



Fostering Character in Children's Museums

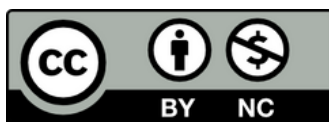
Evaluation Toolkit

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WELCOME

We all want to make a positive impact on this world and we want to help our children grow up into the best versions of themselves. But attaining this goal can be challenging. Children's museums offer playful and carefully designed learning environments where people of all ages can practice real-world skills in safe environments. Recognizing the substantial potential for children's museums to foster large-scale character development for the next generation, the Lilly Endowment, Inc. has invested heavily in the children's museum field.

This toolkit--developed by Children's Museum of Pittsburgh with funding from the Lilly Endowment, Inc.--provides resources that will help us measure and describe the impact of this investment. Designed by professional evaluators with the specific children's museum audience in mind, these tools provide ways of doing evaluation that fit seamlessly with a museum experience. We hope they support you on your journey not only to support character development but to be able to show just how much of a difference you are making.



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INTRODUCTION

How we got here

This toolkit shares resources and information about evaluating exhibits, programs, and other initiatives to support character development in children's museums. Our work with character development began through a significant investment by the Lilly Endowment, brokered by the Association of Children's Museums. The investment started in 2023 with a series of planning grants that allowed a group of children's museums to explore the topic of character development—a process of supporting people to cultivate skills and values that help them be positive members of their families and communities. Then, the Lilly Endowment amplified that planning work by funding a nearly \$38.5M portfolio of larger implementation projects in winter 2024–2025.

Children's Museum of Pittsburgh has a long history of using research and evaluation to deepen our understanding of the learning and growth that happens in children's museums. Hosting a team of internal researchers and evaluators and collaborating with a number of external research institutions, we hold expertise in learning science, public health, out-of-school learning, equity and accessibility in education, social-emotional learning, early childhood education, and more. We bring these strengths to the topic of character development while also drawing on expertise from outside our team: we have worked with character experts as advisors, immersed ourselves in prior research literature, consulted with other museums, and engaged over 1,000 visitors and community members to learn about our neighbors' views of character. As part of our implementation grant, we developed new resources for prototyping and evaluating the outcomes of the exhibits and programs designed to foster character development..

This toolkit shares about our process and provides usable tools that others can adapt and apply in their own environments. We hope these tools can help to nurture our field's ability to support children and families to follow their dreams and grow into the best versions of themselves. Furthermore, these tools can boost the field's capacity to tell our story about the impact of the work we do and the millions of lives that children's museums enrich every year.



What's the toolkit for?

The tools in this toolkit will help gather and use data in a systematic way to answer questions like:

Insight to guide a museum's approach to character development:

- What aspects of character development matter most to our audience/staff?
- How does our audience talk about character development?
- How are we already supporting character in our museum?

Informing continuous improvement:

- What aspects of our program/exhibit are effectively supporting our goals?
- How could we design and/or improve our program/exhibit to better support our goals?

Assessment of an exhibit/program against character-relevant goals:

- What do visitors learn about character through this program/exhibit?
- What character skills do visitors display in our program/exhibit?
- How does our program/exhibit change visitors' perspectives on character?
- What behavior change does our program/exhibit inspire?



Who should use this toolkit?

We hope this toolkit will be useful for a wide range of people within and beyond the children's museum field. The materials are adaptable and can be sampled and remixed in many ways. Some groups that might find this work particularly valuable could be:

- Museum staff: Many museum practitioners take on the responsibility of evaluating their work even if they may not have an extensive formal background in evaluation. The materials in this toolkit could promote efficiency by providing ready-to-go (and/or easy-to-adapt) resources that were designed specifically for children's museums and have already been tested and refined. We also provide guidance about how to analyze and use the data once it's collected.
- External evaluators: Even if you have a strong background in evaluation, these tools may be useful starting points when evaluating character development in children's museums. By saving time on instrument creation, you can work more closely with your client in other areas while providing them with data they can easily compare to other museums doing similar work.
- Museum Associations: For groups like the Association of Children's Museums, the materials in this toolkit may be useful in building the field's capacity for character development and evaluation. Efforts to aggregate data across sites that use these measures could support valuable storytelling about the collective impact of this work.
- Funders: Similarly, funders who are interested in evidence about the return on their investment may be interested in this toolkit as a resource for making that impact visible. Future efforts to do more comprehensive research or evaluation about this topic could also draw on these materials.
- Character researchers: This toolkit is designed for evaluation purposes, but it could inspire further research—particularly about early childhood character development. The majority of existing research about character development focuses on older youth than most children's museums serve, and we found that existing measures were not appropriate for our younger audiences. Researchers who want to learn more about early childhood character development could use or adapt tools in this toolkit as a starting point.

This list is not exhaustive and we hope to hear from people who use our toolkit about how you are using and adapting it for your own context and needs.

What's in the toolkit?

This toolkit provides a range of materials, including:

- Context: Introductory material about evaluating character development in children's museums.
- Raw materials: These resources—including user-tested definitions of character terms and observable indicators of character traits—can be used in many ways and across multiple tools.
- Evaluation tools: A suite of resources for evaluating programs and exhibits, including:
 - Observation protocols
 - A character-focused survey
 - Interview scripts for adults and children
 - Fun activities that generate data while feeling like a natural part of a museum visit (a bingo game, a scavenger hunt, a puppet interaction, etc.)
- Evaluation support: We provide guidance about everything from deciding which tools to use to determining how much data to collect to using the tools for data collection to analyzing data and sharing it with others to improve your project and communicate about its impact.
- Reflection tool: An evaluator reflection tool is designed to promote ongoing learning and can be used throughout your evaluation process.

You do NOT need to read every page in this toolkit. Pick and choose what's relevant!



How we developed this toolkit

We created this toolkit over the course of many months, using the following approaches:

- Literature review: We drew on existing research and practical documentation about character development.
- Practitioner wisdom: We regularly gathered input from museum practitioners—the people who make and run exhibits and programs about character development.
- Community input: We engaged in listening activities and pilot tested tools with visitors and community members (over 1,250 people were involved in this process).
- Authentic use: We've used the tools in authentic contexts while developing character development programs and exhibits in a children's museum.
- Repeated testing: Multiple data collectors tested these tools and used them in multiple museum contexts, making sure they would work for the widest possible range of people and museum projects.
- Team self-reflection: Our process involved frequent discussions about how to position our work and avoid falling into common critiques about how character development efforts can be overly prescriptive and culturally insensitive.



A note about rigor

The data collection tools in this toolkit look different from what some people expect from evaluation methods—and that’s intentional. Traditional evaluation tools often rely on validated scales and measures that look like standardized tests. While there are times when these approaches make sense, our approach differs for several reasons:

- We want evaluation to be a seamless part of the museum experience. Children’s museums are designed to be joyful, engaging, and open-ended. Our tools embrace that ethos so evaluation feels natural and unobtrusive, not clinical or extractive.
- We elevate young children’s ways of communicating. Validated scales and structured assessments often don’t capture how young children think, feel, and express themselves. Our tools use observation, art and making, play, and comfortable conversations to gather insights in developmentally-appropriate ways.
- We prioritize pluralism and cultural responsiveness. As we’ll share more in the upcoming pages, we don’t believe there’s one “right” way to display character. Rather than using tools that measure against a single metric, our approach aims to invite visitors’ own understandings of character and welcome a wide range of perspectives.
- Our ultimate goal is learning and utility. These tools are meant to support reflection, storytelling, continuous improvement, and measures of the impact of museum experiences. The emphasis on ongoing learning means they often have a different and more qualitative vibe than some traditional research materials. That doesn’t make them less rigorous; it makes them more useful in the day-to-day practice of museums.



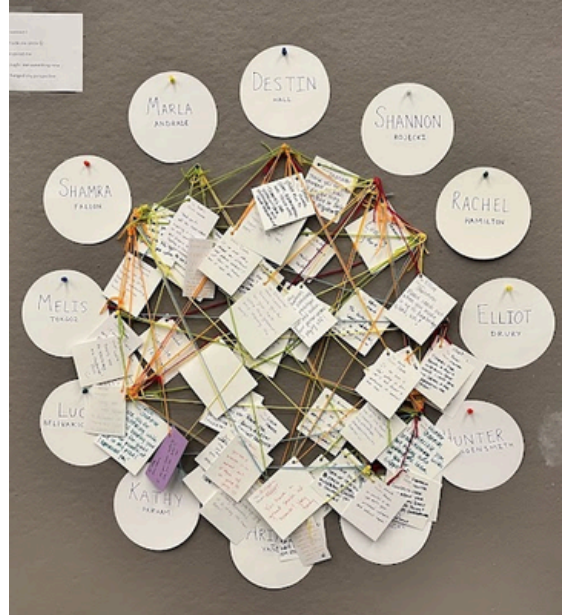
Our approach to character development

Identities, beliefs, and experiences shape virtually every aspect of our lives, including our work in museums. While that can lead to unintentional bias and limitations, bringing our whole selves to the work of character development and its evaluation can also help make the work better and honor the experiences that travel with us. During our planning grant from the Lilly Endowment, Children's Museum of Pittsburgh developed a position paper about how our Museum would approach character development. This process involved literature review and reflection among Museum staff about how our mission and values aligned with character work. Because our values have influenced the way we developed this toolkit, we share some highlights here.

Defining character

We believe that a person's character is what centers them in their world, influencing the ways they approach situations and make decisions; their interactions with people, animals, and the environment; and their inner states and intentions. While the notion of character is universal, it has no single, agreed-upon definition. Character is context-dependent, and our understandings of character evolve throughout our lifespans. Educational experiences that focus on character provide developmental opportunities for people to learn about different values and character traits; practice behaving in ways that enact those traits; and engage in critical thinking about what elements of character are most important to them and how this varies based on where they are, what is happening, and who they are with. For the purposes of our work, we co-created the following definition of character:

We define character as a set of attributes that make you who you are and motivate the ways you act towards yourself and others.



Visitor goals

As part of our position paper, we decided on three goals for the experiences we develop. We hope that visitors will: 1) explore examples of character, 2) practice character skills, and 3) reflect on how they wish to enact character in their lives. Many of the tools in this document enable us to measure these three things.

Perspectives embedded in this toolkit

Below, we offer six statements about the beliefs and values embedded throughout this toolkit, both for the purposes of self-reflection and to be transparent for readers about the points of view and perspectives that informed development of this document:

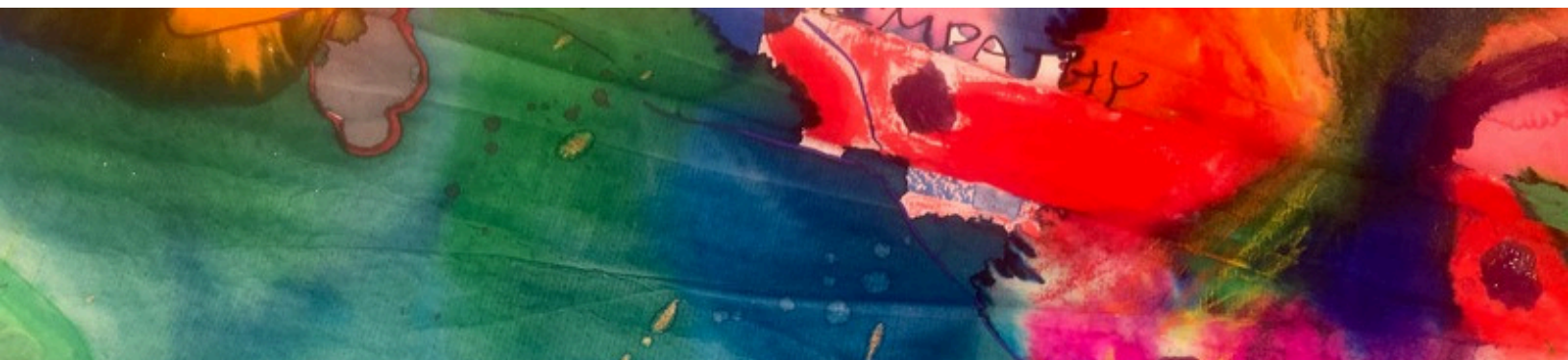
- There is no one “right” way to be, one “correct” definition of character, nor one definitive list of important character traits. Many character education programs – including those that have been very popular and influential – have been criticized for pushing narratives from dominant communities about what good character is and looks like, so doing the work of critical reflection on how (and by whom) character concepts are being defined is critical to addressing past harms and moving forward in more reflective and culturally-affirming ways..
- Language, culture, personal experience, and many other factors shape conceptions of character and character traits. This plays out in how someone might internalize their own beliefs about character and how they might outwardly express character traits in social contexts.
- Character is not static; it requires ongoing work to develop. Character can change over the lifespan, but also moment to moment. Acting in an unkind way in one instance should not mean that someone is labeled as “an unkind person.” Museums can create opportunities for experiences and learning, but also for dialogue around character. This includes dialogue with others, as well as internal dialogue and self-reflection.



- Aspects of character are measurable, but no measurement shows the whole picture. Many aspects of character are not observable to others; when we do observe, we are always gathering a snapshot of character rather than a comprehensive understanding.
- Evaluation work is integrally tied to the museum's broader work and should embody approaches that are synergistic with what is happening in other areas of our practice. In our evaluation work at CMP, this included being playful, centering the perspectives of our visitors (including young children), and thinking deeply about equity and justice.
- Evaluation should be informed by research approaches and guided by research ethics but should also work well in practical contexts. One should not need training in research or evaluation, or a large team of evaluators, to engage meaningfully in this work.

You will see some of these beliefs reflected in the ways in which we include visitor perspectives or "member-checking," including asking visitors to frame what character traits mean to them or which traits feel important to them, in some of our tools. You will also see opportunities for self-reflection on many of the ideas included in our belief statements in our [Evaluator Reflection Routine](#) and throughout our data analysis guidelines. We have challenged ourselves to make as much of this work as possible share-able and editable by others who may want to use it.

In spite of these ways of embedding these beliefs into our evaluation work, we also acknowledge that the work is ongoing and not without limitations and blind spots. Even when we value something deeply, we can't or don't always rise to meet our aspirations in every moment. As we continue striving to embody our beliefs in the work of character development and evaluation, we commit to ongoing learning and reflection, and look forward to learning from others engaged in this work as well. We look forward to your input, which will help us revise and improve these resources and our future work. You can reach us at evaluation@pittsburghkids.org.



GETTING ORGANIZED

What is evaluation?

The word “evaluation” has many meanings, but we consider it to be a systematic process of gathering and using data to make sense of how a specific program, exhibit, or experience works; it’s about the design of experiences, not judging people. As you’ll see, data is more than numbers and statistics – it can be vibrant and creative! We often think of different purposes for evaluation, including:

- Front-end evaluation: This data collection often happens before we develop something and helps us learn about the feasibility and attractiveness of a potential idea. For instance, we did a front-end study about what character traits mattered most to our visitors before we started developing any exhibits or programs.
- Formative evaluation: These studies are designed to gather data that inform specific design decisions. They typically involve people interacting with a prototype. At this stage, we are often gathering data about foundational things like accessibility; safety and durability of materials; how engaging the idea is; and how intuitive the interaction is alongside any project-specific questions about character development or other content.
- Summative evaluation: The summative stage generally happens once a project is at least close to complete. It involves describing impact and assessing how well a program, exhibit, or other project met its goals. This is often the first thing people think of when they hear the word “evaluation.”

Our evaluation approach draws on social science, learning science, and other research-based methods. However, we think of evaluation as distinct from research in that research aims to generate generalizable findings that apply across many different contexts (i.e., all museums) as compared to evaluation findings about a specific program/exhibit context (i.e., a character exhibit at Children’s Museum of Pittsburgh).



Who can do evaluation?

Anyone can do evaluation! The field of evaluation is an established professional discipline and the expertise of a professional evaluator can be incredibly valuable. Yet, many museums don't have the resources to support full time evaluators on staff, nor to hire external evaluators for every project. That doesn't mean you can't do evaluation! Using data to inform decision-making throughout a project will ultimately help you be more efficient and end up with a better product. The tools in this toolkit are designed so people familiar with museums can use them whether or not they've had evaluation training. The following sections will help you think about how to develop a plan that will set you up for success. Here are some things to keep in mind to do a good evaluation.

- Be human: Research and evaluation can have a reputation of being detached and sterile, but it's impossible for people to be fully objective. Instead, we urge you to lean into your humanness; character development is inherently about people, after all! Rather than trying to stay distanced from the work, be yourself and take time to reflect about how that might be impacting the evaluation (spoiler alert: everyone impacts the data, even if they're trying to be objective, but being aware of these impacts is an effective way to minimize them). You can use the Evaluator Reflection tool later in this document for this purpose.
- Be systematic: Evaluations should be fair and consistent. This typically means using data collection and analysis processes in the same way for every person or datapoint. So if you're collecting data, you don't only approach the people you feel most comfortable talking to because they look like you. And if you're reporting, you share quotes that best represent the data, not just the ones you like best. One thing that helps with being systematic is making a clear plan and calendar before you start and making sure you follow your plan unless you have clear reasons to change it. Starting early helps you avoid last-minute stress.
- Be transparent: Sometimes there's a tension between being systematic and being human. If a visitor asks you for a band-aid during an observation, of course you should respond—but your attention may be disrupted. In such cases, you may need to discard the observation or acknowledge its limitations. It's also important to be transparent about any adaptations you make to your protocols, such as translating materials or reading a survey aloud. Things won't always go as planned, and that's okay. What matters is treating the data responsibly and reporting what happened clearly and honestly.

Finding your why

To figure out which tools to use when, it's vital to have a firm sense of the purpose of your evaluation. There are lots of reasons why you might do an evaluation and sometimes people have specific goals in mind. First off, think about who will see or use your data. It's useful to discuss your plans with those people before you select your tools and collect your data. You might think about talking to funders, organizational leaders, program/exhibit developers, educators or facilitators, and/or the people who maintain exhibits. Be proactive about this rather; don't wait until your reports are due!

