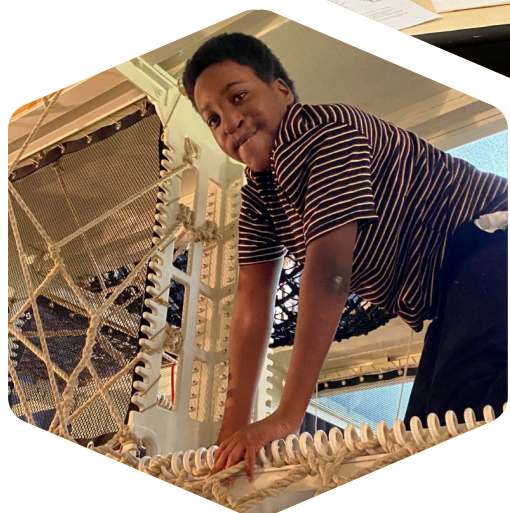


Flexibility, Presence, and Possibility: Accessible Approaches to Art and Making

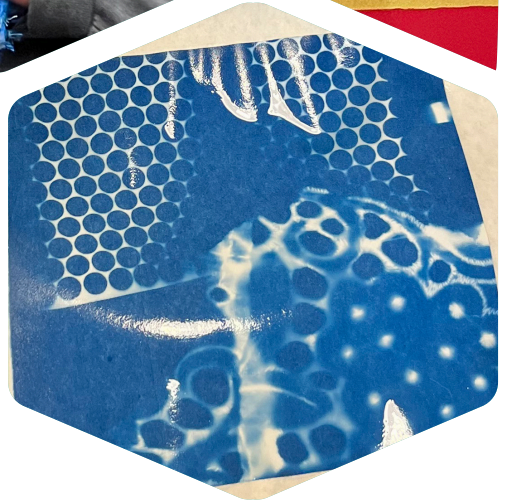
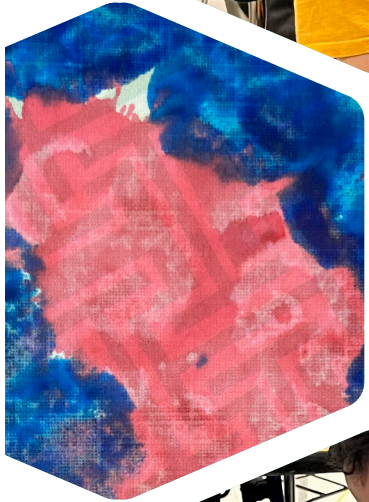
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Welcome!

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Introduction

For more than a decade, the Children’s Museum of Pittsburgh has generated research-based tools to advance maker education and helped to develop hundreds of makerspaces across the country. Maker education is an approach to learning that positions agency at the center, asking students to become more aware of the design of the world around them, and to begin to see themselves as people who can tinker, hack, and improve that design. As a practice, making develops skills and empowers learners through interactive experiences with real tools and materials.

Even as the incidence and diagnosis of conditions like autism spectrum disorder are increasing in our communities, our learning environments and cultural spaces often lag in offering accessible experiences that meet the needs of all students. The pandemic both revealed and deepened divides in our society, exacerbating educational inequities and isolation. As the Children’s Museum of Pittsburgh worked to reopen and rebuild capacity in the wake of COVID-19, we saw an opportunity to reconnect and deepen relationships with children, youth, and families with disabilities.

