A multi-generation engagement program designed to activate creative and collaborative learning using PBS KIDS media and resources.
Welcome!
**WHAT is PBS KIDS Family Creative Learning?**

PBS KIDS Family Creative Learning is a series of sessions that engage families in project-based creative learning. Designed for families with kids ages 5-8 (and younger/older siblings), the sessions use creative play and exploration to introduce kids and grown-ups to digital and tangible tools that can be used to develop science and engineering knowledge, practices, and perspectives. Through child-led projects, the sessions aim to foster collaboration, communication, and problem-solving skills among family members while empowering them to explore, create and express themselves with media and technology.

**WHY is PBS KIDS Family Creative Learning important?**

Children are innately curious and creative, constantly attempting to make sense of the world around them. Early STEM (Science, Technology, Engineering, Math) learning should be a direct extension of that curiosity, exploration, and creativity. It should champion active engagement where kids have the opportunity to take initiative for their own learning; where they are free to ask questions, investigate, express themselves, and share their ideas as they grow and learn. The grown-ups in kids’ lives have an important supporting role to play in the development of these skills and practices. With that said, STEM subjects and content can often be difficult for grown-ups to wrap their minds around, through no fault of their own. These subjects often were taught very differently in school (or weren’t taught at all), and adults’ experiences with these subjects as a child were often less than positive.

PBS KIDS Family Creative Learning is a way to demystify STEM for everyone as families engage in fun, creative, and interest-driven learning. As families explore and create together, facilitators will support the experience by modeling, discussing, and pointing out STEM concepts and practices as they are happening while providing grown-ups with experiences and tools that they can lean on to support their children’s learning throughout the experience and beyond.

**WHERE did it come from?**

The Family Creative Learning program has been designed and developed as an integral component of the 2015-2020 Corporation for Public Broadcasting (CPB) and Public Broadcasting Service (PBS) Ready To Learn Initiative for implementation by local public media stations and their community partners. The model was inspired and built upon the Family Creative Learning work led by Ricarose Roque at the MIT Media Lab. Ricarose’s work explores ways to engage families in multi-generational content creation and invention utilizing media and technology. To learn more about the original Family Creative Learning please visit [http://family.media.mit.edu/](http://family.media.mit.edu/)
About this Guide

This guide is for public media stations, their partners, educators, librarians, community center staff, volunteers, and anyone else interested in engaging young people and their families to become creative and expressive with technology while utilizing PBS KIDS content and media. In this guide you will find our design rationale for the overall program framework and structure, as well as additional suggestions that are intended to provide flexibility with regards to how you choose to implement Family Creative Learning in your own community.

We know that every community is different and that the contexts within which FCL may be implemented will be wide ranging. Our goal is to provide strategic rationale, but to also leave room for you to make the experience work best for you, your partners, and, most importantly, the families in your community. As facilitators we encourage you to remix, adapt, and adjust any and all aspects of this guide to meet the needs of your community. We encourage you to use this guide for both planning and reflection so that it can serve as an artifact of your own learning and can impact future iterations of FCL and other family engagement efforts.

The guide is licensed under a Creative Commons Attribution - ShareAlike 4.0 International License and we encourage you to work with other stakeholders within your community (including participating families) to adapt the experience and to make it your own.

The contents of this guide were developed under a grant from the Department of Education. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government. [PR/Award No. U295A100025, CFDA No. 84.295A].
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Imagining

WHAT WILL YOUR EXPERIENCE LOOK LIKE?
The Goals

Children are innately curious and creative, constantly working to make sense of the world around them. Early STEM (Science, Technology, Engineering, Math) learning experiences should be a direct extension of that curiosity, exploration, and creativity. Learning experiences should encourage active engagement, so that kids take initiative for their own learning by asking questions, exploring, investigating, and sharing their ideas throughout the learning process. Meanwhile, adults also play a crucial supporting role in the development of these skills and habits of mind in children.

PBS KIDS Family Creative Learning is a way to demystify and explore STEM concepts as families engage in a fun, creative, and interest-driven learning environment. As families explore, create and learn together, they will begin to develop new skills, habits and perspectives that will serve them as they continue to grow and support one another as lifelong learners.

Here are the specific learning goals for each participant group:

**CHILDREN**

- Positively impact children’s perceptions and understanding of science, engineering, technology, and design, as well as their perceptions of themselves as scientists, engineers, designers, and learners.
- Increase children’s exposure to and engagement with developmentally appropriate inquiry and engineering processes and practices.

**GROWN-UPS (PARENTS AND OTHER CAREGIVERS)**

- Positively impact grown-ups’ perceptions and understanding of science, engineering, creativity, technology and literacy, as well as their perceptions of themselves and their children as scientists, engineers, designers, and learners.
- Build capacity for grown-ups to support their children’s STEM learning by providing them with strategies, vocabulary, and experiences that can easily be transferred beyond the sessions and into the home and community.
- Positively impact grown-ups’ understanding of how media and technology can be used to support learning.

**FACILITATORS**

- Build capacity for facilitators to support the learning of both grown-ups and kids through the use of PBS KIDS resources and tools.

**STATIONS/PARTNERS**

- Build capacity for stations and partners to support educators, families, and kids within their communities through the use of PBS KIDS resources and tools.
- Deepen/increase the role of the station/partner within the community in which they serve and vice versa.
Each session is divided into four equally important parts that will occur at every gathering; **Eat, Explore, Make, and Share.**

**Eat**

Sharing a communal meal provides families an opportunity to connect with one another. Building a community and creating a comfortable, safe, and warm atmosphere is a vital component of the sessions. This also addresses an important task for grown-ups—making it more feasible for families to attend together. When possible, seek input from families on their favorite local food options, and be sure to ask families about food allergies and other dietary restrictions during recruitment.

**TIP** Consider finding ways to get food donated by local food vendors and creating in-kind partnerships.

**Explore**

Each session includes the opportunity to engage in hands-on explorations and discussions of the themes and goals of the experience. This is a time when we encourage grown-ups and kids to split into two separate groups to engage in age-appropriate discussions of various topics. This exercise further supports the development of inter-family connections.
Sharing is a key part of the experience. Families can learn a lot from one another and the facilitation team as they share their projects, ask questions, and provide feedback to one another. This sharing can further understanding and learning, inspire new ideas, and help build confidence among the participants.

At the heart of each session, families will work together to create their own projects using PBS KIDS media and resources. Families will have time to familiarize themselves with the media and technology being used in the sessions, and will use the tools and resources available to support their collaborative projects. Facilitators will make themselves available to support families as they work together.

Make

Courtesy of KET

Share

© 2016 PBS SoCal (KOCE) / photo by Heather Toner
The Tools

The structure of PBS KIDS Family Creative Learning is designed so that a variety of tools and technologies can be used to encourage families to create together. This guide and the first series of sessions will focus on families engaging with the PBS KIDS ScratchJr app.

PBS KIDS ScratchJr is a free tablet app developed in collaboration with the MIT Media Lab and Tufts University’s Developmental Technologies Research Group. Available on iPad, Android, and Amazon tablets, the app helps kids ages 5-8 learn core coding concepts as they create their own interactive stories and games using PBS KIDS characters. PBS KIDS ScratchJr is available in both English and Spanish, and incorporates PBS KIDS media properties, including characters from Wild Kratts, WordGirl, Peg + Cat, Odd Squad, Arthur, Nature Cat, and Ready Jet Go!

By snapping together colorful programming blocks, kids can make characters move, jump, dance and sing. In the process, they solve problems, design projects, and express themselves creatively using technology. With PBS KIDS ScratchJr, kids aren’t just learning to code, they are coding to learn.
WHERE does FCL happen?

It is entirely up to you, your team, your partners, and when possible, the families you are working with to determine where to implement the sessions.

Things to take into consideration:

Ease of Access
Transportation to any location can present numerous challenges for families. Consider hosting the sessions at a location embedded within the neighborhood of the families you are working with, since that will increase the likelihood of consistent attendance. If that is not possible, consider hosting the sessions at a location that is easily accessible by public transportation.

Comfort
There is also tremendous value in hosting the sessions at a location that participating families are familiar with and comfortable navigating to. If this is not an option, take the time to go above and beyond to ensure the location you are utilizing is as easy to find and navigate as possible. Include maps, signs, and facilitators to help greet and guide participants.

Space
Based on the number of participants and facilitators, the amount of space needed to run the sessions will vary. Ensuring that there is ample space for families to eat and work comfortably together is an important factor to consider. If you choose to split kids and grown-ups during the Explore section or at any other point during the sessions, having the space to do so will also be important. Internet availability and connectivity may also be a variable to consider for certain sessions (though it’s not required for the PBS KIDS ScratchJr sessions). Versions of Family Creative Learning that require internet availability will be discussed in more detail in future materials.
WHEN does FCL happen?

This guide outlines four, two-hour long sessions designed to be implemented over the course of four consecutive weeks.

Regardless of the length of the sessions, the number of sessions, the amount of time between each session, and when the sessions take place, consistent attendance from participating families can be challenging. The participants have incredibly busy lives that can be unpredictable. You are encouraged to find the right balance that will work best for you and your community. When possible, engage the families you are working with in a discussion to figure out what works best for them. Below are explanations for the design choices offered in this guide.

Two Hours

With the community meal included, a two-hour session provides a substantial amount of time for meaningful engagement while still being mindful of the busy schedules and limited free time that families have.

Four Sessions

We can’t achieve all the goals of FCL in a single session. It requires sustained and ongoing efforts to truly engage families in a project-based process that incorporates new tools and experiences and to work towards our overarching goals to shift perceptions and attitudes regarding STEM education. With that said, it is equally important not to expect an untenable commitment from participating families and support staff/volunteers. Having four sessions strikes a good balance between these conflicting considerations.

Weekly

Holding the sessions weekly allows us to be respectful of the busy lives of participating families without compromising the momentum of the experience or the opportunities for meaningful reflection and engagement at home. At the end of each session, families will leave with supplemental materials and suggestions to continue to support learning and play at home. Spacing the sessions out by a week provides a consistent day and time that families can count on, while providing families enough time to engage with the support materials without a loss of momentum from the previous week’s session.
WHO is FCL for?

The Family Creative Learning sessions are designed for kids and their parents/caregivers.

The sessions are built around a model that champions multi-generational family learning in an effort to engage all members of the family in a creative learning process as they explore, share and create together. This multi-generational model is inspired by both Ricarose’s work and by the pioneering two-gen work that the National Center for Families Learning has been driving for the past 26+ years. Learn more about their work and vision here – http://www.familieslearning.org

This version of Family Creative Learning, which features the PBS KIDS ScratchJr app, is ideal for families with kids between the ages of five and eight. Because the app was designed for early elementary aged kids, we encourage you to focus your recruitment efforts around families that have at least one child within that target age demographic. With that said, families come in all shapes and sizes, and we will provide support throughout this guide to address the diversity of families you are likely to come across when engaging in the Family Creative Learning sessions. Some initial considerations:

What if parents cannot attend?
If parents cannot attend, we would encourage kids to bring older siblings or an adult caretaker who has acted as a guardian and/or learning partner in the past. This may include cousins, aunts, uncles, grandparents, or other caring adults.

