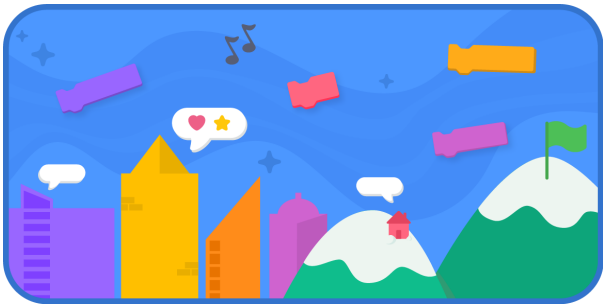
Virtual Family Creative Coding Night

Facilitation Guide

COLOR SCHEME

Background Information

About This Guide



This guide was developed collaboratively by staff at Scratch and the Office of Computer Science at Chicago Public Schools, with teachers and school leaders in mind. Developing this guide took the same computational collaboration that we encourage our young creators to practice. In this case, the collaboration spanned nearly 1,000 miles and what felt like 1,000 iterations!

This guide has suggestions for ways to run Virtual Family Creative Coding Nights. Not every suggestion will work for every school or organization, so please modify your event to fit your audience's needs! If you'd like to remix and customize this guide, you can access a Google Doc version of the guide here. Please be sure to make a copy of the Google Doc for your own use by clicking on "File," then clicking "Make a Copy" – there is no need to request Google access.

About Scratch

Scratch is a free coding language and online community where you can create your own interactive stories, games, and animations — and share your creations with others around the world. As young people create and share Scratch projects, they learn to think creatively, reason systematically, and work collaboratively. Scratch is used in hundreds of thousands of schools around the world and across many different subject areas. If you're new to Scratch, the Getting Started with Scratch guide covers the basics: from dragging out your first blocks of code to creating your own characters. If you'd like to receive news and updates, sign up for our email list and follow us @Scratch on Twitter.

About Chicago Public School's Office of Computer Science

The Office of Computer Science (OCS) is a department within Chicago Public Schools that advocates for the growth of computer science education in the City of Chicago. We want students, teachers, districts, and leadership around the world to recognize computer science for what it is – collaborative, empowering, innovative – and we know that for the growth to be sustainable, it needs to be guided by equity and openness, and must follow the lead of our amazing teachers and students. If you are interested in the work that we are doing, you can keep up with us at our website, or through our Twitter account, @CS4AllCPS!

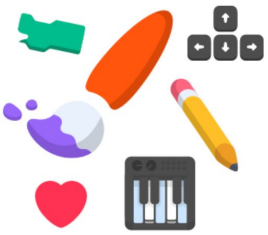
About Virtual Family Creative Coding Nights

Virtual Family Creative Coding Nights bring young people, families, educators, and administrators together online to create and explore using Scratch.

When thinking about the virtual landscape, there were a few questions that kept coming up: How can we support playful and collaborative learning experiences for our creators and their families through a virtual experience? How can our community of creators use the tools they already have available to let their creativity guide their learning? What structures and supports can we provide so that all of our creators can fully engage in their learning? And lastly, how can we provide the opportunity for our creators and families to tinker with Computer Science concepts and build their own knowledge base? Virtual Family Creative Coding Nights were our answer to those questions!

This virtual model builds on the work of the Family Creative Learning Facilitator Guide, developed by the Creative Communities research group at the University of Colorado Boulder. The Family Creative Learning Guide provides a framework and facilitation resources for designing in-person collaborative creative computing events. We're grateful for the opportunity to remix their resources and share ideas to support families gathering and connecting online.

The overall goals of the Virtual Family Creative Coding Nights are to:



- Provide a structure for young people, families, and school communities to collaborate and build connections.
- Support joyful learning, encouraging kids, families, and educators to talk, giggle, and create together.

Planning Your Event

Planning with a Creative Learning Mindset

Even if you're new to Scratch and coding, you can facilitate a Virtual Family Creative Coding Night! Below are guiding principles that can support an exploratory, playful, and family-focused experience.

Setting the Tone: Focus on Joy

Keep it Cozy | Consider ways to set a safe and welcoming tone: the goal of the workshop is to bring families together for a joyful experience.

