Reflect & Refine

- BUILD A LOGIC MODEL
- EVALUATE
- RAPID REFINEMENT

Reflect & Refine

Our process empowers your maker program to be nimble, responsive, and striving for continuous improvement and growth. This involves developing systems and habits for documenting and reflecting on how the program is going, as well as refining the program to make it stronger. Reflection can be a daily practice for individuals, but program staff should also periodically reflect as a team too, perhaps monthly or even weekly until the program has become more established.

In times when there might be a big change on the horizon (e.g., facility remodels or new initiatives), requiring more input from key stakeholders, you may also need to revisit the Listen & Discover and Brainstorm & Prototype sections of the process. This can be helpful in refining your programming to allow for a more indepth review or to reaffirm the "people and purpose" you're serving and how best to make that happen.

We start by introducing a streamlined way to work with your team to develop a logic model—which offers a high-level, one-page snapshot of your program as a whole, including the actions you're taking and the resources you're leveraging to make a difference for your community through making. With this groundwork in place, you can then begin to experiment with different approaches for documentation to gather feedback from program participants, both formally and informally—from the immediate feedback of a 1:1 conversation to a broad survey of your patrons.

Being a reflective program planner or facilitator requires a flexible mindset and a logical approach to problem-solving, as well as imagination, intuition, and inspiration. In this section, we also share examples of how many of our pilot libraries have employed this mindset to rapidly shift their programming in response to immediate community needs.

Maker projects often use very simple materials in creative ways (Corona Public Library).

BUILD A LOGIC MODEL

One of the most important functions of a logic model is as a means of communicating your project plans to internal stakeholders and external agencies and funders before, during, and after the project. Even though it excludes granular detail, a good logic model represents those aspects of an activity or program that, in the view of your stakeholders, are most important for understanding how the effort works.

Logic models are living documents that tell the story of your program planning and implementation efforts. In most cases, logic model development will go through several drafts before resulting in a version that stakeholders agree accurately reflects their story. As your strategy changes, so should the model. Remember to continue to modify and enhance the logic model as the program evolves, revising periodically to reflect new evidence, lessons learned, and changes in context, resources, activities, or expectations.
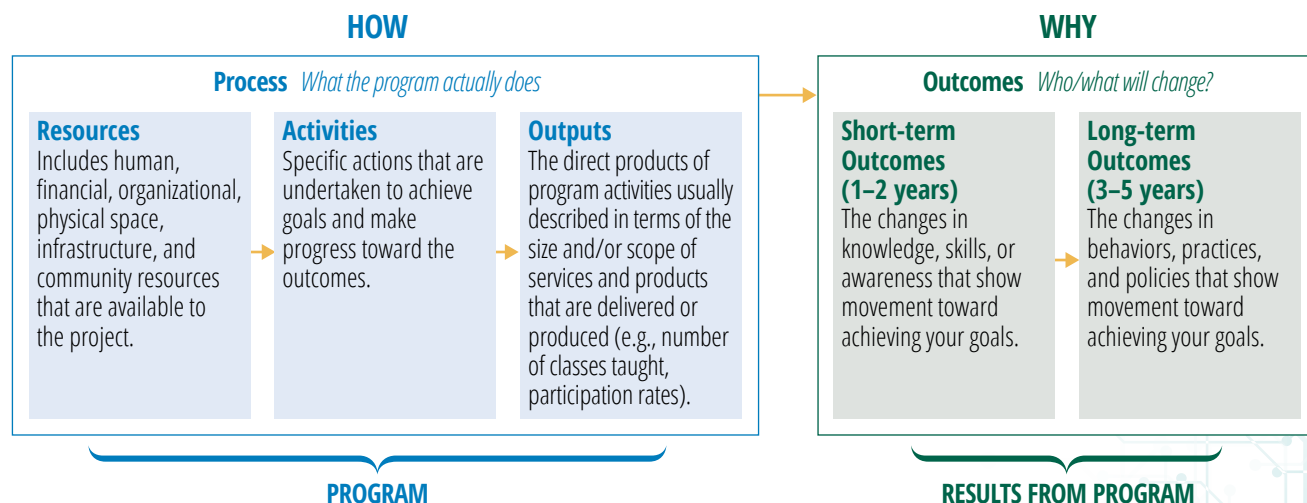
When going through this process, it's helpful to also consider what a logic model is not. Although it captures the big picture, a logic model isn't an exact representation of everything that's going on. Instead, it represents *intention*, not necessarily reality.