We often like to ask people to start by reflecting on what they hope the data will say. For instance, someone might say, "We want to show that the exhibit makes people into better people." Then, as an evaluator, you may need to prompt further questions into what evidence would support that claim. We might suggest that we could measure how many visitors to the exhibit set goals about behaviors they'll do once they leave the exhibit. In formative evaluations, we often encourage people to think about upcoming decisions they can make, so we can gather data that directly informs those choices.

Then we make a list of all the things we want to learn. Some people like to frame these as neutral inquiry questions like, "To what extent do visitors set character goals in the exhibit?" These inquiry questions are usually broader than the questions we'd ask visitors; they're more like goals for the evaluation that are stated as a question. We recommend having around 3-5 inquiry questions per data collection effort. Getting stakeholders to agree on these inquiry questions or goals before you do data collection will help set appropriate expectations for your work.

For a list of inquiry questions that this toolkit is particularly well set up to address, see the "What's the Toolkit For?" section in the introduction.



Selecting or adapting evaluation tools

Once you know what you're trying to learn through your data collection, you can make a plan for how to gather data that will meet your goals. In some cases, the resources in this toolkit may be ready for you to take and use as-is. In other cases, the resources we provide might be a good starting point, but you may need to adjust them to suit your needs. If the tools we offer aren't right for you, you may be able to find existing options elsewhere. Although we discovered that most existing data collection tools were for older audiences and/or did not feel appropriate in our museum setting, you may be able to find something that works for you. Existing research articles are often a good place to find tools. Alternatively, you can make your own data collection tools. Things to keep in mind when selecting or creating tools are:

- Data content: Make sure the tool will gather data that directly addresses your goals or inquiry questions. If it doesn't, you can cut that part out or choose another tool.
- Age and cultural appropriateness: You want the language of the tools to be comfortable and familiar to the people you're working with. Also, the process of using the tool should be an enjoyable or at least neutral experience for participants.
- Data collector comfort: In addition to being appropriate for the participants, the people collecting data need to feel confident that they can use the tool to gather data. This can be cultural comfort or, overly complex observation tools can be too hard for people to use reliably if they don't have the time to go through extensive training.



Summary of tools in our toolkit

Here's a quick overview of the tools we provide. We've sorted them based on the evaluation stage we think they're most useful for, but you may find that you want to use or adapt a tool from one section for a different purpose, and that's ok.

Raw materials:

- Kid-friendly definitions: A list of ways we define character words with children, based on iterative testing with visitors at Children's Museum of Pittsburgh.
- Observable indicators: A set of behaviors that are associated with common character traits that can be observed in a children's museum.

Front-end data collection:

- Multilingual stickers: A quick tool translated into 6 languages that allows you to collect cross-cultural data even if your team doesn't speak 6 languages.
- Bookmarks & cards: An arts-based way to learn how visitors think of their own and others' character strengths.
- Collaborative mural: A drop-in, focus group-style conversation activity that gathers adults and/or kids around a shared art piece while discussing character topics.
- Character bingo: A fun, kid-friendly activity visitors can use to find examples of how your existing programs/exhibits already foster character traits.

Formative data collection:













- Formative observation: This observation tool for prototyping includes character-related data as well as other museum essentials (engagement, accessibility, etc)..
- Formative interview: We offer a basic, customizable interview protocol designed to gather data that will help you improve your prototype.

Summative data collection:

- Visitor survey: A brief survey created specifically for children's museums that measures a range of character outcomes.
- Interview protocols: We offer one tool for interviewing adults, one for talking with kids, and guidance about using puppets to boost child interviewees' comfort.
- Observation tools: One tool looks for character indicators at the group/exhibit level; a second follows a single group's experience and ends with a brief conversation.
- Scavenger hunt: This activity-based tool sends visitors out to find their own examples of character in an exhibit or program.

We also provide an Evaluator Reflection tool that data collectors can use to document what's working, what's memorable, and what they can improve.

The following summary table organizes the key data collection tools in our toolkit by evaluation stage and time/effort required. Use the columns to identify which phase of evaluation you're focusing on—whether it's exploring visitor perspectives (Front-End), improving early prototypes (Formative), or measuring final outcomes (Summative). The rows indicate the typical time and effort needed to implement each tool, ranging from quick, low-effort options to more involved activities requiring more preparation or facilitation. Choosing the right tool depends on your team's capacity and your evaluation goals.

	<u>Front-end tools:</u> What are my audience's views on character?	<u>Formative tools:</u> How can I improve my prototypes?	<u>Summative tools:</u> What are the outcomes of this experience?
Low time/effort 	 Multilingual stickers		 Visitor survey
	 Character bingo	 Interview	 Scavenger hunt
	 Bookmarks & cards	 Observation	 Visitor interviews
	 Collaborative mural		 Look, listen, & record
High time/effort			 Observe & engage

How much is enough?

As you create your data collection plan, you'll have to think about how much data to gather. Whereas formal research projects often draw on statistical procedures to calculate the number of people needed to generate their desired precision of findings, in an evaluation study there are often more practical considerations in place. Here are some things to keep in mind:

- Project stage: Different evaluation types often necessitate different amounts of data. If you're in the formative stages of a project and you identify something that needs to change with a prototype or your data collection plan, you might stop data collection short as soon as you identify it (for instance, if you found that something about your prototype was unsafe, stop collecting data before anyone gets hurt! Once it's fixed, you can gather more data.). On the other hand, summative evaluations tend to involve larger sample sizes to get a more complete picture of your outcomes.
- Visitor experience: Yes, we want our evaluations to be robust but we also have to remember that many museum visitors have paid to be there and they don't all want to spend their time doing an evaluation study. Gathering more data can sometimes harm the visitor experience, ultimately undermining your mission.
- Timeline: Let's face it: sometimes you need data yesterday and you just don't have the time to collect a huge dataset. In these contexts, a smaller study and delivers results sooner is better than a bigger study you can't get done in time for key decision-making.



- Types of data: In general, the richer the data you have, the less of it you need. For instance, if you're doing an observation followed by an interview, you'll know more about a groups' experience than if you only gathered a quick survey from them. Because of that, you'd likely want to collect more surveys than you'd need if your study used the paired observation-interview approach.
- Triangulation: Relatedly, we typically recommend that for every inquiry question or goal you have, you would collect at least two types of data. This helps address your question from multiple points of view and gives a richer overall picture. It's often helpful to pair a quantitative datapoint with a qualitative one.
- Stakeholder expectations: When you share data, you want people to trust and use it. Before you gather data, run your plans by your stakeholders to make sure they agree that your plan makes sense in your context with your selected audience.
- Comparisons: If you're trying to make a comparison between two exhibits or two groups of people or anything like that, a rule of thumb is that you would want at least 30 people in each comparison group.

There are no hard rules about how much data is "enough" that apply to all settings. It always depends on the project, but at Children's Museum of Pittsburgh we often try for:

- Front-end studies: 30 visitor groups of people (each group typically has 2+ people)
- Formative studies: Multiple rounds of prototype testing with 10 groups in each round
- Summative studies: Qualitative data from at least 30 groups; quantitative data from at least 100

Consent and ethics

In formal research, studies typically work with an Institutional Review Board (IRB) to have their plans reviewed against ethical standards. In most cases, evaluation of character development programs in museums would be considered exempt from IRB review because it would fall outside the formal definition of research (the [What is evaluation](#) section above talks more about this). However, it is still important for evaluators to follow ethical procedures. The previous section talked about being systematic and transparent with data collection and analysis. Consent is another important topic for evaluation ethics. Here are some things we think about at CMP:

- [Informed consent](#): It's important for people to understand our study so they can make an informed decision about their involvement. We tell them the purpose of our project, what type of data collection we're doing, how long it takes, and any particular risks or benefits that may be involved.
- [Voluntary participation](#): We always give people the option about whether or not they want to take part in an evaluation. Even if we're simply observing people, we put up a sign before they enter that alerts them that we're doing data collection and lets them know how they can opt-out if they choose.
- [Age](#): We love elevating kids' agency, but when it comes to consent, only a parent or legal guardian can give consent for children under age 18. We also ask children if they would like to participate--this is called "assent," and is not sufficient to continue unless it is also paired with consent. For most of our work, verbal assent and consent is all we need, but some museums or organizations may require written consent and assent forms.
- [Recording](#): One instance when written consent and assent is likely required is if you will be gathering photographic, audio, or video data. Typically we find it is easier to create an evaluation plan without these identifiable data forms, but they can be valuable in certain cases--so make sure if you're doing that, you plan ahead with written forms.
- [Anonymity](#): We almost always keep our data anonymous, which helps protect the identities of people who participate. If you do need to gather identifiable information, follow careful procedures to keep that data confidential, likely using ID numbers or pseudonyms and having a separate key stored in a safe and secure location.

Recruitment

One of the great things about doing evaluation in a museum is that we have a ready audience of potential participants: our visitors! In many ways, existing visitors can be ideal participants because they typically have kids in the age groups we're designing for, they're already there, and they're usually interested in museums and making them better. On the other hand, museums' existing audiences don't always match the breadth of our intended audiences. Museum attendees tend to be wealthier; are more likely to be white and able-bodied; and adults tend to have more advanced degrees than the general population. Depending on your goals, it can often be valuable to work with partners who serve audiences you want to make sure to include and actively invite them into the process. Here are some considerations:

- Use a sampling rule: When you're doing data collection with current visitors in a museum, come up with a rule about who you will include in your data collection. If it's quiet, maybe you can include everyone. But if it's crowded, you might say you'll approach every third group that exits the exhibit, or something like that. Keeping to your rule helps make sure you're getting a representative sample.
- Gather demographics wisely: Collecting demographic data (age, gender, race, etc.) can help you keep track of whose perspectives you're including or unintentionally excluding from your work. However, people tend not to like to provide this data. Only ask for this data if you plan to use it.
- Work with partners: At CMP, when we have goals about reaching certain audiences, we work with community partners to involve them in the development and evaluation processes. It often works out well for us to provide partners with free field trips to the museum, during which we do some evaluation activities.
- Thank people: When we invite people to the Museum specifically to participate in data collection, we like to make it worth their time! We typically provide free admission to the Museum, free parking if they drive, and when possible, we like to offer a gift card. For visitors who are already at the Museum, we often offer a small thank you item like a sticker or fidget.
- Get away from the museum: Sometimes the best way to get fresh perspectives (and hopefully broaden interest in your museum beyond your existing visitors) is to do data collection somewhere else. We love prototyping at farmer's markets and community festivals.

Analyzing data

Once you've collected your data, you'll need to make sense of it through data analysis. While there are entire professional and academic fields dedicated to data analysis, most of the time in museums this process can be relatively straightforward. We encourage you to look up additional resources if you aren't familiar with analysis, but each tool in our toolkit includes some suggestions about how to analyze the data you would generate with it, and here's an overview of what it might look like to work with different types of data.

- Quantitative data: If you're working with numerical data, you'll typically want to enter the data into a spreadsheet for analysis. Basic, descriptive statistics are often all you need: you can report on the lowest value (minimum), highest value (maximum), and the average or median (people are more familiar with averages, but if your data set are skewed or have outliers, the median can be a more valuable sense of the middle of the data). We encourage you to work with someone who has a statistics background if you want to do more sophisticated analyses and inferential statistics.
- Qualitative data: The most common way we analyze qualitative data is through thematic coding. In this process, we read all the responses to a single question and identify themes that come up more than once. Once we have a list of themes, we quantify how many people shared each theme. We typically make a table that shares the themes, a count or percentage to show how common they are, and at least one example quotation that illustrates each theme. You can use a similar process with observation notes, identifying common trends, quantifying them, and providing examples of each. There are many other types of qualitative analysis but we like this process because it is systematic and simple.



Putting it together: Your evaluation plan

The previous pages have outlined many factors to consider when planning an evaluation study. We recommend creating a written plan that includes the following pieces—and then getting approval of that plan from your stakeholders (funders, supervisors, designers, educators, etc.) before you start gathering data:

- A list of your goals and what you're trying to learn
- What tools you'll use to collect data (surveys, observations, etc.)
- How much of each type of data you will collect
- How you will recruit participants and gain consent
- How you will analyze and share your data
- A timeline of your evaluation activities



RAW MATERIALS

About the raw materials

As we worked on developing evaluation tools, there were key pieces of information that we found ourselves needing over and over again:

1. Short, approachable definitions of character and character traits
2. Observable indicators of what traits might look like in action

By spending time in many different spaces in our museum, and by talking to visitors and practitioners to see how they reacted to drafts in progress, we were able to develop language that helped to meet these needs. They take the following format:

You will see these definitions and indicators, what we refer to as “raw materials,” embedded throughout the evaluation tools in this toolkit. For example, when engaging in interviews with visitors about how they see various character traits embedded in our exhibitions, we used some of the character trait language to help explain the traits to visitors that weren’t familiar with them. And when observing for character traits in our exhibitions, we incorporated trait indicators into our observation tools.

While neither the character trait language nor the indicators are stand-alone tools, we provide them here in the hopes that they will be helpful to other museums that are developing their own tools from scratch or “hacking” some of the evaluation tools in this toolkit to fit their own needs.



How we developed the raw materials

We began the process of developing language for our trait definitions and indicators by reading (both academic and practitioner-focused articles), reflecting on previous work in the Fostering Character planning grant process, and drawing on our own experience as educators and museum professionals. We also looked at how others have described character traits to kids, where possible in academic articles but also through free public resources like Character Lab and the PBS Kids Talk About series. In some cases, we brainstormed with a “digital partner” through conversations with generative AI in which we asked questions like “How can I explain ‘creativity’ to a 3-year-old?” or “What are some of the main observational indicators of compassion?” Where we couldn’t find definitions that seemed like a good fit for how we’re approaching character education at CMP, we went to into our exhibitions and tried to capture and record evidence of traits when we saw them in play.

Finally, we engaged visitors in some of these explorations: for example, through a quick game in our exhibitions in which young visitors (and, at times, the grownups with whom they were visiting) were asked to choose a folded-over card from a basket and open it up to find a character word and its related draft definition. As we discussed the draft definition with our young visitors, we looked for evidence of understanding, such as the child’s ability to engage in conversation about the trait, to offer an alternative definition from their own experience, or to provide an example of the trait from their own life or from what they had done in the Museum that day. We also looked for any confused or quizzical looks on young visitors’ faces, and noted when grown-up caregivers stepped in to suggest alternative language.

After these on-the-floor experiments, we revised our draft definitions and indicators, and asked gallery educators to give additional input before creating the “final versions” (for now!) that you can find in this section.



Introduction to the character trait language

Overview

While character development and character education have been studied and written about extensively (think for example of the Jubilee Centre, Character.org, and many others), less has been published around character education in children's museums or with young audiences. For this reason, we made our best effort at developing "visitor approved" language around the idea of personal character and several character traits. We aimed to keep these trait descriptions as short, straightforward, and approachable as possible.

Goals

1. Provide suggested language that can be used in evaluation, programming, exhibit design, etc. that relates to our overall character development work
2. Create a starting point for more in-depth conversations with visitors, staff, etc. about how personal character and character traits might be interpreted in diverse ways

How might I use these "raw materials"?

A few ways you might use this language include:

- Incorporating them into evaluation and assessment tools (for example, you'll see some of our suggested character language incorporated into the Observe & Engage tools, interview protocols, and surveys)
- Including them in language used in exhibitions or programming
- Introducing draft language as a starting point for staff, visitor, and community engagement conversations around personally- and culturally-specific interpretations of character traits

Developing Your Own

While we've already found many ways to use this language, we acknowledge that it is (and will continue to be) a work in progress. For example, we recognize that there are many culturally-differentiated understandings of character traits, many ways that different individuals would interpret these traits differently, and many different languages into which these traits could be interpreted. For those engaging in developing their own trait-related language, we encourage you to see our work at CMP as a starting inspiration to develop language that will make most sense for you and your unique staff, visitor, and community populations. For thoughts on how we went about developing language, see the prior page.

Character trait language

Character

*“Your character is what makes you, you.
It guides what you say and what you do.”*

Character development

*“Character development is the process of
growing into the best version of yourself.”*

Curiosity

*“Being curious means wondering about something,
asking questions, or trying to learn more.”*

Kindness

*“Being kind means doing or saying something to show you care
about yourself or someone else.”*

Bravery

*“Being brave means overcoming something you’re afraid of or
trying something out even if it makes you feel nervous or scared.”*

Perseverance

“Having perseverance means that even when something is hard or frustrating, you keep trying to do your best.”

Creativity

“Being creative means using your imagination or doing something in a new way.”

Compassion

“Having compassion means that when someone is hurt or sad, you want to help them feel better.”

Collaboration

“Being collaborative means being a good teammate or partner when you’re working with someone else.”

Insight from a museum educator:

When using this language with young children, you might try giving examples or using facial expressions related to the trait, if possible. For example, when describing the actions related to Curiosity, you might offer children a quizzical look or say “Hmmm.....” and ask them a question to help connect to the feeling of being curious.

Introduction to the observable indicators of character traits

Overview

Looking for evidence of predefined behaviors is an approach to observation that has been used in countless educational settings. Figuring out what behaviors you might hope to see or hear in a given context – what we can call indicators of those behaviors – often leads to new learning and to understanding a context more deeply. In developing our own list of indicators related to different character traits, we were able to probe our own understandings of what these traits mean and how they might look different for different visitors. Creating these draft indicators is also a starting point for us in engaging with visitors and community members about how their interpretations of what a character trait means might be different from ours.

Goals

1. Provide a list of observable actions (those that can be seen and/or heard) that can be incorporated into evaluation tools
2. Create a starting point for more in-depth conversations with visitors, staff, community members, etc. about how personal character and character traits might be interpreted in diverse ways

How might I use these observable indicators?

