clip to a conductive item, and connect the other end to the “Earth” section of the MaKey MaKey.



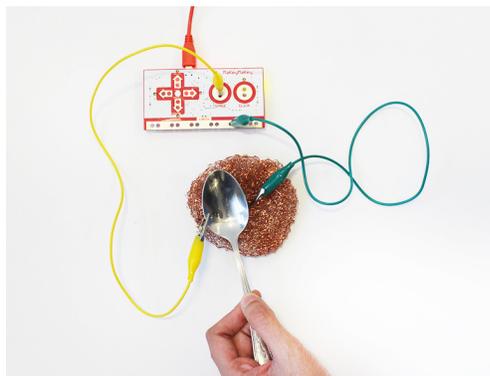
2

Connect the space key.



3

Tap to play!



Connect more materials to MaKey MaKey to interact with rest of your notes!

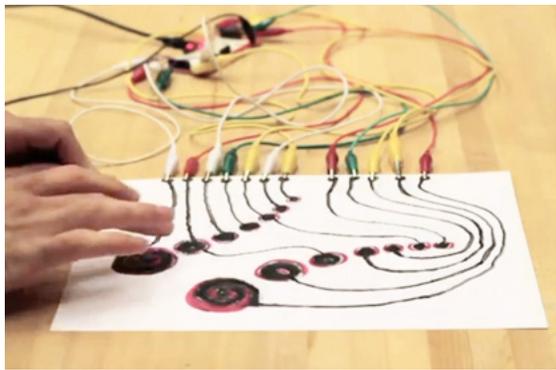
Explore instruments

How else can you interact with your musical instruments?

1 With your feet?



2 With paper and pencil?



3 With high fives?

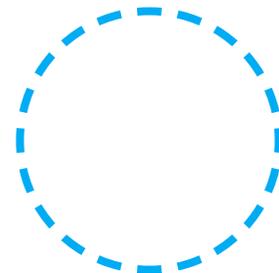
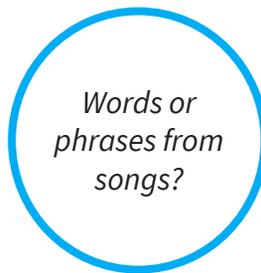


4 What else?



Explore sounds

What other kinds of sounds can you make?