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LOGIC MODEL
A systematic,
visual way to
present your
understanding of
the relationships
between the
resources you have,
the activities
you plan, and the
outcomes you hope
to achieve.
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Anatomy of a Logic Model

A basic logic model typically has two central components—process and outcome. Process describes the program's resources, activities, and outputs (direct products). Outcome describes the intended effects of the program, which can be short- or long-term. If you've never created a logic model before, one of the best ways to get more comfortable with them is to look at an example. We provide an example from one of our pilot libraries alongside the Logic Model tool in the Toolbox section.

LOGIC MODEL ELEMENTS

HOW

Process *What the program actually does*

Resources
Includes human, financial, organizational, physical space, infrastructure, and community resources that are available to the project.

Activities
Specific actions that are undertaken to achieve goals and make progress toward the outcomes.

Outputs
The direct products of program activities usually described in terms of the size and/or scope of services and products that are delivered or produced (e.g., number of classes taught, participation rates).

WHY

Outcomes *Who/what will change?*

Short-term Outcomes (1–2 years)
The changes in knowledge, skills, or awareness that show movement toward achieving your goals.

Long-term Outcomes (3–5 years)
The changes in behaviors, practices, and policies that show movement toward achieving your goals.

PROGRAM

RESULTS FROM PROGRAM

how to CREATE A LOGIC MODEL

STEP 1

ASSEMBLE A DIVERSE TEAM OF STAKEHOLDERS

Logic models should be developed using a team approach. Involvement of key stakeholders is essential to gaining a clearer understanding of your program goals, assets, and commitments. Include representatives from your library administration, city or county leadership, established partner organizations, donors, or grant-making organizations.

STEP 2

CREATE A TIMEFRAME FOR COMPLETION

A logic model isn't likely to be developed in a two-hour meeting, or even two such meetings, therefore you should plan on investing the time to create it. Consider conducting a series of "mini retreats" (around three hours long) or more frequent short (hour-long) meetings, depending on what works best for the team. Be sure to keep the conversations going so that momentum towards completing the model is consistent and connected.

STEP 3

PREPARE FOR THE MEETING(S)

- Disseminate key facts about your program to your team so that everyone "starts in the same place." Prepare a presentation or report and reference documentation developed, including the People and Purpose tool, Action Plan, Budget Plan, evaluation data, and even photographs from your programs.

- Identify a note-taker, ideally someone who is consistent through the process and who will share all of the notes with participants.

- Locate the following supplies: a large whiteboard or a roughly 12-foot length of butcher paper, five different colors of notecards or large sticky notes, markers, and tape.

- Create a large version of the template provided in the Logic Model tool on the whiteboard or butcher paper. Write your Framing Question and headings for the five logic model elements (resources, activities, etc.) at the top.

- Assign a different color card or sticky note to each of the five logic model elements.

STEP 4

FACILITATE THE MEETING(S)

- Begin your first meeting with an overview of your program and an orientation to the elements of a logic model, leaving time for discussion. Use the glossary in the Logic Model tool as a resource.

- Ask participants to brainstorm the resources, writing them on individual color-coded cards or sticky notes and securing them under the appropriate element header.

TOOL

LOGIC MODEL

This tool guides your logic model creation. It includes a detailed glossary of terms, a template, and an example.

how to **CREATE A LOGIC MODEL** *continued*

- Continue in the same manner through each of the other four sections (activities, outputs, etc.) until all of the ideas fill the logic model template.

- Take the necessary time to go back and fine-tune each of the five elements before concluding. Be sure to take a photo and share with all meeting attendees to reflect on and refine further.

- Once you feel you have a version that is complete, type the information into the template provided in the Logic Model tool to more easily share with stakeholders.

All of our pilot libraries collaborated in a logic model workshop as part of their training, where they brainstormed activities and outputs, as well as discussed outcomes.

Benefits of Logic Models

There are many benefits of developing a logic model and numerous ways to apply elements of the model to your library and makerspace activities.

Provides clarity: A logic model helps keep focus on the desired outcomes. Clarifying outcomes—and then expressing what steps you'll take to achieve these outcomes—leads to more measurable results. Without this process, makerspaces run the risk of spinning their wheels and not fully accomplishing their goals as efficiently as possible.

Strengthens communication: A well-built logic model is a powerful communication tool. At a glance, it shows stakeholders what a program is doing (activities) and what it's achieving (outcomes), emphasizing the link between the two.

Enhances program planning: A logic model provides a guide for current and future program planning. If a new activity or grant opportunity is presented, staff can refer to the logic model and decide if it's aligned with the program's goals and objectives.

Aids fundraising efforts: For development officers and grant writers, a logic model can prove invaluable. It clearly communicates in one page what you do and what you're trying to achieve.

Drives evaluation: While it's neither possible nor necessary to measure all of the outcomes on your logic model, it does help staff avoid having to guess which measures are most important to quantify.