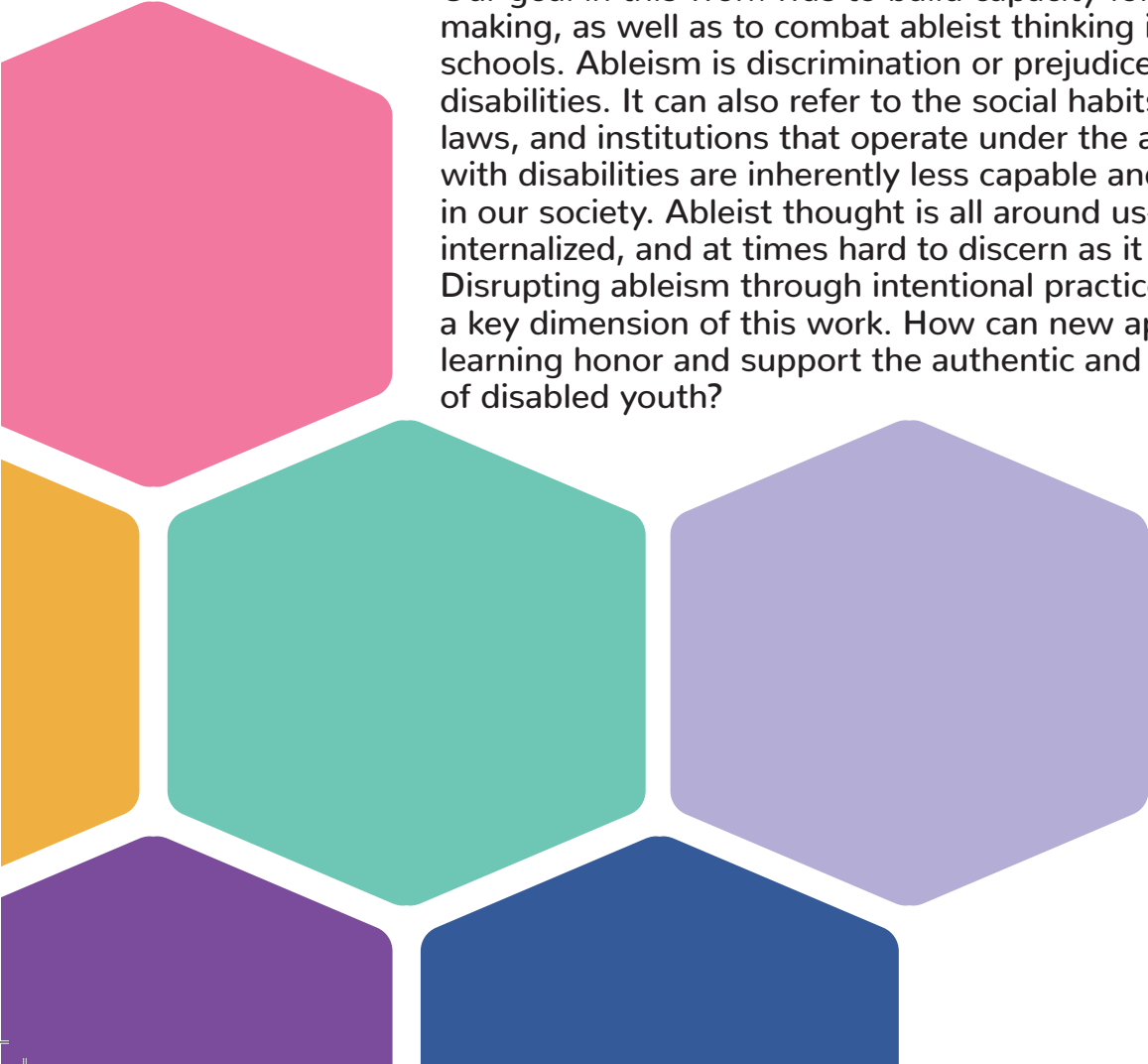
The mission of the Children’s Museum of Pittsburgh is to provide innovative and inclusive museum experiences that inspire kindness, joy, creativity, and curiosity for all learners. With this project, we sought to revisit the museum’s approach to both art and maker education from an anti-ableist lens, incorporating principles of Universal Design for Learning (UDL). Our goal was to build our capacity to better serve young people of all abilities in creative learning experiences that expand opportunities for expression and nurture their agency. This report summarizes our approach as well as what we learned. It is offered as a guide for other practitioners seeking to make both art and making experiences more inclusive.



Reframing Disability

Over time we have seen a paradigm shift in how disability is understood within society. For centuries disability was perceived as a health problem, a biological (and even moral) shortcoming that was to be feared, isolated, and repaired. However, in recent decades the social model of disability has offered a liberatory perspective. Disability doesn't reside within the individual—rather it exists at the intersection of bodies and the society in which they live. Human variability is the norm, while individuals are disabled by inaccessible environments.