A few ways we can envision using these indicators include:

- Incorporating them into evaluation and assessment tools (for example, we have used these indicators in the Look, Listen, Record documentation tool, the Observe & Engage observation tool, and interview and survey questions about specific traits.)
- Introducing draft language as a starting point for staff, visitor, and community engagement conversations around personally- and culturally-specific interpretations of character traits (see more about these in our Community Conversations guidelines)

Developing Your Own

For those who are interested in developing their own character trait indicators, you might find some helpful inspiration in the overview of Our Process at the beginning of this section. For those with access to academic articles or budget to purchase, a great starting list of indicators for many character traits can be found in the following article:

Bulach, C. R. (2002). Implementing a Character Education Curriculum and Assessing Its Impact on Student Behavior. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 76(2), 79–83.

Observable indicators of character traits

Interacting with Peers & Caregivers		Bravery	Collaboration	Creativity	Curiosity	Kindness	Perseverance
1	Sharing space and opportunity (taking turns with objects, materials, or experiences; listening to others)		X			X	
2	Being friendly to self/others in words, actions, or expressions					X	
3	Working together		X				
4	Helping/mentoring/teaching another, or learning from another		X			X	
5	Asking questions or wondering				X		
6	Negotiating or resolving conflict		X				
7	Standing up for oneself or others	X					
8	Offering encouragement, compliments, or comfort to self or others					X	

Observable indicators of character traits, continued

Interacting with Objects & Physical Spaces		Bravery	Collaboration	Creativity	Curiosity	Kindness	Perseverance
9	Looking or pointing quizzically				X		
10	Changing perspectives; looking at something from another angle				X		
11	Looking at how things work, move, or sound				X		

Working in Uncertainty or Discomfort		Bravery	Collaboration	Creativity	Curiosity	Kindness	Perseverance
12	Overcoming shyness, sadness, or discomfort	X					X
13	Asking for help, or for a turn	X					
14	Using positive or helpful self-talk						X
15	Continuing when something is hard or there are setbacks	X					X

Observable indicators of character traits, continued

Engaging with Activities, Challenges, & Projects		Bravery	Collaboration	Creativity	Curiosity	Kindness	Perseverance
16	Using one's imagination to discuss, create, or envision something			X			
17	Trying something new	X		X			
18	Creating a challenge for oneself				X		
19	Trying out different approaches to a problem			X			X
20	Working on a goal to complete it or make progress						X
21	Becoming fully engrossed; being in "flow"						X
22	Revisiting to try again, look for new opportunities, or expand on an idea			X	X		X
23	Investigating why a solution didn't work				X		X

FRONT-END DATA COLLECTION TOOLS

Multilingual stickers: Broadening our cultural perspectives

Overview

As we've discussed previously, character is culturally dependent, meaning different people have different ideas about what "good" character looks like or what matters most to them. In some cases, different languages even have un-translatable character words; English simply does not have a concept for these words! It was important to us during our planning grant to engage with neighbors who have different perspectives on character, even if we did not share the same language. We worked with a local organization that serves refugee and immigrant families who speak many different languages, and we translated a range of character words into different languages. Then, this simple activity, facilitated by a multilingual sign, asked people to take a sticker with the character trait that mattered most to them.

Suggested time:

- This only takes a few seconds for each participant.

Focus of analysis:

- This activity is currently designed for people who read Arabic, Dari, English, Russian, Spanish (US), and Swahili.

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Goal:

1. Develop a way of gathering character data from people with whom our data collectors did not share a language.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- What character words are most important to our multilingual neighbors?

Quick tips:

- We did this activity as part of a community event at the Museum, but it would work well outside the Museum, too, at farmers' markets, festivals, playgrounds, or other locations.
- In addition to having the stickers out and available for people to take on a table, we put the stickers on building materials with the idea that people could use the pieces that mattered most to them to build a structure that represented their character. We didn't have the full instructions translated so this message didn't quite get across, but you could play around with this idea in your museum!

Before the data collection:

- Decide on an audience for this activity. You may want to work with local partners.
- Learn as much as you can about the audience before you do this activity! If there are other languages that are important to this audience, you could have the materials translated into those languages.
- If possible, find (and pay!) someone who can translate during the data collection.
- Gather your materials, including:
 - Printed stickers (the page below is formatted for Avery 5294 stickers)
 - The multilingual sign, in a sign stand if possible
 - A table and chair(s)
 - A tally sheet and pen/pencil or another way for you to take notes
- Count how many of each type of sticker you have

Gathering data:

1. Set up the stickers and sign on a table.
2. Be friendly and encouraging, even if you may not share a language with people. You can guide them to the sign and stickers.
3. As people take stickers, tally which ones they choose. Yes, you counted before you started but this is good back-up!
4. Keep the table tidy and restock stickers as needed.
5. When you're done, count how many stickers you have left of each type and record that on your tally sheet.



Take a sticker to remember what matters to you.

خذ ملصقًا لتتذكر دومًا أهدافك.

Tome una pegatina para recordar lo que le importa.

یک برچسب بردارید تا به یاد داشته باشید که چه چیزی برای شما مهم است.

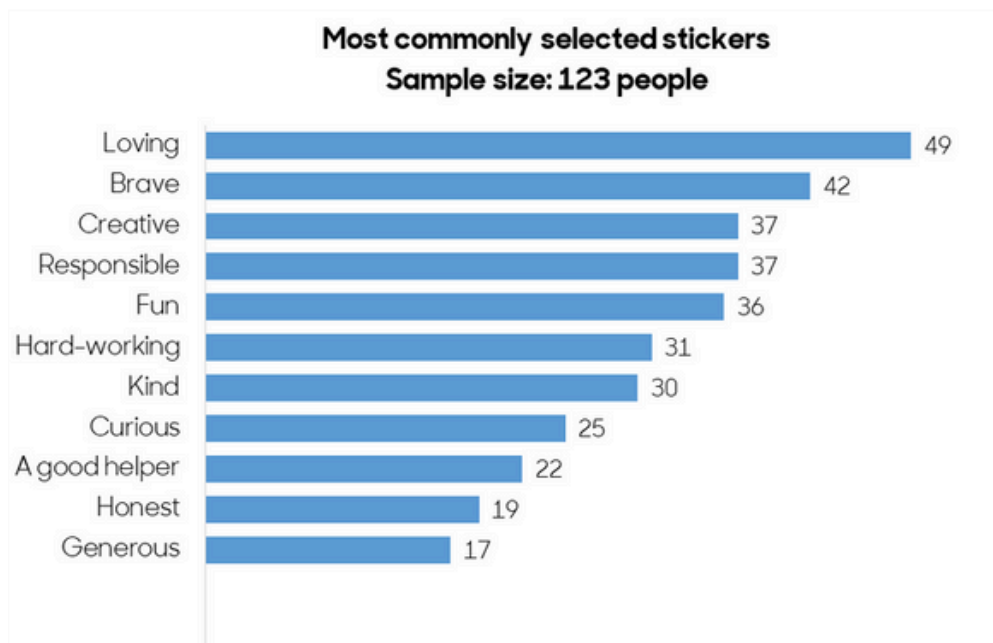
Возьмите стикер, чтобы вспомнить, что для вас важно.

Chukua kibandiko ili kukumbuka kile ambacho ni muhimu kwako.



Analyzing and sharing data from the sticker activity:

The analysis for this activity is very simple! Count up your tallies of how many of each sticker people chose and also figure out the difference between the number of each kind of sticker you started with and ended with. Most likely, these two numbers will be slightly off, and that's ok. Reflect on which data source you think is more accurate and share that one, while noting to your audience that there was a slight discrepancy between the two counts. You should also count up the total number of people who took stickers so you can share the sample size. We recommend making a graph like this:



Bookmarks & cards: Learning about visitors' strengths

Overview

Early on in our planning grant, we wanted to learn more about the words our visitors used to talk about character. We also wanted to know what they considered to be their strengths and the strengths of their family members. So, we designed these simple activities to find out. The activities are very similar to things we normally do in our Museum but they generate artifacts that we can use as data. Our bookmark activity was created as part of our annual Rev. Dr. Martin Luther King, Jr. Day celebration, so it features one of Dr. King's quotes and prompts people to think about their own character strengths. We've now adapted it to include a range of additional quotations, as well. The card activity prompts visitors to think about a friend or family member's strengths and to make a card to give to them that recognizes those strengths.

Suggested time:

- Plan for visitors to spend about 5–20 minutes at the activity.

Audience:

- Both grown-ups and kids can do either version of the activity.

Goal:

1. Offer a quick activity that feels like a natural part of the Museum experience but also gathers data.
2. Prompt visitors to recognize strengths and take home a reminder of them.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- What do visitors see as their strengths? Their friends'/family members' strengths?
- What words do visitors use to describe character traits?

Quick tips:

- Visitors move fast and we want them to take home their cards/bookmarks, so be ready to take pictures of what they make before they leave and/or have conversations with them and take notes while they're making their pieces so you don't lose the data if they leave in a flash!
- We've tried this activity with bookmarks and cards but there are lots of crafts, games, or other ways you could get people talking about character strengths. Be creative!

Before the data collection:

- Decide what activity format you want to use (bookmark, card, other).
- Gather your materials, including:
 - Cardstock or bookmarks (printed, cut out, hole-punched) and tassels
 - Pens, pencils, markers, crayons, stickers, etc. for decorating
 - (Optional): You could print out small stickers with character words on them
 - Paper and pen/pencil or device for you to take notes
 - Camera to document what people make
 - Table and chairs

Gathering data:

1. Put the materials on the table and invite people to join you. You can introduce the activity with a simple script such as:
 - a. *Hi! I'm [Name] and I work here at the Museum. Today we're making [cards that recognize people's strengths/bookmarks about what makes us special]. Would you like to make one?*
 - i. *[Cards]: Great! You can use these materials to make the card. Just decide who you'd like to make a card for and then decorate the card in ways that celebrate all the things you love about them!*
 - ii. *[Bookmarks]: Awesome! These bookmarks have different quotes. Pick the one you like best. On the back of the bookmark is space for you to write or draw about your character strengths, or all the things that make you great.*
2. As people are making, ensure they have the materials they need and ask them about what they're doing, taking notes along the way. Here are some questions to ask:

For cards:

- Who are you making your card for?
- Why are they special to you?
- What are they really good at?
- How are you showing those things on your card?
- How will they feel when you give them your card?

For bookmarks:

- Which bookmark did you choose? Why?
- What are your character strengths?
- Why did you choose [word(s)]?
- Do other people know that you're [word(s)]? Why?
- Which strength is most important to you? Why?



3. Take pictures of people's cards/bookmarks before they go!

Character bookmarks - printable



"I look to a day
when people
will not be
judged by the
color of their
skin, but by the
content of their
character."

-Dr. Martin
Luther King, Jr.



"Character cannot
be developed in
ease and quiet.

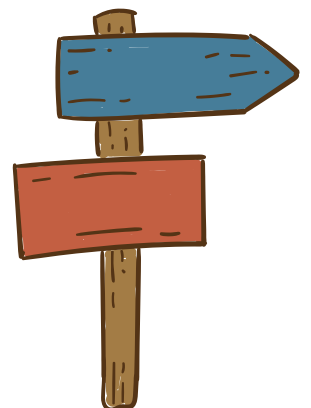
Only through
experience of trial
and suffering can
the soul be
strengthened,
ambition inspired,
and success
achieved."

-Helen Keller



"The content of
your character is
your choice. Day
by day, what you
choose, what you
think, and what
you do is who you
become."

-Heraclitus



Character bookmarks - printable



My character is:



My character is:



My character is:

Character bookmarks - printable

"Character is
power."

-Booker T.
Washington



"Ability may
get you to the
top, but it takes
character to
keep you
there."

-Stevie
Wonder



"Character
building
begins in our
infancy and
continues
until death."

-Eleanor
Roosevelt



Character bookmarks - printable



My character is:



My character is:

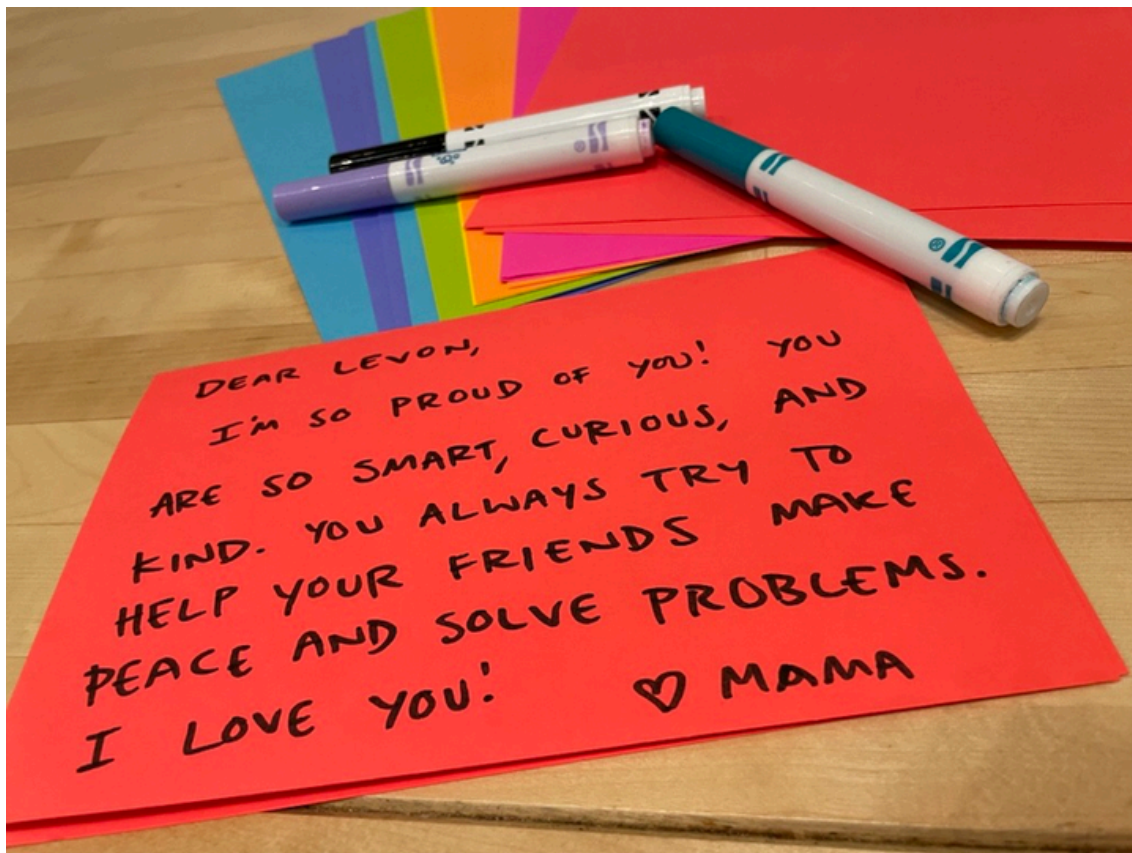


My character is:

Analyzing and sharing data from the bookmark or card activity:

Data analysis from this activity does not need to be overly complicated. Here are some ways you can make sense of what you learn:

- Word frequency: One of the things we found most important from these activities was simply making a list of the words people used to describe character strengths and counting how many visitors used each word.
- Bookmark preferences: You can count and make a graph of how many people pick each bookmark. You can describe the reasons for visitors' choices. If you have enough data, you can code these responses thematically to summarize trends.
- Context for words: Look through the notes you took about the conversations you had with visitors. Beyond which words they used, what did you learn? You can look for themes but your data may not have a lot of themes and that's alright. If you have examples and quotations, those are great to share because they give your stakeholders more of a sense of the "why" that's driving visitors' thinking. When we did the card activity, we had kids and grown-ups make their cards separately and then give them to each other, and multiple people were so happy that they cried! You can share these stories in your reporting.
- Visual data: The photos that you gather are also valuable data in themselves. Stakeholders love to see examples of what visitors make, so being able to show them the photos gives them more of a sense of what the activity was like.



Collaborative murals: An artistic take on focus groups

Overview:

This activity invites people to get into deep conversations about character while contributing to a collaborative art piece. It was designed for an event with local teachers, but it could be done with staff or even with visitors. While in many ways the data are similar to a focus group conversation, this activity works fine in a drop-in setting where people come and go, staying as long as they like.

Suggested time:

- Timing is flexible but we recommend at least one hour.

Focus of analysis:

- This activity can work with kids and adults. You might want to adjust some of the materials if working with very young audiences.

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Goal:

1. Gather deeper insight than you'd typically get from a visitor survey or interview.
2. Collect rich qualitative data in a drop-in setting.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- What are participants' values in regard to character development?
- What resources have formed participants' character?
- What would participants want from a museum in regard to character growth?

Quick tips:

- We describe ways of doing this activity as a large mural, but you could use very different materials. We do think having a shared piece of art to work on makes a big difference in getting people to settle down and talk for a longer period of time, but it could be clay, collage, quilting, or many different activities.
- We recommend taking pictures of the art as it's in process. Sometimes other people's additions obscure previous components so they could be lost if you don't document them when they're visible.

Before the data collection:

- Read through the script and prompts below and decide if you'd like to make any adjustments.
- Gather your materials, which might include:
 - A large piece of paper or other mural material (we love paper/poly drop cloths)
 - Permanent markers in assorted colors
 - Pastel sticks
 - Watercolor paint
 - Tempera paint
 - Paint brushes
 - Cups with water
 - A printed sign with the activity prompts (we provide a printable example)
 - Paper and pencils or device for you to take notes
 - A table and chairs
 - A camera to document the art-making process
- Expect that setup for this activity will take some time. Having all the materials ready ahead of time will help when you're ready for your data collection session.
- Similarly, once you're done it will take a little bit of time to clean up. We suggest scheduling at least half an hour for setup and half an hour for cleanup on either side of your data collection.