Spread the Learning | This event is an opportunity for everyone to enjoy coding together! We encourage adults to jump in and code with their young person. Consider introducing the concept of a "driver" and a "navigator." The "driver" controls the mouse/trackpad. The navigator guides the project by sharing suggestions to try. At the start of your event, you could ask: "Who is going to start as the driver, and who is going to start as the navigator?" Then recommend switching these roles every so often during the session.

Code Collaboratively: Focus on Connections

Share the Thinking | It's OK to not know all the answers! Think about how you can ask questions rather than giving answers. You can model learning through tinkering and exploration by saying something like "I don't know, but let's figure it out together."

Share the Love | As the group moves into creating individual projects, encourage students to share their screens when they discover something new, or when they want help debugging (problem solving) their code. Now is the time to use the wisdom of the room! If you don't have the answer, ask the group if there is someone who can help out.

Many Paths, Many Styles: Focus on Creative Exploration

Make it Your Own | Consider inviting kids and families to bring ideas that are personally and socially meaningful[1] into their projects. For example: a starter project might begin as a parade. Who do they want to add to the parade? Could they place themselves, or someone important to them, into the project? Perhaps they want to turn the parade into a protest march? Or a birthday celebration? By positioning learners as creators[2] you provide them with the freedom to express their own powerful ideas.

Share Early and Often | Sharing is often the piece of the workshop that gets left out due to time constraints; but it is a critical component to establishing connection and collaboration between kids and their families. As you customize the schedule to fit your needs, be mindful of maintaining a comfortable timeframe for as many people as possible to share their projects.

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[1]Roque, R., & Jain, R. (2018, July 01). Becoming Facilitators of Creative Computing in Out-of-School Settings. Retrieved August 28, 2020, from https://repository.isls.org//handle/1/908

[2] Ibid.

Focus on Reflecting and Iterating

Reflect and Improve | As soon as possible after the event, gather organizers and facilitators to reflect on what went well, what questions surfaced, and things that could be improved.

Red, Yellow, Green | The Scratch team uses a "Red, Yellow, Green" framework to reflect on their workshops. "Red" are challenges that need to be specifically addressed. "Yellow" are suggested changes. "Green" are bright spots, or areas that the team felt went really well.

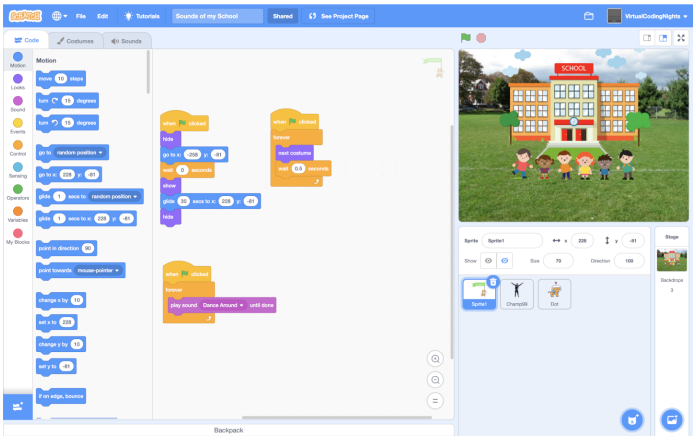
Review and Iterate | End the reflection by discussing several strategies to try implementing in the next workshop. These could range from possible facilitation prompts, ways to engage adult family members, or ideas to smooth out any technical issues.

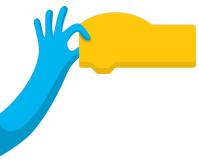
Starter Project

A "Starter Project" is a Scratch project that your community can remix and make their own. It's not a necessity that they stick to the starter project – it is meant to be a jumping off point! Here is an example of a starter project that you are welcome to use for your own event:

Sounds of my School (shown right)

When you *really* imagine it, what does your school sound like to you? What voices, what music, what sounds do you hear? In this project, you'll get to show your school spirit and fill your stage with a school parade or other gathering!





Quick Tip: When you are organizing your Virtual Family Creative Coding Night, you can remix this starter project and add pictures of your own school/organization for the backdrop! Here is a Starter Project example from Chicago Public School's Sayre Language Academy.