As designers of learning spaces and experiences, we can create conditions that either enable or disable the full participation of students with and without disabilities. Universal Design for Learning (UDL) facilitates the creation of a flexible, responsive curriculum and addresses the how, why, and what of learning. It offers guidance and tools to ensure that motivation, experience, participation, and demonstration of learning are designed with human variability in mind. The goal is to offer multiple ways for learners to understand content, engage with activities, and express themselves, honoring the diversity of learning and communication styles present within our communities. Disabilities may be invisible, temporary, or fluid-- at the same time, they might be absolutely central to a person's identity and experience of the world. Importantly, the adaptations and innovations that reduce barriers for individuals with disabilities help make a world that works better for all people—simply put, inclusive design is good design.



Our goal in this work was to build capacity for accessible art and making, as well as to combat ableist thinking in museums and schools. Ableism is discrimination or prejudice against individuals with disabilities. It can also refer to the social habits, norms, regulations, laws, and institutions that operate under the assumption that people with disabilities are inherently less capable and valuable than others in our society. Ableist thought is all around us-- pervasive, deeply internalized, and at times hard to discern as it is so normalized. Disrupting ableism through intentional practice and reflection became a key dimension of this work. How can new approaches to creative learning honor and support the authentic and powerful contributions of disabled youth?

Acknowledgements

This project was made possible through catalytic grant funding from Remake Learning. Our funders at Remake encouraged us to take bold risks and imagine a new, more equitable future of learning. The grant gave us resources to dedicate time to this work, compensate partners, experiment with new tools and approaches, to reflect, iterate, and share learning.

These learnings are the result of close partnerships, forged over the course of a year. The Children's Museum of Pittsburgh is grateful to its partners Pressley Ridge and Pittsburgh Public Schools for their collaborative spirit and dedication. Through staff exchanges, professional development, outreach visits, and field trips, educators and students from the participating organizations grew closer, took risks, and generated new insights.

Pressley Ridge has served children on the Northside of Pittsburgh for nearly 200 years. As part of their extensive network of services they now operate the Pressley Ridge School for Autism and School for the Deaf, serving students with multiple disabilities in both residential and intensive programs that integrate social, behavioral, therapeutic, and academic interventions.

Pittsburgh Public Schools Pioneer Education Center serves students who require more extensive accommodations and services than are possible in their neighborhood public schools, primarily youth ages 5-21 with multiple or medical disabilities. Pittsburgh Pioneer offers an intensive program driven by the students' individualized education plans, offering a wide array of holistic services with a goal of fostering independence.

This project was made possible with input and guidance from expert supporters Vanessa Braun, Kristen Link, Jeanine Pollard, and Liz Whitewolf. This guidebook also shares many insights from youth with disabilities as well as their family members, teachers, and support staff. These youth have a diverse of backgrounds including many different abilities, disabilities, and neurodivergence and racial, ethnic, linguistic, economic, and more. Youth brought a wealth of lived experiences, wisdom, creativity, and complexity to the project's learnings.

At Children's Museum of Pittsburgh the project was led by Tress Belesi, Access and Equity Education Researcher. Tress served as project manager, partnership coordinator, lead researcher, primary educator, and champion of this work. Without Tress this project would not have been what it was. Many additional Museum staff were also deeply involved in making this project happen, with particular contributions by Dr. KT Todd, Zainab Adisa, Darin Carlini, Taylor Erickson, Danielle Linzer, and many others. Executive Director Jane Werner continually challenges and inspires our staff to dream big in service to our mission.

This project built on prior work by renegotiating power imbalances in the design, research, and delivery of art and making education in informal learning environments through centering the voices, needs, and dreams of learners with disabilities. Our hope is that these resources will aid teaching artists in enhancing the accessibility of the tools, materials, methods, contexts, and people involved in art and making activities.

Part I: Approaches for learning together



Key to success: Partnerships

Organizations that wish to work with people with disabilities can benefit from forming partnerships with schools and institutions that already have trusting relationships with disabled communities.

Between one and four and one and six people have a disability (Centers for Disease Control and Prevention, 2023; World Health Organization, 2023). Yet despite the prevalence of disabilities, factors such as social stigma, inaccessible design, and ableist attitudes can make it uncomfortable and challenging for people with disabilities to engage in many environments. This can lead to segregation where people with disabilities are isolated from able-bodied people and may see little value in attending public places like museums. When educational institutions like museums wish to work with people with disabilities but lack connections with disabled communities, it can be helpful to develop partnerships with organizations that regularly work with people with disabilities. These organizations can help to bridge the gaps between communities of disabled people and educational institutions like museums.

