

For Multi-Generations to Come

Dan Marwit

In October, my wife and I took our nine-year-old son to see the *Obama Portraits Tour* at the Brooklyn Museum.¹ We were moved to tears by artists Kehinde Wiley and Amy Sutherland's unprecedented depictions of American leadership. But for our son, the best part was the scaled-down reprint of George Washington's portrait nearby. It had numbers on it that corresponded to bite-size, relatable captions, like a seek-and-find. It inspired us to find Washington's portrait one floor up and compare the two visions of what a president can be.

I suppose my family would fall on the "collaborative learning" end of the family learning style continuum observed by Lynn Dierking, Oregon State University professor and long-time free-choice learning scholar.² We generally enter, journey through, and learn together in museums. It typically takes more work than in the *Portraits* example. On the other end of the continuum are "independent learning" families. These groups tend to split up and check in with each other throughout a visit. Opportunities for these types are easier to come by, as many museums now include very rich children's

galleries, like the Heyman Family Art Lab at New York's Museum of Modern Art and the Dimenna Children's History Museum inside the New-York Historical Society.

Truly blended experiences for collaborative families are fewer and further between. The Boston and Chicago Children's Museums note that "adults should be engaged too" because they "likely represent 50 percent of your audience."³ But what if your museum is a more grownup or expressly intergenerational one? How do we engage the 50 percent or so who are children in these settings? Or better yet, how can we collaboratively engage the 79 percent of all museum visitors in North America who come in family groups?⁴ The USS Constitution Museum's *Engaging Families* website and publication are instructive here. They propose nine strategies, suggesting that family exhibits should be multiuser, multisided, multimodal, social, multi-outcome, authentic, relevant, accessible, and fun.⁵ What do such exhibits look like? The Lake Minnewaska Visitor Center, which opened in 2020, has insights to offer.

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MINNEWASKA STATE PARK PRESERVE

BY NATURE
ATED BY PEOPLE

LAKE MINNEWASKA AREA

Map and informational panel showing the Lake Minnewaska area, including a legend and a list of activities.

THINGS TO DO

Digital touch screen displaying various activity options.

Choose Your Destination

Margaret City

Map and informational panel showing the Margaret City area, including a legend and a list of activities.

Fig. 1. The Lake Minnewaska Visitor Center welcomes young and grownup visitors with color and visible opportunities to engage together.

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Lake Minnewaska Visitor Center

Beginning in 2018, I had the opportunity to work as the content developer on the Moey, Inc. design-build of the Lake Minnewaska Visitor Center exhibition (fig. 1, p. 43). It opened in October of 2020, but only partially. Due to COVID-19 precautions, park staff prohibited use of the exhibition's interactives, touchscreens, and tactile elements until July of 2021. Meanwhile, despite these and other COVID-related restrictions, attendance at Minnewaska grew at a record rate, from 500,000 visitors in 2019 to 600,000 in 2020. Similarly, attendance soared across the New York State Parks system, from 77.1 million to 78 million. New Yorkers had clearly awakened to the relatively safe fresh-air experiences that state parks offer.

Lake Minnewaska is the centerpiece of the 24,000-acre Minnewaska State Park Preserve in Ulster County, New York. The park is one of the most visited in New York, and its preserve designation empowers it to protect the globally unique ecologies within its boundaries. The visitor center building is a new one, designed by BSKS Architects as an “experiential extension of the park.”⁶

It includes 1,500 square feet of exhibition space and was made possible by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) with the Open Space Institute (OSI), which works to acquire land for preservation and public use.

Before the visitor center was built, there was no visitor center. Minnewaska's nature lovers and recreationists ventured into the landscape with maps from the parking gate and little else. According to a study in 2014, nearly 56 percent of them wound up in the same place, usually Lake Minnewaska.⁷ This led to crowding around the lake while thousands of park acres remained mostly secluded. Thus, the planning team made “twin orientation” the main goal of the exhibition. We wanted people to become oriented both intellectually and geographically. We wanted them to discover new interests in nature and go pursue them in a safe and informed way.