What if families attend with multiple children?
We will offer strategies throughout this guide for ways to manage families with multiple children, including considerations around how to engage siblings who don’t fit within the target age demographic.

What if families speak different languages?
When possible, find facilitators who speak the primary languages of your participating families to ensure a strong level of communication and support that will allow for success. These sessions are not centered around English literacy and/or proficiency, and therefore, we encourage you to support as wide a range of participants as you are able to. Sometimes, kids or other family members can also help translate. All parent materials will be translated into both English and Spanish, and editable versions will be available for additional translations.

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Facilitating
SUPPORTING LEARNERS
Celebrate and support the process
Engagement in the process is a core piece of these sessions and it is as important as any final products families will create.

Ask questions rather than giving answers
It may be tempting to provide answers and explanations, but when possible, ask questions to support learners in making their own discoveries.

Use technical words sparingly
Be aware of the words you use. Avoid technical jargon. If you have to use it, use it as a learning opportunity to introduce and explain new vocabulary.

Hands off the tools
Try describing steps and asking questions as you do so rather than directly helping learners. If you have to manipulate the tools, let participants try it for themselves after you model it for them.

Build trust and relationships
Learning is a social process. Get to know your participating families and help them get to know each other. Learning requires an openness and willingness to take risks. Creating a safe and comfortable environment can help facilitate the learning process.

Embrace mistakes
Encourage learners to be open to mistakes. Call out your own mistakes and celebrate them as a vital part of the learning process. It is what happens after a mistake that matters the most.

Authentic enthusiasm goes a long way
Learners often feel unsure about their work. Giving encouragement and showing curiosity in their work can go a long way in building confidence.

Build upon pre-existing strength
Find ways to connect what families do during the sessions to how they already approach and engage with the world and with each other.

Stay nimble
Nothing ever goes exactly as planned. Be ready and open to adapt the experience to match the needs and interests of your participants.

Keep track of True North
This work is all about creating an environment where children and families can have positive experiences that will help children develop the practices and perspectives that will help support school readiness and lifelong learning.
Facilitation Team

Facilitators play a variety of roles in developing and maintaining a safe, welcoming, and creative learning environment for families throughout the experience. As such, not all facilitators need to have the same background knowledge be successful facilitators. We encourage you to recruit and engage with a group of diverse facilitators.

What makes a good facilitator?

Strong social and emotional skills are the most important factors in good facilitation. Being able to understand someone else’s perspective and feeling comfortable with both kids and adults are far more valuable than having a strong technical background. Facilitators do not need to have all the answers as much as they need to be able ask the right questions and guide learners to making their own discoveries.

Throughout FCL, it is important to know when to step in and out, giving enough space for learners to play with the materials and tools. Even if learners are making a ‘mistake,’ letting them experience the mistake and supporting them as they overcome it can be an incredibly empowering learning experience.

Facilitator Roles

**Recruitment** - Finding families to participate in the experience and enrolling them into the program.

**Lead-up/Follow-up** - Whether through calls, texts, and/or emails, getting in touch with families in the days leading up to and immediately following each session is important.

**Logistics** - All the details that ensure that the sessions are set for success, including locating a space, set-up, to transporting and arranging materials, and clean-up (including food).

**Instruction/Modeling** - Each session requires facilitator-led guidance and instruction.

**Support** - During the sessions, facilitators are needed to support the project-based work.

**Documentation** - Capturing photos, videos, and conversations from each session.

**Survey Administration** - Families will need guidance when completing pre- and post-workshop surveys.

**Translation** - Communicating with families in their primary language.

**Time Management** - A timekeeper can help ensure that each session stays on track.

**Creative Corner** - Having a child-friendly space, age-appropriate activities, and a facilitator for the younger siblings of attending families who may have difficulty staying engaged and/or contributing to family work will help give families the time and space to fully engage in the experience.

**Other** - What other facilitator roles can you imagine for your Family Creative Learning experience?
Facilitator Recruitment and Training

How many facilitators will we need?
We recommend having one facilitator for every three to four families, plus at least two others to cover additional session logistics. If you choose to split children and grown-ups into separate groups as indicated in guide, make sure you consider what needs that will require of your facilitators when planning each session.

Where can we recruit facilitators?
In addition to leveraging the education and outreach staff at the station and within partnering organization(s), we recommend pulling directly from the community you are serving in; teen mentors, professionals, college students, volunteers, local teachers, and past parent participants can all make great facilitators.

How can we recruit them?
When recruiting, frame FCL as a learning experience for everyone involved. Facilitators will experience and learn about youth and family engagement, technology, and designing creative learning environments, while at the same time developing their professional skills. It’s a fun and rewarding way to engage with and give back to the community.

How should we train facilitators?
Facilitators should spend time becoming familiar with both this facilitator guide as well as the PBS KIDS ScratchJr app before beginning the facilitation of the sessions. We recommend that all facilitators take part in this self-paced Professional Development Workshop that will introduce the why, how, and what of using the PBS KIDS ScratchJr app in both formal and informal learning environments. As a facilitation team, the whole group should meet at least once to walk through the entire guide, the sequence of the sessions, and the support materials that help connect the dots. The in-person training should serve as an opportunity to explore the full scope of the materials and the experience, while also presenting an opportunity to answer questions, explore ways to adapt the experience to meet the needs of your community, and to assign responsibilities to your team.
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Facilitating Learning with English Language Learners

English proficiency is not a requirement for participation in PBS KIDS Family Creative Learning. For some participating families, English may not be the primary language spoken at home. To help support this inevitability, below are some suggestions and practices that can help you as you work to support participating English Language Learners (ELL).

**Encourage and support the use of a family’s primary language**

As families work together, they should feel free to do so in the language that they are most comfortable with. All of the programming blocks and most of the features in the app are icon based, and as such, language should provide few barriers to participants as they explore and create with the app.

To further support ELL families, we would recommend having a facilitator who can communicate in the primary language of participating ELL families. While the app might be language agnostic, FCL itself includes a lot of discussion. Having a facilitator present to help translate the conversation will go a long way in supporting the successful participation of ELL families.

**Communicate clearly and allocate wait time**

FCL introduces and explores a lot of big ideas. All learners, especially ELLs, will benefit from slow and clear speech. Additionally, allocating wait time after questions and during discussions will allow for the thoughtful formulation of ideas and responses.

**Provide multiple means of representation**

Say it, write it, draw it, and model it. Support the conversations and the work that families are engaging in by representing the experience in as many ways as possible. As you discuss a topic or provide instruction, make sure you are capturing the main ideas visually so that everyone can see it and refer back to it. All learners receive and process information differently. Providing as many access points as possible will help support all of your learners.

**Check for understanding**

Check-in with families often. Throughout each session, pause periodically to make sure participants are following the conversation with a simple thumbs up/thumbs down. Additionally, make sure everyone feels comfortable admitting potential confusion by providing simple and discreet ways to seek additional support. For example, encourage grown-ups to place a yellow post-it on their table if they’re confused and/or have a question about something. Facilitators can then personally respond to participants as needed.

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Family Variables

Beyond the diversity of languages and cultures you are likely to encounter, it is important to acknowledge that families come in all shapes and sizes. As facilitators, it is important to be as prepared and flexible as possible as you work to craft an experience that will successfully support all of your families. Some variables to keep in mind and plan for include:

Families with Multiple Kids

If there are more than three family members present during the sessions, especially if the kids outnumber grown-ups, it will be difficult for the whole family to all work on the same project and even harder for the grown-up to support all of the kids equally as they work together. If you have the resources, consider offering larger families multiple tablets to use and encourage them to work on multiple projects simultaneously. Additionally, make sure facilitators keep an eye on grown-ups trying to support multiple kids at once, as they will most likely benefit from additional support.

Older Siblings

For kids older than eight, the PBS KIDS ScratchJr app and the supporting activities may seem too ‘babyish.’ If that’s the case, there are several fun ways you can engage older siblings by giving them special tasks and challenges throughout the experience:

- **Junior Facilitator** - Many older kids will pick up on how to use ScratchJr very quickly and can assume a junior facilitator role helping to support participating families as they work together on their projects. Providing an older kid with this type of leadership role can be a great way to engage and empower them as learners.

- **Documenter** - Whether just documenting their family experience, or FCL as a whole, older kids can be really helpful documenters. Provide them with a recording device and encourage them to capture pictures, videos, and interviews to help document the creative process of their family and other participants. Additionally, provide them with the opportunity to share their documentation with the group during the Share portion of the sessions.

- **More Advanced Tools** - If you have the resources available and notice older kids quickly mastering the use of ScratchJr, you can point them towards other creative coding apps and websites where they may find more challenging and exciting coding tools:
  - **Scratch** - [https://scratch.mit.edu/](https://scratch.mit.edu/) a web-based creative coding tool for 8-16 year-olds that works on computers (and requires web access).
  - **Hopscotch** - [https://www.gethopscotch.com/](https://www.gethopscotch.com/) an app-based creative coding tool for 8-14 year-olds that works on iPads and iPhones.
Younger Siblings
For kids younger than five, the PBS KIDS ScratchJr app and some of the supporting activities may be too complicated and not very engaging. If this is the case, we encourage you to utilize the Craft Corner materials provided. With facilitator support, engaging younger siblings with separate crafting activities is a helpful way to keep other family members focused and engaged. With that said, younger siblings can easily be engaged as families imagine and plan their projects and can even help create and design characters and backgrounds using craft materials during the Make portion of each session.

Special Needs
There are a wide range of special needs, learning differences, and health issues that you may encounter among both your kid and grown-up participants. Gathering this information early during the recruitment process will go a long way in making sure you are able to prepare and adapt accordingly.

Dietary Considerations
On a related note, make sure you ask about any dietary restrictions and allergies before making decisions about the food you will serve during the sessions.
Documentation

Documentation is an invaluable part of any community engagement work. Here are some tips and rationale regarding the importance of documenting the sessions throughout the experience.

Sharing Experiences with Families

Many families love seeing photos and videos of themselves. Sharing photos and videos of families in action on Facebook, Instagram, Flickr, or privately through email (or through other means) is a great way to motivate and bring smiles to the faces of participating families. It’s also a great way to positively influence their perceptions of themselves as engaged learners.

Telling Your Story

Pictures are worth a thousand words. Photos and videos are a great way to share the stories of your participants from the experience with community stakeholders. These stories can be shared with internal staff, funders, volunteers, partners, the community at large, and future participants.

Consider sharing these photos and videos on station and partner websites, on social media pages, and with local news outlets to help tell your story to the community.

Encouraging Reflection Among Facilitators

Photos and video can be useful tools and points of reflection for your facilitation team. In addition to these forms of media, we encourage your team to jointly document the process. In addition to documenting the planning efforts and the execution of the sessions, adding team reflections is a great way for your team to grow and adapt the sessions accordingly.