Event Layout and Order of Events

The Virtual Family Creative Coding Nights usually run for about an hour. Below is a sample structure:

Meet ~15 - 20 minutes	**Create** ~25 minutes	**Share & Close** ~15 - 20 minutes

- **Meet** | To begin, lead your whole group in a community building event – for example, a virtual pep rally. Introduce your community to a starter project, and briefly explain how the breakout rooms and troubleshooting room will work.
- **Create** | Shift to breakout rooms to encourage kids and families to create their own projects. Encourage them to share their screens and talk through questions they may have.
    - **Small Group Sharing** | About ten minutes into the Create portion, you can suggest that your group share projects and ideas with each other. After about five minutes of sharing, they can return to creating.
- **Share & Close** | Gather the whole group to share creations and field questions from the audience. To close out the night, a school/organization leader can reflect on the community experience of creating, exploring, and sharing together. You might also want to share a (short) survey for your community to provide feedback on their event experience.

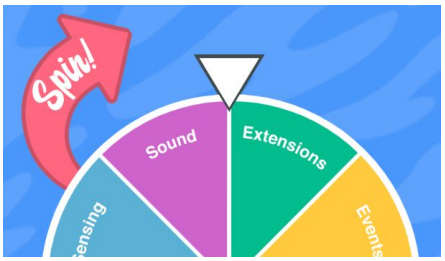
Sample Schedule:

Meet [15 - 20 minutes, as a whole group]

Strong Start	**3 - 4 minutes** | Welcome by organizer. Greetings from teachers/facilitators. **3 - 4 minutes** | Silly time, pep rally/ice breaker/community builder ● **Pep Rally** | Find something in your home that makes noise, and let's all make noise together! ○ Prompt students to make noise by grade level: "Let's hear from the third graders! Let's hear from the fourth graders!" ○ Use this as a chance to practice a special "listening signal" for everyone to pause, mute their devices, and listen when important information is going to be shared. 
Fun Finish	**4 - 5 minutes** | Introduce the starter project ● Show the starter project and play it twice by clicking on the green flag. Show the remix process: making a copy of a project and modifying it to add your own ideas. As long as you're logged in to Scratch, you can remix anyone else's project by clicking the green "Remix" button at the top right of the project page.  ● Show your community three or four different things they can change/add into the project, for example: adding a sprite (character), changing a sprite's motion or looks, adding a sound, etc.

	• Use this as a chance to practice a "discussion signal" to prompt discussion about things they might want to add/change in the starter project! **2 - 3 minutes** | Explain how breakout rooms will work. • Share the different links for the different grade levels. Let students know the reason for the troubleshooting room.

Make [25 minutes, in breakout sessions]

Create [10 minutes]	**2 - 3 minutes** | Warm welcome and Wheel of Blocks • "Wheel of Blocks" is a Scratch project that prompts experimenting with new blocks. When you spin the wheel, it will land on a random set of blocks. Encourage your kids and families who feel stuck to try out whatever set of blocks the wheel lands on!  **7 - 8 minutes** | Coding community gets time to work on their own projects. If anyone is stuck or has a question, encourage the room to solve it. It's also ok for everyone to quietly play and work!
Share [5 minutes]	**1 - 2 minutes** | Introduce Sharing Practices to the group. • Share your screen. • Show the project twice. • Let the group know when you're ready for questions. **2 - 3 minutes** | Have a couple of creators share their projects. Give time for audience questions and comments.
Create [10 minutes]	**7 - 8 minutes** | Give your kids and families time to keep working on their projects. Encourage them to use the wisdom of the room when they're stuck, or share out when they find something new! **2 minutes before sharing projects** | Give the group a heads up that it's almost time to rejoin the whole group. Share a link with them to rejoin the meet.

Share [10 minutes] and Closing

Set the Stage for Sharing [2 minutes]	**1 - 2 minutes:** Remind everyone of Sharing Practices: • Share your screen • Show the project twice • Let the group know when you're ready for questions/comments
Share and closing [9 minutes]	**8 - 9 minutes:** Have some of your kids and families share their screens in order to share their projects. Encourage adults to jump in too! • Organizer closing statements • Share link to feedback survey and event Scratch studio with your community.

Organizer What-To-Dos

Timeline

Below is a sample timeframe leading up to a Virtual Family Creative Coding Night. A similar task list is provided for your event coordinator in our Techie Addendum.