In considering this goal, the team had families in mind. About 16 percent of Minnewaska's visitors are under 18, and large families with several children often visit the park.⁸ Plus, the park expected this number to grow. The visitor center would include space for expanding educational programs, and this would likely increase Minnewaska's popularity among families in general. The team agreed that to help everyone get out on the land in a twin-oriented way, the exhibition needed to be enjoyable for both young and adult visitors. The best way to do that was to lean toward collaboration. This would provide engagements for collaborative families that could of course also be used by independent families.

Moey had direct experience to draw on for the task. Between 2016 and Minnewaska's schematic phase, Moey had designed four other visitor center exhibitions at Hallock, Thatcher, Grafton, and Green Lakes State Parks, which opened between 2017 and 2018. As with all exhibitions, each of these is unique, but in visits to them every six to eight months, Moey staff (typically Moey's

president and cofounder, Molly Lenore) made informal observations of visitors in action that support and add new dimension to the strategies outlined by the USS Constitution Museum. We applied our observations, and our findings from them, while designing and building the Lake Minnewaska Visitor Center. Some of the most influential findings included that grownups and kids both need to feel welcome, that multidimensional design can bring grownups and kids together, that interactives should be simple, that digital is powerful, and that there are tangible ways to encourage visitors to continue learning together.

Welcome Everyone

When a family arrives at the Lake Minnewaska Visitor Center, they proceed down a short hall into a high-ceilinged gallery, where the exhibition is bathed in natural light from a glass wall on the left that looks out onto the lake. Directly ahead, they see a safe-to-touch topographic model of the whole park on a low table. On the right, they see a ceiling-height mural-photograph of Lake Minnewaska on a clear morning, and over it, a puzzle-like display of large photographs, artifacts that relate to visitors' lives and experiences in the park, and text on brightly colored panels. Below the display, they see a reader rail low enough for kids and high enough for adults with a mix of interactives and exploratory elements. At the end of the gallery, an entryway invites visitors into a second exhibit space with a second mixed reader rail just beyond a funky, bright orange, kid-height table with hands-on interactives and big pullout drawers. The family can see that this is a playful space with something for everyone and for all of them to explore together.

The decision to strike such a first impression was partially based on Moey's informal observations of prior work. For example, at Thatcher State Park, exhibit designs feature timelines, text-heavy graphics, and muted tones that suit its adult target audience

and geology content. One section of the exhibit, however, is different. It is a sculpted, fully immersive bat cave with tactile and audiovisual elements inside. Moey staff have observed that families with children typically head straight for this cave. Similarly, at Green Lakes State Park, designs include a pair of reader rails along the perimeter. These are colorful and feature a mix of interactives. Moey has observed that school groups – kids with adult teachers and chaperones – tend to gravitate to them. Our assumption is that as soon as intergenerational visitors enter these spaces, they decide what's "for them" and what's not, based on first-glance cues. Color and obvious opportunities for interactivity are two important ones. We brought this thinking to Minnewaska and created an everyone-is-welcome atmosphere that pops with exciting colors and distributes hands-on elements throughout the space in easy-to-spot locations.

Make It Multidimensional

We further emphasized Minnewaska's everyone-is-welcome appeal by adding depth where flatness is expected. The intention is to make the displays surprising in a way that delights both grownups and kids. Moey's first experiments with this were at Hallock and Green Lakes State Parks. At Hallock, Moey created a wall display that mixes photo panels and artifact cases. The fronts of the cases compose a first layer of depth; the panels on the wall the second. This layering does achieve some exciting dimensionality, but Moey staff has rarely seen grownups and kids investigate it together, possibly because its look and content are geared to Hallock's adult target audience. Meanwhile, the intergenerational-appeal reader rails at Green Lakes also defy their own flatness. Flip books, tactile displays, and graphic panels are assorted on top while media elements and artifact cases are embedded below. Kids and grownups who visit the mixed rails generally explore multiple elements together.