Additionally, using documentation as part of the reflection process can help provide you with specific examples that can be used to demonstrate learning that is happening with participating families. A great photo or quote from an early session can be used as a reference point for a facilitator as an observed development or as examples of a specific skill at later sessions.

Consent

Before capturing photo, video, and/or audio that feature participating families, please make sure to get their consent. It is important that families fully understand and are comfortable with plans for documentation and potential distribution.
Capturing Live Engagement
Take candid photos and videos from multiple perspectives.

Participant’s view
What are their hands doing?

Facilitator’s view
How are people interacting with each other and the tools?

Designer’s view
How do the space and the materials look before anyone enters? How about during and after each session?

On-looker’s view
What does it look like to someone walking by?

Additionally, capture the conversations of participants whenever possible. Whether recorded or transcribed, this is a great way to help capture the overall experience.

- What are families sharing during the Explore portion?
- What are they creating?
- What are families talking about as they work together?
- What kind of questions are they asking each other?
- How are they working together?
- What are participants choosing to share with the group during wider discussions?
Projects as Artifacts
As families progress through FCL, you will see their coding skills and ability to use ScratchJr evolve. Taking screenshots or videos of their projects to capture their development over the course of four sessions is a great way to document their experience and growth over the course of the experience.

The Whole Process
Pick a couple of families and take photos and videos of their entire process, from the moment they walk in, all the way through to their final sharing. Capture every step of their experience from multiple perspectives whenever possible. Capturing the whole story for a given family can shed light to the highs, lows, and the growth that occurs over the course of the experience.
Reflection

Reflection is a key part of learning. It will be incredibly helpful for the facilitation team to build in time and space for reflection to support their own learning.

Immediate Post-Session Reflections

At the end of each session, after everything has been cleaned up, gather your team for a 10-15 minute debrief. We recommend using a specific structure for reflection, one that can easily work its way into your routine. In this guide, we suggest a “GREEN, YELLOW, RED” structure as an example. Have all the facilitators offer up their thoughts on each of the three colors and document their responses:

- **GREEN** - What went well? Who had positive interactions? What materials and processes supported these positive interactions? When and how were families deeply engaged in the process and why? What kinds of interactions with families resonated most strongly?

- **YELLOW** - What questions do you have? What are you unsure of? Were some families less engaged than others? Why? What felt confusing?

- **RED** - What could be improved? Were there any challenging interactions with families? Were there any families/participants that were unengaged throughout the session? Why do you think that was?

Information from this reflection can be used to help inform adjustments to future sessions.

Pre-Session Reflections

In the time between sessions, we encourage facilitators to share any thoughts and reflections openly with one another. Whether by email, or through some other means, allowing space for dialogue and reflection can be helpful as your team preps for future sessions.

Additionally, take 5-10 minutes of the set-up time before each session to gather facilitators and set the tone. This is an opportunity to revisit and incorporate reflections and feedback from past sessions.
Preparing

WHAT DO YOU NEED TO GET READY?
Recruiting

Recruitment is an opportunity for families to learn about what they are signing up for and the amount of commitment involved. You and your partners may already have recruitment strategies you’re planning on utilizing, which is great! Below are some additional strategies for recruiting kids and grown-ups.

**STRATEGIES TO CONSIDER**

- Talk to kids and grown-ups face-to-face.
- Ask families who have been a part of your previous outreach/engagement efforts to help recruit new families.
- Hand out printed flyers.
- Host an open house or an info table.
- Participate in community events/fairs/back-to-school nights/parent-teacher conferences.
- Make announcements at school assemblies.
- Visit classrooms and afterschool programs, and talk to students and teachers (who can then communicate to parents and caregivers).

**THINGS TO SAY DURING RECRUITMENT**

**To Children**

- Like art, games, stories, and cartoons? You’ll learn to create your own.
- Like PBS KIDS characters? You can create your own stories and animations using your favorite PBS KIDS characters.
- Bring your 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.
- Find new ways to support your kids learning and creativity.
- Learn how you can support your kids’ STEM (Science, Technology, Engineering, Math) education.
- Increase your comfort and understanding of technology, while furthering your understanding on how your kids use technology.
- The whole family is welcome!

**To Both**

- No experience with computers or technology is necessary.
- Free food (and activities for young kids).

Photo courtesy of ideastream
Retaining Families

Retaining families over the course of multiple sessions that span several weeks can be challenging. Here are some strategies to consider when working to retain families over the course of the entire experience:

**Reminders**

Well timed reminders are an important way to reiterate and solidify the details of upcoming sessions.

- During the first session, take time to preview the FCL sessions and provide families with a handout that lists all of the relevant dates/times/location.
- At the end of each session, remind families about next week’s session.
- Between sessions, take the time to call, email, and/or text families to check-in and remind them about the upcoming session.

**TIP** Consider taking advantage of automated texting/calling site likes this one - [https://app.call-em-all.com/login/](https://app.call-em-all.com/login/)

**Incentivization**

Providing families with incentives can be a positive way to encourage ongoing participation. Types of incentives to consider:

- **Recognition** - Working with partners and other community members, find ways to highlight the great work of participating families throughout the community. Being positively recognized for participating in FCL by schools, churches, and other community-based organizations can encourage ongoing engagement.

- **Basic Needs** - Working with your partners, consider which of the participant families’ basic needs you can help fulfill over the course of the sessions. Providing a meal at each session is part of this thinking, but consider other basic needs that you could help families with, such as providing actual goods or connecting families to valuable community-based resources (school administrators, doctors, etc).

- **Special Items** - Certificates, t-shirts, memberships, admission passes, tablets, framed photos, etc. can all serve as incentive prizes. There are a lot of premium items that you can use to encourage ongoing and complete participation in FCL. If you plan to utilize these incentives, determine beforehand what the requirements, if any, might be for a family to receive an incentive prize. Be sure to clearly communicate that information during recruitment and during the first session.
Our Families

FAMILY 1
Names (and ages of kids):
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Interests:
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FAMILY 2
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FAMILY 3

Names (and ages of kids):
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Contact info:
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Interests:
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FAMILY 4

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Interests:
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### FAMILY 7

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### FAMILY 8

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Space

Physical Space Layout

PBS KIDS Family Creative Learning is a community experience. Arranging the space in a way that allows families to easily interact with each other is important.

We recommend having a central communal table for eating and meeting, and areas/tables/chairs for families to work on their projects. There should also be a table for materials, a separate table for food, a section of the room designated as the ‘Creative Corner’ for younger siblings, and space for facilitators and participants to move around easily.

If at any point you choose to split grown-ups and kids up during the Explore and/or Make portions, you will also need to plan for an additional room/space to make this possible.

TIP

Some facilities may require eating to be in a separate room. Be sure to check with your location and to plan accordingly.

Safe and Comfortable

It’s important to make sure that families feel comfortable and safe in whatever space you choose. Making and sharing as a family isn’t necessarily going to be a natural experience for many, and doing what you can to make the setting comfortable and familiar, will go a long way in helping families feel at ease and engaged. Make sure that the space is easy to find, accessible, and that the furniture is conducive for use by both kids and grown-ups.

© 2017 WGBH Educational Foundation/photo by Anna Fort
Our Schedule

Here are our key dates for PBS KIDS Family Creative Learning:

<table>
<thead>
<tr>
<th>EVENT</th>
<th>DATE</th>
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<tbody>
<tr>
<td>Recruitment Begins</td>
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<td>Facilitator Training</td>
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<tr>
<td>Pre-Session 1 Reminder</td>
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<td><strong>Session 1</strong></td>
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<td>Pre-Session 4 Reminder</td>
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<td><strong>Session 4</strong></td>
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<td>Follow-up</td>
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The Sessions

A RUNDOWN OF EACH SESSION
Session 1

What is a MAKER?

**Eat**  Family and facilitator introductions

**Explore**  Technology, Makers, and Maker hats

**Make**  PBS KIDS ScratchJr

**Share**  Set norms, discuss thoughts and share projects
Welcome to Session 1!

The first session is important as you kick off FCL and work to establish your community. During this first session, everyone will get to know each other, the space, and the tools and tech that will be used throughout the experience. This session is all about setting a positive tone, having fun, exploring the use of technology and learning about what it means to be a maker.

One week before the session

- Gather materials
- Contact grown-up participants to remind them of the session time and date
- Confirm food order
- Check-in with facilitators and designate roles for each person
- Confirm the space

Space

- Communal table
- Food table
- Welcome table
- A separate room or space for the Explore and Make sections (if you plan on separating grown-ups and kids)
- Craft corner for younger siblings

Materials

**FOR PARTICIPANTS**

- Nametags
- Directional sign
- Media release forms
- iPads loaded with pre-FCL surveys
- How-to Cards
- Take home materials

**FOR EATING**

- Tablecloth
- Paper goods (plates, napkins, utensils, cups)
- Aluminum foil
- Trash bags and trash can

**FOR TECH**

- Session 1 Powerpoint
- Document projector
- Tablets (iOS or Android)
- Tablet Chargers
- Protective Tablet Cases
- Camera(s)
- Speakers (and music)

**FOR ACTIVITIES**

- Poster-size/butcher paper
- Markers and crayons
- Other craft materials
- Hat-making paper
- Craft corner materials


**Eat** (45 minutes)

**Welcome** (30 minutes)

1. Create a friendly environment with music playing and facilitators present to greet participants as they arrive.
2. Use the welcome table for introductions, sign-ins, and nametag creations.
3. Invite families to get food and eat.
4. As participants finish eating, welcome everyone to PBS KIDS Family Creative Learning! Explain that first things first, you need the grown-ups to fill out a pre-FCL survey. Pass out the surveys and media release forms for grown-ups to fill out while inviting the kids to an open area in the room for an ice breaker game (such as Simon Says). Make sure facilitators are available to support grown-ups as they fill out the surveys. Surveys should take 10-20 minutes to complete.

**Introductions** (10 minutes)

1. Once the grown-ups have completed their surveys, bring the group together for a round of introductions. Starting with yourselves, go around the room and have everyone introduce themselves. Encourage participants to speak loudly and clearly, and ask them to share one interesting thing about themselves and/or one reason why they are attending Family Creative Learning sessions.
2. Introduce PBS KIDS Family Creative Learning; a series of interactive sessions that invite families to explore, make, and play together using PBS KIDS media and interactive tools. Families will use digital tools to create projects together as they develop new skills and support one another as learners and as a family.

**TIP**

It will be tempting to allow the Eat to serve as a rolling start time for families to show-up and get food. Resist this temptation and encourage families to all arrive on time. Families showing-up at different times will hurt your efforts to create a shared momentum and flow.

**TIP**

Encourage facilitators to grab food and sit amongst families while eating. Facilitators can help create an inclusive atmosphere for the experience by making connections with families and encouraging inter-family conversations.

**TIP**

There may be a wide range of language and literacy capabilities among grown-up participants. Make sure you have facilitators available to help support and guide grown-ups as they fill out the surveys and forms.