We worked with multiple schools—each of which had a different student body and philosophy of education. Our approach was to honor the expertise and cultural context of each school and adapt our programming to support their ways of working with youth as well as listening closely to the interests and needs that the youth themselves articulated. Each side of the partnership benefitted from our work together: the Museum shared its expertise in art and making and the schools shared expertise in accessible education as well as access to students with disabilities, who engaged in the art and making programming. Each school also was interested in a different depth of the relationship. With one school, we had outreach visits and/or field trips on average twice each month during the school year. We worked with a second school approximately monthly. The third school was less frequent, with a total of four engagements throughout the year.

Tips for forming partnerships:

- Try to form relationships among multiple people at each organization. This will help the relationship last even if someone leaves.
- Each partner should articulate their goals for working together. This helps everyone know how to focus their time.
- Prioritize your partners' needs. If you don't have the internal resources to do what they request, try to connect them to external opportunities that can support them.
- Make sure partners are fairly compensated! Thanks to funding from Remake Learning, each of our partner schools received \$2,500.

Project activities

Our project involved a series of activities that built on each other throughout the year,

- **Relationship-building and professional development:** This allowed us to establish trust and learn how to honor cultural differences across organizations
- **School visits led by Museum staff at the partner schools:** During school visits, the Museum introduced students to new art and making approaches in the comfort of their own spaces
- **Field trips to the Museum:** These trips built on the relationships and skills from the prior steps while exposing youth to new experiences in a new context
- **A self-advocacy event:** Research and reflection were embedded throughout the project, but this culminating event centered ways of learning from youth



Relationship-building and professional development

Initial project activities developed trust among partners and supported mutually beneficial collaborations. We started with onsite meetings where Museum staff visited the schools and staff from the schools attended the Museum. In our conversations we shared information about what we do as well as our needs, concerns, and dreams for working together. Next, we gathered surveys from staff at the Museum and partner schools about what they wanted to learn from one another. Based on those responses, we identified ways Museum staff

and partner staff could share knowledge with each other. For instance, a Museum educator led a professional development session for one of the schools about 3D printing and a staff member from Pressley Ridge led a session for Museum staff about Deaf culture and education. In some cases, staff at both the Museum and partner schools identified needs that the partners did not feel equipped to provide. In these cases, we sought external trainers to provide additional professional development.

Tips:

- When working with partners, it's ok if people aren't established "experts." Each partner holds valuable insights about the unique culture of their organization and their strategies for their work.
- When working with external trainers, try to prioritize presenters who are people with disabilities and can share about their lived experiences as well as content-based expertise.
- Offer trainings in multiple formats to support different learning styles.
- Create lasting resources from professional development for people who aren't able to attend the session. Carve out time for people to engage with these materials.

School visits

Before having students visit the Museum, Museum educators facilitated art and making programming at the partners' schools. This helped familiarize Museum staff with the schools' routines and norms and build trust with youth and school staff. Museum staff chose activities that they regularly facilitated at the Museum. This was intentional; we did not want to create separate, segregated activities for disabled youth, but wanted to use this project to expand accessibility in ongoing programming. Museum staff worked with school partners to reimagine the existing activities for their students. As we conducted school visits, we did the same activity multiple times with different groups because this allowed us to iterate and refine the programming. In fact, some groups requested that we do the same activity multiple times with the same students because the familiarity was valuable.

Tips:

- Be willing to adapt activities to make them shorter or longer in order to fit into partners' schedules.
- If you can, do the same activity multiple times so you can make improvements and evaluate their effectiveness.
- Bring a variety of options for the tools and materials you use in your activities.
- Observe the ways students engage with the activity and be ready to make adjustments as you go.

Field trips

Following the school visits, students came to the Museum on field trips. Building on what we'd learned in our school visits, we incorporated elements of the schools' routines into the field trips. For instance, with one school we started each field trip with their usual "good morning" song. Compared to most field trips at the Museum, partner schools for this project brought smaller groups of students with a higher ratio of teachers and paraprofessionals. Based on the schools' schedules, these field trips were shorter than most Museum field trips. We built in more break time for bathroom stops, snacks, and mental decompression. Rather than taking students to as much of the Museum as possible, we selected a few exhibits and spent more time in each one. Across the series of field trips that we hosted with our partners, we had the opportunity to iterate on our visits using a data-informed approach. During the visits we took observation notes and held debriefing conversations about what worked well, what could be improved, and what was surprising.