Caption

> " *The logic model forced us to examine the big picture, define steps, and see where we've been and where we're going.* — LIBRARY STAFF

EVALUATE

Even though you're busy developing and building your maker program, it's important to take time to pause, observe, and pay attention to how things are going, so you can make improvements and changes along the way. Then, at key milestones during program design and implementation, it's helpful to take a big picture view by collecting different pieces of information to see how far you've come and what impact the program has made.

Though observing and evaluating your program requires some advance planning, our toolkit offers a variety of methods to choose from. Before deciding on one or more methods, it's important to understand what you're hoping to investigate, so you can weigh the benefits and drawbacks of each. Are you curious to know what participants learned through your program? What activities are participants interested in trying? How can your program be improved?

We encourage you to partner with your frontline staff and take a team approach so that everyone feels empowered to play a leading role in evaluation. Help everyone understand that using these tools can support them professionally and assist the team to be more aware and in touch with the ongoing needs and interests of patrons. Evaluation and reflection is a continuous, interactive process that doesn't need to be a chore—it can be creative, collaborative, engaging, and fun!

Approaches to Data Collection

Data collection methods fall into two main categories—quantitative and qualitative—that both have their advantages and disadvantages. *Quantitative* approaches tend to be less time-intensive and easier to administer to a large number of participants, making them more generalizable. These approaches typically result in numbers (e.g., percentage of patrons who said they would recommend this program to a friend, number of days a program is offered, how many attended). Often libraries routinely track quantitative data like this about programs, so be sure to tap into any existing information sources and evaluation tools. However, quantitative data sometimes lacks the more in-depth information you need to inform specific changes to your program.

Qualitative approaches, on the other hand, tend to be more time-intensive and difficult to use with a large number of participants, but they provide more in-depth information than you might get from quantitative methods. Luckily, you don't have to choose one or the other! These two methods can be combined to more fully explore the questions you have.

You also need to consider that everyone will have different preferences and comfort levels with the various types of evaluation. If someone is shy, they may not feel

comfortable providing their feedback in a public way. If English is not someone's first language, they may be less prone to do an interview with you. If someone is not a citizen, they may be reluctant to participate in any forms of evaluation that involves them giving personal information. And if someone has a restless child or an elderly parent waiting for them at home, they simply may not be able to participate for lack of time. So experimenting with different methods for different programs and audiences is an important part of the process.

By the Numbers

QUANTITATIVE ●——————○ *QUALITATIVE*

Tracking purely quantitative information for your programs is worthwhile and most likely aligns with some systems you already have in place.

- How many people pre-registered for a workshop versus how many attended?
- How many first-time attendees came to your event?
- How many repeat requests are there for your maker box program?
- How many unique visitors came to your maker web page?
- How many requests for 3D prints were processed?

Keep in mind, especially at small and rural libraries, you may never see large numbers or big growth in attendance because the population may be small and the space limited. But knowing that you have a regular, dedicated audience is one demonstration of the strength of your program.

Pay attention to circulation numbers and even general gate count. Are there more people in the library on maker program days? Are people checking out more books about arts, crafts, coding, and STEAM-related topics? When you offer a program, it's a perfect opportunity to showcase books and media in your collection that people can check out to extend their learning at home.

At our pilot libraries, there was a noticeable difference in higher circulation numbers and a surge in requests for books in maker-related categories. For example, in the months after the small, rural Exeter Library launched their makerspace program, they moved up several notches to second place for overall circulation in their 17-branch system. At Lakeport Library, since offering their maker program to adults and children, they've noticed an increase in circulation for books related to arts and crafts, and the Zip Books interlibrary loan program has received many book requests for DIY and STEAM topics.

Surveys

QUANTITATIVE ——●——○ *QUALITATIVE*

Surveys can be used to get specific feedback from program participants—as well as gather input from people who have not yet participated—to find out what they'd like to

see. Surveys can be on paper or distributed electronically and can be designed to be anonymous. They're an efficient way to gather lots of information from many people and to gain a representative picture of the attitudes and characteristics of a group. Though the results are typically quantitative, you can also solicit qualitative input by asking open-ended questions such as, "Is there anything else we should know?"

When you're designing your survey, remember to make it accessible for people with different languages and abilities. Many electronic surveys offer multiple options to accommodate universal design, so a user could utilize a screen reader, translation tools, enlarged text, and more, if needed.

Since surveys are a common form of data collection throughout multiple aspects of life, many people can suffer from survey fatigue. To combat this, keep your surveys as brief as possible and make sure you connect with your library administration to make sure you aren't surveying the same patrons multiple times across programs. Also, remember that using surveys with young children (especially those still learning to read) is challenging, and tweens and teens tend to dislike them because they feel too much tests that they take in school. However, there are still creative ways to use surveys with these audiences. We offer a sample survey in the Toolbox section and have included some examples from our pilot libraries to help you get started.