**TIP**

Throughout the sessions, you can utilize the accompanying sessions slideshow to provide visual reinforcement. Feel free to edit the slides to match any adaptations you make.
PBS KIDS ScratchJr

1. Point out that this experience isn’t just about using technology as a family, but it’s also about creating with technology. By creating with technology, families will learn new ways to express themselves, to support one another’s learning, and to engage in a problem-solving process that can be applied beyond the sessions.

2. The digital tool families will be using during the sessions is PBS KIDS ScratchJr, an app that will introduce kids and families to computer programming as they create their own stories, animations, and projects featuring PBS KIDS characters.

The Sessions

1. Describe the time and commitment of the entire experience by sharing the dates and giving a brief description of each session, pointing out that each will build upon the last.

2. Describe the structure of each session and its four parts; Eat, Explore, Make, and Share:

   **Eat**
   Families will share a meal and have time to get to know one another

   **Explore**
   Grown-ups and kids will engage in hands-on activities to explore the goals of the experience

   **Make**
   Families will work together on projects that utilize media and technology

   **Share**
   Families will share their projects with one another
The Explore portion is a time to engage grown-ups and kids in hands-on activities and discussions designed to tie into the goals of FCL. We encourage you to separate kids and grown-ups during this time to give each the opportunity to participate without having to worry about what their counterparts are thinking and doing. With that said, some families may not be comfortable with separating and/or may really cherish the uninterrupted 2-hours of together time with their kids. Like all things in this guide, feel free to modify the experience as needed.

GROWN-UPS

Introduce (5 minutes)

1. Welcome grown-ups and explain why they and their kids have been separated into two groups. During each session, facilitators will use the ‘Explore’ time to check-in with and engage grown-ups and kids separately. This is an opportunity for grown-ups to get to know other grown-ups, to ask questions, and to explore together as a cohort of learners.

2. Explain the role of grown-ups during the experience. We want grown-ups to be active facilitators, rather than passive observers of their children’s learning experience with technology. We want the sessions to be a place for grown-ups to explore how they can provide that support.

Technology (10 minutes)

1. Ask grown-ups about their thoughts on technology in the lives of their kids.
   a. What are the potential benefits of your kids using media and technology?
   b. What are the potential drawbacks?
   c. What roles can you play as parents and caregivers to support your kids’ use of media and tech?

2. During the sessions, we’re specifically going to be using technology and media in a creative way, which may be new for a lot of kids and grown-ups. Why might it be valuable to use technology to be creative and self expressive?

TIP
Capture the group’s thinking in writing at the front of the room. This is a valuable way to synthesize the conversation for all learners, and it can be helpful for participants to see their ideas as opposed to just hearing them out loud.

TIP
There are no right answers to these questions! Allow grown-ups to share their own thinking. Feel free to contribute your own thoughts as facilitators. This should feel like a discussion as opposed to instruction.
Creativity/Makers (10 minutes)

1. Explain to the grown-ups that their kids are having a conversation about what it means to be a Maker, and are making hats that show off their creativity and what they like to make. Ask the group if they have heard the word ‘Maker’ before and engage in a discussion about what it means to be a Maker.

   a. Who/what are Makers?

   **Makers:** Creative problem-solvers who like to design and build their own projects.

   b. What do Makers create? What do your kids like to make? What do you like to make?

2. What skills are Makers developing when they design and build their own projects? How do these skills help them in school and in life?

   **TIP** Check-in often with your participants to make sure they are understanding and following the conversation. Avoid simply asking if participants have questions because they may be nervous about speaking up. Instead, provide a safe and easy way (thumbs up/thumbs down) to gauge participant understanding.

   Courtesy of KET
CHILDREN

Introduce (5 minutes)

1. Encourage kids to reintroduce themselves and share what they are looking forward to the most.

2. Explain why grown-ups and kids have been separated. During each session, facilitators will use the ‘Explore’ time to check-in and engage with grown-ups and kids separately. This is an opportunity for kids to get to know other kids, to ask questions, and to do some fun kid-only activities.

Makers (10 minutes)

1. Reiterate that FCL is about families working together to create projects with technology. We want families to learn about fun technologies that they can use to make projects together.

2. Ask kids to define and discuss what it means to be a Maker. Discuss and capture their ideas at the front of the room.

3. Ask kids to express the kinds of things they like to make or what they would like to make in the future. Discuss and capture their responses at the front of the room.

TIP Capturing ideas in writing at the front of the room is a valuable way to reinforce the conversation for all learners, and can be especially helpful for participants who respond well to seeing ideas as opposed to just hearing them.

TIP Check-in often with your participants to make sure they are understanding and following the conversation. Avoid simply asking if participants have questions because they may be nervous about speaking up. Instead provide a safe and easy way (thumbs up/thumbs down) to gauge participant understanding.
**Maker Hats (10 minutes)**

Explain that all Makers need Maker hats so that everyone knows that they are, in fact, Makers!

1. Pass out hat making materials and encourage kids to use the materials to make their own Maker hats (which can look and be anything).

2. Encourage kids to design their hats to show off what it means to be a maker and what kinds of thing they like (or would like) to make.

3. Have them put on their hats and look around. Are there any two hats alike?

4. Point out and celebrate the fact that everyone’s hats are different, which is exactly as it should be! We all bring unique perspectives and talents, which is one of the reasons why it’s so much fun to engage in creative and collaborative work. There’s never a single ‘right’ answer and we all have something special to contribute to the process.
**Make**  
(40 minutes)

For the first half of the Make portion, we encourage facilitators to keep families separate to give grown-ups a chance to play with the PBS KIDS ScratchJr app while the kids are engaged in the crafting of community guidelines. The reason for this separation is to build some comfort among grown-ups with the app before they begin using the app as a family. Adults often need more time than the kids to familiarize themselves and get comfortable with using the app.

**GROWN-UPS**

**Introduce** (5 minutes)

1. Pass-out tablets to grown-ups.
2. Open up PBS KIDS ScratchJr and project the app on a large screen.
3. Point out the various ‘help’ features in the app and show grown-ups how to get started by creating a new project.
4. Point out the main features on the project screen.
5. Demonstrate how to add characters.
6. Demonstrate how to drag a block into the programming area, how to test the block, how to connect additional blocks, and how the characters respond to the sequence of blocks in order.
7. Make the PBS KIDS ScratchJr How-To Cards available to grown-ups for use as needed.

**TIP**  
This video shows what to cover in your demo  
https://www.youtube.com/watch?v=JoHpVzltafU

**TIP**  
When talking about a feature within the app, model and demonstrate the functionality as you explain. Combining live visual references with descriptions will help further support understanding among participants.
Explore and Discover (15 minutes)

1. Give grown-ups ten minutes to freely play with and explore the app.

   **TIP** As grown-ups explore the app, facilitators should be floating around the room to support and answer questions that may come up.

2. After ten minutes, ask grown-ups to share any fun discoveries they have made with a neighbor.

3. Share some of your favorite features and blocks with the group. Don’t worry if you don’t touch on every block and feature. Families will have lots of time to play and discover.

4. Explain to grown-ups that as they snap the various blocks together to animate the characters on screen, they’re actually engaging in basic computer programming by creating a series of instructions that tell a computer (or other technology) what to do, which is something they will continue to explore and learn about in upcoming sessions.

5. Prep grown-ups for the next activity, where they will introduce their kids to the PBS KIDS ScratchJr app.

   **TIP** Throughout FCL, use a visual timer to help both you and participants manage time.
CHILDREN
Community and Collaboration Guidelines (15 minutes)

1. Explain to kids that during Family Creative Learning sessions, they will be working together as a family to create projects using tablets and additional crafting supplies/materials.

2. Ask the group if they know what the word collaboration means. As a group, work to create a definition and write it at the front of the room.

3. Explain that when collaborating and learning together as a community, it is really important to have some guidelines to make sure everyone has a fun and positive experience together. Ask the group why they think that might be so.

4. Tell the group that you want them to come up with those guidelines! Starting with the idea of respect; ask the group how they would handle a situation if they were in the middle of using a tablet but their parent or sibling wanted to take a turn. How would they respect their parent or siblings wanting to take a turn? Capture the main idea on a piece of poster paper.

5. Move on and discuss other collaboration and community guidelines you want to set as a group. Focus on the concrete activities you’ll be engaging in, such as planning projects, expressing ideas, asking questions, giving feedback, etc. Ask the kids how they would like to act in those situations and how they would like others to act as well.

TIP
Giving kids ownership of their guidelines is a powerful way to set a positive tone and to create an inclusive atmosphere for the experience.
**TOGETHER**

**Introduce (5 minutes)**

Bring kids and grown-ups back together for some joint exploration and play with the PBS KIDS ScratchJr app.

1. Have the kids show off their Maker hats to the grown-ups. Reiterate the same point you made to the kids about how everyone’s hats are different, which is exactly as it should be! We all bring unique perspectives and talents, which is one of the reasons why it’s so much fun to engage in creative and collaborative work; there’s never a single ‘right’ answer and we all have something special to contribute to the process.

2. Encourage kids to share their definitions of collaboration and community, as they share their community guidelines with the grown-ups.

3. Ask the grown-ups if there is anything they would like to add to the guidelines.

4. Make sure every family has at least one tablet, a Family Journal, and the How-To cards as you explain that the next 15 minutes is a chance for families to explore the PBS KIDS ScratchJr app together. Point out that the Family Journals are a tool that families can use to help guide their experiences during Family Creative Learning.

**Play (15 minutes)**

1. Encourage grown-ups to introduce their kids to the app by showing off its main features and the fun discoveries they made during their initial exploration with the app.

2. From there, encourage families to continue to explore the app together with no specified goal other than to get familiar with how it works.

   **TIP** Again, facilitators should be floating around the room to support families as they start working together for the first time.

3. As families play, remind them of your maker conversations and the hat building activity. With a tool like PBS KIDS ScratchJr, there is no ‘right’ answer and families are free to explore and create what is most interesting to them.

   **TIP** Some participants may struggle with open-ended exploration and may prefer to have more goal-oriented tasks. If this is the case for any of your participants, give them a small challenge to focus their energy on. Here are some possibilities:
   - Make a character move when you tap it
   - Record your own voice to make a character talk
   - Make a character talk and move at the same time
   - Create a dialogue between two characters

   **TIP** During the Make portion, younger siblings may be more engaged with activities available at the Craft Corner. If this is the case, we encourage you to provide the space and facilitator support to engage younger kids in the supplemental activities to keep them engaged while providing support to other family members who are exploring the app.
Share (15 minutes)

Each session concludes with the Share portion: a chance for families to share their ideas and work with one another. This is a valuable time to celebrate all of the fantastic work that families are engaging in. This time will also be used to practice giving and receiving feedback that can be valuable for continued learning and exploration.

Set Sharing Norms

1. Explain that sharing is an important part of the learning process. When sharing with others, we can be inspired by their ideas and work, and can get help with difficult and confusing problems. It’s also a great opportunity to build confidence as we explore our own ideas and work.