For the Minnewaska wall displays, we took our own Hallock example and, along with

Fig. 2. Displays are built out and otherwise dimensionally constructed to avoid flatness and inspire interest and exploration.



color, added more than two layers of depth. In one display, we even built out the wall so we could backlight the photos and text panels and vary their depth more effectively in relation to the artifact cases (fig. 2). We also applied Green Lakes' lessons toward Minnewaska's reader rails, giving them more dimensionality as well. Magnifying lenses stand tall on the rails over specimens to examine. Flip books and other hands-on elements complete a layer closer to the rail surface. Artifacts compose yet another layer, and some of them are mounted above the surface while others are embedded below, and so on. The variety provides some excitement that is intended to keep kids and grownups making and sharing discoveries.

Make It Simple

Another interesting observation at Green Lakes is that while mixed-age visitors engage together at the rails, they do so less at the exhibition's centerpiece, which is a large table with a topographic model on top and interpretive pullout drawers on all sides. What Moey staff has observed here is that visitors of different ages do interact with the drawers, but by and large it's adults who explore the content. Kids tend to open and close the drawers and move on. One possible reason is that the presentations inside are somewhat dense with information.

In planning for Minnewaska, we combined these observations with ones we made at Grafton State Park, where the 500-square-foot exhibition is built into a sculpted nature scene. It includes a very popular live turtle tank and a handful of hands-on interactives, including block puzzles, a matching game, and a spinning ecology wheel. Moey staff has observed more instances here of grownups and kids engaging together. It's likely that the familiarity of the interactive elements is partly responsible. However, this sometimes outshines the delivery of the content. For example, in one of the matching games visitors must spin two seven-sided drums to match images of the forest in different eras with animals that would have commonly



Fig. 3. Flipping a tactile, 3D-printed pine cone is one example of how interactives and other elements present whole, color-coded stories through diverse modalities.

been found in them at the time. The interactivity is simple, but the messaging is fairly complex. It brings together time, place, evolution, and habitats, and adds a roll-the-dice component to all of it. It's probably a lot for kids to comprehend, for adults to explain, and for both generations to talk about together. At Grafton, Moey observed kids spinning the drums on their own without attempting to make matches.

Simplifying, or "lightening up" the interpretive content, as Lynn Dierking puts it, was a leading strategy in creating interactives at Minnewaska. Additionally, we positioned them as chapters in greater stories in order to scaffold the social learning and constructive conversations that interactives can inspire.⁹ For example, when visitors engage with an interactive on a mixed reader rail, such as a flip-able pine cone, they notice that it is color coded to match a cluster of elements on the rail and display wall (fig. 3). In this case, the pine cone is grouped with orange elements that together tell the story of how



Fig. 4. A brightly colored table is packed with 15 interactives for families to explore together and relate to overall exhibit themes.

Good interactives can make a big difference in a family's exhibition experience.

natural forces have shaped the Minnewaska landscape over many millennia. The pine cone itself is actually two 3D-printed models on either side of a plate visitors can turn like a waffle iron. On one side, labeled “before fire,” the pine cone is closed. On the other, labeled “after fire,” it is open, demonstrating that pitch pines need fire to release their seeds. Beside the flip-able pine cone, visitors see an orange graphic panel with photos of controlled burns at Minnewaska and the healthy forest regeneration that follows them. And in the orange section of the display wall, they see a large-scale photo of a recent forest fire in the park. Together, these simple, digestible pieces compose one chapter in the orange-coded natural forces story. Each one is an entry point for kids and grownups alike to recognize, ask about, and explain.