TOOL

PROGRAM SURVEY

This tool provides an example survey with a variety of questions you can include or modify to fit your library's needs.

The JFK Library used simplified "emoji" surveys to get feedback from children at their programs, particularly drop-in programs and outreach events. When designing a survey like this, you could ask participants to select a response from a few emoji icons, ask them to draw their own, or provide emoji stickers or stamps to indicate their response.

(Above) Lake County Library used this quick, simple survey after their weekly program to get feedback on what patrons were using and their interests.

(Left) Atascadero Library collected feedback on their new sewing workshop series with a board where teens provided their input using dot stickers.

Self-Reflection

QUANTITATIVE ●————●———● QUALITATIVE

Another great way to capture feedback from staff or volunteers immediately after a program is through self-reflection. Timeliness is key, so it's important to carve out time within a few hours after a program to have everyone involved write down some information about how the session went (successes and challenges) and what was seen and heard, including both quantitative and qualitative data. Although it can be challenging to get started, creating a habit of writing down ideas, feedback, and quotes right after a program fosters a culture of lifelong learning among your staff and helps you respond immediately to things that didn't work as planned.

Regular reflective tasks include:

- Gathering information from participants *during the activity*, sometimes adjusting in the moment to help participants have a better experience

- Writing down notes *after an activity,* with personal observations and thoughts on what went well and things that might be better done differently

- Taking stock of all this information and adjusting *before the next session* to put into practice the things you learned

We've created a Maker Activity Log in the workbook to help, and recommend keeping these in a binder or electronic folder, filed with the Maker Activity Plan for that activity. The team should regularly review the comments in this binder and use this feedback to make program decisions and inform best practices. If you're planning to repeat an activity, take a look at the reports from previous sessions to get helpful advice from the last time it was offered.

Interviews

QUANTITATIVE ●————●◉ QUALITATIVE

Interviews can be a great way to get a general sense of participants' thoughts and feelings about a program and help build relationships. They can also be used to gain greater "buy-in" from stakeholders, helping them to feel more valued and have more ownership of the project. Interviews can be formal, scheduled events, conducted in person or virtually, or they can be in-the-moment conversations with participants. You may choose to record the interviews with permission from the participants, but keep in mind that you would then need to spend time or money to transcribe the recordings.

Craft a list of questions that you want to ask people, and be consistent so you can look at the results more holistically afterwards. One key advantage of interviews is that they allow you to dive deeper on anything interesting or unclear. Just listening to what people say and requesting a bit more information ("Can you tell me more about that?") can lead to the most valuable responses. You may be surprised at how much great insight people will share when asked for their thoughts!

Informally, even just striking up a conversation with participants during the program can yield helpful feedback. Ask them a little about themselves and what they like to make. Do they have special skills or experience with science or the arts? What other similar experiences have they had that they liked? Do they know others who might be interested in future programs? These conversations can be very rich and rewarding. Remember to note any feedback you receive in your Maker Activity Log.

At Corona Public Library, the Maker Exchange staff wanted feedback from teens on the different gaming and coding programs they were offering. Their staff noted that the

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TOOL

MAKER ACTIVITY LOG

This tool provides a template for collecting data for reflection after each program.

TOOL

PATRON INTERVIEW QUESTIONS

Use this tool as inspiration for interview questions to ask patrons. Modify based on the amount of time you have.

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single best way to gather frank, honest, and useful information was to sit down with the teen and ask them while they were there at the computer. Teens seemed happy to have the chance to share their thoughts, and staff were able to get specific feedback and ask follow-up questions regarding what they liked and didn't like about the software, which helped them decide what kinds of programs to invest in moving forward.

At Lakeport Library, which is in a small town rural setting, staff call maker program participants on the phone to get direct feedback about what kinds of activities they would like to engage in with their virtual maker program.

When the Gilroy Library launched its first ever Mini Maker Faire, they had a person specifically assigned to interview participants with a set of questions about their experience at the event. They later used that data to provide stakeholders with a follow-up report.

Focus Groups

QUANTITATIVE ●————● *QUALITATIVE*

Focus groups typically include 8-10 people who have engaged with your makerspace as participants or partners. These group discussions are geared toward understanding their thoughts and feelings about your offerings. Rather than relying on assumptions, focus groups allow for people to bounce ideas off each other and build off one another's comments. The result is that participants feel their opinions are respected and valued.