Gathering data for the collaborative mural activity:

- Once you have your materials set out and your sign visible, you can invite people to join you at the table. Here's a possible script:
 - *Hi! I'm [Name] and I work here at the Museum. We're making a collaborative mural today about our community's values and how the Museum can support them. Would you like to contribute to the mural and/or chat with me?*
 - *[If yes] Great! Would it be ok if I take pictures of your artwork and take anonymous notes about what we talk about? You can stop at any time or you can do the activity without me taking notes and pictures.*
 - *We have a bunch of materials to work with today and each one pairs with a question, but you can also use the materials however you like. This sign shows our suggested questions. Would you like to give it a try?*
- Some people will stick to the directions about which materials pair with which topic, but it's ok if people do their own thing. As they work, you can ask the questions from the sign out loud, as well as prompting and related questions. Don't worry about sticking to a script with these questions; let the conversations flow (like the paint!). Here are some questions you can ask:
 - What values are most important to you? How do those values affect your choices and actions?
 - What people or places helped you grow into the person you are today? What about them was special to you? How do your [families, schools, religious organizations, etc.] approach character development?
 - How do you support your friends and families?
 - What helps you be your best self? What do you need to thrive?
 - How could the Museum help you/your family grow into your best selves?
 - Can you tell me about what you're working on?
- During the session, take notes as thoroughly as you can and take pictures of the art as it evolves. Take photos of the finished product, too!



Collaborative mural

Help us make a mural about our community's values!

Use the materials to write or draw about these questions:

- Permanent markers: What do you value?
- Pastel sticks: What people or places helped you grow into the person you are today?
- Watercolor: How do you help other people grow?
- Tempera: What helps you be your best self?



Analyzing and sharing data from the collaborative mural activity:

Because the conversations from this activity will likely be free-flowing and different people will share about different topics, the data analysis is a little bit less structured than some of the other activities in this toolkit. Here are some ideas, but if these don't end up working for your dataset, that's ok; do what makes sense for your data! The goal is to come up with a way that accurately summarizes what you learned, providing stakeholders with take-aways that will help them make good decisions.

When we've done this activity, we start by sorting our notes by topic. The notes document will bounce back and forth between different topic as your conversation flows, but you want all the data that are talking about the same thing to be together in one place. So, you might keep your full notes document in one place but start a new document where you only copy and paste in the text that's about people's values. Another document would have only your notes about people and places that helped people grow, and so on.

Next you can summarize the notes for each topic. After reading through the documents that have only the text that's relevant to a particular topic, write a brief summary of that text (probably about a paragraph). You might talk about any common words or themes people brought up, as well as areas where people differed. You can also include quotations that illustrate the points you're trying to make.

In addition to the textual summary of your conversations, we recommend compiling photographs of the process. If you can find photos that pair well with the notes in your summaries, that's ideal. But even if the art doesn't cleanly map to the conversations, it's great to share visual data alongside the text.



Character bingo activity: Practicing & recognizing character

Overview:

How do visitors practice character traits in our exhibitions and programs? This was a question we hoped to learn more about through a bingo-style data collection activity. Providing opportunities for visitors to see examples of how they might enact that trait by what was printed on the cards also helped to develop “sensitivity” to opportunities to practice the trait, something that researchers at Harvard’s Project Zero have found to be one of the biggest barriers to developing a disposition or a “way of being” in the world. Offering a fill in the blank space on the card for visitors to propose their own version of what a character trait looks like also provided opportunities for visitors to develop their own narratives, language, and interpretation about character traits, and for CMP to learn about how visitors are thinking about character.

Suggested time:

- At least 30 minutes

Who is involved:

- Older children can use these bingo cards on their own; younger children (especially pre-readers) can use them in collaboration with a grownup.
- This activity works well both with individual visitors and large groups (e.g., field trips).
- If it’s busy, it may be helpful to have more than one staff member to help introduce this activity to visitors and talk with them as they return their cards.

Goals:

1. Invite visitors to practice specific character traits.
2. Provide a starting point for conversations with visitors about specific character traits.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- To what extent and in what ways do visitors practice [character trait(s)] in this program/exhibit?
- Which exhibit components or aspects of this program most often prompt visitors to practice [character trait(s)]?

Quick tips:

- To encourage people to share their data, we offered a sticker to anyone who handed in their bingo card and had a conversation with us about it.
- We also told visitors that they didn’t have to complete every box on the card if they didn’t have time or couldn’t find opportunities to do so.

Before starting the activity:

- Look at the bingo cards on the following pages, and decide if you want to use them as-is or design your own, possibly focusing on different character traits.
- Gather your materials:
 - Bingo cards
 - Pencils or other writing utensils
 - Clipboards (if possible)
 - Printed definitions of your focal character trait(s)
 - Printed Closing Script & Note-taking Sheets
 - "Prize" stickers (if possible)
 - Markers or stickers for marking off the actions that visitors have tried out

Facilitating the activity:

- Introduce the bingo activity using the Introductory Script on the following page.
- If you're using more than one card, ask the visitor group to choose one card and provide them with the card, a writing utensil, and if possible a clipboard and dot stickers.
- As visitors return their card, use the Closing Script to learn more about their experiences.



Introductory script (use when visitors pick up a bingo card):

Hi! I'm [your name] and I work here at the museum. Today, we're thinking about setting goals around character: in other words, thinking about how we want to be and act in the Museum today. We're thinking about three different "ways of being" in particular (point to a printed definition of each trait):

- Curiosity: wondering about something or someone; having questions
- Creativity: doing or thinking about something in a new way
- Perseverance: trying even when something is hard or frustrating to do

Would you like to try out working on one of these character traits today? If so, you can take a bingo card and some dot stickers and fill in as much of your card as you can! Each time you do one of the things on the card, you can put a dot sticker on that box.

At the end, bring your card back to me and choose a sticker to take home! It's ok if you don't get a chance to fill out your whole card.

Using the closing script and note-taking sheet:

On the upcoming pages, we share a printable bingo card and note-taking sheet for a conversation you can have with visitors when they return their bingo cards. At the top of the page is a place for you to write your name or initials, the date, and the group number, so you can keep track of how many people you've talked to. The sheet provides a brief script of questions. As you ask the questions, you can take notes about the visitors' responses in the table, indicating which bingo tasks the group completed, where in the exhibit they were when they completed them, and notes about what they share about each action. Some groups may not have the time or interest to give explanations of every task, and that's ok. Two bingo tasks that we found especially valuable to probe about were:

1. Having a conversation about the chosen character trait
2. Finding and drawing visitors' own examples of character

At the bottom of the page, there is a place to write kids' ages and a question where they can share any additional information they want to provide, beyond your specific questions.

Once you've asked the questions, we recommend giving visitors a small token of appreciation, such as a sticker, to take home with them.

Note: The tools on the next two pages focus on curiosity. There are additional versions for creativity and perseverance in the appendix.

Character Bingo: Curiosity

Find something
you wonder about

Ask a question
about something

Look closely at
something to
learn more
about it

Have a
conversation
about curiosity

Free space!



Make your best
guess about why
or how something
happens

Take something
apart (with an
adult's
permission!) to
learn something
new about it

Find another example
of curiosity and write
or draw it here:

Learn or try
something new

Data collector: _____ Date: _____ Group Number: _____

Character Bingo Closing Script & Note-taking Sheet: Curiosity

Ask these questions when visitors bring their bingo card back to you and record your notes below.

Thanks for coming back! Can you show me your bingo card?

- Which boxes did you check off?
- Where were you in the exhibit when you [action they checked off]?
- Can you tell me about that?

Bingo action	<input checked="" type="checkbox"/>	Location	Notes
Find something you wonder about	<input type="checkbox"/>		
Ask a question about something	<input type="checkbox"/>		
Look closely at something	<input type="checkbox"/>		
Have a conversation about curiosity	<input type="checkbox"/>		
Make your best guess	<input type="checkbox"/>		
Take something apart	<input type="checkbox"/>		
Find another example of curiosity	<input type="checkbox"/>		
Learn or try something new	<input type="checkbox"/>		

Thanks! And could you tell me the ages of the kids in your group? _____

Thanks so much! Is there anything else you'd like to share with me today?

Analyzing and using data from the character bingo activity:

Here are some ideas about how you might analyze the data collected from this activity, along with some sentence starters you can fill in when sharing results:

- Sample size: Sharing the total number of people who returned the bingo card after having done at least one action gives a sense of the scale of impact. You could also share the minimum, maximum, and average number of squares people completed on their bingo cards.
 - *A total of x visitors completed this activity, practicing one or more indicators of [trait(s)]. On average, visitors finished [number] squares on their bingo card, ranging from [minimum] to [maximum].*
- Trait interest: If you give visitors the option of selecting which trait they want to focus on for the activity, you could calculate the number and/or percentage of visitors who choose each one, giving an indication of visitors' goals and interests.
 - *Visitors had the option of selecting which trait they wished to focus on. We found that x% of visitors chose to work on [trait], x% focused on [trait], and x% on [trait].*
- Frequency of actions: For each trait, you could calculate the number and/or percentage of groups that completed each action. This gives a sense of what types of behavior your activities and your exhibit as a whole are encouraging.
 - *The most frequent indicators of [trait] were [indicator 1, (x% of visitors)], [indicator 2, (x% of visitors)], and [indicator 3, (x% of visitors)].*
- Description of actions: In addition to the quantitative data above, visitors' qualitative descriptions of their actions can offer rich contextual information about the depth of experiences you are fostering. If you have a large dataset, you might qualitatively code the data for themes. Otherwise, simple description is fine.
 - *When describing how they [indicator], visitors most often spoke about [theme(s)]. For instance, one person said, "[quote]." Several visitors also came up with their own indicators of [trait]. For example, [description, photo, etc.]*
- Location of actions: The data about which parts of the exhibit/program fostered certain behavior can help you assess against behavioral goals (if you have them) and help you map the ways people are practicing character in your space.
 - *Visitors often displayed [indicator] at [activity/part of program]. No visitors reported that they displayed any indicators at [part of program/exhibit].*

FORMATIVE DATA COLLECTION TOOLS

Formative observation: Many areas for improvement

Overview:

Observation of prototypes is the heart of many museums' approaches to formative evaluation. There's often nothing better than seeing what visitors do when interacting with prototypes; and many times, what they do is surprising! The prototypes don't need to look like finished products; in fact, people often give better feedback when they can tell things are in a rough form, perhaps because they don't want to offend someone who has clearly put a lot of time into making something. The observation form in this toolkit includes indicators of character—but it's largely about other things that need to be in place for a successful character development experience: people need to understand what to do, the activity needs to be accessible, the materials need to function appropriately, and it needs to be engaging!

Suggested time:

- Each observation takes as long as a visitor naturally engages with the prototype.

Focus of analysis:

- You will observe a single visitor group, which might include a few people or a larger group like a field trip or camp.

.

Goal:

1. Notice how people naturally engage with a prototype experience.
2. Identify areas for improvement in the prototype.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- How do visitors engage with the materials?
- How does the design of the materials support engagement? What barriers to engagement emerge?

Quick tips:

- It can be tempting to explain an exhibit to visitors, but it's great when you step back and see what people do without support. If they ask for help, you can say, "There's no right or wrong way to use it and we're trying to see what people do without staff explaining it, so why don't you try it out and if you feel stuck, let me know."
- Collect enough data to make sure you're including a range of people of different ages, cultures, abilities, etc.
- Investing in prototyping saves you time, effort, and money later on! You can fix issues before they become big problems.

Before the data collection:

- Talk to anyone who's involved in developing and ultimately using the exhibit and/or program you're prototyping. Find out what the upcoming decisions are for their process. Learn what they're worried about and what questions they have. The more your data can directly inform decisions, the better.
- Adjust the observation form based on what you heard from those conversations.
- Review the indicators from the Raw Materials section and decide what behavior you'll be looking for based on your character goals.
- Make sure you're familiar with the prototype so you know what you're observing.
- Gather your materials, including:
 - Copies of the observation form
 - A clipboard or something you can write on
 - A pen or pencil
 - A sign that lets visitors know you're doing observations. It might say something like: "This area is being observed until [time] to help us improve our museum. Please contact [person, contact info] with any questions."

Gathering data:

1. Depending on where your prototype is, you might observe people who naturally approach it or you might want to actively invite people to try it out.
2. When a group begins, fill in the top of the Note-taking Sheet with your name or initials, the date, group number, group information, and the time they arrive.
3. As they use the prototype, check off the boxes at the top if you notice any of these:
 - a. People being confused about what to do
 - b. The materials malfunctioning
 - c. Accessibility issues
 - d. Positive examples of character-related behavior
4. In the notes section, describe anything you observe related to the check boxes at the top as well as general notes about:
 - a. What the visitors do and say
 - b. Evidence that people are engaged and/or distracted
 - c. How the materials work
 - d. Accessibility – positive or negative (think about ease of use, reach, dexterity, vision, hearing, sensory experiences, cognitive load, social elements, etc.)
 - e. How visitor behavior relates to character
5. When the group leaves, note the time at the top of the page.

Data collector: _____ Date:_____ Time start: _____ Time end: _____ # Visitors in group: ____

Formative Evaluation: Observation Note-taking Sheet

<input checked="" type="checkbox"/>	Do you notice evidence of any of the following? If so, check the box and describe below.
<input type="checkbox"/>	Confusion about what to do
<input type="checkbox"/>	Materials malfunctioning, breaking, or not working as intended
<input type="checkbox"/>	Accessibility barriers
<input type="checkbox"/>	Visitors displaying character traits

Observational notes

What do you see/hear that made you select the indicators above? What are people doing? Do they seem (dis)engaged? How do the materials work? What supports/hinders accessibility? How are visitors displaying character traits?

Analyzing and sharing data from formative observations:

Once you have collected your data, you can enter it into a spreadsheet. Here we suggest some analyses you can do and some sentence starters for how you might share about your data:

- Observation duration: By calculating the difference between the observation start and end times, you can share visitors' dwell time, which can be a measure of engagement. You can share the minimum, maximum, and average dwell time.
 - *Across the [x] observed visitor groups, people used the activity for between [minimum] and [maximum] minutes, with an average of [average] minutes.*
- Frequency of focal observations, with descriptions: If you add up how many times you checked each of the boxes at the top, you can share the frequency of each one occurring. When reporting about the frequency, we recommend sharing examples from your notes about what these things looked and sounded like.
 - *In general, the activity was intuitive (or other interpretation) for visitors. Only [x] group showed confusion about what to do when they approached the activity, but once they [tried moving the pieces, etc.] they seemed to figure out what to do. The prototype materials tended to [work well], although the [component] broke after the third group and was removed for the later groups. This [did not seem to affect the later groups' experiences]. Two of the groups had young children (ages 1-2), and these children had trouble grasping the pieces. Overall, [x] of the observed groups showed evidence of [character trait]. This included [description of their character-aligned behaviors].*
- Emergent outcomes: Sometimes something will come up in prototyping that you did not expect and that did not align with one of the checkboxes. If you think it's important for future decision-making, go ahead and share it in your reporting! Because prototyping often involves small sample sizes in each round of data collection, you might not think it's important if something only comes up with one or two groups, but noting these things anyway can be valuable, as you can keep track of them in future iterations and sometimes there are easy fixes that are worth it even if they only benefit a minority of visitors.



Formative interviews: Visitors' suggestions for growth

Overview:

Getting visitors' opinions about your prototypes is highly valuable and it pairs really well with observation data. You don't have to take every suggestion a visitor makes, but you'll want to pay attention to trends. Self-report data can often be surprising after doing an observation, because visitors will share insights that you were not able to glean just by watching them. While there are many ways to get this feedback, this toolkit shares a brief interview protocol that you can use with visitors once they're done engaging with a prototype.

Suggested time:

- This short interview can be completed in less than 5 minutes.

Focus of analysis:

- You can interview an individual or a small visitor group.

Goal:

1. Gather input about prototypes directly from visitors.
2. Identify areas for improvement.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- How do visitors evaluate the prototype?
- What do visitors think would improve this prototype?

Quick tips:

- The questions on this interview can be asked in a variety of ways. You could have visitors respond to the questions with sticky dots and Post-its on poster paper; have them "vote" for their answers with pom-poms or other small items; put the questions on a survey; or other ways.
- While we're providing the interview protocol in this toolkit as a resource that hopefully can be broadly applicable, we typically ask questions that are much more specific to the particular interests of a prototype and the needs of the team developing it. Feel free to use different questions if you think other information will be more useful!
- For consent reasons we typically have a grown-up present for interviews with children, but we do encourage you to include children in the conversations when possible. Their perspectives are highly valuable--and often overlooked!

Before the data collection:

- As we wrote about the formative observations, it is vital to know what key stakeholders want to learn from the data collection and what decisions they'll make with the data, so you can get data that will directly inform those decisions.
- Review the questions on the interview in this toolkit and make any adjustments you want to make--or make something totally new!
- If you use the tool we provide, there's a placeholder to ask about how well the prototype met its goal. You'll want to decide what goal you'll ask about and develop consistent wording for how you want to talk about it.
- Gather your materials, including:
 - Copies of your Note-taking sheet
 - A clipboard or something you can write on
 - A pen or pencil
 - Stickers or another small token of appreciation to give to participants (optional)

Gathering data:

1. Develop and follow a systematic recruitment strategy. If you're using this interview in coordination with the observation tool, you might invite every group you observe to complete the interview.
2. Here's a sample recruitment script (it's also on the Note-taking sheet):

a. Hi! I'm [Name] and I work here at the Museum. This is a prototype [program/exhibit] and we're trying to learn what worked and what we could improve about it. Would you mind helping us out by answering a few questions about it? It's anonymous and you can skip questions you don't want to answer.
3. Once people agree, ask them the questions on the Note-taking sheet and take notes. Try to be as close to verbatim as possible, using visitors' own words rather than paraphrasing. Abbreviations help save time, and you can leave out connector words (the, a, an, etc.) and fill them in later.
4. When you're done, thank the visitors and give them a sticker or other small item of appreciation if you have them.
5. Finally, go back in and clean up your notes, adding anything you clearly remember but didn't have time to write down in the moment. Then store the Note-taking sheet in a safe place and get ready for the next group! If you observed and interviewed the same group, make sure they have the same group number on them and/or staple or paperclip them together.