Similarly, we simplified messaging in a table with drawers like the one at Green Lakes. In this case, however, we prioritized the younger audience and filled the tabletop and drawers with interactives, including a marble-maze version of the park's trail map, mechanical animations of animal gaits, tactile models of trees parts and rock formations, and a Viewmaster-style “Birds of Minnewaska” slide show (fig. 4). As Lynn Dierking puts it, “When content is delivered in a fun way, kids are engaged and adults feel

more comfortable facilitating their child's play.”¹⁰ This was our assumption as well, that shifting the audience of the Green Lakes-style table would not only reach more kids, but more grownups too, and in collaborative fashion. Additionally, each interactive connects with a central theme in the Minnewaska exhibit. The trail map relates to outdoor recreation, the animal animations to ecology, and so on. Grownups and kids can bounce between the table and the exhibit and make these connections together.

Because interactives are fun, it can be easy to lose sight of their impact. Good interactives can make a big difference in a family's exhibition experience. People look to them to promote talking and doing things together, and they frequently view them as the best way to learn. Furthermore, visitors acquire short-term learning from them that transforms over time into social learning and long-term self-awareness in relation to exhibit messages.¹¹ This can be especially important for State Parks, which rely on public support in many ways.

Be Smart With Digital

Parks was clear from the start that it wanted to minimize screens and technology, so we only employed them where they really made sense. As with the hands-on interactives, we integrated these into scaffolded stories. We also made sure to keep their delivery simple, which can be difficult since digital interactives are capable of doing so much. Again, we looked to observations from Green Lakes, where it was helpful to compare two digital components. The first is a library of 20 videos across six very broad categories, such as, “Wildlife” and “Meet The Scientists.” Visitors can tap to open a category and then play a video. The second is a Mutoscope-inspired presentation of archival photographs.¹² Seen one at a time, they tell a history of the park across their captions. The screen is set in a box. A spindle onscreen appears to hold the photos in place. When visitors press physical buttons nearby, the photos flip over the spindle, revealing the next one, and so on, going forward or backward.

Between the two, the Mutoscope is more of a favorite with young audiences. Moey has observed school groups clamoring for a chance to operate it or watch the person doing so. Continuing with the same notion that Lynn Dierking has, that when kids engage, their grownups engage with them, we added a Mutoscope to Minnewaska (fig. 5). We also simplified it by narrowing its content to a single story: the rise and fall of two resort hotels that once overlooked Lake Minnewaska. We knew from early conversations with project supporters that this story was of interest to people in New York’s Hudson Valley, home to 50 to 57 percent of Minnewaska visitors.¹³ We also knew that stunning

collections of hotel photographs happened to be available, including many already held by the park. Based on Green Lakes, we imagined the mutoscope would do well with intergenerational audiences, but as with the flip-able pine cone example, we bolstered the experience with several more entry points, including a small display of hotel artifacts, tactile artifacts used for resort carriage road construction in the 1880s, and large-scale photographs of hotels and carriage roads on the display wall. All of these are color coded in gold to support the overall human history narrative of Minnewaska.

We also modified the tap-to-play video element from Green Lakes for the Minnewaska exhibition. A strong possibility for why the element captures fewer family groups at Green Lakes than it could is the amount and arrangement of its content: 20 videos across six marginally related categories. It’s easy to imagine that visitors



Fig. 5. A Mutoscope-like viewer provides a fun-to-use history of two hotels that once stood on park land.

simply don't know where to start. For Minnewaska, we simplified things again by narrowing down choices. We produced a touchscreen that merely invites visitors to tap one of four animals to learn more about it. The animals appear in big pictures, and by tapping one, visitors immediately open a single video of the animal in action, accompanied by a brief template of basic facts, such as diet, habitat, and life span. Visitors also find the animals in taxidermy on the display wall, which is color coded per the natural communities the animals inhabit and support. Additionally, visitors can touch replicas of the animals' signature skeletal features, such as beaver teeth and a rattlesnake rattle. While none of these engagements alone are multimodal, as the USS Constitution Museum strategies recommend, they do together offer multimodal entry into a shared area of content. Young people and grownups can start where they're interested and easily find places to overlap their learning.