Preparing for and implementing focus groups is time-intensive, and there can be a lot of logistics involved in finding the right people and getting them in the same room at the same time. These challenges aside, we highly recommend starting your makerspace creation process with focus groups! Refer to our dedicated section on Focus Groups in Listen & Discover for more information.

Peer Observations

QUANTITATIVE ●———●——— *QUALITATIVE*

Observations help to gather information about how a program or activity actually operates, especially regarding processes. They allow you to directly see what people are doing, versus relying on what they say. In the absence of paying for an outside evaluator, observations can be done by your peers (staff, volunteer, or co-facilitator) and still provide very valuable feedback on what aspects of your programming are working well and which need a new approach.

The peer observer might be someone from another branch, another makerspace, or even a colleague from your own branch. Peer observation provides an opportunity to view a program conducted by a colleague and record information about what they see happening (or not happening). Once the observation is complete, we recommend a discussion between peers (observer and program staff/facilitator) to review and reflect

> **TOOL**
>
> ## PEER OBSERVATION
>
> **This tool includes suggested prompts for the peer observer to comment on the maker environment, the facilitation, and the activity itself.**

on what was noted, with room for constructive dialogue. Ideally, peers should reciprocate and complete this observation for one another. The experience can prove to be a positive learning experience for both.
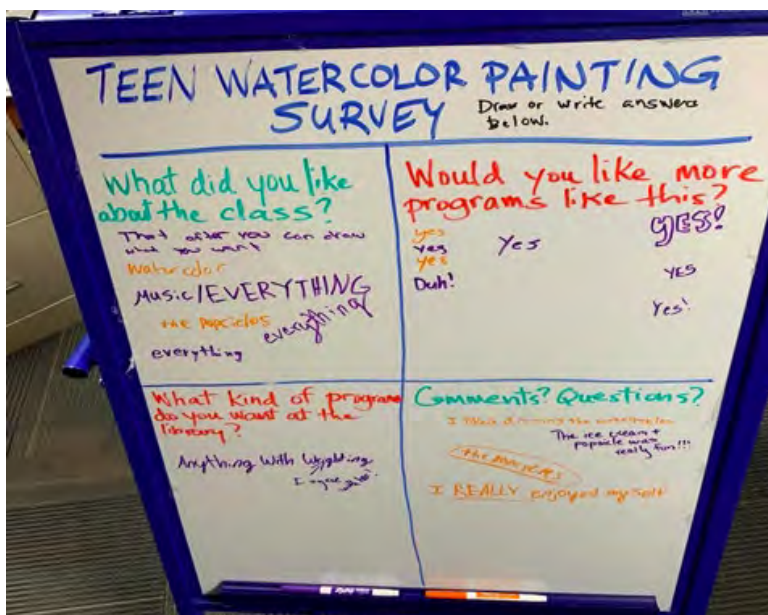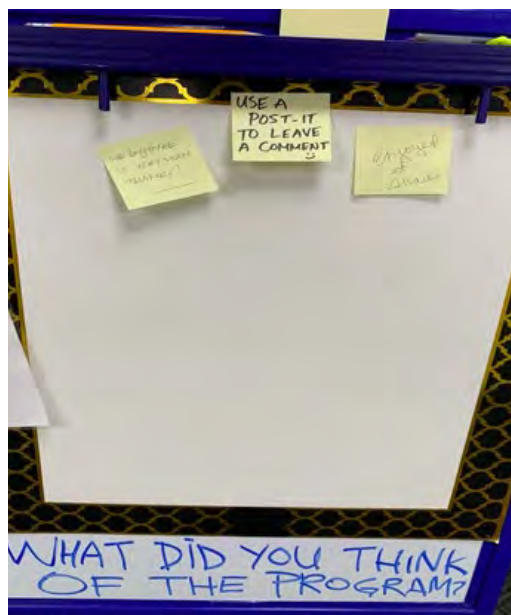
Talk-Back Boards

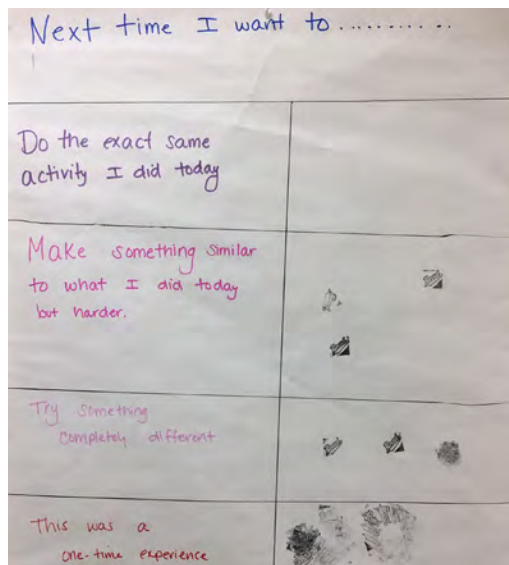*QUANTITATIVE* •———————• *QUALITATIVE*

A talk-back board is an engaging way to collect feedback from a group, where participants can see the results in the moment. They are fun and interactive for both small- and large-scale maker programs and events. You won't get in-depth responses using this type of evaluation, but you'll get a "pulse" of how the program went.