Tips:

- Think about how to make a visit more comfortable by integrating routines that learners are used to from other contexts.
- Schedule breaks during a field trip visit. Consider having multiple, short visits rather than a single long visit.
- Send information ahead of time about parking and accessible pathways into your building.
- Work out an agenda with your partners before the visit. Discuss whether it is more valuable for the partner sites to stick to the schedule or respond flexibly to learners' interests in the moment.



Self-advocacy event

At the end of the project year, the Museum invited youth with disabilities to bring their friends and families to an event called Be an Access Advocate. The event had two goals. First, it engaged youth and their groups in practicing self-advocacy skills to shape the future of art and making education at the Museum and beyond. Second, we wanted to offer a fun and accessible experience that built attendees' interest in returning to the Museum. Rather than having a prescriptive agenda for the event, we wanted youth to exercise their agency and advocacy skills to make choices about what to do based on their own interests. Each participant

received a guidebook that described the different stations and gathered feedback about the various activities. Stations included a collaborative mural about belonging; an opportunity to envision an accessible space through clay sculpture, poetry, or drawing; a voting activity about the principles of accessible artmaking; a place to make and share art prints and buttons; an embossing activity; and several drop-in Museum exhibits. There was also a sensory-friendly quiet space and a place to have a snack.

Tips:

- When seeking feedback from youth with disabilities, make sure you first prioritize their accessibility needs and preferences.
- Make sure your engagements are valuable to the people who participate! We offered each group a \$50 gift card, free parking, free admission, and food at the event.
- Offer many ways to gather feedback to accommodate differences in communication styles.
- Send a follow-up survey in case people have thoughts after the event.

Lesson learned: Spotlight on structure

Clear structure and direct instruction may feel uncomfortable for informal learning educators but can be an anti-ableist practice for some students with disabilities (particularly autistic youth). One of the things we thought a lot about in this project was the amount of structure we provided in art and making activities. Some of the advice that our partners offered about how to make art activities more accessible seemed in direct contrast to our standard practices. For example, Pressley Ridge recommended handing out tools and materials one by one, whereas during drop-in activities in the Museum's art and making spaces, all tools and materials accessible and laid out on table for people to select as desired. A teacher shared that students often don't know what to create, struggle with creative thinking, and therefore can be intimidated by art and making. Museum staff have often embraced open-endedness as an intentional (and highly valued) contrast to formal learning. Our challenge as facilitators was to create an activity that embodied the Museum's mission while also providing structure and guidance.

Strategies for offering structure within art and making programming:

- Create labels for tools to promote shared language.
- Provide a visual schedule to set expectations.
- Use a scaffolded chain of yes or no questions rather than one open-ended question.
- Offer choices and share examples while supporting students to come up with ideas.
- Demonstrate how to do an activity in person or through illustrations or videos.
- Allow time for open-ended exploration at the end of an activity, after more directed instruction.

Lesson learned: Spotlight on engagement

Working with youth with disabilities can help us expand our notions of what success and engagement look like. In conducting school visits, Museum staff recognized that their standards for success in an activity often reflected ableist standards about what it meant to follow directions, be on-task, and learn desired outcomes. When we let go of these standards, staff felt liberated to learn from and celebrate new forms of creativity that the youth demonstrated. One facilitator reflected on a student's experience, noting that the young person chose not to touch any of the tools or materials for an activity, but was highly focused in watching and listening. Other students would repeat phrases or use tools in innovative ways. We learned to embrace choice as a tool for nurturing students' agency and self-advocacy. One of the most basic choices that students made was whether and how they wished to engage with an activity. We came to honor the beauty of choice—even refusal—as a way students communicated and took ownership of their learning journey.

“You can't force any students to do anything, because people learn in all different types of ways. Students want to engage in the way they want to because they're having a different experience of the world.”

-Museum educator

Part II: Resources for accessible art & making

This project enabled us to do meaningful work with people with disabilities. It also gave us the opportunity to reflect on what worked and develop resources that can support others who wish to lead accessible art and making programming. The following pages share our insights and tools. As we discuss in the next section, accessibility and anti-ableism depend on creative flexibility. We hope these resources will provide a starting point, but we encourage you to review these tools and use or adapt them based on the needs of your context and the people with whom you work.