Continue the Dialogue

Coming back to the main goal of twin-orientation – geographic and intellectual – the true guiding objective at Minnewaska is to help people leave the exhibition that we worked so hard to get them into. As with any exhibition, the team here shared a vision of visitors continuing their dialogue on their way out the door. In the case of Minnewaska, and in other parks, that dialogue is immediately applicable. Visitors will use what they learned in their very next experience together. The team agreed that a material takeaway could help young people and grownups keep talking on the trails.

To achieve this, we took a successful interactive from Thatcher State Park and slightly modified

its content and form. The interactive is a set of embossers that kids can easily operate. At Thatcher, the embossers are distributed throughout the visitor center in a kind of scavenger hunt. Kids find them and make impressions of fossils on a graphically organized page. In Moey observations, young visitors often show the impressions to their grownups after making them.

Similarly, for Minnewaska we designed and fabricated six embossers and distributed them around both galleries (fig. 6). While the fossil impressions made sense at Thatcher, where geology is the main subject matter, they weren't going to work for Minnewaska. The team debated a few possible replacements and settled on leaves and needles from deciduous and evergreen trees. We also agreed the impressions should be made in a sturdy, pocket-size booklet that families can take with them on a hike (fig. 7). Each leaf or needle gets its own page with a title and caption, and visitors see a note encouraging them to look for the items in the outdoors. In this way, the scavenger hunt continues out on the trail, where kids literally carry knowledge to share with grownups.

More Research Required

The Lake Minnewaska Visitor Center officially opened in October 2020, but, due to COVID-19 restrictions, without interactives and tactile elements available to the public until July 2021. At this time, Moey has had one opportunity to visit and make informal observations, and a few additional opportunities to check in with park staff about anything they may have seen.

When Moey visited in July, we did see a few families with kids in the visitor center. This even though it was a weekday with extreme

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Fig. 6. Six embossers distributed throughout the exhibit impress relief images of leaves and needles in a booklet families pick up at a staff desk.



Fig. 7. Booklets with embossed impressions visitors made themselves in the exhibit can be carried into the landscape as a shared natural observation guide.

fog that probably deterred more than a few enthusiasts (our group hiked to a clifftop vista and saw nothing). Each family in the visitor center did move through the exhibits together as a unit. They used both hands-on and digital interactives together, and did appear to talk about their experience with one another. Grownups played with their kids at the table with the pullout drawers, engaging with multiple interactives, and we overheard one conversation in which a boy expressed his discovery that Minnewaska is a good place to see birds (it is in fact an officially designated New York State Bird Conservation Area). We also observed two families using the embossers together. In both, grownups showed their kids how to make the first impression. The kids took off after that, making their own and returning as predicted to show their grownups. These observations mostly comport with follow-up conversations with Minnewaska staff, who shared that both kids and adults enjoy the embossers and that kids tend to engage with the drawers-table for significant amounts of time.

That said, a formal study would be worthwhile at Minnewaska, and would be useful for the museum field. It could shed more definitive light on what works for families and what can be improved, and whether families really do venture forth from our facilities feeling inspired and informed. It could also offer insight into how institutions can better reach culturally diverse families. As Pamela Maldonado and Cecilia Nguyen plainly put it in *It's Not Just for The Children*, there is “a clear need for museums to do better” in this realm.¹⁴ They summarize a point made by Jill Stein, Cecilia Garibay, and Kathryn Wilson that “incorporating intergenerational participation is especially important” in this regard because “immigrant and underrepresented communities...are often family oriented.”¹⁵ A study at Minnewaska could go a long way here, considering that the languages heard at the park are many, including Spanish, Russian, Yiddish, French, Korean, Chinese, and Polish.¹⁶

Also, families change over time. Some return to their favorite parks year after year, with new perspectives and developing senses of stewardship. Making an exhibition that impacts a person at the age of nine, and again at 11, 14, and so on is a tall order. Designs at Minnewaska strive for this by offering open-ended experiences that can be different each time a visitor returns, and by coordinating multiple entry points into stories that can appeal to people in different ways as they age. But how do we even assess whether these ideas are working? Anecdotally, there are those adult New Yorkers who occasionally revisit the American Museum of Natural History to see the squid, the whale, and other displays of their youth. How do we plan for evolution in interpretation?