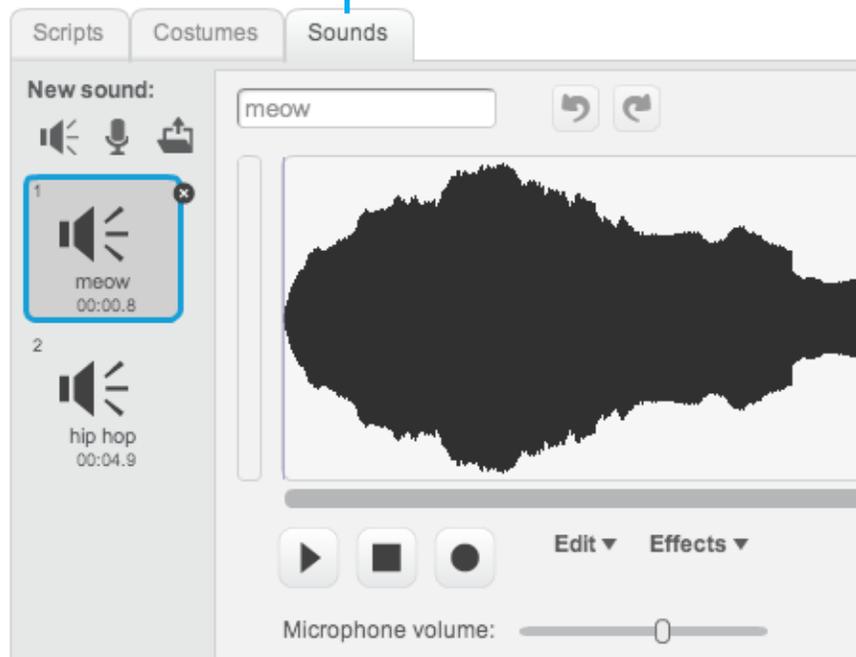


Click on the Sounds tab to create new sounds in Scratch

Import a sound from the Sound Library

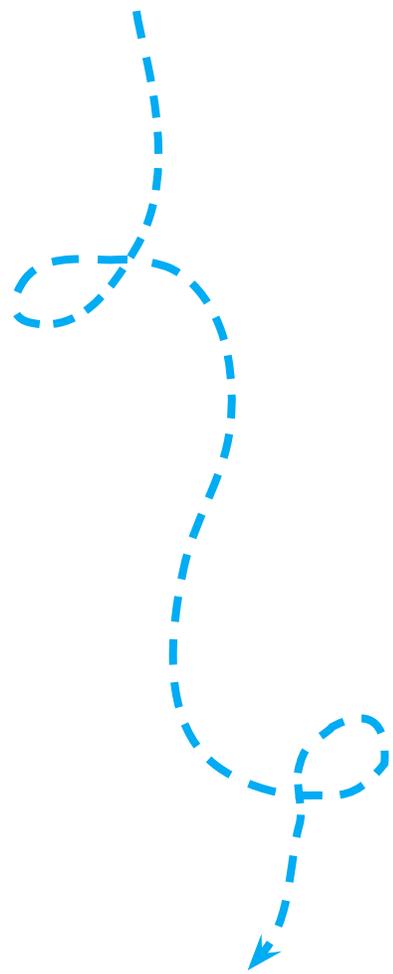
Record a new sound

Import a sound from your computer (check out page 10 for a refresher!)



My Notes

A large, empty rectangular box with a dashed blue border, intended for writing notes. The box is centered on the page and occupies most of the vertical space below the title.



Day Three: Make your Community Showcase project



Brainstorm

A large, empty rectangular box with a dashed blue border, intended for brainstorming ideas. The box is centered on the page and occupies most of the lower two-thirds of the page.

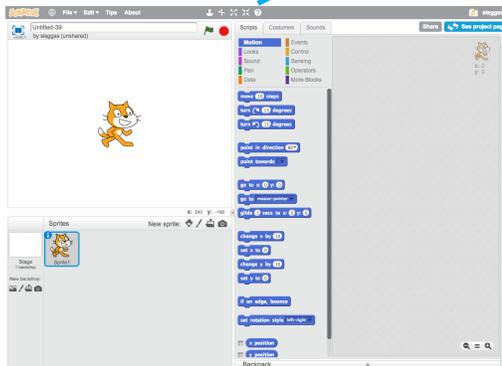
Brainstorm

A large, empty rectangular box with a dashed blue border, intended for brainstorming ideas. The box is centered on the page and occupies most of the vertical space below the title.

How do I...

Use the How To tab in the Tips Window in Scratch to learn how to enhance your project!