Data collector: _____ Date: _____ Group #: ____ # Visitors in group: _____ Approx. kid age(s): ____

Character Development Formative Interview Note-taking Sheet

Hi, my name is [name] and I work here at the Museum. This is a prototype program/exhibit and we're looking for feedback about it. Could I ask you some questions about it? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. If you were describing this activity to a friend, what would you say the activity was about?

2. One of this activity's goals is [goal]. Would you say it did a good job, bad job, or ok job at that goal?

(Circle one):

Good job

Ok job

Bad job

Why do you think so?

3. Was this activity boring, fun, or in the middle?

(Circle one):

Boring

In the middle

Fun

Why do you think so?

4. Was it too easy, too hard, or about right?

(Circle one):

Too easy

About right

Too hard

Why do you think so?

5. How could we improve this activity?

Thanks for your help today!

Analyzing and sharing data from formative interviews:

It's often easiest to analyze your data by entering it into a spreadsheet, with one visitor group on each line and each question in a column. Once you've done that, you can do some of the analyses below and use the sentence starters and examples we provide to guide your reporting. If you changed the questions, you may need a different approach, but likely some of these strategies will still be helpful:

- Visitors' understanding of the activity: Question 1 asks how people would describe the activity to a friend. You can count up how many of the responses align with your goals for the activity versus how many seem misaligned.
 - *When we asked visitors how they would describe the activity to a friend, [x] of the [y] groups we interviewed mentioned [character trait]. For instance, one said, "[quote]." Other groups described the exhibit as being about [topics].*
- Goal alignment, engagement, and challenge: Questions 2-4 all follow a similar structure: they start with a multiple choice selection and then ask visitors to describe the reason for their choice. Count up the multiple choice responses and report those on their own. Then, qualitatively describe the rationales; because formative evaluation typically involves small sample sizes, it likely is not worthwhile to formally code the open-ended responses; instead, you might use wording such as:
 - *Visitors tended to think the activity was ["just right"] in terms of difficulty, with [7 of the 10] groups we interviewed selecting this answer option. [Two of the other three] thought it was [too easy] with the [last group feeling it was too hard]. The group that thought it was too hard reported that they [reason]. In describing why it was just right, one group shared [reason].*
- Room for improvement: We like to share every one of visitors' suggestions, even if they may not all be feasible. Again, formal coding is typically unnecessary for formative interviews, but we like to sort any similar responses together and share visitor quotations in groups with those similar comments next to each other, starting with the most common and ending with the least common.



SUMMATIVE DATA COLECTION TOOLS

Visitor surveys: Quick, primarily quantitative information

Overview:

Visitor surveys can provide quick, self-report data about a wide variety of aspects of the visitor experience. In the survey we designed for our Fostering Character work, we focused our questions on all three aspects of the CMP's Framework for Character Development: discovering or learning about character; practicing character skills (including recognizing and celebrating others' strengths); and reflecting on values and goals related to character. At Children's Museum of Pittsburgh, we used a version of this survey that asked people to link character skills to specific exhibit components, but for the sake of this toolkit we're sharing a more general version that could work anywhere.

Suggested time:

- Plan for visitors to spend about five minutes per survey.

Focus of analysis:

- The survey presented on the following pages is meant to be filled out by an adult or a child working with an adult.

Goal:

1. Provide an anonymous, simple way for many visitors to give feedback in a relatively short amount of time.
2. Better understand visitors' experiences in a character-related program/exhibit.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- What do visitors learn about character in this program/exhibit?
- What character skills do visitors practice in this program/exhibit?
- How does this program/exhibit prompt long-term behavior beyond the museum?

Quick tips:

- Visitors can fill out this survey by themselves or you can offer to read the questions out loud and fill it in for them. This can be a valuable accommodation for visitors who prefer not to read and write or people who simply have their hands full or need to keep their eyes on young children. When reporting, it's worth noting if you do read surveys aloud because it could bias people to give more positive responses so they don't disappoint you.
- We're all for saving money, but if possible, we recommend printing the surveys in color. It makes them look much more appealing and boosts accessibility.

Before the data collection:

- Before your first data collection session, read through the survey and see if you have any questions you want to add, change, or remove.
- Figure out the ideal number of surveys you would like to collect.
- We provide a printable version of the survey but you may want to set up a digital version that people can fill out on a tablet, laptop, or mobile phone. In this case, you might have the survey loaded on a device for people to use or you might offer a QR code for people to use their own device. We recommend asking people to do the survey right after they finish the program/exhibit so the experience is fresh in their minds.
- Translate the survey into popular visitor languages, if possible.
- Gather your materials, including:
 - Color copies of the survey (double-sided) or a way to access digital versions
 - Clipboards or something you can write on
 - A pen or pencil
 - Stickers or small token of thanks to give participants (optional)



Gathering data:

1. Develop and follow a systematic recruitment strategy. This might mean offering a survey to every person who exits the program/exhibit or approaching every third visitor to leave or something like that. If you wait for people to approach you or only ask people who "look friendly," you could end up with a biased sample.
2. There is consent language at the top of the survey but you might introduce yourself with a simple script such as:

a. Hi! I'm [Name] and I work here at the Museum. Would you mind helping us out by filling out this survey about [program/exhibit]?
3. Once people complete the survey, thank them! You can offer a sticker or similar item if you have them. Then put the survey in a safe place. We recommend numbering surveys as you collect them (putting a number in the top right corner or something like that) so you can keep track of how much data you've collected.

Museum Experience Character Survey

The program/exhibit you just experienced was designed to support kids and grown-ups to grow into the best versions of themselves. We call what makes up our best selves our "character." This optional, anonymous survey will help us learn what we're doing well and how we can improve. You can skip questions you don't want to answer. If you're a kid, please complete this with a grown-up.

1. Did the program/exhibit you just experienced...

	NO!	no	yes	YES!
...share positive <u>examples</u> of character?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...use appropriate <u>vocabulary</u> about character?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...align with your <u>values</u> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...introduce you to <u>new perspectives</u> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...prompt <u>learning</u> about character?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Did the program/exhibit support you or your group members to practice any of the following character skills? (circle all that apply)

bravery creativity joy patience recognizing others' strengths

collaboration curiosity kindness perseverance other: _____

3. If you circled anything in question 2, please share an example of how you or someone in your group practiced a character skill in the program/exhibit:

OVER →

4. Did the program/exhibit you just experienced...

	NO!	no	yes	YES!
...provide a <u>safe space</u> to practice character skills?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...support you to <u>recognize others' strengths</u> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...make it seem <u>fun to practice</u> character skills?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...help you <u>think about what you value</u> ?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...prompt you to <u>set goals</u> for after you leave the Museum?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...make you <u>want to practice</u> character skills beyond the Museum?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

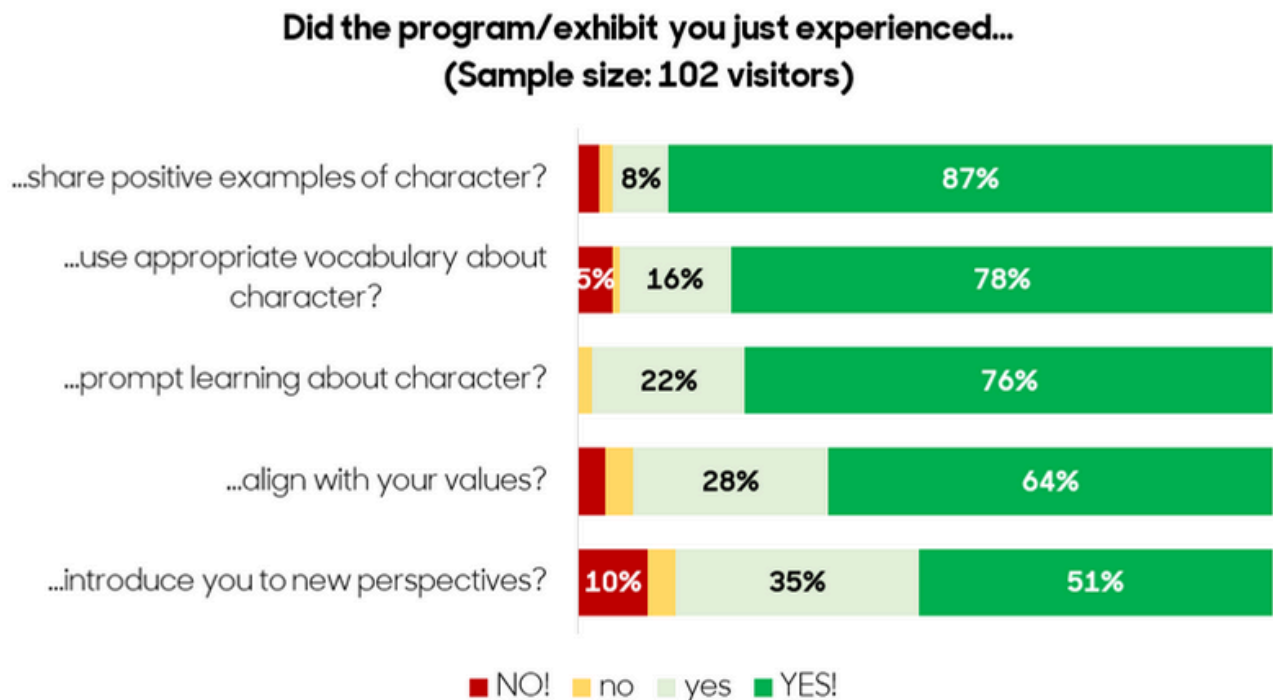
5. Did the program/exhibit inspire you to do anything different after you leave the Museum today? If so, please share more here:

Thanks for filling out this survey! If there's anything else you'd like to share with us today, please do so here:

Analyzing and sharing data from visitor surveys:

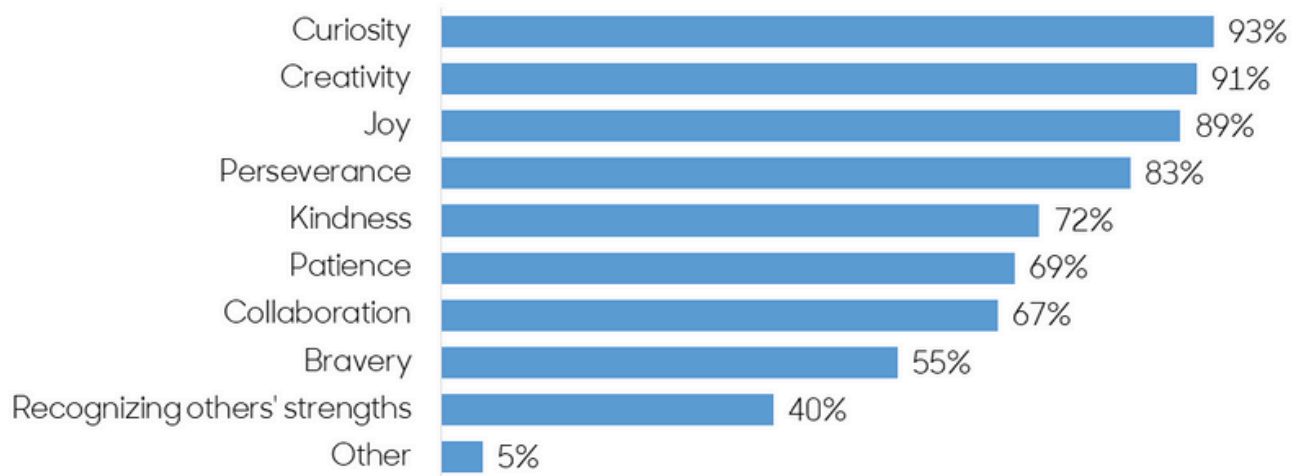
Survey data tends to be relatively quick to analyze. First, you'll want to enter your survey data into a spreadsheet. Then, here are some suggestions for how you can make sense of and report about data from the character surveys:

- Likert scale data (questions 1 and 4): We typically like to visualize Likert scale data in its four categories, making stacked bar graphs that display the full results. Then in writing, we might summarize by sharing the percentage of people who selected "yes" or "YES!" Here's some mock data:
 - *More than 85% of participants felt that the [program/exhibit] supported every one of our indicators of discovery and learning. The strongest support was for sharing positive examples of character: 87% selected "YES!" with an additional 8% saying "yes." For the overall statement about whether the exhibit prompted learning about character, 98% of people agreed that it did, with no visitors picking the "NO!" option and only 2% picking "no." People tended to feel strongly that the [exhibit/program] used appropriate vocabulary, with more than three-quarters selecting "YES!" About two-thirds of respondents felt strongly that the [exhibit/program] aligned with their values, but only 8% disagreed that the content was values-aligned. The least positive statement was about the exposure to new perspectives: 51% strongly agreed that the [exhibit/program] did this and an additional 35% agreed, with 12% indicating that they did not feel the [exhibit/program] had introduced them to new perspectives.*



- Yes/no data (question 2): You can make a simple bar chart to illustrate these data and then describe in words such as the following:
 - *More than half of the survey respondents indicated that at least one group member displayed each trait we asked about except recognizing others' strengths (40%). The most common three were curiosity (93%), creativity (91%), and joy (89%).*

**Did the program/exhibit support you or your group members to practice any of the following character skills?
(Sample size: 102 visitors)**



- Qualitative data (questions 3, 5, and 6): You can use thematic coding (see more detail in our section on Analyzing Data) to find trends in the responses to the questions about visitors' examples of practicing character traits (question 3) and what they expect to do differently after their visit (question 5). In these cases, you can report the themes, how common they are, and an example quotation for each theme. Question 6, which asks if there's anything else to add, is likely to not have many responses, so a simple description of these comments may be sufficient without needing to code them. To present these results, you might say:
 - When describing the ways their group members practiced character traits, [x]% wrote about [topic], [x]% about [topic], and [x]% more wrote about [topic]. For example, one person wrote, [quote] and another shared [quote]. [x]% of visitors shared something they'll do differently after leaving the Museum. Of those, [x]% of people talked about [trend], with one person sharing [quote]. An additional [x]% of people shared that they would [trend].

Visitor interviews: Elevating visitor perspectives

Overview:

Character development can be a very personal process, one that does not always result in observable actions. Gathering interviews with visitors can share visitors' internal experiences and, as Harvard Project Zero researchers describe, "make learning visible." Educational psychologists including Lev Vygotsky and many others have also written about how articulating one's thoughts in words is a learning process in itself, involving problem-solving and complex cognitive work. Interviews can be a great way to understand more about what visitors learn and experience in the museum context, as well as how they imagine connecting their museum visit to other areas of their lives. On the following pages, we provide two sets of suggested interview questions: one for young children and one for adults.

Suggested time:

- At least 5 minutes per interview (although some may be much longer)

Focus of analysis:

- The interview scripts presented on the following pages are meant to be conducted with individual visitors (either young children or older children/adults)

Goal:

1. Understand visitor experiences as they engage with a character-related exhibition

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- To what extent and in what ways do visitors display [trait] in [exhibit/program]?
- How do visitors think about [trait]? How, if at all, does their visit change their thinking?
- To what extent and in what ways does [program/exhibit] inspire future behavior?

Quick tips:

- Before you start collecting data, come up with a strategy for whom you will approach to interview. This should be systematic (not just whoever looks friendly), such as every fifth person to exit the exhibit area you're focused on.
- While you want to be systematic, also remember that visitor experience matters! Never pressure anyone into doing data collection if they don't want to participate.
- Bringing a small sticker or other token of appreciation can help make your data collection more enticing.
- We provide guidance below about using puppets in your interviews! This can be a fun way to make interviews seem more approachable to young visitors.

Before the data collection:

- Before your first interview, read through the interview questions and decide which traits you want to focus on, and whether you want to change any questions.
- You might try out a "practice" interview with a colleague before collecting data to analyze, especially if you decide to use a puppet!
- Consider the languages your audience speaks. If relevant and possible, make sure you or someone present for your data collection can translate visitor comments.
- Gather your materials, including:
 - Copies of the Note-taking Sheet
 - A clipboard or something you can write on
 - A pen or pencil
 - Stickers or another small token of appreciation to give participants (optional)
 - For interviews with children, we recommend a table and chair, printouts with trait definitions, trait cards (enough for visitors to take home – see printable option below), pictures of the exhibit (if applicable), and a puppet

Gathering data:

1. Always start by asking a potential interviewee if they agree to be interviewed (e.g., "I'm talking to some visitors about their experience in the museum today; would you be open to talking with me? It will take about five minutes."). Let them know that they don't have to answer any questions they don't want to answer. If you're interviewing children, you'll need their parent/guardian's consent as well as the child's agreement.
2. Fill out the header of the Note-taking Sheet with your name or initials, the date, the group number (the first group you talk to is #1, the second is #2, and so on), and group information.
3. As you ask questions, record notes using the Note-taking Sheet. You won't be able to write every word a visitor says, but try your best to write down exact words that visitors say rather than paraphrasing in your own words. You can leave out small connector words and focus on key nouns and verbs. You may also develop your own short-hand and abbreviations. For example, if a visitor said, "I would say this exhibit is really about making kids think about other people's feelings and how to be kind." You might write, "Making kids think re: ppl's feelings, how be kind." After the interview, you can go back and fill in the linking words.
4. As you listen to visitors' responses:
 - Ask clarifying questions ("Do you mean the exhibit with the water?") as needed.
 - Ask probing questions (e.g., "Can you tell me more about..." or "What makes you say that?") if interviewees' responses are brief.
 - Try to maintain the flow of the conversation without interrupting; you can always jot down points you would like to return to later.
 - Be comfortable with silence and allow time for thinking ("wait time").

Conducting interviews with puppets:

Both educator experience and research have shown that young children are often more apt to engage in conversations—and go deeper into conversations—with puppet conversation partners than they might with adult partners, especially when those adults are strangers to them. We found engaging in “puppet interviews” to be a great way to include youth voice in how we are thinking about character development and understanding children’s inner thoughts around issues of character.