There are several ways to conduct talk-back boards. Here are two:

- Invite participants to write or draw their own responses to one or more open-ended questions. They could provide their answers directly on a whiteboard or on sticky notes that get added to the board. You can add one more interactive layer by encouraging people to "like" others' responses by adding a sticker or making a mark (such as a heart or X) to indicate that they agree with the same idea. Once you've gotten responses from all, take a photo of the board so you can have a record of that feedback.

Atascadero Library experimented with different ways to collect feedback on a talk-back board. One was an open-ended invitation to write thoughts about the program on a sticky note, and the other had four specific prompts where partici-pants wrote their ideas directly on the board.

Blanchard Community Library's Teen Scene patrons use a rubber stamp to mark their responses to four different statements posted on a chart paper, providing a quick snapshot of information to facilitators.

- Alternately, on a poster or whiteboard, write a few statements that are related to your desired program outcomes. Examples could include:

  » Today I discovered an interest or talent I didn't know I had.

  » Today I gained skills that will benefit me in my current or future job.

  » Today I came up with a new way to solve a problem.

Provide stickers or stamps to participants, and ask them to place one next to each statement that rings true based on their own personal experience. Allow them to vote more than once if that makes sense.

Suggestion Box or Feedback Journal
QUANTITATIVE ●————●— *QUALITATIVE*

A suggestion box or feedback journal invites participants to provide opinions and more in-depth thoughts in an anonymous way. Make sure the box or journal is clearly marked and accessible to the people you hope to reach. If you want them to comment specifically about the maker program, include instructions or questions to clarify what kind of feedback you're looking for, either on the cover of the journal, on the suggestion box slips of paper, or on signs near where these are placed.

With a suggestion box, people can't see one another's comments unless you decide to share them publicly, but with a feedback journal, people can page through and see what others have written. You might keep these anonymous, or give people the option to provide their name and contact information. Consider how you might make your response to these suggestions visible—either by implementing the desired changes or by providing some general updates to the requests, such as posted notes on a bulletin board, verbal announcements during the maker program, or sharing the information in your newsletter or on social media posts.

At Atascadero Library, they routinely ask the teens for feedback on the day's activities and solicit suggestions for future things to do. One time, when staff forgot to ask for feedback, the teens took it upon themselves to start collecting the information in a journal. They

simply put a date at the top of the page, passed the book around the room, and each teen provided their comments and ideas. At the end of the session, they returned it to the staff person. This approach, created by the teens themselves, has continued to be one of the ways the library gets feedback at their weekly program. And teens can see how well it works by noticing some of their suggestions taken seriously and worked into the program.

Analyze the Data

When trying to decide which evaluation method(s) to use, there are many factors to consider, including how much time you have to analyze the data. When people take the time to give you feedback, they like to feel heard and acknowledged by either seeing the change or understanding why the change isn't possible. Unless you have the time to devote to recruiting participants and conducting lots of evaluations, your sample size will be small. And with a small sample size, data might be difficult to generalize. But even a small sample can be helpful in noticing trends that can be used to inform program changes or any subsequent evaluation.

If you've never done evaluation before at your library, it might feel a bit overwhelming. What we provided here in this section isn't intended to be a comprehensive course on evaluation, but rather a broad overview of several approaches with real examples from our pilot libraries. There are many other in-depth resources provided below that can help guide you to dig deeper into evaluation practices and data analysis.

The big takeaway here is to not get swept up in all of the details, but to at least try some way(s) to get feedback and keep a record of the responses, so you can review and analyze the information and use it to make decisions on how to refine programming moving forward. Always be sure to share your findings—the successes and the challenges—with your stakeholders, partners, and funders, keeping them connected to the program during this journey.

FURTHER READING

The **Beyond Rubrics** toolkit has embedded tools to capture qualitative and quantitative evidence of the process of making.

The **Capturing Connected Learning in Libraries** (CCLL) project is building tools for libraries to quickly and effectively assess learning outcomes for connected learning programs and spaces.

The **Evaluation Springboard** website provides a basic understanding of the why and how of evaluation. It was designed for those who want to undertake or commission evaluations in educational settings.