2. Nobody is expecting anybody else to have mastered ScratchJr, and it’s normal to feel uncertain about sharing. Being uncomfortable means learning is happening!

3. Model ways for families to interact with one another. Encourage participants to be present, to be enthusiastic, and to listen to, and support one another.

4. Encourage families to turn their tablets over when they aren’t sharing their own work to avoid the temptation of continuing to play on their devices.

Share

1. Have 2-3 families join together for a small group share.

   TIP A small group share is a nice way to facilitate sharing early on. Often, speaking in front of a whole group can be scary and stressful. The small group share not only takes away some of that stress, but it also creates opportunities for deeper engagement and connection among participants as they engage in small group discussions.

2. Encourage participants to share one of the things they made or discovered within ScratchJr. Ask them to talk about one thing they found awesome about the app, and one thing they found confusing or strange.

   TIP Once participants have a chance to try out their ideas in a small group setting, they may feel more confident contributing them aloud to the whole group. This wider sharing can help cross-pollinate the ideas that emerge from the small group discussions.

3. After 10 minutes, ask the whole group if anyone wants to share one thing discussed in their small group with the whole room.

   TIP Facilitators should join in on the different small group discussions. Encourage them to model providing feedback, and to also share their initial thinking about the app.
Wrap-up and Take-home

1. Close out the first session with a lot of congratulations and a recap of all the great work the group engaged in over the course of the session.

2. Remind families of the date, time and location of the next session. Then, provide a brief preview of what families will be doing during session two: learning about computer programming/coding and how they can use coding to make ideas come to life with the PBS KIDS ScratchJr app.

3. Collect tablets and nametags, and encourage families to take home their Maker hats.

   **TIP** Keep track of which tablet(s) each family used. You’ll want them to have access to the same tablet in subsequent sessions so that families can access their past projects.

4. Finally, provide families with the Session 1 take home materials, which contain activities and supports for families to continue their collaborative and creative learning at home in-between sessions.

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The Dot by Peter H. Reynolds

While reading The Dot, use these questions to discuss creativity and self-expression with your kids:

1) How did Vashti feel in the beginning? Why did she feel that way?

2) How did Vashti feel when she saw her picture framed?

3) How did Vashti’s art change as she kept making more and more?

   Have you ever gotten better at something the more you practiced?

4) What’s something you would like to create?

   Reading together is a great way to explore and think about new ideas. Check out these other books at your local library to continue to explore the themes from the PBS KIDS Family Creative Learning workshops.

- Pumpkin Soup by Helen Cooper
- If I Built a Car by Chris Van Dusen
- Going Places by Peter and Paul Reynolds

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Make Together - Mischievous Monsters

**MATERIALS SUGGESTIONS**

- Use socks, yarn, paper bags, and other materials to create silly monsters.

**MAKE IT MONSTER FUN!**

- Tell your monsters a story about how they got their monster-ness.

**PUT IT ALL TOGETHER**

- Showtime!

---

Read Together

The Dot by Peter H. Reynolds

**WHY I LIKE THIS BOOK**

The Dot is a story about how an ordinary girl named Vashti discovers that she is special, unique, and valuable. With the help of her art teacher, she learns that everyone has something special to contribute and that everyone has the potential to make an impact on the world. The Dot is a beautiful story that celebrates creativity, self-expression, and the power of imagination.

**WHO IT’S GOOD FOR**

The Dot is a great book for kids of all ages who are interested in creativity, self-expression, and the power of imagination. It is a wonderful book for parents, teachers, and caregivers who want to inspire and empower their children to be confident, creative, and successful.

**WHAT YOU NEED**

- The Dot book
- A party hat
- A story to tell

**HOW TO USE THIS BOOK**

- Read The Dot with your child or group.
- Encourage them to share their thoughts and feelings about the story.
- Ask them to think about what they can do to make their own special contribution to the world.

**TIP**

- Keep track of which tablet(s) each family used. You’ll want them to have access to the same tablet in subsequent sessions so that families can access their past projects.
### What are your team’s reflections on Session 1?

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<tbody>
<tr>
<td>What went well?</td>
<td>What questions do you have?</td>
<td>What could be improved?</td>
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<tr>
<td>Who had positive interactions?</td>
<td>What are you unsure of?</td>
<td>Were there any challenging interactions?</td>
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</tbody>
</table>
Session 2  What is CODING?

Eat  Review and Preview

Explore  Robot Chef, Robot Dancer, and Coding

Make  Tinker, Play, and Make Starter Projects

Share  Share projects and discoveries
Welcome to Session 2!

Session 2 will build upon the first session’s open play exploration of the PBS KIDS ScratchJr app and what it means to be a collaborative maker. Facilitators will introduce the idea of coding, what it is, and how it works. Families will continue to explore and work together as they get more comfortable with the app and the structure of the experience.

One week before the session

- Gather materials
- Contact grown-up participants to remind them of the session time and date
- Confirm food order
- Check-in with facilitators and designate roles for each person

Materials

**FOR PARTICIPANTS**
- Nametags
- Family Journals
- Block Decks
- Take home materials

**FOR ACTIVITIES**
- Poster-size/butcher paper
- Markers and crayons
- Pretend PB&J supplies

**FOR EATING**
- Tablecloth
- Paper goods (plates, napkins, utensils, cups)
- Aluminum foil
- Trash bags and trash can

**FOR TECH**
- Session 2 Powerpoint
- Document projector
- Tablets (iOS or Android)
- Tablet Chargers
- Protective Tablet Cases
- Camera(s)
- Speakers (and music)
Eat (30 minutes)

Welcome (5 minutes)

Welcome families back to the Family Creative Learning! After spending Session 1 working to create a warm, comfortable and safe atmosphere, it’s important to get everyone back on board as you kick off Session 2. Express how excited you are to have families back together for continued collaboration, exploration, making, and learning.

Invite families to get food, and provide them with time to eat and to interact with one another. Encourage facilitators to also join in and to spend time getting to know participating families.

Review (10 minutes)

1. While families eat, project images of the group from Session 1. If you are aggregating your documentation online (on Facebook, Flickr, or elsewhere), provide grown-ups with access to the link(s).

2. If families engaged in any of the take-home activities, invite them to share their experiences.

3. As everyone begins to wrap up their meals, ask participants to recap and share their favorite memories from last week’s session.

4. Review the community and collaboration guidelines that the kids created in Session 1.

TIP While the food set-up may occur before families arrive, encourage full group participation in the clean-up effort. Assign roles for participants beyond just cleaning up after themselves. Having something to do that supports the whole group can help with creating a more communal atmosphere. If any participants show up early, engage them in the set-up process.

TIP Throughout the sessions utilize the accompanying session slideshows to help provide visual reinforcement for the conversations outlined throughout this facilitator guide. You can also edit the slides to reflect any adaptations you might make.

TIP Sharing photos of participants from previous sessions is a great way to motivate continued engagement as well as reflection. Families will love seeing photos where they are engaged, playing together, and smiling. It can support and encourage them to see themselves as makers and collaborators.

TIP Family life can be very hectic and busy. While families are encouraged to engage in the at-home work and to share their experiences, there should be no-pressure to do so.
Preview (10 minutes)

1. Provide a brief roadmap for the session so that families know what to expect. This session, like every session, will include an Eat, Explore, Make, and Share portion.
   a. Explore - Kids and grown-ups will explore the basics of coding with some hands-on activities
   b. Make - Families will continue to explore PBS KIDS ScratchJr as they make their first starter projects
   c. Share - Families will share their experiences

2. If you have any supporting/supplemental activities available for younger and/or older siblings, introduce their availability and provide indications of when and how those activities will be facilitated.

   TIP Helping set expectations can add to the comfort and participation levels of grown-ups and kids. Without needing to worry about what’s going to happen next, participants are free to focus on the task at hand.

Warm-up - Laughing Meditation (5 minutes)

Go around the room and take turns sharing a unique and silly laugh (dog, pirate, witch, etc) that everyone else then imitates.

   TIP Warm-ups, especially silly ones, are a great way to create a fun and light mood, to build comfort and camaraderie through shared (and funny) experiences.
Explore (30 minutes)

GROWN-UPS

Review (5 minutes)
1. Ask grown-ups about the first session, and what stuck with them after the session. What was it like exploring PBS KIDS ScratchJr on their own? How about with their kids?
2. Remind grown-ups of your discussion from Session 1 about Technology and Makers. Engage in a discussion around any new thinking about how technology and maker activities connect with and support what kids are learning in school.

There are no right answers to these questions. Allow grown-ups to share their thinking, and feel free to contribute your thoughts as facilitators. This should feel like a discussion as opposed to instruction.

Robot Chef (10 minutes)

Explain that with PBS KIDS ScratchJr, not only are families able to make their own interactive projects, stories, games, and animations, but they are also learning the basics of computer programming in the process.

1. Ask grown-ups what they know about computer programming (aka coding). Many will have heard of the term, but may not be clear about what it means. Engage in a discussion and provide the following definition:

   **Programming/Coding:** Creating a sequence of instructions that tells a computer (or other technology) what to do.

2. Point out that this is exactly what they were doing last week as they played with PBS KIDS ScratchJr. Each of the blocks represents an instruction, and as they snap the blocks together, they are creating a sequence of instructions that tell the characters on screen (the technology) what to do.

3. Split the grown-ups into smaller groups of 3-4 for a fun, no-tech coding activity. Challenge each small group to create a list of step-by-step instructions to ‘program’ the facilitator at the front of the room (the robot chef) to make a PB&J sandwich.

4. After 7 minutes stop the groups and ask for volunteers to share their sequence of steps for the ‘robot chef’ facilitator to follow.

**TIP**
Use a visual timer to help both you and participants manage time.

**TIP**
Choose any easy-to-make food item that is common and culturally relevant for the families you are working with.

**TIP**
Use pretend ingredients to ‘make’ the PB&J sandwiches. Using real food items for this activity might be seen as wasteful and isn’t necessary for effectiveness.
5. Point out two very important takeaways from this activity:
   a. Making a PB&J might seem like a super simple task, but when you break it down into individual steps, you quickly realize just how many steps are involved. The same is true when coding with PBS KIDS ScratchJr (or any other coding language/tools). Making your ideas come to life in the app requires a lot of problem solving as you use the blocks to build a specific sequence of instructions that tell the characters what to do and what order to do it in.
   b. Grown-ups are already constantly helping their kids develop coding/programming skills in their everyday lives (and often without using any technology). Developing and maintaining daily routines is something that all families spend a lot of time doing. Whether it’s brushing teeth, tying shoes, getting ready for bed or facing challenges/problems, grown-ups are constantly helping kids develop sequences (routines) and problem solving skills to help them manage everyday life.

Robot Dancer (15 minutes)

It is now time to help grown-ups connect the dots between the Robot Chef activity and working with PBS KIDS ScratchJr.