Quick tips for conducting interviews with puppets:

- It can be helpful to have a second person note-taking while another conducts interviews, or (if you have permission) to record visitor conversations for later transcription and analysis. Having extra puppets sitting out for children who want to speak to you “through” a puppet is also a good idea.
- Hand puppets (as opposed to other sorts—e.g. paper bag puppets, marionettes) seemed to have been successful for our pilot interviews because a) they were big enough for multiple visitors to see and engage with at once, b) they did not require any specialized staff training to use, c) they left one of the staff member puppeteer’s hands open for note-taking, and d) the hand puppet could “wave” to young visitors as they passed by, which was the main reason that some children wanted to talk to the puppet.
- When we did puppet interviews, sometimes we talked with individual children, and other times our puppets spoke with multiple children at once. Sometimes, children ignored the puppet and talked right to the staff member holding the puppet. Some children talked directly to the puppet (which sometimes had a funny voice!) and ignored the puppeteer. Some children wanted to wear a puppet on their hand and have it talk to the puppet on the staff member’s hand.



The next page shares printable, take-home trait cards for kids, for use with or without a puppet!

Data collector: _____ Date: _____ Group #: _____ # Visitors in group: _____ Approx. kid age(s): _____

Note-taking Sheet: Interview with Young Children

Consent language, spoken to adult: Hi! We're talking with some visitors today to help us understand the visitor experience at the museum. Is it alright if (my puppet and) I talk to your child? It will just take a couple minutes, it's anonymous, and they can skip questions they don't want to answer.

Assent language, spoken to child: Hi! I'm [name/puppet name]. I'm trying to learn about some new words. Would you like to help me? [If yes]: Thanks! I'm trying to learn about [character word(s)]. Do you know what any of these words mean? (Share definitions as needed.)

1. Did you do anything in this exhibit that matches one of these words? (circle) YES NO

[If yes]: Nice! Which word(s)? _____

Can you tell me about what you did?

Can you show me where in the exhibit you did that?

2. Did you notice any other examples of these words in the exhibit? (circle) YES NO

[If yes]: Great! Which word(s)? _____

Can you tell me about what you noticed?

Can you show me where in the exhibit you noticed that?

3. Here are some cards that show the words that we talked about. Is there one that you'd like to try out after leaving the Museum today? You can take that card with you to remind you.

Selected word: _____

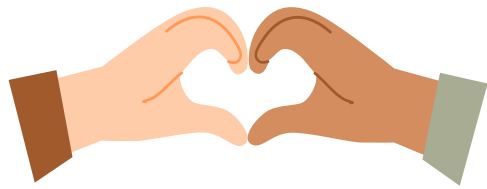
What do you think you'll do to practice being [word] after you leave the Museum?

Why did you pick that card?

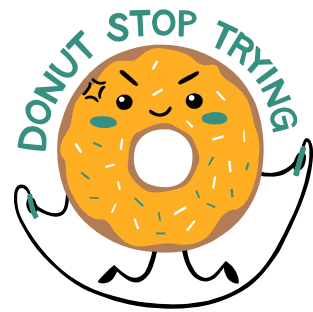
Thanks for talking to me today!



Curiosity



Perseverance



Collaboration



Data collector: _____ Date: _____ Group #: _____

Note-taking Sheet: Interview with Adults

Consent language: Hi! I'm [name] and I work here at the Museum. I'm talking with visitors to help the museum better understand the visitor experience. Do you have a few minutes to talk? It's totally anonymous, and you can skip any questions you don't want to answer or stop early if you want to.

1. Who are you visiting with today, and what are the ages of the kids in your group?

2. What would you tell someone this exhibit/program is about?

3. This exhibit/program is designed to focus on [character traits].
Did you notice any examples of [traits] in this exhibit? (circle) YES NO

[If yes]: Which trait (s)? _____

Can you tell me about what you noticed?

4. How, if at all, do you talk about [traits] with your group outside the Museum?

5. How, if at all, did this program/exhibit change how you think about [traits]?

6. Were there any parts of this program/exhibit that might help you or your group members to be [traits] after your Museum visit? If so, what were they?

7. Can you think of any other ways this exhibit connects to your life outside the Museum? If so, what are they?

8. Thanks so much for talking to me today! Is there anything else you'd like to share?

Analyzing and sharing data from the interview tools:

Interviews gather great qualitative data, and there are ways to quantify pieces of the interviews as well. Here are some ideas for how you can analyze these data, along with sentence starters about how you could talk about the data:

- Examples of traits: Both the child and adult interviews ask visitors to identify examples of character traits in the exhibit. Some basic counting can tell you what percentage of groups identifies one or more examples of character in the exhibit and which traits are most commonly identified. Then, within each trait you can summarize the examples visitors provide either through thematic coding (if you have enough data) or some simple description with quotations.
 - *In our interviews, [x]% of visitors recalled at least one example of a character trait enacted in the exhibit. Of these, [x]% remembered an example of [trait], [x]% recalled an instance of [trait], and [x]% spoke about an example of [trait]. When describing the behaviors they associated with [trait], visitors tended to talk about [theme, (x% of visitors)] or [theme, (x% of visitors)]. For example, one interviewee shared, [example/quote].*
- Exhibit/program messaging: The second question of the adult interview asks what visitors think the exhibit/program is about. You might go through and determine the proportion of people who say something that aligns with your stated goals.
 - *In describing what the exhibit/program was about, [x]% of visitors mentioned something related to character development. For instance, one person said, "[quote]." When they did not say something about character development, visitors tended to think the exhibit/program was about [theme(s)].*
- Connections beyond the Museum: There are several interview questions about visitors' behavior outside a museum, including how they might enact and think differently about character traits in the future as well as how they talk about character at home and what connections they draw between the exhibit/program and their daily life. For these, it could be valuable to quantify how many people plan to enact character traits and expect to think differently about character after having been to the museum. Then, thematic coding could help identify trends about how visitors talk about character, what types of follow-up behavior they expect to enact, and how they will think differently about character in the future.
 - *Interviewees felt that the [program/exhibit] related to their lives by [description]. They shared that outside the Museum, they talk about [trait] by [description of how they talk about the topic]. After visiting [program/exhibit], [x]% of visitors report that they will think differently about [trait]. For instance, one visitor noted [quote/description]. Additionally, [x]% have plans to engage in [trait] behavior after they leave. For instance, visitors expect to [description of future behaviors].*

Observe and engage: Noticing and discussing character in action

Overview:

Character looks different for each person: there are cultural differences around how a trait is perceived, how it might look or sound in action, and even whether or not it's considered desirable. For all of these reasons, the "Observe & Engage" tool has two parts. The first part (Observe) is an observation tool based on what we know about how a character trait might look or sound in a museum. The second part (Engage) is a process for follow-up conversations with observed visitors where you can discuss what you noticed during the observation to see if what you observed matches their own understanding and experience of a focal character trait. You'll find a version of the Observe & Engage tool about Bravery on the following pages. Versions relating to Collaboration, Creativity, Curiosity, Kindness, and Perseverance are in the appendix.

Suggested time:

- At least 10 minutes per observation

Focus of analysis:

- Choose a visitor group that includes at least one kid (if appropriate) and observe the behaviors for the whole group (including adults).

Goals:

1. Use data to understand how an activity supports a character trait.
2. Use data as an entry point into character-related conversations with visitors.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- What evidence of [trait] do visitors display in [exhibit/program]?
- What behaviors do visitors associate with [trait]?

Quick tips:

- It can be difficult to observe multiple traits at once; we recommend focusing on one!
- Not every action you might observe is "doing" or practicing a character trait; some visitor behaviors are just about tinkering, joy, exploration – and that's great! Every action doesn't need to fit into a category on an observation sheet.
- As you start your observation, decide which visitor group you will follow and stick with them for 5+ minutes. If group members split up, we always follow the kid!

Before the data collection:

- Before your first observation, read through the tool you're planning to use; you might want to try out a "practice" observation before formally collecting data.
- Gather your materials, including:
 - Copies of the Note-taking Sheet (double-sided) – the next two pages share the version for bravery. The appendix includes versions for collaboration, creativity, curiosity, kindness, and perseverance.
 - A clipboard or something you can write on
 - A pen or pencil
 - A printed definition of your chosen character trait, to show visitors during the interview (you can tape this to the back of your clipboard)
 - A sign that lets visitors know you're doing observations. It might say something like: "This area is being observed until [time] to help us improve our museum. Please contact [person, contact info] with any questions."
 - Stickers or another small token of appreciation to give participants (optional)

Gathering data:

Start with the front side of the Note-taking Sheet ("Observe").

1. Randomly select a "focus" group of people to observe that includes at least 1 kid.
2. Fill in the header on the survey with your name or initials, the date, how many people are in the group, and the time you start observing.
3. Check the checkbox if you notice a visitor (kid or adult) engaging in one of the numbered actions in the "indicators" list.
4. Then use the Observational Notes section to describe what you saw/heard that made you check that box. You can also use this box to keep track of things you might want to discuss with the group in your follow-up conversation.
5. When the group finishes the activity, write down the time in the header. Then flip over the page to continue with the Engage section.

To use the Engage portion of the tool:

1. Approach the visitor group and ask for their consent to have a conversation.
2. Ask the questions on the Engage Note-taking Sheet and jot down notes, trying to record as many of the visitors' exact words as possible.
3. For question 4, you'll need to fill in material from your observation. You can flip over the page and look at your observation notes. Tell visitors what you observed and ask if they think those actions matched the trait you're observing

Observe Note-taking Sheet*: Bravery

Bravery includes acts big and small that learners might take to step out of their comfort zone in a museum. For example, working through discomfort, “putting yourself out there” intellectually or socially, or getting up and trying again after a setback. These acts are often seen at the individual level, but might include support from or interaction with others.

<input checked="" type="checkbox"/>	Indicators: I see/hear a learner...
<input type="checkbox"/>	1. Overcoming or working through discomfort (e.g. nervousness, fear, shyness)
<input type="checkbox"/>	2. Sharing, working, conversing, or playing with a new person
<input type="checkbox"/>	3. Asking a stranger for help, or for a turn
<input type="checkbox"/>	4. Standing up for themself or someone else
<input type="checkbox"/>	5. Offering a response, idea, or opinion in a public setting
<input type="checkbox"/>	6. Trying something new (e.g. a new medium, material, activity)
<input type="checkbox"/>	7. Doing something in a different way than other people
<input type="checkbox"/>	8. Trying again when something doesn’t go as planned (e.g. a setback, an injury)

Observational notes about bravery

What do you see/hear that made you select the indicators above? What aspects of bravery are not represented? What wonderings, puzzles, or ideas do you have?

*Format adapted from Wardrip and colleagues (2024).

Engage Note-taking Sheet: Bravery

Hi, my name is [name] and I work here at the Museum. Today I'm looking for examples of bravery in this exhibit. Could I ask you some questions about bravery? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. Bravery can mean different things to different people. What does "being brave" mean to you? (If the visitor is unfamiliar with the word "brave," you might suggest, "Being brave means overcoming something you're afraid of or trying something even if it makes you nervous.")

2. Did you do anything brave in the exhibit today? If so, could you tell me about that? Where were you in the exhibit when that happened?

3. Do you think anyone else in your group was brave today? If so, could you tell me about that? Where were they when that happened? What made you think they were being brave?

4. Bravery looks different for everyone. Some things I noticed that I thought might be examples of bravery were [add notes from observation]. Did you feel brave in those moments, or not really?

5. Thanks so much for talking to me today! Is there anything else you'd like to share?

Analyzing and sharing data from the Observe & Engage tool:

The Observe & Engage tool produces a range of data that you can use in many ways. Here are some examples of ways you might analyze and share about the data, including sentence starters you can fill in for your reporting:

- Observation duration: Calculating the amount of time visitors stay at an activity gives you a sense of the depth of their engagement. You can share the minimum, maximum, and average time visitors stay at your activity.
 - *Visitors stayed at this activity between [minimum] and [maximum] minutes, with an average of [average] minutes.*
- Observed trait-aligned behaviors: You can share what percentage of visitors demonstrated at least one of the observable traits during your observation, as well as the minimum, maximum, and average number of traits you observed. Additionally, you can report about which traits were most and least common. Your observation notes section provides additional, rich details about what the observable indicators looked like in the context of your exhibit. Stakeholders often love to hear examples and quotations directly from visitors alongside the frequency numbers.
 - *Groups displayed between [minimum] and [maximum] observable indicators of [trait], with an average of [average]. The most frequently observed indicators of [trait] were [indicator 1, (x% of visitors)], [indicator 2, (x% of visitors)], and [indicator 3, (x% of visitors)]. Examples of visitors displaying [indicator] include [example 1] and [example 2]. Across the full observation effort, the most common behavior we observed that was linked to [indicator/trait] was [behavior], which [number] visitors displayed.*
- Visitors' views of traits: Your "Engage" data contrasts with the observation by sharing visitors' own perspectives. The first question allows you to describe their definitions of your trait and questions 2 and 3 share their examples. You can qualitatively code these definitions, looking for common themes, words, and actions visitors include. You can also share how many visitors felt their group displayed their trait.
 - *In interviews with visitors, we learned that people tend to define [trait] as [theme (x% of visitors)] and [theme (x% of visitors)]. [x]% of visitors used the word [word] in their definitions. When sharing examples of [trait] that they'd enacted or noticed in the exhibit, the most common theme was that people described [theme, (x% of visitors)]. [x]% of visitors reported that at least one person in their group displayed [trait] at the exhibit.*

One of the most interesting--and potentially challenging--things about the Observe & Engage tool is that your observations may not match visitors' perceptions. This is ok! If, for instance, you observed that 72% of the groups displayed an observable indicator of a trait but only 65% of visitors reported displaying that trait, simply report both numbers transparently. Then use what you learn from visitors to consider revising the indicators!

Look, listen, record: Observing character in action

Overview:

We often intuitively develop ideas about what visitors do in our programs and exhibits based on what we see and hear when we're in the space. Systematically documenting observed behavior helps standardize how we are thinking about the presence or absence of certain character traits, offering a more objective sense of what's happening. While the Observe & Engage tool is designed for more in-depth observations of individual visitor groups and is coupled with interviews, this Look, Listen, Record tool is meant to support observers in looking at larger visitor groups within a single space.

Suggested time:

- At least 15 minutes per observation

Focus of analysis:

- Choose a single activity or a small area of an exhibit.

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Goal:

1. Generate quantitative and qualitative data about how an exhibit or experience supports one or more character traits.

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

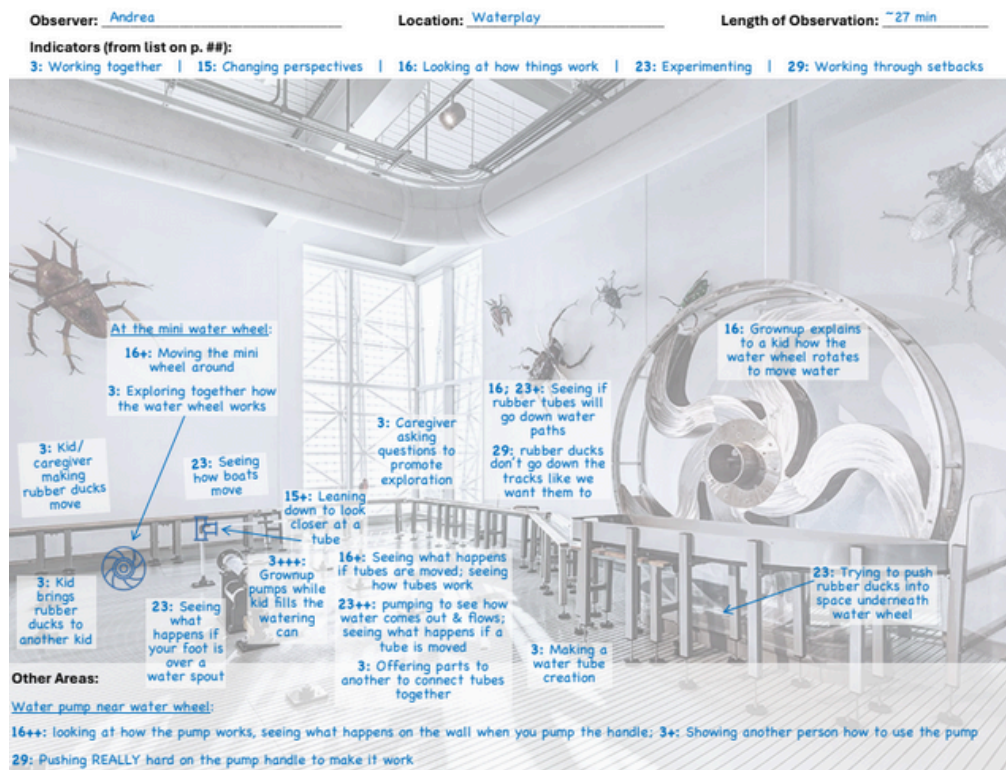
- What evidence of [trait] do visitors display at [specific activity]?
- What elements of [specific activity] are most commonly associated with [trait]?

Quick tips:

- Pick a location where you can sit or stand comfortably while observing.
- Do your best to position yourself so you can hear conversations at your activity.
- You may want to do these observations several times, including busier and quieter periods of the day or week, or varying observations between school/camp groups and individual visitor groups.
- Lots can happen in a busy museum space! If you can get consent, another option is to video record an area and analyze the video. This allows you to pause, slow down, and replay sections to clarify what people were saying or doing--in real time, we all miss things!