MakEval is creating suites of tools—including surveys, assessments, and observation protocols—that provide educators, researchers, and program administrators with information to evaluate maker programs and experiences with youth.

The **Simple Interactions** tool provides a common, descriptive language to talk about interactions in practice.

The **Learning Activation Lab** is a national research project seeking to discover what best sparks curiosity and interest for engaged STEAM learning. Their website offers a robust collection of evaluation tools.

RAPID REFINEMENT

As much as we would love to have the time and space to carefully plan all of our evaluations and get quality data that informs the next stages of our programs, sometimes we don't have that luxury. In addition to the more methodical refinements you might make, your library makerspace can be a place where continuous reflection results in more rapid refinements. By adopting a mindset rooted in rapid prototyping, flexibility, listening to community needs, and constant iteration, your staff will become an invaluable asset when the needs of the community change and a more immediate response is warranted. Throughout this pilot project alone, we've seen libraries quickly adapt to respond to a number of challenging situations.

Across Northern California starting in 2019, the local power utility instituted regional preventative power shut-offs on high-risk days (hot, dry, windy) to prevent wildfire, resulting in homes, schools, and businesses without power for days at a time. Libraries like the one in Lakeport were provided with generator power and designated as a cooling center and place to get internet access amid the widespread power outages. Many gathered in the library to find refuge and enrichment during these times. The emergency reinforced the notion that their community could be more resilient if the makerspace could fulfill its purpose and help bring people and organizations together.

A different kind of emergency took place in the summer of 2019 at the annual Garlic Festival, a popular food festival celebrating Gilroy as the "Garlic Capital of the World." Tragically, there was a mass shooting at the festival, where three people were killed and more than a dozen wounded. This small community was understandably devastated by grief. The library partnered with a host of local agencies and became an important asset in the local emergency relief efforts during the hours and days that followed. The library staff noted that they didn't want to cancel all of their maker programs in the wake of the shootings because they felt a need to bring people together for something positive, and arranged for art activities that promoted healing and wellness.

The COVID-19 pandemic has also highlighted the adaptability, creativity, and problem-solving skills of dedicated professionals at public libraries around the country, even as their institutions were forced to shut their doors to the public and many staff members were working from home or reassigned to other roles in their towns. To meet urgent needs, library maker staff didn't act alone or in a silo—they reached out and collaborated, leveraging their active local, national, and international maker ecosystems to serve most effectively in the time of emergency. Here are just a few examples of how the makerspaces at our pilot libraries stepped up to help during this time of need.
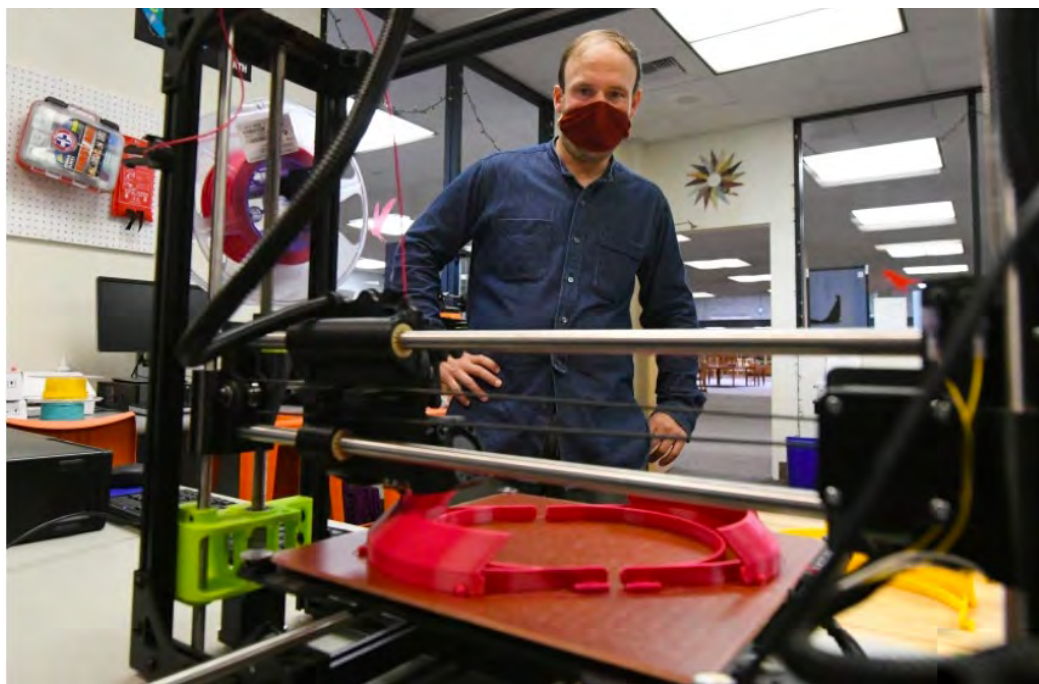
Light Manufacturing

To fill the gap in the shortage of personal protective equipment (PPE) for health care and frontline essential workers, makerspaces used their tools—such as 3D printers, laser cutters and sewing machines—to manufacture PPE parts. This includes face shields, masks, gowns, and more.