1. Hand each grown-up a deck of PBS KIDS ScratchJr Block Cards
2. Reiterate that each of the blocks in the app acts as a single instruction that can tell a character on the screen what to do. When you snap the blocks together, you are coding by creating a sequence of instructions that tell the character what to do and what order to do them in (just like making the PB&J)
3. As a group, go through each block in the deck and determine what the physical movement should be for each block (move left, move right, move up, etc)
4. Encourage participants to work in small groups, and to take turns playing Robot Dancer by being programmers and robots:
   a. Programmers use the Block Cards to create a sequence of cards for the robots to enact.
   b. Robots must follow the block sequences created by the programmers exactly.
   c. Dancing, movement and silliness should ensue.

TIP
The only card/block in the deck that won’t have a movement associated with it is the yellow “Start on Green Flag” block. Explain that the yellow blocks in the app are trigger blocks; blocks that activate the sequence of blocks that follow. Encourage grown-ups to always start with a yellow block when building their sequences during this activity to help reinforce its use in the app.

Robot Dancer is a great way to make coding with the PBS KID ScratchJr blocks physical, silly, and fun. Grown-ups might be shy about dancing/moving in front of their peers. Facilitators should join in and model that it’s okay to be silly to help make others comfortable.
CHILDREN

Review (5 minutes)

1. Ask kids how they felt about the first session and if they have any questions. What is a Maker? What did they think about PBS KIDS ScratchJr?

2. Ask kids about what it was like to work together as a family. What was the most challenging? What was the funnest part?

Robot Chef (10 minutes)

1. Ask kids if they know what computer programming (aka coding) is. Follow their thinking and work towards a definition that is close to:

2. Point out that this is exactly what they’re doing when they play with PBS KIDS ScratchJr. Each of the blocks is a different instruction, and as they connect them together, they’re creating a sequence of instructions that tells the characters what to do. They’re coding!

3. Working as a group, engage the kids in a programming challenge that does not involve technology. Challenge them to ‘program’ you with step-by-step instructions to make a PB&J sandwich (or another nut-free, gluten-free, culturally relevant option).

4. Take turns giving kids an opportunity to suggest a step while a ‘robot’ facilitator acts the step out at the front of the group. Follow their instructions exactly, but also make it easy to revise/self-edit instructions.

5. Afterwards, point out how making a PB&J sandwich may seem simple, but when you break it down into steps, it can get really complicated! The same is true when coding with PBS KIDS ScratchJr. Making ideas come to life in the app requires a lot of problem solving as you use the blocks to create sequences of instructions for the characters.

TIP

Use pretend ingredients to ‘make’ the PB&J sandwiches. Using real food items for this activity might be seen as wasteful and isn’t necessary for effectiveness.

TIP

While one facilitator is the robot, make sure another facilitator is at the front of the room capturing each step in writing. Representing kids’ contributions both aurally and visibly is a great way to help reinforce their thinking and learning.
Robot Dancers (15 minutes)

1. Hand each kid a deck of PBS KIDS ScratchJr Block Cards.

2. Remind them that each of the blocks in the app acts as a single instruction that can tell a character on the screen what to do. When you snap the blocks together, you’re coding by creating the sequence of instructions that tell the character what to do and what order to do it in (just like with making the PB&J sandwiches).

3. As a group, go through each block in the deck and determine what the movement should be for each block (move left, move right, move up, etc).

4. Encourage the kids to work in small groups and to take turns being programmers and robots:
   a. Programmers use the Block Cards to lay out sequences for the robots to enact.
   b. Robots must follow the block sequences the programmers create exactly.
   c. Dancing, movement and silliness should ensue.

5. If any of the kids want to share their block sequences and/or dances, encourage them to come to the front of the room to share.

TIP Using the cards is a great way to make exploring and learning about the blocks a physical and active experience, which is a great way to support deeper learning.
This session’s Make portion is a continuation of Session 1’s Make. As with the rest of FCL, there is no right or wrong way to engage in the Make. It should be an open-ended time designed to support families as they engage in exploration, discovery, and making projects with the app. By the end of this Make, the goal is to have all the families feel comfortable and confident with the core features of the app.

**Review** (5 minutes)

1. Remind families how to get started, and the resources that are available to them if they need assistance. These include the Family Journals, How-to Cards, facilitators and other participants.

2. Review how to add characters, backgrounds, and text, as well as the different categories of blocks.

3. Specifically point out the yellow “Start on Green Flag” and “Start on Tap” blocks. Demo/explain the need to use the yellow trigger block to trigger programming sequences.

**Tinker, Explore, Discover** (20 minutes)

1. Give families ten minutes to freely play with and explore the app together. Kick-off this time by defining this type of exploration and play as **Tinkering**, which is a valuable approach to learning how things work. Have families keep track of any fun, exciting, or silly discoveries they make while tinkering together.

   **Tinkering:** Experimenting with materials and tools to figure out how they work and what they are capable of.

2. Encourage family members to take turns being the main coder.

   **TIP** For families with multiple children, consider providing an additional tablet to further support the opportunity for family members to all have a chance to tinker with the app.

3. Have families share any fun discoveries they make with one another. If willing, have a participant come up and share a discovery by actually demoing it on the projector.

4. Ask the participants if they understand the connections between the definition of coding, the robot chef activity, robot dancer, and actually playing with the app.

5. Have facilitators share additional fun features that they like about the app. Specifically take the time to point out:
   - a. How to add photos to characters and backgrounds.
   - b. How to record sounds.
   - c. How to add pages and use the “Go To Page” block.
Create (20 minutes)

During the second half of the make portion, challenge families to use their developing understanding of the app to create their first projects. The projects can be as simple as making a single character move in a specific way across the screen, but the idea is to set a goal and to then achieve that goal using the app.

1. Point out the five creative challenges in the Family Journals and encourage each family to choose one:
   a. Family Choice - Set a goal, and then create anything you would like.
   b. Dance Party - Create an animated dance party.
   c. Conversation - Create a project where two characters talk to each other.
   d. Interactive eCard - Have an upcoming holiday/birthday to celebrate? Create an interactive card to help celebrate!
   e. About Us - Make an interactive project that introduces your family.

2. Once families have decided what they want to make, encourage them to bring their idea to life using the blocks, characters, backgrounds, and other features within the app.

Facilitating the Make

As facilitators, make yourselves available and accessible throughout the room to support families as needed. Express your curiosity and interest by asking families about what they are up to, listening attentively, and following up with questions and feedback. This is an opportunity to model the types of questions that grown-ups can use to support their kids’ creativity and learning. Use the guiding questions below for support. Make sure you use the words coding, sequence, and instructions when talking to families about what they are doing as they explore the app and start creating their first projects.

Guiding Questions:

- Tell me about what you are making. Do you have a specific goal in mind?
- Why did you [insert specific trait of their project]?
- What happens when this line of code is triggered? How is it triggered?
- What are you still hoping to accomplish? How are you going to accomplish that?
- What has been the most challenging thing so far?
- What is the best part about working as a family?
- What is the hardest part about working together as a family?
- Have you thought about adding...?
- What if [blank] happened? How would you do that?

The challenges serve to move families beyond exploration and tinkering towards goal setting and working towards achieving those goals. However, if families are still struggling with the core functionality of the app, then continue to place more emphasis and support on that aspect of the work.

Encourage families to keep their initial goals simple. Like making the PB&J, what may seem like a simple goal can quickly become more complex as you break it down into its sequential steps.
Share (15 minutes)

As families share, provide feedback on their work and make sure to use the words that have been introduced throughout the course of the experience such as: collaboration, makers, coding, programming, sequence, instructions, tinkering, goals.

Review Sharing Norms

1. Let families know that it’s more than okay to share unfinished work and incomplete ideas that are still being developed. Sharing ideas and projects before they’re ‘finished’ is a great way to gather new ideas that can be helpful as you continue to engage in the creative process.

2. Remind families to be respectful, enthusiastic, and attentive to their fellow participants. Model and encourage giving and receiving thoughtful feedback.

Share

1. Split families into groups of 2-3 families for a Small Group Share.

2. Encourage the small groups to share their work with one another, to provide feedback on each other’s projects, and to engage in small group conversations about the challenges and discoveries made during the Explore and Make portions of the session.

3. Ask the small groups if anyone would like to share a project, or an idea/thought discussed with the whole group.

Wrap-up and Take-home

1. Close out the session with a recap of the great work the group engaged in over the course of the session.

2. Remind families of the date, time and location of the next session, and provide a brief preview of what families will be doing during Session 3. Let them know they will explore the engineering design process and start to make more in-depth family projects.

3. Collect all tablets, Family Journals, and nametags. The PBS KIDS ScratchJr Block Decks are for families to keep, so they can take those home with them. Additionally, provide families with the Session 2 take-home materials, which contain suggestions and supports for ways families can continue their collaborative and creative learning at home in-between sessions.
<table>
<thead>
<tr>
<th>GREEN</th>
<th>YELLOW</th>
<th>RED</th>
</tr>
</thead>
<tbody>
<tr>
<td>What went well? Who had positive interactions?</td>
<td>What questions do you have? What are you unsure of?</td>
<td>What could be improved? Were there any challenging interactions?</td>
</tr>
</tbody>
</table>
Session 3

What is the Design Engineering Process?

Eat  Review and Preview
Explore  Paper Planes and Engineering
Make  Imagine, Plan, Build, Test, Repeat
Share  Share projects and discoveries
Welcome to Session 3!

The third session will move beyond exploration with the tools, and will shift to focus on the design engineering process as families begin work on their own PBS KIDS ScratchJr projects.

One week before the session

- Gather materials
- Contact grown-up participants to remind them of the session time and date
- Confirm food order
- Check-in with facilitators and designate roles for each person

Materials

**FOR PARTICIPANTS**
- Nametags
- Family Journals
- Take home materials
- How-to-Cards

**FOR ACTIVITIES**
- Simon Says Cards
- Character magnets/cutouts
- Background magnets/cutouts
- Construction Paper
- Markers and crayons
- Other craft materials

**FOR EATING**
- Tablecloth
- Paper goods (plates, napkins, utensils, cups)
- Aluminum foil
- Trash bags and trash can

**FOR TECH**
- Session 3 Powerpoint
- Document projector
- Tablets (iOS or Android)
- Tablet Chargers
- Protective Tablet Cases
- Camera(s)
- Speakers (and music)

One week before the session:

- Gather materials
- Contact grown-up participants to remind them of the session time and date
- Confirm food order
- Check-in with facilitators and designate roles for each person
Welcome

Welcome families back for Session 3 of PBS KIDS Family Creative Learning. Express how excited you are to have families back together for continued collaboration, exploration, making, and learning. Make sure everyone is checked in, and point them towards the food.

Provide families with free-time to eat and reconnect with each other after a week apart. Encourage facilitators to spend time with families and to help facilitate inter-family connections.

Review

1. As families eat, project images from Session 2 to the group at the front of the room.
2. Ask participants to recap and share their favorite memories from last week’s session.
3. If families engaged in any of the at-home work, invite them to share their experiences.