Before the observation:

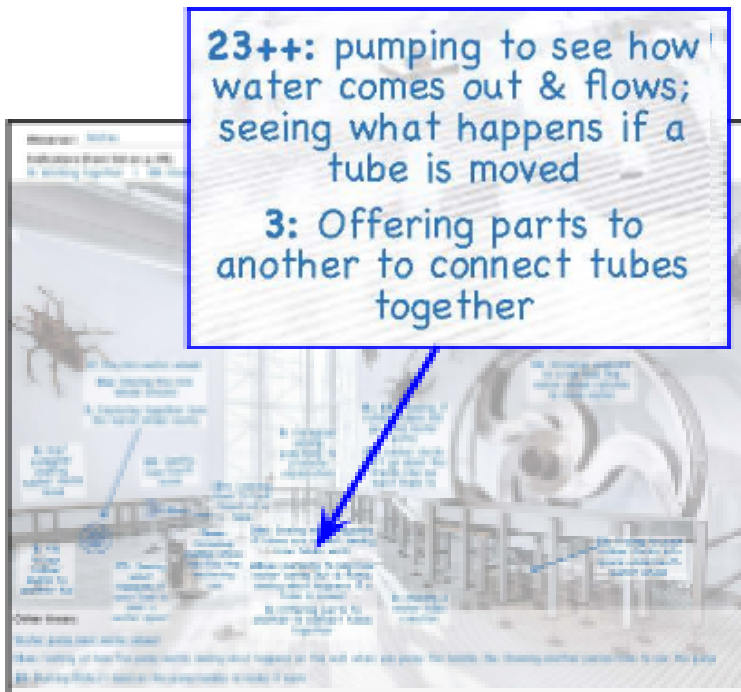
- For this tool you'll want to select a few specific, observable indicators of character that you'll focus on for your observation. You can draw from the Observable Indicators of Character Traits list in this toolkit, which we've tested in children's museum settings, or you can come up with your own. We recommend no more than 5 indicators at a time. Think about:
 - What are the main ways I expect visitors to interact/engage with this activity?
 - What am I hoping to learn about by observing? (You'll write this at the top of the Analysis Worksheet where it says "Guiding Inquiry Question.")
 - Are there any specific character traits I want to observe (our Observable Indicators list shows which indicators are aligned to different traits)?
- Add your chosen indicators to the top of the Note-taking Sheet.
- Choose the setting you want to observe and add a picture, floorplan, or drawing of it to the Note-taking Sheet. You could do this digitally or by hand (rough is ok!). If you're focusing on a program, you might want to add the agenda and take notes about different aspects of the agenda instead of physical spaces.
- Gather your materials: Copies of your Note-taking sheet, a clipboard or something to write on, pens/pencils, and a sign alerting visitors that you're doing observations: "This area is being observed until [time] to help us improve our museum. Please contact [person, contact info] with any questions."



An example of data gathered using a prototype of the Look, Listen, Record tool

Conducting the observation:

- After you arrive in your observation space, take a few moments to watch and listen before you start recording data.
- Review the list of indicators and their numbers so you can easily recall what you're looking and listening for. Try to get used to the types of interactions that are happening in the space and think about how they align to your chosen indicators.
- When you're ready to begin, fill out the header of the Note-taking Sheet with your name or initials, the date, your location, and the start time of your observation.
- Then, each time a visitor enacts an indicator, record (write down) the number of that indicator and what they did or said on the part of your picture where you witnessed it.
- If the same visitor enacts the same indicator in the same way more than once, you don't need to mark it down again.
- If a different visitor enacts an indicator that you've already recorded (same location and same action as another visitor), add a "+" sign next to the note you already made on your template.
- If you see/hear any indicators that aren't shown on your photograph, you can note them in the "Other Areas" box on your template., along with any reflections you want to remember later.
- When you're done, write the end time at the top of your Note-taking Sheet.



This data collector noticed 3 visitors displaying indicator 23 when they used a pump and observed how water flowed when the tube moved.

They observed one visitor show indicator 3 when they shared tube pieces with another visitor.

Data collector: _____ Date:_____ Location: _____ Time start: _____ Time end: _____

Look, Listen, & Record Observation: Note-taking Sheet

Observable Indicators	
#	Indicator

Add photo, map, or drawing of your observation area and take notes here.

When a visitor displays one of the indicators above, write the indicator number on the image below and briefly describe what happened. If multiple visitors do the same thing, add a “+” each time.

Other notes:

Analyzing and sharing data from the Look, Listen, & Record tool:

This activity can generate a bunch of different types of data. There are lots of ways you might handle the data, but here are some suggestions and sentence starters for possible claims you could make based on the data:

- Observation duration: While it's not a visitor outcome (you'll decide how long you observe), calculating the difference between the observation start and end times will allow you to report on the duration of your data collection.
- Total number of trait-aligned behaviors: By counting up all of the indicator numbers and "+" signs on your observation sheet(s), you can say how many examples of character-related behaviors you observed. Pair this with the observation duration and you can say how often you observed character-aligned indicators.
 - *After observing for [duration], we noticed [number] of visitor behaviors that aligned with our selected character indicators. On average, that means we noticed visitors displaying an indicator of [trait] every [x] minutes.*
- Frequency of specific indicators: If you add up how many times you observed each of your indicators, you can share how often you noticed each one.
 - *The most frequently observed indicators of [trait] were [indicator 1, (x% of visitors)], [indicator 2, (x% of visitors)], and [indicator 3, (x% of visitors)].*
- Description of indicators: In addition to counts of how frequently you observed each indicator, your qualitative descriptions of the behavior you observed for each indicator offers valuable insight and flavor that may be of interest to stakeholders. If you have a large dataset you can qualitatively code these notes for themes, but otherwise, simple description of examples is sufficient.
 - *Examples of visitors displaying [indicator] include [example 1] and [example 2]. Across the full observation effort, the most common behavior we observed that was linked to [indicator/trait] was [behavior], which [number] visitors displayed.*
- Location of indicators: One of the strengths of this tool is that it visually links behavior with physical, designed elements of an exhibit or other space. By counting how many indicators you observed when people engaged with each physical component, you can get a clear sense of which pieces are prompting character-aligned behavior.
 - *Visitors often displayed [indicator/trait] at [activity/part of program]. No visitors displayed any indicators at [part of program/exhibit].*

The Look, Listen, & Record Analysis Template on the next page may be helpful for organizing the data from your Note-taking Sheet and turning it into usable insights.

Data collector(s): _____ Dates: _____ Location: _____ Observation length _____

Look, Listen, & Record Observation: Analysis Template

Guiding inquiry question: _____

Indicator #	# unique visitors enacting this indicator	Where was it enacted? How?
Total # visitor actions observed:		

Questions to consider:

- Looking through the data, how would you "answer" your guiding inquiry question? (You may need to piece together different sources of data for a full picture.)
- What parts of the exhibit/program had the most "action," and in what ways? (Look for areas on your recording sheet that have lots of notes on them.)
- What indicators did you observe most frequently, and in what ways? (Look at the tallies in the table above.)
- Where is there room to do more? (Look at the tallies in the table above and/or consider questions from the Evaluator Reflection Tool).
- What else did you notice?

Character trait scavenger hunts: Finding & celebrating character

Overview:

Where do visitors notice character traits in our exhibitions? Asking visitors to be investigators and find character examples encourages them to have conversations about what different character traits mean and look for examples in the exhibits--both those that have been carefully curated, and other things that might be unplanned. These activities can cultivate both observation and interpretation of character values, and give a starting point for follow-up conversations. Visitors could be asked to look for a specific character trait (providing a list), or make one up on their own.

Suggested time:

- At least 30 minutes

Who is involved:

- Older children can do this activity on their own; younger children can use them in collaboration with a grownup.
- If it's busy, it may be helpful to have more than one staff member to help introduce this activity and gather data.

Goals:

1. Learn about how and where visitors see character traits in existing exhibitions
2. Provide a starting point for more in-depth conversations with visitors about specific character traits

Inquiry questions:

This activity is particularly well-suited for addressing inquiry questions such as:

- To what extent and in what ways do visitors practice [character trait(s)] in this program/exhibit?
- Which exhibit components or aspects of this program most often prompt visitors to practice [character trait(s)]?

Quick tips:

- This activity can be done in multiple ways (see below). Choose what works for you!
- This activity is great for getting little bits of data from lots of people. You can expand the closing script to get more in-depth information (from fewer people) if you like.

Before starting the activity:

- Decide how visitors will document the evidence they find of the character trait(s):
 - Instant cameras: We love doing this activity with instant cameras. Visitors enjoy taking them around, printing out the photos, and watching the images emerge. We haven't had issues with the cameras disappearing but we do recommend giving people a limit (take up to 3 pictures, etc.) to save film.
 - Cell phone photos: If you don't have (or don't want to use) instant cameras, most visitors come with cell phones. You can have them take pictures on their phones and show them to you (you can describe the pictures in your notes) and/or ask them to upload them in a folder of your choosing. We don't typically recommend having visitors text or email photos for the sake of respecting people's privacy.
 - Sticky-note drawing: A more analog version of this activity involves having people draw or use words to describe examples of character traits they found in the program/exhibit. We ask people to use one sticky note per example.
- Gather your materials:
 - Based on your choice above, you might need instant cameras, a sign about how to upload phone photos, and/or sticky notes
 - Pens and pencils
 - Paper for you to use for taking notes
 - Printed definition of focal trait(s)
 - You'll want a work station: a table or cart, maybe a chair, etc.



Facilitating the activity:

- Introduce the activity using the Introductory Script, which asks visitors to notice and document an instance of a character trait in a program/exhibit. The scripts focus on curiosity, but it's easy to swap out the word "curiosity" for another trait!
- Send visitors out into the gallery/program to gather documentation and ask them to return and tell you about what they found when they're done.
- As visitors return, follow the guidance below and use the note-taking sheet below to document learning.

Introductory script for instant cameras:

Hi! I'm _____ and I work here at the museum. Today, we're looking for curiosity in the museum. Do you know what curiosity means?" [If no, "When you're curious, you're wondering about something or you have questions about it (point to printed definition)."]

Can you find anything in this program/exhibit that you're curious about or that you have questions about? We have these cameras here and we're asking for visitors to take 1-3 pictures that show what you're curious about, and then you can bring them back and tell me about them. Would you like to try that? [If yes, show how to use camera.]



Examples of instant camera photos that illustrate examples of visitor curiosity

Introductory script for phone cameras:

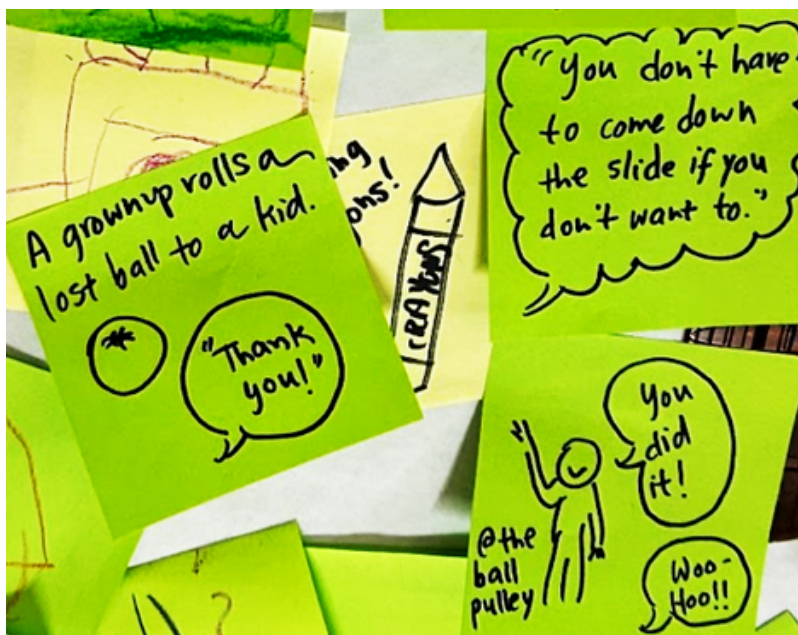
Hi! I'm _____ and I work here at the museum. Today, we're looking for curiosity in the museum. Do you know what curiosity means?" [If no, "When you're curious, you're wondering about something or you have questions about it (point to printed definition)."]

Can you find anything in this program/exhibit that you're curious about or that you have questions about? Once you find something you're curious about, you can work with a grown-up to take a picture of it on a phone. When you're done, you can come back and tell me about it and if you'd like to, you can share it with me so we can remember it.

Introductory script for sticky notes:

Hi! I'm _____ and I work here at the museum. Today, we're looking for curiosity in the museum. Do you know what curiosity means?" [If no, "When you're curious, you're wondering about something or you have questions about it (point to printed definition)."]

Can you find anything in this program/exhibit that you're curious about or that you have questions about? Go explore and once you find something you're curious about, come back here and you can write it down or draw a picture of it and tell me what you found. Then you can add your example to our collection!



Examples of sticky note documentation
of examples of kindness in an exhibit

When people return to your station:

Depending on which version of the activity you're doing, when people return your actions will vary slightly:

- Instant cameras: You'll want to take the cameras back from people. We like to ask people to caption or title their photos. You may also want to put a number on the photos so you can easily refer back to them later. Once the group leaves, you'll want to check that the camera still has enough film.
- Cell phone photos: If you're asking people to submit their photos to you, you'll need to give them instructions on how to do that. We recommend a QR code that links to some sort of a drop box.
- Sticky-note drawing: In this version, you'll need to give people time to draw or write about their example. Give them the materials and then allow them the space to create at their own pace – although you can offer to help if they like.

Using the note-taking sheet:

Once you have the photos or sticky notes, you'll want to gather descriptions of what they represent and why visitors link that example to your focal trait (curiosity, etc.). You can use the note-taking sheet below to document what you hear from visitors. At the top, you can write your name or initials and the date. There's also a place to tally how many visitors return to your station to complete their scavenger hunt. You can use one note-taking sheet for multiple visitors.

Then in the table, use one row per photo/sticky note. In the left column, either put a number (and put that same number on the photo or sticky note so you can pair it later) or write a brief description in your own words about what's in the photo (a good enough description that you can pick it out later). The column on the right is a place for you to write visitors' descriptions of their example. We suggest the prompt: "Tell me about this example." You can follow up with probes like "What were you curious about?" or "Why did you decide to take this picture as an example of curiosity?" or "What might you want to do to follow up on your curiosity and answer your wonderings?" Try to get a description from visitors about every photo or sticky note. See the example below, based on the photo shown earlier in this section.

Example description (by data collector)	"Tell me about this example."
close-up of gears	"I took a picture of the clock because I was curious about how the mechanics worked." -Visitor, age 6

Data collector: _____ Date: _____ Location: _____ Tally # participants: _____

Character Trait Scavenger Hunt Note-taking Sheet

Analyzing and using data from the character trait scavenger hunt activity:

The data from this activity are fairly straight-forward and typically don't require a lot of analysis. Here are some ways you could share about what you learned, along with some sentence starters you can fill in when sharing results:

- Sample size: You can let your audience know how many people completed the scavenger hunt, identifying at least one character trait in the program/exhibit. You might also keep track of how many people shared multiple things, possibly reporting on the minimum, maximum, and average number of scavenger hunt examples people provided.
 - *A total of x visitors completed this activity, practicing one or more indicators of [trait(s)]. Groups identified between [minimum] and [maximum] examples of [trait], for an average of [number] examples per visitor group.*
- Artifacts: The bulk of the data collected through this activity is the qualitative examples of traits that visitors provide. Stakeholders often love seeing visual examples of the photos and drawings your visitors make! You can share these examples in reports and presentations to offer some valuable flavor to your data.
- Themes in visitor examples: In addition to the photos and/or drawings themselves, you can qualitatively analyze themes about what visitors considered to be examples of your trait(s).
 - *When asked to find examples of [trait], visitors most often shared about [theme(s)]. [Number] of the [total number] visitors who completed this activity shared examples related to this theme. For instance, one person took a picture of [thing] and said, "[quote]."*
- Location of indicators: You may also want to go through the photos/drawings and descriptions and quantify which parts of the exhibit people were highlighting in connection to your selected character trait. This can give you a sense of how design is influencing visitor behavior.
 - Visitors often identified [indicator] at [activity/part of program]. No visitors reported that they noticed [trait] at [part of program/exhibit].

EVALUATOR REFLECTION

Evaluator reflection

As we discussed in the early pages of this toolkit, each person has their own values and beliefs about character. We want our character to positively influence our behavior, and that means it affects the way we approach evaluation, as well. But to keep our values from unintentionally becoming problematic biases, it's valuable to reflect on how our thought processes may influence the way we interpret other people's words and behavior--and the data we collect and analyze through an evaluation.

Evaluators can use our reflection tool after a data collection or analysis session. It prompts data collectors to think critically about their work and how their perspectives and assumptions may have shaped the data they gathered. The insights from this tool are valuable in unearthing the strengths, limitations, and other considerations about the findings. Our reflection tool includes three sections:

- What surfaced: This section encourages you to think about the affective components of your experience because your emotions are often one of your strongest indicators of when something happens that you interpret as unusual, unexpected, or important. Sometimes we can sense our feelings even when we can't put the reasons into words. For instance, if you saw something that made you angry, might it be because someone acted in a way that violated your value system about fairness? Think about what your emotions suggest about your own character and your judgments of others' character.
- What else: If the previous section focused on emotions, these questions probe about cognitive aspects of your experience. They invite you to think about how your initial assumptions about a visitor or situation might have led you towards confirmation bias--the tendency to look for evidence that confirms your first thoughts. You will consider how your identities or your sense that you're similar to or different from evaluation participants might have led you to think about their character, and how participants' views about you might have led them to display what they thought were socially desirable behaviors. Finally, you'll think about whose data are included in your dataset and whose might be missing.
- What now: The last section leads you into upcoming actions and continuous improvement. These might be changes to the design of the program or exhibit you're evaluating, new questions to ask in the next round of data collection, additional people to recruit to participate in your study, or even steps in your own personal growth.

Data collector: _____ Date: _____ Topic of reflection: _____

Evaluator reflection form

Reflect on these questions after collecting or analyzing evaluation data about character.

What surfaced in your data collection/analysis process? You might consider...

- What stood out as you gathered and/or analyzed your data?
- What thoughts, key words, or questions stuck with you from the data? Why?
- How did the data make you feel? Why?
- How might these take-aways connect to things you believe or care about?