For example, although the library employees in Santa Paula were forced to work from home during the pandemic, Adult Services Librarian Justin Formanek of Blanchard Community Library gathered all the library 3D printers, plus additional ones from community organizations, and set up production for face shield parts in his home garage. The local paper took notice and published an article on the front page about his work. He's quoted as saying, "I have always believed that the primary goal of public libraries is to support and inform the communities we serve. Though our doors may be closed, we can still find a way to work together and use what resources we have to provide meaningful support. The face shields are just one example."

Librarian Justin Formanek created a makeshift face shield production line with 3D printers in his home garage.

In Vallejo, Chris Radin, JFK Library's young adult librarian, led the charge in utilizing the 3D printers in The Makery to create face shields for local hospitals, while other staff members, including Angelina Gonzalez, a children's library associate, sewed masks. They collaborated with Vallejo's Risk Management division to ensure these supplies got to folks who needed them most during the pandemic.

JFK Library staff members helped out during the coronavirus pandemic: Charlie Radin uses the makerspace's 3D printers to make face shield holders, while Angelina Gonzalez sews masks. Photo by Chris Riley for Times-Herald.

Shifting Programs Online

Libraries also supported local families by shifting existing programs to an online format. Suddenly the camera and video editing software in the makerspace became valuable tools to support the delivery of high-quality virtual enrichment programs.

Some libraries convened their regular maker program sessions via video conference, while others used social media platforms to share curated and original instructions for skill building, activities, and fun design challenges with their followers. One surprise is that the new mode of program delivery extended its reach to homebound makers, who had never been able to visit the library before due to physical constraints.

At Lakeport Library, this began with simple phone calls to the Creative Club adult programming regulars, and then it graduated to recurring Zoom meetings where they shared their work. Participants even set up creative challenges for one another to attempt before reconvening in the next session.

The JFK Library started to produce their own how-to cooking videos, including **this one** demonstrating how to make hummus. They shared these videos online across multiple platforms, including YouTube and Facebook.
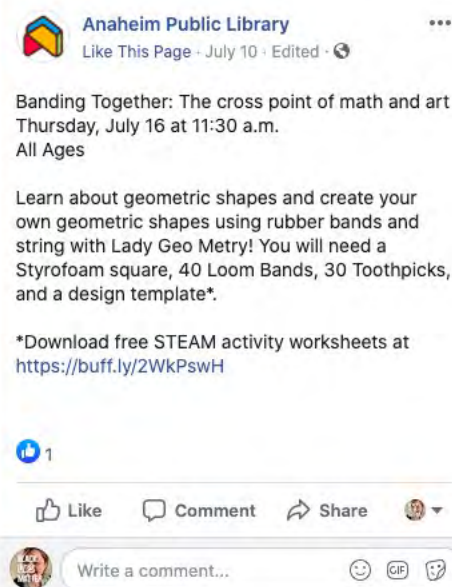

JFK Library offered a livestream cooking demonstration from The Makery.

Supporting Making at Home

Knowing that families sheltering in place would have a difficult time getting the supplies they needed to do the variety of maker activities that were originally planned for spring and summer at the library, staff came up with creative solutions for families to engage in more making at home. Considering that families may not have reliable internet or computer access, staff designed and built activity kits, offering challenges that would utilize the most basic of household materials or items found in nature. Since many libraries in California serve as locations for free summer lunch distribution, these activity kits, along with books, were offered for curbside pickup alongside meals that went to many homes of enthusiastic children.

The San Luis Obispo Library (Atascadero Library's system) teamed up with a local artist to design "Art2Go" kits, distributed curbside to hundreds of local tweens and teens.

Ponderosa Library helped create STEM kits in English and Spanish to distribute curbside with lunch at the library. The instructions and video examples were also posted on the library website and promoted via Instagram and Facebook.

The important thing to note from all of these examples is that many of these refinements, although originally thought to be temporary, can result in lasting change. After the immediacy of the moment subsides, it's essential to take time to reflect and evaluate lessons learned from these experiences. Many of these quick changes can result in new or strengthened partnerships, unique modes of delivery for programming, or even the ability to reach new audiences. There may even be aspects of those changes that become incorporated in the next iteration of your logic model and embedded as permanent components of the next phase of your programming.