Preview

Provide a brief roadmap for the session so that families know what to expect.

- **Explore** - Families will explore the engineering design process.
- **Make** - Families will begin imagining, planning, and building their family projects.
- **Share** - Families will share their progress on their projects.
- If you have any supporting/supplemental activities available for younger and/or older siblings, introduce their availability and provide indications of when and how those activities will be facilitated.

Warm-up

Use the PBS KIDS ScratchJr Simon Says Cards to lead a game of PBS KIDS ScratchJr Simon Says. Similar to Robot Dancer, this game is a great way to physicalize and reinforce the functions of the blocks and the idea of cause and effect relationships. Using the Green Flag block is like saying ‘Simon Says...’, which is what dictates whether or not a player should do the move indicated on the following block(s).
**GROWN-UPS**

**Review (10 minutes)**

1. Ask grown-ups about Session 2 and what stuck with them after the session. Did they continue to make exciting discoveries with PBS KIDS ScratchJr? Is it fun working together as a family? What was the most challenging aspect of Session 2?

2. Remind grown-ups of your discussions and exploration of coding/programming last session. As a group, redefine the term and reiterate how families are exploring coding as they engage with PBS KIDS ScratchJr and the other activities from Session 2. Facilitate a discussion around these questions:
   a. Is coding a valuable learning experience for kids and families? Why?
   b. How does coding with PBS KIDS ScratchJr connect to what kids are learning about in school?

**TIP**

Collaborative and creative work, especially with a new tool, can be frustrating. Encourage anyone who expresses frustrations to keep at it. Persisting through tough challenges is often when the best learning occurs.

**Paper Plane Challenge (10 minutes)**

Switch gears by splitting the grown-ups into groups of 3-4. Explain that for the next 10 minutes, they’ll be engaging in a paper plane challenge.

1. Make sure each group has plenty of usable paper.

2. Tell everyone that they have 7 minutes to create the farthest flying paper plane possible. At the end of the 7 minutes, there will be a competition to see which plane flies the furthest.

3. Start creating the planes!

4. After 7 minutes, have one representative from each group line up to throw their groups’ paper plane. Whichever plane travels farthest is the winner!

**Engineers and the Engineering Design Process (15 minutes)**

1. Explain that through the paper plane challenge, the groups have just engaged in a fun and simple engineering challenge. Engage the group in a discussion about what engineering is and what engineers do. Work towards the following definition:

   **Engineering** is a process of developing solutions to problems. Engineers use creativity, problem-solving skills, and knowledge of technology, math, and science to design and build products, machines, and structures for a better world. They curiously explore why and how things work, and try to figure out how to make things work even better.
2. Ask grown-ups if they see a connection between the definition of engineering and the work they’ve done as families with PBS KIDS ScratchJr.

3. While a lot of the knowledge engineers need to have to be successful within their given areas of focus is too advanced to introduce to young children, the Engineering Design Process is a process that all engineers utilize. This process can be introduced and applied to nearly all project-based work, even projects designed for young children and families (including paper plane challenges and creating projects with PBS KIDS ScratchJr). By supporting the Engineering Design Process, grown-ups help their kids develop a process and habits of mind that can be transferred and applied to project-based experiences in science class, in school and beyond the classroom.

4. Introduce and discuss the different steps in the process, and use the paper plane challenge to provide context:

   a. Define the Problem - All engineers start their work by coming up with a goal or a problem that they want to solve. With the paper plane challenge, the goal was already identified: create the farthest flying paper plane possible.

   b. Imagine and Plan - There is rarely one right answer or one way to approach a problem/goal, which is why it’s so important for young people to be creative problem solvers. With lots of possible ways to go about creating/building a project, it’s important to take some time to think about the possibilities and to create a plan to provide guidance for the team before everyone starts building. Who is doing what? In what order? How is it supposed to look when it’s done? Did any of the teams do any brainstorming or planning before they began building their planes? If so, was it helpful? If not, do they think it would have been helpful?
c. **Create** - It is always a good practice to build **incrementally**, or one piece at a time, and to test the pieces as you go, as opposed to building everything all at once. Why might that be the case?

d. **Test and Improve** - Engineers test their creations regularly as they build to make sure their ideas work. Testing your project as you go is a great way to save time and to fix mistakes if you realize something isn’t working. After each test, **evaluate** if you are happy with the results and if not, figure out what adjustments you want to make. How many groups tested their planes and made adjustments to their planes based on their tests? Was this helpful?

e. **Communicate** - Sharing your project with others for feedback throughout the process is a great way to get new ideas. Did any of the teams share or seek ideas from other teams, OR did any of the teams peek at what the other teams were up to? After seeing the other planes, do you have new ideas about what you might do differently next time?

5. Explain that the **Engineering Design Process** is circular and that the steps can happen in any order as needed.

6. Check in with grown-ups to see if they have ideas about how they can apply the **Engineering Design Process** and their experiences with the paper planes to their work with PBS KIDS ScratchJr and other project-based challenges. When else might it be useful to use the **Engineering Design Process**?
Review (5 minutes)

1. Ask the kids how they felt about the last session and if they have any questions. Did they like making projects with PBS KIDS ScratchJr? What was fun and what was hard?
2. Review the last session’s exploration of programming/coding. Ask kids to redefine the term, and ask them if they think learning to code is fun. Do they find coding hard? Do they think it’s important? Why or why not?

Paper Plane Challenge (15 minutes)

Switch gears by splitting the kids up into groups of 3-4. Explain that for the next 15 minutes, they’ll be engaging in a paper plane challenge.

1. Make sure each group has plenty of paper
2. Tell each group that they have 10 minutes to create the farthest flying paper plane possible. At the end of the 10 minutes, there will be a competition to see which plane flies the furthest
3. Start creating the planes!
4. After 10 minutes, have one representative from each group line up to throw their group’s paper plane. Whichever plane travels farthest is the winner!

Engineers and the Engineering Design Process (15 minutes)

1. Tell the kids that during the paper plane challenge, they all got to practice being engineers. Engage the group in a discussion about what engineering is and what engineers do. Work towards the following definition:

**Engineering** is a process of developing solutions to problems. Engineers use creativity, problem-solving skills, and knowledge of technology, math, and science to design and build products, machines, and structures for a better world. They curiously explore why and how things work, and try to figure out how to make things work even better.

2. Explain that there are lots of different types of engineers who solve different types of problems, but that they all use the **Engineering Design Process**. Introduce and discuss the different steps in the process, and use the paper plane challenge to provide context:

   a. **Define a Problem/Goal** - All engineers start by coming up with a goal or a problem that they want to solve. We identified the goal for you in the paper plane challenge: create the farthest flying paper plane possible. What goals or problems might kids be interested in solving?

   b. **Imagine and Plan** - There is rarely one right answer or one way to approach a problem/goal, which is why it’s so important for young people to be creative problem solvers. With lots of possible ways to go about creating/building a project, it’s important to take some time to think about the possibilities and to create a plan to provide guidance for the team before everyone starts building. Who is doing what? In what order? How is it supposed to look when it’s done? Did any of the teams do any brainstorming or planning before they began building their planes? If so, was it helpful? If not, do they think it would have been helpful?

TIP

Consider partnering younger children with older children, and/or including starter templates for kids who may find making a paper airplane on their own too challenging.
c. **Create** - It is always a good practice to build incrementally, or one piece at a time, and to test the pieces as you go, as opposed to building everything all at once. Why might that be the case?

d. **Test and Improve** - Engineers test their creations regularly as they build to make sure their ideas work. Testing your project as you go is a great way to save time and to fix mistakes if you realize something isn’t working. How many groups tested their planes and made adjustments to their planes based on their tests? Was this helpful?

e. **Communicate** - Sharing your project with others for feedback is a great way to get new ideas. After seeing other teams’ planes, do the kids have new ideas about what they might do differently next time?

3. Check for understanding with the kids. Are they confused about any parts of the **Engineering Design Process**? Do they think they could use the **Engineering Design Process** when creating PBS KIDS ScratchJr projects with their families?
It’s time for families to begin working on their own self-directed projects! Families should feel free to use any and all features within the app, as well as any available crafting materials to create the kind of projects they would like.

1. Let families know that they will have time during both Sessions 3 and 4 to work on their projects, so there is no need to feel rushed.

2. Encourage grown-ups to use and support their kids’ use of the Engineering Design Process, and point out that their Family Journals contain pages to help support the process.

3. Allow families to get started on their projects and encourage them to work at their own pace. Let them know they are free to utilize all of the resources available to them.

4. Five to ten minutes into the Make portion, facilitators should check in with each of the families to see what kinds of project ideas they are imagining. Highlight any fun/interesting ideas for the whole group to help inspire others.

5. Halfway through the Make portion, have families pause to share their progress, either with the full group or with nearby families or facilitators. It is okay for everyone to be at different points in their process.
   a. Encourage families to share the part of the process they’re at, what their project is going to be, and what they’re the most excited about.
   b. Encourage listeners to offer feedback and to ask clarifying questions.

As families work to Imagine and Plan what is they want to create, some may have trouble generating ideas. Ask them what they enjoy doing together. Make some suggestions using “What if...” statements.

Families will move at different paces. It is your job as facilitators to make yourselves available throughout the room to check-in with families, help troubleshoot, ask questions, and provide feedback based on where they are at. Offer supportive feedback and ask questions that allow participants to describe what they’re trying to accomplish, and what their next steps are going to look like. Call out the different steps in the process by name as you talk to families about where they are at.

The storyboarding materials are a great resource to support project planning and are a great way to involve younger children in the creative process. Families can use the characters and background cutouts to help plan their projects before beginning to code them using the app.

If families are really struggling to agree/compromise, consider allowing them to work on two separate projects if you have the available resources.
Share (20 minutes)

Engage in a Small Group Shares or a Full Room Share based on the preferences of the group.

1. Remind families that there is no expectation for their projects to be finished, and that sharing unfinished work is a wonderful way to inspire improvements and new ideas.

2. Encourage families to speak loudly and clearly when sharing their projects. Encourage families to listen attentively as others share and to contribute to each other's work by offering supportive feedback.

3. If presenting families are looking for specific feedback on a particular part of their project, encourage them to say so before they begin sharing.

TIP Asking for focused feedback is a great way to get insights/inspiration related to a challenging, difficult, or problematic aspect of a project.

Wrap-up and Take-home

1. Close out Session 3 with a lot of congratulations and a recap of all the great work the group engaged in over the course of the session.

2. Remind families of the date, time and location for Session 4 and provide a brief preview of what families will be doing during the final session of FCL. The focus will be on how they can continue to support each other’s creativity beyond the experience, wrapping up their family projects, and sharing their fantastic work with the group.

3. Finally, provide families with the Session 3 take-home materials, which contain activities and supports for ways families can continue their collaborative and creative learning at home in-between sessions.

Depending on the interest and comfort level of the families, encourage them to invite other family members and friends to the second half of the final session, so that loved ones can see all of the fantastic work that they have been engaging in together. Have flyers on hand with all of the pertinent information, so families can share with loved ones.