What else could be missing from the data? You might consider...

- What were your first impressions when you started? How might they have shaped your work?
- How were you similar/different from the participants? How could this shape your efforts?
- How might the data collection experience might have affected participants' behavior?
- Whose perspectives are included in this dataset, and whose might be missing or obscured?

What's next for your work moving forward? You might consider...

- What do you want to learn more about? What can you do to make this happen?
- What actions or changes do you want to make next?
- What values or beliefs does this tool invite you to reflect on, deepen, or expand?

CONCLUSION

Conclusion

Evaluating character development initiatives in children's museums can be incredibly rewarding. Front-end evaluation data can help your museum create experiences that are meaningful to your audience and that build on and extend your museum's existing strengths. Formative evaluation can give you clear evidence about how to improve your prototypes and save you time and effort by fixing issues before you've invested too much to make changes. And summative evaluation can document the impacts of your work and provide insights about the ways you design experiences that encourage children and families to explore positive examples of character, practice new character skills in a safe space, reflect upon what matters to them, and set goals for how they will enact their character in your communities.

We hope the tools in this toolkit will make evaluation more approachable. All of the tools we provide are simply starting places. We have found them useful in our work and they are the result of repeated testing and refinement with visitors, staff, and other stakeholders. Yet every museum's needs are different so we hope you will feel empowered to use these materials as inspiration but to adapt them in whatever ways best suit your context.

At Children's Museum of Pittsburgh, we are always collecting formative information and making improvements--whether or not we're officially doing formative evaluation. In this case, that means we want to hear from you! We'd love to learn what resonates with you, what's confusing, what's useful, and what's missing from this toolkit. We fully expect to make updates based on your input.

As you embark on your evaluation journey, remember what this project is all about: living lives that are grounded in values. We hope you'll lean into an appreciation of evaluation as an approach that embraces values such as continuous learning, connection, accountability, and cross-cultural humility. While there are many resources in this toolkit, we encourage you to start small. Pick something that seems doable, valuable, and hopefully even fun. Reflect on what you learn. Then try again.

And because the work that matters most often receives the least recognition: thank you for the work you're doing to inspire your community members to thrive. Remember that you deserve to thrive, too: take the time to ground yourself in your values and take care of yourself as you go forth to inspire the others around you!

APPENDIX

What's in the appendix

The following pages provide an acknowledgements section and a glossary of terms as well as alternate versions of the tools we introduced in previous sections:

1) Character bingo: The version of the tool for curiosity is in the main body of text, above; here in the appendix you'll find alternate versions for creativity and perseverance.

2) Observe & engage: In the main text above, we provided a tool for bravery. This appendix offers different versions of the tool that focus on collaboration, creativity, curiosity, kindness, and perseverance.



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Glossary

Adaptation: A change you make to a protocol, tool, or activity so it works for a specific situation or group.

Character: The mix of qualities inside a person that shape who they are—how they act, how they treat others, and the choices they make.

Character Development: The ways people grow and strengthen their qualities over time, such as learning to be more responsible, caring, or fair.

Data Collection: The process of gathering information (through observation, interviews, surveys, etc.) to help answer a question.

Indicator: Something you can see, hear, or measure that shows a trait might be present. For example, sharing a toy might be an indicator of generosity.

Limitation: Something that might affect your data or how you interpret it, such as missing responses or distractions during an interview.

Observation: Watching and recording what people do to learn from their behavior.

Protocol: A step-by-step guide for how to collect information in a consistent way.

Qualitative: Descriptive information tells about experiences, feelings, or ideas.

Qualitative Analysis: Looking at descriptive information (like interview notes) to find patterns in what people say or do.

Quantitative: Information that can be counted or measured with numbers.

Quantitative Analysis: Looking at numbers or measurements to find patterns or trends.

Thematic Coding: A way of organizing qualitative data by labeling parts of it with "codes" that stand for bigger ideas or themes.

Trait: A quality that is part of someone's character, such as honesty or persistence.

Transparency: Being open and honest about how you collect, analyze, and share your data—including any challenges or changes along the way.

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B. Practical Tools & Web Resources

- Character.org – Nonprofit fostering character education in schools through its 11 Principles Framework and Schools of Character recognition programs. <https://character.org/11-principles-in-schools/>
- Project Zero Thinking Routines – Practical strategies to foster critical thinking and metacognition in educational settings. <https://pz.harvard.edu/thinking-routines>
- Berkeley Puppet Interview (BPI) – Play-based interview method for assessing children's self-reported emotional, behavioral, and peer challenges. See Ringoot et al. (2013) in research section for details.
- Jubilee Centre for Character and Virtues Framework – A flexible framework emphasizing virtues in education and community life. <https://www.jubileecentre.ac.uk/character-education-/the-jubilee-centre-framework-for-character-education-in-schools/>
- PBS Kids "Talk About" Series – Video-based resources to help children discuss feelings, character-related topics, and social-emotional experiences. <https://thinktv.pbslearningmedia.org/collection/pbs-kids-talk-about/>
- Character Lab – Research-based tools and resources for cultivating character strengths in children. <https://characterlab.org/>

Character Bingo

Character Bingo: Creativity

Use your imagination	Find another example of creativity and write or draw it here:	Explore a new material, idea, object, or activity
Make up your own way to do something	Free space! 	Try something out that you're not sure will work
Have a conversation about creativity	Find more than one way to solve a problem	Find something you could improve (make better) in some way

Data collector: _____ Date: _____ Group Number: _____

Character Bingo Closing Script & Note-taking Sheet: Creativity

Ask these questions when visitors bring their bingo card back to you and record your notes below.

Thanks for coming back! Can you show me your bingo card?

- Which boxes did you check off?
- Where were you in the exhibit when you [action they checked off]?
- Can you tell me about that?

Bingo action	<input checked="" type="checkbox"/>	Location	Notes
Use your imagination	<input type="checkbox"/>		
Find another example of creativity	<input type="checkbox"/>		
Explore a new idea, object, or activity	<input type="checkbox"/>		
Make up your own way to do something	<input type="checkbox"/>		
Try something you're not sure will work	<input type="checkbox"/>		
Have a conversation about creativity	<input type="checkbox"/>		
Find 2+ ways to solve a problem	<input type="checkbox"/>		
Find something you could improve	<input type="checkbox"/>		

Thanks! And could you tell me the ages of the kids in your group? _____

Thanks so much! Is there anything else you'd like to share with me today?

Character Bingo: Perseverance

Solve a problem

Take a risk

Create a goal or
plan and make it
happen

Try again when
something gets
frustrating

Free space!



Find another example
of perseverance and
write or draw it here:

Learn from a
mistake

Have a
conversation
about
perseverance

Work on the same
thing for 5 minutes
or more

Data collector: _____ Date: _____ Group Number: _____

Character Bingo Closing Script & Note-taking Sheet: Perseverance

Ask these questions when visitors bring their bingo card back to you and record your notes below.

Thanks for coming back! Can you show me your bingo card?

- Which boxes did you check off?
- Where were you in the exhibit when you [action they checked off]?
- Can you tell me about that?

Bingo action	<input checked="" type="checkbox"/>	Location	Notes
Solve a problem	<input type="checkbox"/>		
Take a risk	<input type="checkbox"/>		
Create a goal or plan and make it happen	<input type="checkbox"/>		
Try again when frustrated	<input type="checkbox"/>		
Find another ex. of perseverance	<input type="checkbox"/>		
Learn from a mistake	<input type="checkbox"/>		
Have a conversation about perseverance	<input type="checkbox"/>		
Work on the same thing for 5+ minutes	<input type="checkbox"/>		

Thanks! And could you tell me the ages of the kids in your group? _____

Thanks so much! Is there anything else you'd like to share with me today?

Observe & engage

Data collector: _____ Date: _____ Time start: _____ Time end: _____ # Visitors in group: ____

Observe Note-taking Sheet*: Collaboration

Collaboration includes working together and navigating social dynamics in various ways. This often includes working together toward a goal, but might also include prosocial behaviors like listening, sharing, helping, and taking turns. It might also involve negotiating conflict with others.

<input checked="" type="checkbox"/>	I see/hear a learner...
<input type="checkbox"/>	1. Helping or offering help
<input type="checkbox"/>	2. Working together to complete a task or solve a problem
<input type="checkbox"/>	3. Sharing materials, objects, ideas, or information
<input type="checkbox"/>	4. Negotiating or resolving conflicts
<input type="checkbox"/>	5. Modeling or teaching someone else
<input type="checkbox"/>	6. Listening to others
<input type="checkbox"/>	7. Taking turns

Observational notes about collaboration

What do you see/hear that made you select the indicators above? What aspects of collaboration are not represented? What wonderings, puzzles, or ideas do you have?

**Format adapted from Wardrip, et al. (2014).*

Engage Note-taking Sheet: Collaboration

Hi, my name is [name] and I work here at the Museum. Today I'm looking for examples of collaboration in this exhibit. Could I ask you some questions about collaboration? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. Collaboration can mean different things to different people. What does "being collaborative" mean to you? (If the visitor is unfamiliar with "collaborative," you might suggest, "Collaborative means being a good teammate or partner when you're working with someone else.")

2. Did you do anything collaborative in the exhibit today? If so, could you tell me about that? Where were you in the exhibit when that happened?

3. Do you think anyone else in your group was collaborative today? If so, could you tell me more? Where were they when that happened? What made you think they were being collaborative?

4. Collaboration looks different for everyone. Some things I noticed that I thought might be examples of collaboration were [fill in]. Did you feel collaborative in those moments, or not really?

5. Thanks so much for talking to me today! Is there anything else you'd like to share?

Data collector: _____ Date: _____ Time start: _____ Time end: _____ # Visitors in group: ____

Observe Note-taking Sheet*: Creativity

Creativity is often thought about as tightly connected to originality: a creative person might be thought of as a "free thinker" or someone who finds their own ways of doing things. Creativity can also be coming up with multiple approaches to a task and the ability to iterate on an idea. Creativity might present itself on an individual level or in social/group settings.

<input checked="" type="checkbox"/>	I see/hear a learner...
<input type="checkbox"/>	1. using their imagination to discuss or create something
<input type="checkbox"/>	2. iterating on an idea; trying another way of doing something they've tried before
<input type="checkbox"/>	3. questioning existing or accepted norms and systems
<input type="checkbox"/>	4. doing something in a different way than others; "thinking outside the box"
<input type="checkbox"/>	5. doing/using something in a different way than intended, or making up own rules
<input type="checkbox"/>	6. playing around with materials, objects, or the exhibit space; "tinkering"
<input type="checkbox"/>	7. taking a risk; trying something that might not work out as planned
<input type="checkbox"/>	8. expanding on an idea or creation (adding details, refining, making connections)

Observational notes about creativity

What do you see/hear that made you select the indicators above? What aspects of creativity are not represented? What wonderings, puzzles, or ideas do you have?

**Format adapted from Wardrip, et al. (2014).*

Engage Note-taking Sheet: Creativity

Hi, my name is [name] and I work here at the Museum. Today I'm looking for examples of creativity in this exhibit. Could I ask you some questions about creativity? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. Creativity can mean different things to different people. What does "being creative" mean to you? (If the visitor is unfamiliar with the word "creative," you might suggest, "It's using your imagination or doing something in a new way.")

2. Did you do anything creative in the exhibit today? If so, could you tell me about that? Where were you in the exhibit when that happened?

3. Do you think anyone else in your group was creative today? If so, could you tell me about that? Where were they when that happened? What made you think they were being creative?

4. Creativity looks different for everyone. Some things I noticed that I thought might be examples of creativity were [notes from observation]. Did you feel creative in those moments, or not really?

5. Thanks so much for talking to me today! Is there anything else you'd like to share?

Data collector: _____ Date:_____ Time start: _____ Time end: _____ # Visitors in group: ____

Observe Note-taking Sheet*: Curiosity

While curiosity is often seen at the individual level, it can sometimes be a social character trait, for example when young visitors explore a question together and/or seek help from others in following up on something they wonder about. Sometimes, we might see this trait in how visitors interact with objects, spaces, or activities and challenges in the museum.

<input checked="" type="checkbox"/>	I see/hear a learner...
<input type="checkbox"/>	1. asking questions or using "wondering words" (e.g. "Hmm..." "Why..." "Huh...")
<input type="checkbox"/>	2. looking quizzically or pointing
<input type="checkbox"/>	3. changing perspectives or looking at something from a different angle or point of view
<input type="checkbox"/>	4. exploring how things work, move, or sound
<input type="checkbox"/>	5. experimenting or creating a hypothesis
<input type="checkbox"/>	6. creating a challenge to investigate

Observational notes about curiosity

What do you see/hear that made you select the indicators above? What aspects of curiosity are not represented? What wonderings, puzzles, or ideas do you have?

**Format adapted from Wardrip, et al. (2024).*

Engage Note-taking Sheet: Curiosity

Hi, my name is [name] and I work here at the Museum. Today I'm looking for examples of curiosity in this exhibit. Could I ask you some questions about curiosity? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. Curiosity can mean different things to different people. What does "being curious" mean to you? (If the visitor is unfamiliar with the word "curious," you might suggest, "Being curious means wondering about something.")

2. Did you feel curious in the exhibit today? If so, could you tell me about that? Where were you in the exhibit when you felt curious?

3. Do you think anyone else in your group felt curious today? If so, could you tell me about that? Where were they when that happened? What made you think they were feeling curious?

4. Curiosity looks different for everyone. Some things I noticed that I thought might be examples of curiosity were [add notes from observation]. Did you feel curious in those moments, or not really?

5. Thanks so much for talking to me today! Is there anything else you'd like to share?

Data collector: _____ Date:_____ Time start: _____ Time end: _____ # Visitors in group: ____

Observe Note-taking Sheet*: Kindness

Kindness can manifest in many different ways, including self-kindness. This tool is designed to observe for both kindness to oneself and kindness to others. This character trait might include easily-identifiable actions and words ("I like your block tower!") as well as subtler acts like a comforting pat on the shoulder or a friendly smile.

<input checked="" type="checkbox"/>	I see/hear a learner...
<input type="checkbox"/>	1. sharing materials or objects
<input type="checkbox"/>	2. being friendly or welcoming in words, actions, or expressions (e.g. smiling)
<input type="checkbox"/>	3. helping or comforting another; thinking of others
<input type="checkbox"/>	4. practicing self-kindness by considering and/or acting on one's own needs
<input type="checkbox"/>	5. saying/doing nice things for self or others (e.g. "thank you," hug, embracing one's flaws)
<input type="checkbox"/>	6. having a generous spirit toward self and others
<input type="checkbox"/>	7. offering encouragement or compliments (e.g. "I like your drawing!," "You can do it!")

Observational notes about kindness

What do you see/hear that made you select the indicators above? What aspects of kindness are not represented? What wonderings, puzzles, or ideas do you have?

**Format adapted from Wardrip, et al. (2024).*

Engage Note-taking Sheet: Kindness

Hi, my name is [name] and I work here at the Museum. Today I'm looking for examples of kindness in this exhibit. Could I ask you some questions about kindness? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. Kindness can mean different things to different people. What does "being kind" mean to you? (If the visitor is unfamiliar with the word "kind," you might suggest, "Being kind means doing something nice or showing that you care about someone – whether yourself or others.")

2. Did you do anything kind in the exhibit today? If so, could you tell me about that? Where were you in the exhibit when that happened?

3. Do you think anyone else in your group was kind today? If so, could you tell me about that? Where were they when that happened? What made you think they were being kind?

4. Kindness looks different for everyone. Some things I noticed that I thought might be examples of kindness were [add notes from observation]. Did you feel kind in those moments, or not really?

5. Thanks so much for talking to me today! Is there anything else you'd like to share?

Data collector: _____ Date:_____ Time start: _____ Time end: _____ # Visitors in group: ____

Observe Note-taking Sheet*: Perseverance

Perseverance might look like becoming engrossed in an activity. Often, it includes sticking with a task even when it presents setbacks or requires sustained effort. It might include solving problems, either individually or in collaboration with others. It might unfold over time, as when a young visitor takes a "cool-down" break elsewhere in the exhibit before trying again to complete a challenge or activity.

<input checked="" type="checkbox"/>	I see/hear a learner...
<input type="checkbox"/>	1. staying with an activity or a problem for an extended period of time
<input type="checkbox"/>	2. continuing to work on something even when it's hard/when there are setbacks
<input type="checkbox"/>	3. working toward a goal until it's completed (might require coming back after a break)
<input type="checkbox"/>	4. trying out different approaches to a problem
<input type="checkbox"/>	5. trying to find out why a failed solution didn't work
<input type="checkbox"/>	6. showing excitement at completing or making progress on a task
<input type="checkbox"/>	7. using positive or hopeful self-talk while working through a challenge
<input type="checkbox"/>	8. not wanting to leave or stop an activity; being in a state of "flow"

Observational notes about perseverance

What do you see/hear that made you select the indicators above? What aspects of perseverance are not represented? What wonderings, puzzles, or ideas do you have?

**Format adapted from Wardrip, et al. (2024)*

Engage Note-taking Sheet: Perseverance

Hi, my name is [name] and I work here at the Museum. Today I'm looking for examples of perseverance in this exhibit. Could I ask you some questions about perseverance? It's totally anonymous and you can stop at any time or skip questions you don't want to answer.

1. Perseverance can mean different things to different people. What does "perseverance" mean to you? (If the visitor is unfamiliar with the word "perseverance," you might suggest, "Having perseverance means you keep trying even when something is hard or frustrating.")

2. Did you do anything that showed perseverance in the exhibit today? If so, could you tell me about that? Where were you in the exhibit when that happened?

3. Do you think anyone else in your group showed perseverance today? If so, could you tell me more? Where were they when that happened? Why do you think they showed perseverance?

4. Some things I noticed that I thought might be examples of perseverance were [fill in]. Did you feel like you were showing perseverance in those moments, or not really?

5. Thanks so much for talking to me today! Is there anything else you'd like to share?