Two Weeks Before

- **Recruit teacher/organization leaders** | Find a few members of your school or organization community who would be able to join the breakout rooms. These leaders can use their unique relationships with kids and families to keep engagement strong throughout the event.
- **Recruit families** | Create a platform for your community to RSVP to the event. Here is a sample RSVP Google Form. Note: If using Google Forms, you might want to make sure it is not restricted to one email address domain.
- **Communicate with your partners** | Make sure to share resources you create with any partners who are helping with your Virtual Family Creative Coding Night! Resources might be things like your RSVP platform/number of attendees, flyers, and break out room links.

One Week Before

- **Communicate with families** | Send a reminder email to families who have RSVP'd. You might want to include a short blurb about what families and students can expect at the event, and, importantly, how they can access a link to the Virtual Family Creative Coding Night the day of the event. You can also share your Class sign-up link with families that would like to make a Scratch account ahead of time.
- **Continue recruiting families and teacher/organization leaders!**

Two Days Before

- **"Playtesting" session** | You might want to coordinate a "playtesting" session with your facilitators to review the event plans. This will also give everyone an opportunity to play with the starter project and anticipate issues that your community might have with it.

The Day Of

- **Share the link with families** | Email families the meeting link to the Virtual Family Creative Coding Night!
- **Expect to have fun!**

The Day After

- **Share the love with families** | Email families thanking them for participating. The email might include:
  - The event feedback survey link.
  - A link to the Virtual Creative Coding Night project studio that you created.
  - An invitation to go further with creative coding: this could be information about upcoming school or district initiatives and a link to the Scratch Ideas Page for tutorials, activity guides, and more ideas to explore.

Roles & Responsibilities

Event Organizer/Coordinator

- Create Scratch Teacher Account, Class, and event Studio
- Generate links for any virtual meeting spaces, breakout rooms, and troubleshooting room
- Build backchannel for communication among facilitators
- Communicate with families and organization leaders for the event
- Hold a "playtesting" session for facilitators prior to the event

Master of Ceremonies (MC)/Event Host

- Start the night with an energizer/pep rally
- Introduce the group to the starter project and to breakout rooms
- Facilitate sharing of projects and ideas at the end of the event

Facilitators

- Support collaboration among kids and families in the breakout rooms
- Provide links and keep time to help kids and families move from breakout rooms into the main room/troubleshooting room
- You can find prompts to encourage your community to share in the Sharing Tips/Prompts section of this guide

Teacher Leaders

- Leverage existing relationships with kids and families to engage them in breakout rooms
- Support collaboration among creators in the breakout rooms

Troubleshooters

- Monitor backchannel for issues that may come up
- Float between breakout rooms to troubleshoot quick-fix problems
- Have participants navigate to troubleshooting room in case of larger issues (example: support making a Scratch account)

Quick Contacts

Want to be on call for event support? Share your contact information with your collaborators in this section in case anyone runs into roadblocks or needs a thought partner!

Person	Role	Contact information

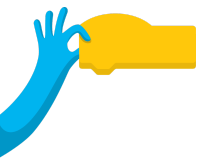
Breakout Rooms & Sharing

Virtual Family Creative Coding Nights can be organized and coordinated using any virtual meeting platform, such as Zoom, Microsoft Teams, or Google Meets. Most of these platforms have the ability to place people into breakout rooms. Because Google Meets does not (yet) have this capability, here are tips specific to Google Meets.

Managing Breakout Rooms in Google Meets

To run breakout rooms in Google Meets, you will need to create all of your Meet links in advance. For example, if you are planning a Virtual Family Creative Coding Night for third, fourth, and fifth grade students and want them to break out by grade level, you will need five different links: a Meet link for your whole group gathering, Meet links for your third, fourth, and fifth graders, and a Meet link for your troubleshooting room.

Because many of Google Suite's platforms are domain specific, we suggest that breakout rooms ***not*** have nicknames. That way, families who do not register with their young person's school-specific email address will not have to wait to be admitted to the Meet.



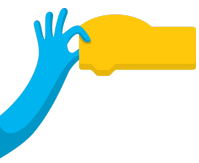
Quick Tip: To keep things secure, breakout room links should not be shared before the event.