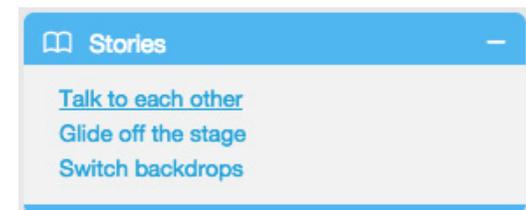
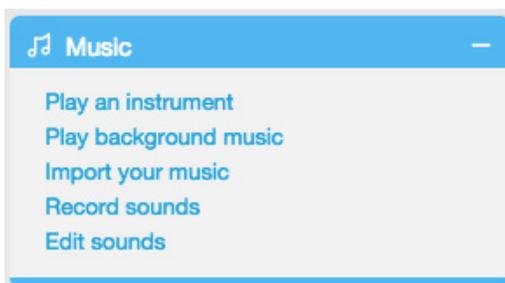
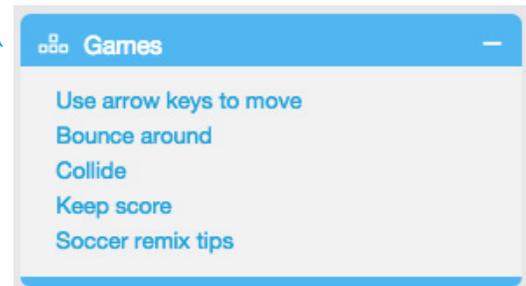
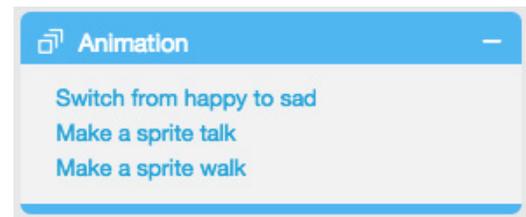
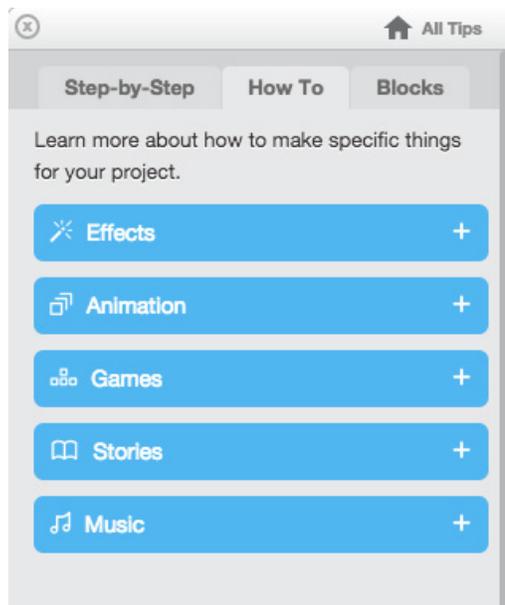
1



Click the  tool and click on a block to learn more about the block in the Tips Window.

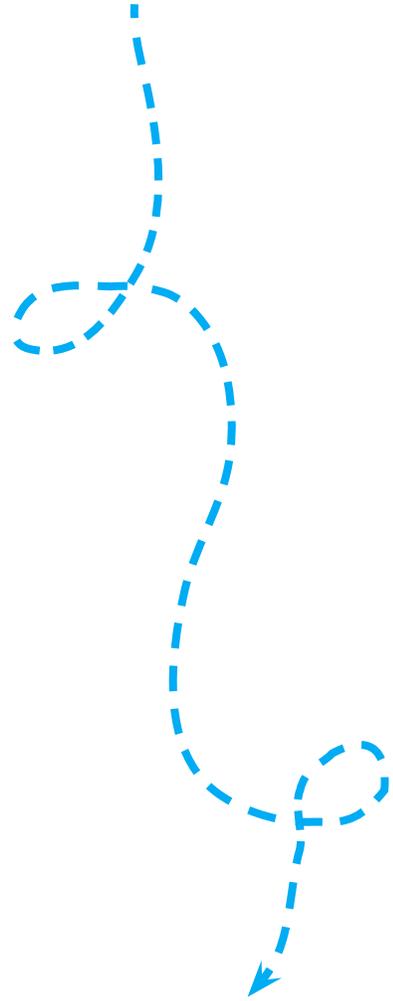
Click on the tab at the very right of the screen to access the Tips Window.

2



My Notes

A large, empty rectangular box with a dashed blue border, intended for taking notes. The box is centered on the page and occupies most of the vertical space below the title.



Day Four: Creating your family project



About your project

What's your project about?