Guidance for accessible art and making

The following list offers a set of approaches that can guide your work when doing art and making programs with people with disabilities. There are numerous excellent, existing resources available about accessible education. This list supplements current resources with a specific focus on art and making programming led by a museum. We developed this list through an iterative process with disabled youth; their family members and caregivers; teachers and paraprofessionals; and Museum educators. When enacting these themes, we found there were two common sticking points: 1) we want to provide more accessible programming but we don't know how, or 2) we know what we should do, but we don't feel like we have capacity to do it. Below each theme, we offer a question that is meant to challenge us in those instances when we're unsure what to do as well as a grounding statement to reassure us when the work feels overwhelming.

Design for flexibility

When planning an activity, consider and create many approaches to engagement. Consider how to break the activity into simple, small parts and how to expand it into deeper and broader learning with extension opportunities. We found that building these multiple pathways in a single activity was preferable to designing different activities for different learners.

- Challenge: How are you celebrating learners' different speeds/styles of learning and making, without making any pace/approach seem more valuable than another?
- Grounding: Flexibility is a never-ending practice.

Elevate ability

Design activities that make use of disabled youth's strengths. What unique art form might young people create with their assistive devices? How might we celebrate individuals' stimming behavior or neurodivergence as an art practice? How can we de-emphasize the artistic field's traditional emphasis on visual art as a gold standard by focusing on and integrating audio, tactile, and other multisensory elements?

- Challenge: How can you elevate your learners' strengths as beautiful and as core practices of art and making?
- Grounding: Art is all around us if we are only present enough to observe it.

Incorporate interests:

Connect with youth participants through things that matter to them. This might be anything from an activity (sports, dance, etc.) to a favorite food or person. Youth express their interests in many ways, from the colors they wear to the accessories on their communication devices. Be observant, ask questions, and seek ways to make meaningful connections to the things that matter to them.

- Challenge: How can you invite learners to express joy through their art and making?
- Grounding: Creating art from the heart is an act of healing.

Practice disruption:

Sometimes the number of access barriers in our society can feel overwhelming. Identify at least one tangible way you can disrupt ableist norms in each interaction you have with disabled youth. The more we practice, the more our disruptions become natural. By naming these disruptions, sharing them with others, and celebrating them, we aimed to make anti-ableism part of our work culture.

- Challenge: How can you challenge your expectations of productivity in order to foster deeper learning and engagement?
- Grounding: You are enough.

Enact adaptability:

Design for flexibility, the first practice on this list, is a great place to start. But even when you make a flexible experience, you need to be present enough to see when things aren't going as planned and adapt your activity based on learners' emergent needs. This improvisation can lead to beautiful, unanticipated learning! Even when things did not go as expected, we found it helpful to reflect on our standards of success and focus on positive relationships above productivity-based outcomes.

- Challenge: In what ways is presence more important than preparation?
- Grounding: You are always learning; embrace not knowing.

Embrace imperfection:

People are, by definition, imperfect. Society urges us to strive for perfection and defines perfection with able-bodied expectations. For people with disabilities, this can cast an ever-present feeling of deficiency. We can all uphold our self-worth by accepting our imperfections, which make us fully human. When things didn't go as planned we worked to embrace imperfection and acknowledge our missteps as opportunities for further learning.

- Challenge: How can you find peace with the consequences of imperfection?
- Grounding: Imperfection is a window into creativity.



Care for all:

Young people aren't the only ones who have access needs. Make sure you are attending to your own needs as a facilitator, as well. Not only will it support you, but it will allow you to be more present with youth. You will also be modeling self-advocacy, an important skill for youth with disabilities. We found it is vital for staff to make space for their own access needs to create an environment of holistic care.

- Challenge: What colleague(s) or friend(s) could you consult with so you don't feel alone?
- Grounding: Take a moment to consider your own needs.

Apply accessibility:

The insights we gain about how to lead accessible programming for youth with disabilities can help us do better work with all learners. By making accessible programming the norm, we benefit people with and without disabilities who come to museums and makerspaces every day, even without our knowledge.

- Challenge: What accessible practices can you incorporate into your everyday routines?
- Grounding: When you design for human variability, you invite more people to thrive as their full selves.