Multigenerational approaches may hold the key, especially when designed with collaboration in mind. The collaborative family needs this kind of experience. The independent family can also enjoy it as it wishes. When kids and adults both feel welcome and invited to play and explore together, the takeaways have incredible potential for immediate knowledge gains and long-term shared memories that support increased self-awareness. As attendance across New York State Parks continues to grow – which officials anticipate – it may be important to consider how Minnewaska and other collaborative exhibitions offer models for new and updated visitor centers. The same may be true for museums and other cultural settings, as well. By designing collaborative experiences in exhibitions museums can more effectively reach multigenerational audiences today and empower them with learning in our treasured institutions for many years to come. What they take home together stays with them for a lifetime. ■

- 1 For more on this touring exhibition of portraits of U.S. President Barack Obama and First Lady Michelle Obama, see: <https://npg.si.edu/obamaportraitstour>.
- 2 Lynn D. Dierking, “The Family Museum Experience: Implications from Research,” *The Journal of Museum Education* 14, no. 2 (1989): 9–11, <http://www.jstor.org/stable/40478807>.
- 3 Tim Porter and Tsvia Cohen, *Learning Together* (Boston and Chicago: Boston Children’s Museum and Chicago Children’s Museum, 2012), <https://www.bostonchildrensmuseum.org/sites/default/files/pdfs/Learning-Together.pdf>.
- 4 *Understanding Our Visitors*, Collaboration for Ongoing Visitor Experience Studies (COVES), 2018, http://www.understandingvisitors.org/wp-content/uploads/2018/10/COVES-FY18-Aggregate-Report_spreads.pdf.
- 5 *Engage Families*, USS Constitution Museum, 2021, <https://engagefamilies.org>.
- 6 BKS Architects, January 20, 2022, <https://bkskarch.com/work/minnewaska-state-park-visitor-center>.
- 7 “A Look At Who’s Visiting Minnewaska State Park Preserve,” *Pulse of the Parks*, Open Space Institute’s Alliance for New York State Parks, 2015.
- 8 Ibid.
- 9 John H. Falk, Carol Scott, Lynn Dierking, Leonie Rennie, and Mika Cohen-Jones, “Interactives and Visitor Learning,” *Curator: The Museum Journal*, 47 (2004): 171–98.
- 10 *Engage Families*, USS Constitution Museum.
- 11 Falk, Scott, Dierking, Rennie, and Cohen-Jones, “Interactives and Visitor Learning,” 171–98.
- 12 The Mutoscope was a single-viewer motion-picture device patented by Herman Casler in 1894. See Karen Fishman’s Library of Congress blog post, *Happy 125th Birthday to the Mutoscope!*, November 21, 2019, <https://blogs.loc.gov/now-see-hear/2019/11/happy-125th-birthday-to-the-mutoscope>
- 13 “A Look At Who’s Visiting Minnewaska State Park Preserve”; Randall Gross, *Minnewaska State Park Preserve: Intercept Survey Findings* (Randall Gross/Development Economics, 2014).
- 14 Pamela Maldonado and Cecilia Nguyen, “It’s Not Just for the Children: On Engaging Culturally Diverse Families at Museums,” *Curator: The Museum Journal*, virtual issues, September 27, 2020, <https://curatorjournal.org/virtual-issues/its-not-just-for-the-children-on-engaging-culturally-diverse-families-at-museums>.
- 15 Ibid.
- 16 Randall, *Minnewaska State Park Preserve: Intercept Survey Findings*.