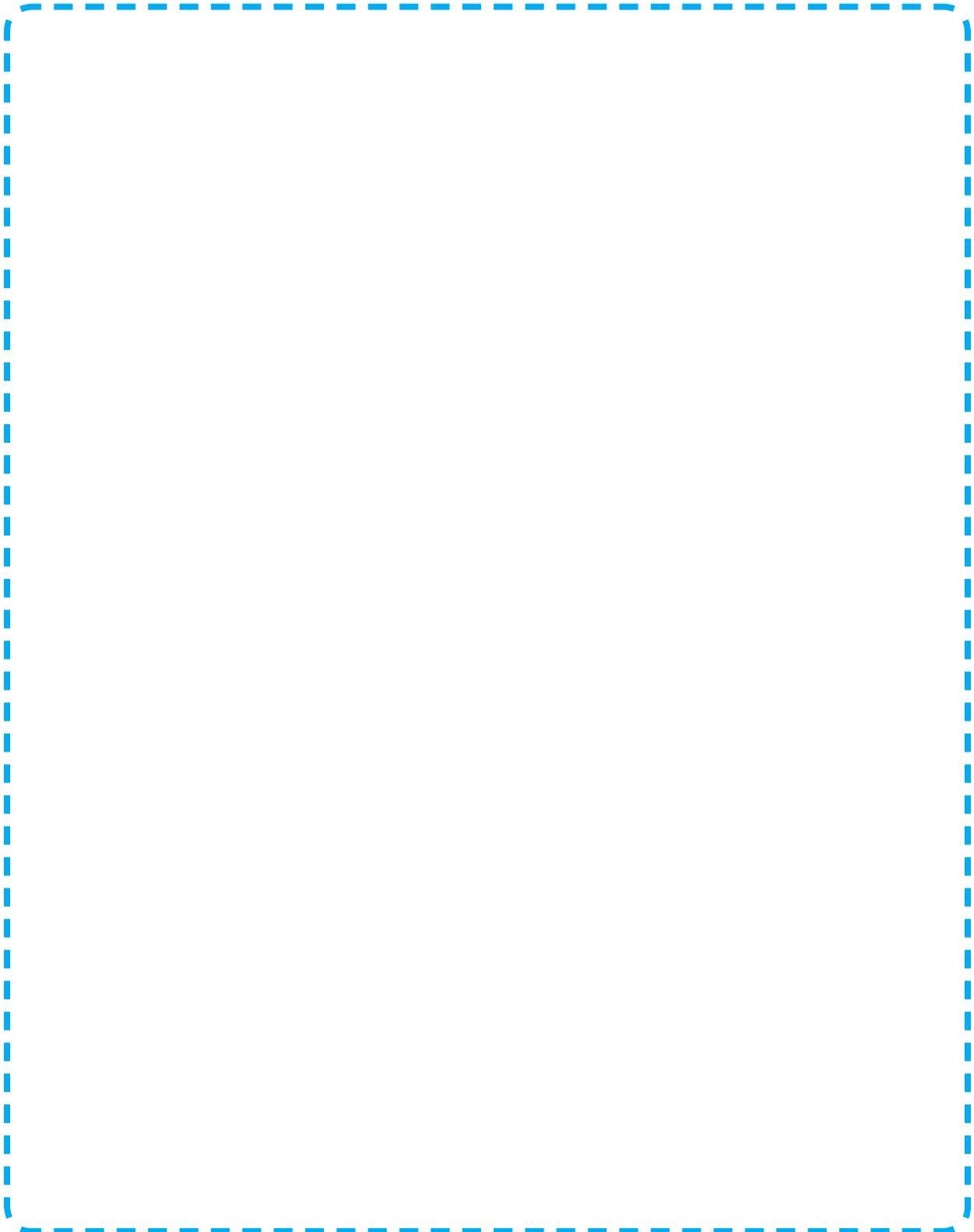
How did you make it?

What's something you're proud of?

My Notes

A large, empty rectangular box with a dashed blue border, intended for writing notes. The box is centered on the page and occupies most of the vertical space below the title.

My Notes

A large, empty rectangular box with a dashed blue border, intended for writing notes. The box is centered on the page and occupies most of the vertical space below the title.

What's Next?

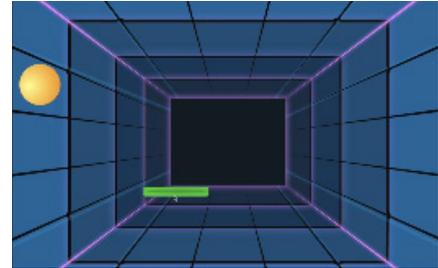
1 Try out the other Scratch tutorials in the Tips Window!