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Read Together

The Boy Who Harnessed the Wind by William Kamkwamba and Bryan Mealer

While reading The Boy Who Harnessed the Wind, use these questions to spark conversations with your child about problem solving, inventing, and helping others:

1) William is curious about how a lot of things work. What are you curious about?
2) Have you ever dreamed up an invention? What was it, and what problem did it solve?
3) What are some things in your home or community you would like to improve? What do you think some possible solutions are?
4) Who is someone in your community who makes a big difference?

Reading together is a great way to explore and think about new ideas. Check out these other books at your local library to continue to explore the themes from the PBS KIDS Family Creative Learning workshops.

• Balloons Over Broadway by Melissa Sweet
• The Girl who Never Made Mistakes by Mark Pett
• What do you do with an Idea? by Kobe Yamada

TIP Asking for focused feedback is a great way to get insights/inspiration related to a challenging, difficult, or problematic aspect of a project.

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Make Together - Catapults

There are lots of great engineering projects that can be made together at home as a family. Check out this plan for making catapults!

**MATERIALS**
- Cardboard tube
- Elastic band
- Wooden spoon
- Small, soft object to launch

Don't have these materials available? Design your own plan with materials that you do have!

**BUILDING THE CATAPULTS**
1. Loop the elastic band over the cardboard tube twice to make an X
2. Insert the wooden spoon handle under the X
3. Place the soft object on the end of the spoon
4. Stomp on the spoon handle to launch!

Try moving the handle up or down to see how it changes how your catapult launches. Try launching things of different weights and sizes to see how that affects how far or how high objects go.

Set up buckets or other containers at different distances and give them point values. See who can get the most points by launching their soft objects into the buckets!

You can find other ideas for fun engineering projects that use household objects by searching the internet for 'simple engineering ideas/projects.'

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What are your team’s reflections on Session 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?
Session 4

Celebrating Families

Eat  Review and Preview
Explore  Ongoing Support
Make  Family Projects
Share  Share and Celebrate Family Awesomeness
Welcome to Session 4!

The final session is focused on families continuing to engage in the engineering design process as they finish up their family projects. The tone of this final session is celebratory, as families share all of their hard work and the experience wraps up.

One week before the session

- Gather materials
- Contact grown-up participants to remind them of the session time and date
- Confirm food order
- Check-in with facilitators and designate roles for each person

Materials

FOR PARTICIPANTS
- Name tags
- Family Journals
- Certificates
- Take home materials
- iPads loaded with post-surveys

FOR EATING
- Tablecloth
- Paper goods (plates, napkins, utensils, cups)
- Aluminum foil
- Trash bags and trash can

FOR TECH
- Session 4 Powerpoint
- Document projector
- Tablets (iOS or Android)
- Tablet Chargers
- Protective Tablet Cases
- Camera(s)
- Speakers (and music)

FOR ACTIVITIES
- Construction Paper
- Markers and crayons
- Other craft materials
Welcome families back for the fourth and final session! Express how excited you are to have families back together for continued collaboration, making, and learning. Check everyone in, and point them towards the food.

Provide families with free-time to eat and reconnect with each other after a week apart. Encourage facilitators to join in to eat and spend time with families.

**Review**

1. As families eat, project images of the group from Session 3 at the front of the room.
2. Ask participants to recap and share their favorite memories from last week’s session.
3. If families engaged in any of the at-home work, invite them to share.
4. As participants finish eating, explain that since this is the last session, they need to fill out a post-FCL survey. Pass out the surveys for grown-ups to fill out and invite the kids to an open area in the room for a warm-up game (see below). Make sure facilitators are available to support grown-ups as they fill out the surveys. Surveys should take 10-20 minutes to complete.

**Preview**

Provide a brief roadmap for the session so that families know what to expect.

- **Explore** - Families will reflect on FCL and explore family roles.
- **Make** - Families will continue working on their family projects.
- **Share** - Families will celebrate and share their hard work and projects with one another.
- If you have any supporting/supplemental activities available for younger and/or older siblings, introduce their availability and provide indications of when and how those activities will be facilitated.

**Warm-up**

Use the PBS KIDS ScratchJr Simon Says Cards to lead a game of PBS KIDS ScratchJr Simon Says. Similar to Robot Dancer, this game is a great way to physicalize and reinforce the functions of the blocks and the idea of cause and effect relationships. Using the Green Flag block is like saying ‘Simon Says...’, which is what dictates whether or not a player should do the move indicated on the following block(s).
Explore (20 minutes)

GROWN-UPS

Review (10 minutes)

1. Ask grown-ups how they felt about Session 3 and what stuck with them the most. What were their favorite aspects of Session 3? What was the most challenging and/or confusing?

2. Revisit the Engineering Design Process and review the different steps. What was it like engaging in the process as they began working on their family projects?

3. How does the Engineering Design Process connect to what kids are learning about in and out of school?

TIP There are no right answers to these questions. Allow grown-ups to share their thinking and feel free to contribute your thoughts as facilitators. This should feel like a discussion as opposed to instruction.

TIP As you engage in this conversation, be sure to highlight the successes you’ve seen among participating families. Call out specific instances where you noticed grown-ups supporting their kids’ experience with the practices involved in creative collaboration.

Ongoing Support (10 minutes)

With Family Creative Learning concluding after this session, grown-ups may be wondering how what they worked on can transfer and have a positive impact beyond the experience. Engage grown-ups in a discussion about the different roles grown-ups can and do play when supporting their kids’ learning and vice versa:

1. **Collaborator** - When family members take on a project together, they do so as collaborators. Working together with your kids is a great way to help them develop their teamwork and communication skills. Ask grown-ups why developing those skills is important for their kids. What can they do to model and support good collaboration with their kids?

2. **Teacher** - Grown-ups have so much knowledge and life experience to pull from to support their kids’ learning. Opportunities will constantly present themselves for grown-ups to help their kids make sense of something. What effective teaching strategies have grown-ups encountered during the FCL sessions or elsewhere?

3. **Learner** - It is just as important for grown-ups to provide kids with the opportunity to be the teacher. Kids are constantly working to make sense of the world around them, and are constantly exposed to new and exciting ideas. Having grown-ups assume the role of learner and giving kids the chance to teach them about something they are excited about is a great way to support their child’s’ interests and development. What does it mean to be a good learner?

4. **Motivator** - Providing feedback and motivation is incredibly valuable for young learners. Encouraging hard work and praising persistence are great ways to support the likelihood of kids self-identifying as hard-working and persistent. What are some good ways to motivate and support kids as they persist through tough challenges?

Point out that you have witnessed grown-ups utilizing all 4 approaches at different points throughout the experience. Call out any specific examples of each approach that you can recall.
CHILDREN

**Review** (10 minutes)

- Ask kids how they felt about the last session and if they have any questions. How was the process of starting and working on their PBS KIDS ScratchJr family projects? What was the most fun? What was hard? Are they excited to finish and share their projects with the group?

- Reflect together on the experience as a whole. Do they like coding with the PBS KIDS ScratchJr? Do they enjoy working together as a family on creative projects? Have they learned anything new?

**Rosie Revere Engineer** (10 minutes)

After reviewing and reflecting on the experience together, read Rosie Revere Engineer out loud to the group. Then, use these questions to discuss the engineering design process, the concept of persistence, and how to learn through failure.

- Like a lot of you, Rosie has dreamed up a lot of big inventions. What kinds of inventions have you thought of?

- Rosie doubts herself when her cheese-copter crashes, but Aunt Rose helps her see her success. How does Rosie use her first failure to make her project better? Did anything like that happen to you while you were working on your ScratchJr projects?

- Failing can be frustrating, but it is also an important part of the learning process. Can you think of a time when you failed a few times before you got it right? How did it feel when you succeeded?

- Discuss some of the qualities that make Rosie a great engineer. Do any of you have those qualities?

**TIP**

Children’s books like *Rosie Revere Engineer* are a great way to explore and connect the plot of the story to FCL and school/life.
This session’s Make portion is a continuation of Session 3. Families should pick up where they left off last session, as they work to finish up their family projects.

**Facilitation**

As mentioned last session, families will move at different paces. It is your job as facilitators to make yourselves available throughout the room. Check-in with families, ask questions, and provide feedback to support their process.

1. When there are 10 minutes left in the Make portion, provide families with a gentle reminder that they have 10 minutes left to work on their projects. Remind them that it is more than okay for projects to be a work in progress.

2. When there are 5 minutes left, encourage families to start putting the finishing touches to their projects (based on where they are currently at), and to get ready to share.
This final PBS KIDS Family Creative Learning Share should be a giant celebration of all of the wonderful work families have engaged in over the course of the experience. If participating families have invited friends and family, invite the guests into the room. Once everyone is in the room, introduce yourselves, Family Creative Learning, the PBS KIDS ScratchJr app and give an overview on what families have been working on over the course of the last four sessions.

**Review Sharing Norms**

1. Quickly remind families that it’s more than okay to share unfinished work.

2. Remind families that they can celebrate each other’s work by being attentive and respectful listeners, and by offering supportive feedback to one another.

**Full Room Share**

For this final share, we would encourage you to engage in a Full Room Share. If your families are still uncomfortable with the idea of presenting in front of the group, you can alternatively engage in small group shares.

1. Beyond sharing the project itself, encourage families to talk about the process they went through to create their projects.
   
   a. How did they come up with their idea?
   
   b. Who did what on the project?
   
   c. What is something in the project they are especially proud of?
   
   d. What was the most difficult challenge they overcame while working on their project?

2. Encourage questions and feedback from others in the room.

3. Give a big round of applause for each family, and make sure to capture photos and videos of them presenting their projects together!

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Celebrate

After every family has shared their projects, take a moment to personally recognize every family for their hard work and creativity. If you have a celebratory treat/dessert, now would be a great time for everyone to partake!

When recognizing families, equally distribute attention across families so that nobody feels less recognized or appreciated. You may want to work as a facilitation team to discuss strengths/special moments with each family before this session begins.

1. Review the main themes of the sessions, and reiterate all of the incredible work you’ve accomplished together tinkering, collaborating, making, problem-solving, coding, learning and engaging in the engineering design process. Remind participants that they all used a brand new tool to create their own projects together as a community of families!

2. Present each participant with a certificate to recognize their hard work and contributions.

3. If possible, give each family a parting gift, like an action shot of the family working together or a collage of their experience.

4. Share next steps - hand out all take-home materials. If you have plans to continue engaging with families in some capacity, share your plans with them. This could include pointing families to other local events and activities to take part in and/or pointing them to online and on-air resources they can utilize. Make sure families know how to keep in touch with you and your partners (through social media, websites, phone/email, calendar of events, etc).

If families have gotten close over the course of the experience and want to exchange contact information, help facilitate that sharing. With that said, also be sensitive about families that may not want to share their contact information.

5. Before everyone leaves, make sure to get a group picture!
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