Google Meets Breakout Room Map

You might want to use a map like this to keep track of breakout rooms in Google Meet:

Whole Group Google Meet: <Your link here>		
Kinder - 2nd Grade Room(s) <Your link here>	**3rd - 5th Grade Room(s)** <Your link here>	**6th - 8th Grade Room(s)** <Your link here>
Troubleshooting Room <Your link here>		

You can copy this organizational map into a separate document and share it with your coding community when it is time to split up into breakout rooms.



Quick Tip: If two video chat windows are open at the same time on one device, there can be disruptive feedback. To avoid this, remind students to either:

- Close the whole group meet window once they enter their breakout rooms, or
- Mute their microphones when they move from room to room

Sharing Tips/Prompts

Sharing is a part of workshops that often gets left out due to time constraints – but it is such an important piece of any event! Below are ideas to help support a welcoming and generative sharing process.

Setting the Tone

Keep it Cozy | You might want to remind your kids and families that it's ok to not be a Scratch expert. Your Virtual Family Creative Coding Night is an opportunity for everyone to explore Scratch and create something meaningful to them. There are no "wrong answers" when it comes to sharing your project!
Process Over Product | Remind your kids and families that every project is a work-in-progress – they do not need to be completely finished to share! They can always go back and make changes to their projects. This is their time to show what they have created to their community and share their thinking!
Everybody In | While your young creators may be eager to share their projects right away, their adult family members may be reluctant and need direct encouragement. Take an opportunity just before sharing projects to invite entire families to share – adults too! Everybody in!

Active Sharing

Tell Your Story | Your kids and families might feel encouraged to share their projects if you share a project first. Let your creators know about your own experience: What excited you? Did you run into any roadblocks? Is there anything you would like to add to your project? Show that you are all active learners in your Virtual Family Creative Coding Night!
Share a Routine | You might want to consider building a routine around how projects are shared in your Virtual Family Creative Coding Night. You could have your creators:

1. Share their screen to show their project.
2. Play their project two times by clicking the green flag.
3. Talk about one thing they loved including in their project.
4. Let the group know when they are ready for questions and comments.

Question Stems | Your creators may know what they want to ask or say, but not have the vocabulary right away. Here are some question/comment stems that you could display as you begin to share projects:

- "What was your favorite part to create?"
- "Did you have any challenges making your project? How did you solve them?"
- "Is there anything else you would like to add to your project?"
- "I really like how you..."

Reflection and Iteration

Room to Reflect

As soon as possible after your Virtual Family Creative Coding Night, take time as a team to reflect on your experience and consider ways that you can iterate on the event.

There are many ways you can capture real-time feedback during the event. Your backchannel may have valuable information regarding patterns of things that generally worked well for your team and things that can be improved upon. You can also give a survey, like the sample survey linked here, that families, students, teachers, and facilitators can respond to.

Red, Yellow, Green

The Scratch team uses a "Red, Yellow, Green" framework to reflect on their workshops. Red are challenges that need to be specifically addressed. Yellow are suggested changes. Green are bright spots, or areas that the team felt went really well. You can track your conversation with a simple table, like the one below.

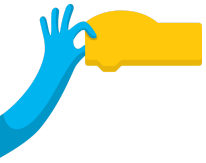
Red	Yellow	Green

Iterative Steps (Ideas to try for the next event)

Notes for Coordinators – The "Techie Addendum"

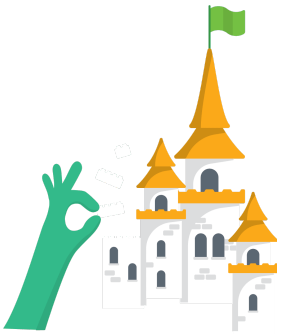
Before your Virtual Creative Family Coding Night, there are a few "technical" things which you might want to have in place. Below is a task-list that your event coordinator should consider in putting your event together, with more details in the sections that follow:

- ❏ Register for a Scratch Teacher Account
- ❏ Create a Class for your Virtual Family Creative Coding Night
- ❏ Create a Scratch Studio that can collect your creators' projects
- ❏ Create and store links to necessary breakout rooms and troubleshooting room
- ❏ Determine and create your "backchannel" for communication among your facilitators



Quick Tip: The official Scratch Teacher Accounts Guide shares more detailed instructions for signing up for a Scratch Teacher Account, creating Classes, and different methods for adding creators to your Classes. The official Scratch Studios Guide shares more detailed instructions for creating and maintaining Studios.