Framework for accessible art and making

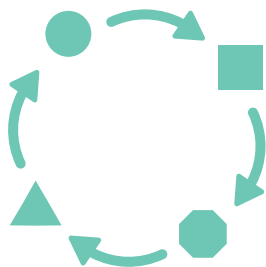
When shifting our thinking from overarching approaches (as described on the previous pages) to the practical, day-to-day aspects of leading art and making activities, we drew on past research about maker education (i.e., Brahm & Werner, 2013; Brahm & Crowley, 2016; Sheridan et al., 2014) as well as the principles of Universal Design for Learning (CAST, 2018) and disability justice (Berne, 2015) to organize our work around five key elements of an art or making experience:

- 1. People:** The people who are involved in an art or maker activity (e.g., educators, facilitators, support staff, family members)
- 2. Tools:** Devices (e.g., scissors, paint brushes, hammers) that we use to make changes to materials
- 3. Materials:** Things that we change or combine during an art or making activity (e.g., canvas, clay, wire)
- 4. Processes:** Methods or steps taken to create something (e.g., sculpting, wood carving, programming)
- 5. Environment:** The space and surroundings where an activity takes place (e.g., classroom, art studio, makerspace) and the furnishings and amenities in the space and its proximity

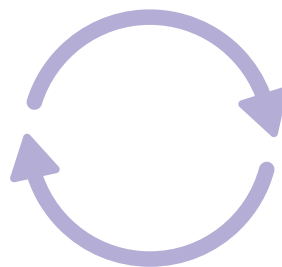
Then, there are three actions that we can use to change the five elements above to make them more accessible:

- 1. Adapt:** By changing the tools, materials, processes, and environment, people can make an activity accessible to more learners.
- 2. Replace:** Some tools, materials, processes, or environmental features may be incompatible with some people's needs and interests, and they may need to be switched out for more suitable alternatives.
- 3. Remove:** In reflecting on the activity, it may become clear that some tools, materials, processes, or environmental features are not necessary for the activity. Eliminating them may enhance the activity for some people.

Adapt



Replace



Remove



Tools based on our framework for accessible art and making

We have created three tools that use our framework for accessible art and making to support practical planning and reflection for educators, teaching artists, and facilitators who wish to lead accessible and anti-ableist art and making activities.

- 1. The planning tool:** This tool is designed for practitioners to use when they are planning an art and making activity and want to prioritize accessibility. It offers a structured set of questions that follows our framework for accessible art and making, considering ways of adapting, replacing, and removing tools, materials, processes, and elements of the learning environment.
- 2. The people tool:** Whereas the planning tool focuses on tools, materials, processes, and the environment, the people tool emphasizes the human elements of an art and making activity—including both the learners and the facilitators. This tool is based on the principles of disability justice (Sins Invalid, 2015). Practitioners can use it either before or after an activity.
- 3. The evaluation and reflection tool:** Researchers/evaluators or practitioners can use this tool to gather observation notes during an activity or soon afterwards. It guides users in focusing on observable evidence of the creative genius that neurodivergent and disabled youth bring to their art and making practice, as well as identifying ways the activity can be improved.



These tools can be found at pittsburghkids.org/program/accessible-art-and-making/ or by scanning the QR Code



Conclusion

We are incredibly grateful for the opportunity to engage with and learn alongside so many wonderful people as part of this project. The countless ways we have witnessed—and been changed by—the creative ingenuity of neurodivergent youth and youth with disabilities has helped us shift the way we approach art and making activities as educators, makers, artists, researchers, evaluators, leaders, and as people. We have learned from professionals with decades of experience working in schools that are deeply committed to providing young people with comprehensive educations that disrupt the ableist norms of our society.

Much of this is due to the trust and flexibility that our funders at Remake Learning provided us; in aiming to support transformative learning, they truly allowed us to center the ever-evolving needs, interests, and leadership of disabled and neurodivergent youth. One of the things that felt most valuable about this project was that it provided us with the time to reflect and make meaning of what we were doing. Thanks to this funding model, we have invested in building lasting knowledge, skills, tools, and most importantly, relationships with youth, family members, educators, and more. We hope that this document and its companion tools will inspire others to commit to accessible art and making and to disrupting ableism in their jobs, organizations, and lives, as well.

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