<http://scratch.mit.edu/dance>



<http://scratch.mit.edu/favorite>



<http://scratch.mit.edu/pong>

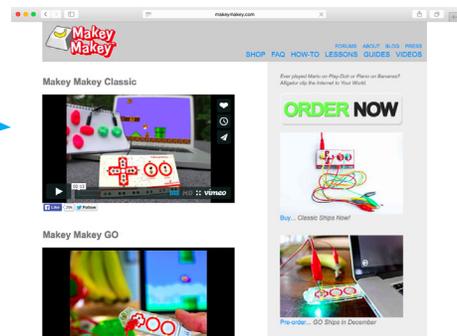
2 Remix a few Scratch Starter Projects!



http://scratch.mit.edu/starter_projects

3 Visit the MaKey MaKey website for projects, videos, and more!

<http://makeymakey.com>



your first name or nickname

a drawing of yourself

something you like

something you like about yourself

your first name or nickname

a drawing of yourself

something you like to do

something you like about yourself

your first name or nickname

a drawing of yourself

something you like to do

something you like about yourself

Your family name(s)

Your family members

Something you like to do together

Something you like about your family

REGISTRATION FORM

Please fill out all applicable information. Your contact information will only be used for communication purposes, and will not be sold, shared, or released.

Parent (or Guardian) Information

Guardian 1

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Address: _____

City: _____ Zip: _____

Home Phone: (_____) _____

Cell Phone: (_____) _____

Email Address: _____

Best Time to Call: _____

Preferred Method of Contact:

Home Phone Cell Phone Email

Race (check all that apply, optional):

Asian Black or African-American

Hispanic/Latino Native-American

White Other

Guardian 2 (if applicable)

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Address: _____

City: _____ Zip: _____

Home Phone: (_____) _____

Cell Phone: (_____) _____

Email Address: _____

Best Time to Call: _____

Preferred Method of Contact:

Home Phone Cell Phone Email

Race (check all that apply, optional):

Asian Black or African-American

Hispanic/Latino Native-American

White Other

Student Information

Student 1

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Cell Phone: (_____) _____

Email Address: _____

School Name: _____

Grade Level: _____

If more than one child will participate, please use the back of this form to enter their information.

Student Information (cont...)

Student 2

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Cell Phone: (____) _____

Email Address: _____

School Name: _____

Grade Level: _____

Student 3

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Cell Phone: (____) _____

Email Address: _____

School Name: _____

Grade Level: _____

Student 4

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Cell Phone: (____) _____

Email Address: _____

School Name: _____

Grade Level: _____

Student 5

First Name: _____

Middle Initial: _____

Last Name: _____

Birthdate: ____ / ____ / ____

Gender: Female Male

Cell Phone: (____) _____

Email Address: _____

School Name: _____

Grade Level: _____

Media Release Form

Please check one of the following:

- I hereby grant [Your name or your organization name] the right to:
- Record my and my child's participation and appearance on video, audio, film, photograph, or any other medium.
 - Use my name and my children's names, likeness, voice, and biographical material in connection with these recordings.
 - Reproduce, distribute, publicly display and/or publicly perform, either electronically or by any other medium, and to allow others to do the same, the recordings and/or copies of the materials listed below, in whole or in part and without restrictions or limitations, for educational and related non-profit purposes.

I do NOT grant permission.

Name: _____

Signature: _____ Date: _____



Family Creative Learning

Creativity Workshops for Families

WHO

You and your family!
 Free dinner and childcare provided.
 No experience with technology needed.

WHEN

Five Evenings

[DATE] [TIME]
 [DATE] [TIME]
 [DATE] [TIME]
 [DATE] [TIME]
 [DATE] [TIME]

WHAT

Design and invent together with your family using creative tools like Scratch. With Scratch, you can program your own games, animations, and stories. Meet other families from South Boston and learn about how creativity and computing is relevant to you, your family, and your community.

Please return all forms by [date] at [place].

For more information call [Facilitator] at [phone number].