Building Your Event Front End



Your event front end includes planning that will support organizing accounts and managing projects before your event, including: setting up your Scratch Teacher Account and creating classes and event studios.

Creating a Scratch Teacher Account

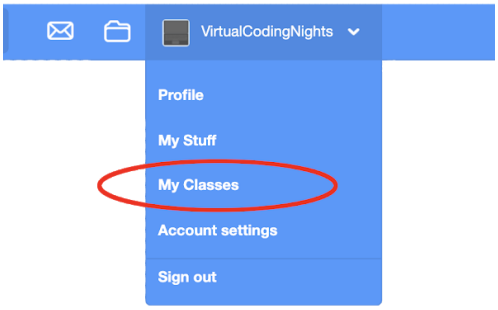
A Scratch Teacher Account makes it easier to organize and centralize different coding events that you might host. It also makes it easier for your students to manage their projects and share them to studios.

You'll need to register for a Teacher Account at https://scratch.mit.edu/educators/register. You'll be asked for a few things like: your email address, your name, your organization/role, and what you will be using the Teacher Account for. **Note:** Make sure that the username you create does not contain identifying information about yourself, your students, or your school!

You'll then get an email from the Scratch team with a link to confirm your email address. Once your request is reviewed, you'll receive a welcome email and be able to log into your teacher account!

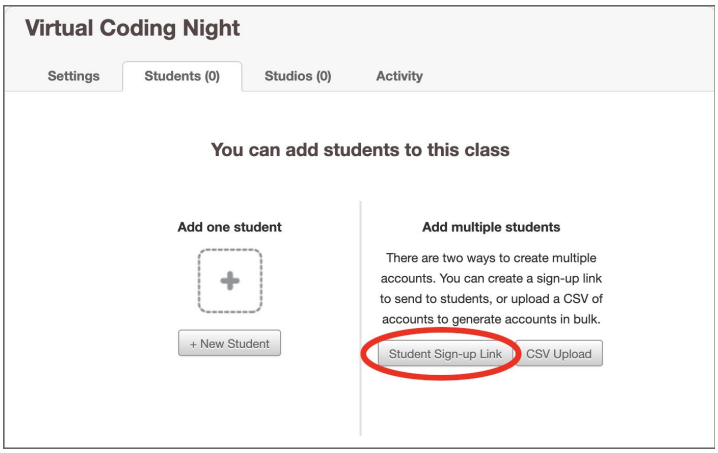
Creating a Class

After creating a Teacher Account, you might want to create classes for your different Virtual Family Creative Coding Nights. Classes will allow your creators to sign up for a Scratch account without needing to verify their email addresses, and it will make it easier for them to share their projects in a studio.



After your Scratch Teacher Account is verified, click on your username at the top right corner of the page and choose "My Classes."

After clicking "My Classes," click on the "+ New Class" button to add a new class. Then give your Class a name and a description.



When your class is created, click on the "Students" tab. There are three ways to add creators to your class: "add one student", "share a sign up link with students", or "upload a CSV doc".

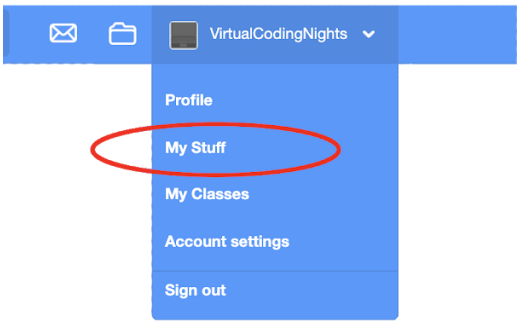
Suggested method: Clicking "Student Sign-up Link" will create a sharable link for students to create their own usernames and passwords. Students who use your sign-up link will be automatically added to your Class without having to verify their email addresses.

Note: Remind students that usernames should not contain any identifying information, such as their names, schools, contact information, or organization ID numbers.

Quick Tip: The sign-up link generated for your Class might be too long or complex for students to type out. Consider shortening the link with a service like Bitly or TinyURL.

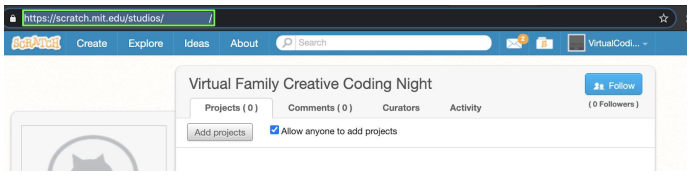
Setting up the Studio

Studios are curated collections of Scratch projects. They can be a great way to organize Scratch projects by class, grade level, or theme. Consider creating a specific studio for your Virtual Family Creative Coding Night that you can share either during or at the end of the event. Your coding community can add their projects to the studio so that you can have a gallery to display all of the projects created during the event.



After your Scratch Teacher Account is verified, you can create a studio by clicking on your username along the top of the page and clicking on "My Stuff."

After clicking on the "Studios" tab, you will see the "+ New Studio" button, which gives you the option to create a new studio. You can rename your studio by clicking its title.



To have students add to the studio, they will need the link to the studio. You can share a studio link by copy-and-pasting the studio URL into any email, into a shared Google Doc, or into the break out room chat window during the event.

Students will need to click the "Add projects" button and select which project they want to add to the studio.

Quick Tip: To allow your coding community to add projects to the studio, make sure the checkbox in your studio labelled "Allow anyone to add projects" is checked during your event.

Building Your Event Back End

Your event back end includes planning that will support collaboration behind the scenes, including your backchannel and the organization of your breakout and troubleshooting rooms.

A Note About Email Addresses

We suggest that families use their young person's school or organization-based email address to navigate the event. That way families can fill out forms and join your meeting links without any issues, especially if you're relying on a Google domain to plan your event. If a family doesn't know how to access the school or organization-based email address, it is ok for them to navigate with a different email, but it might go a little less smoothly.

The Backchannel

If you were hosting an in-person Family Creative Coding Night, you would be able to talk to and support your fellow facilitators as things came up. During a virtual event, you can do the same thing with a backchannel. Your backchannel is a place to communicate in real-time with any facilitators, teachers, hosts, etc., to share support. If your school/organization already uses a platform like Slack or GroupMe, you could create a chatroom to serve as your backchannel. You could also create a Google Doc or Google Hangout Chatroom to use for communication.

If you have a designated Troubleshooter for the event, it's helpful if they are familiar with how to monitor the backchannel and move through breakout rooms to help creators debug technical problems.

Troubleshooting Room

Are your families having trouble logging into or creating a Scratch account? Are your creators not completely sure what breakout room they should navigate to? In addition to any breakout rooms you might have, you might want to set up a troubleshooting room – a room where anyone can go if they are having difficulties with their technology that can't be solved in their breakout rooms.

Consider setting up your troubleshooting room in a way that minimizes transitions for kids and families. One idea might be to repurpose your initial whole-group meeting room into your troubleshooting room after everyone moves into breakout rooms. This way, if you are using a platform that has the capability to form breakout rooms, like Zoom, everyone can leave their breakout room to return to the whole-group meeting/troubleshooting room more easily. If you are using a platform that does not have breakout room capability, like Google Meets, this can reduce the number of links families would need to manage.

Odds and Ends

Helpful Resources

Family Creative Learning Facilitator Guide | The Family Creative Learning Guide provides a framework and facilitation resources for designing in-person collaborative creative computing events for kids and families.

ScratchAtHome page | Provides children, families, and educators with ideas for engaging in creative learning activities in remote or hybrid environments using Scratch. Includes the Getting Started with Scratch Guide, Teacher Accounts Guide, Scratch Studios Guide, and more.

Scratch Educator Page | The Scratch Educator page includes a variety of resources to support creative learning with Scratch across the curriculum, including tutorials, the Scratch Coding Cards, and ways to connect with other educators.

We'd Love to Hear from You!

Have a great coding night story to share? Include #VirtualCreativeCoding and tag @Scratch and @CS4AllCPS in a Tweet!

Have questions, comments, concerns, and/or criticisms about this guide? Share them with Scratch and the CS4AllCPS team in our two-minute feedback form.