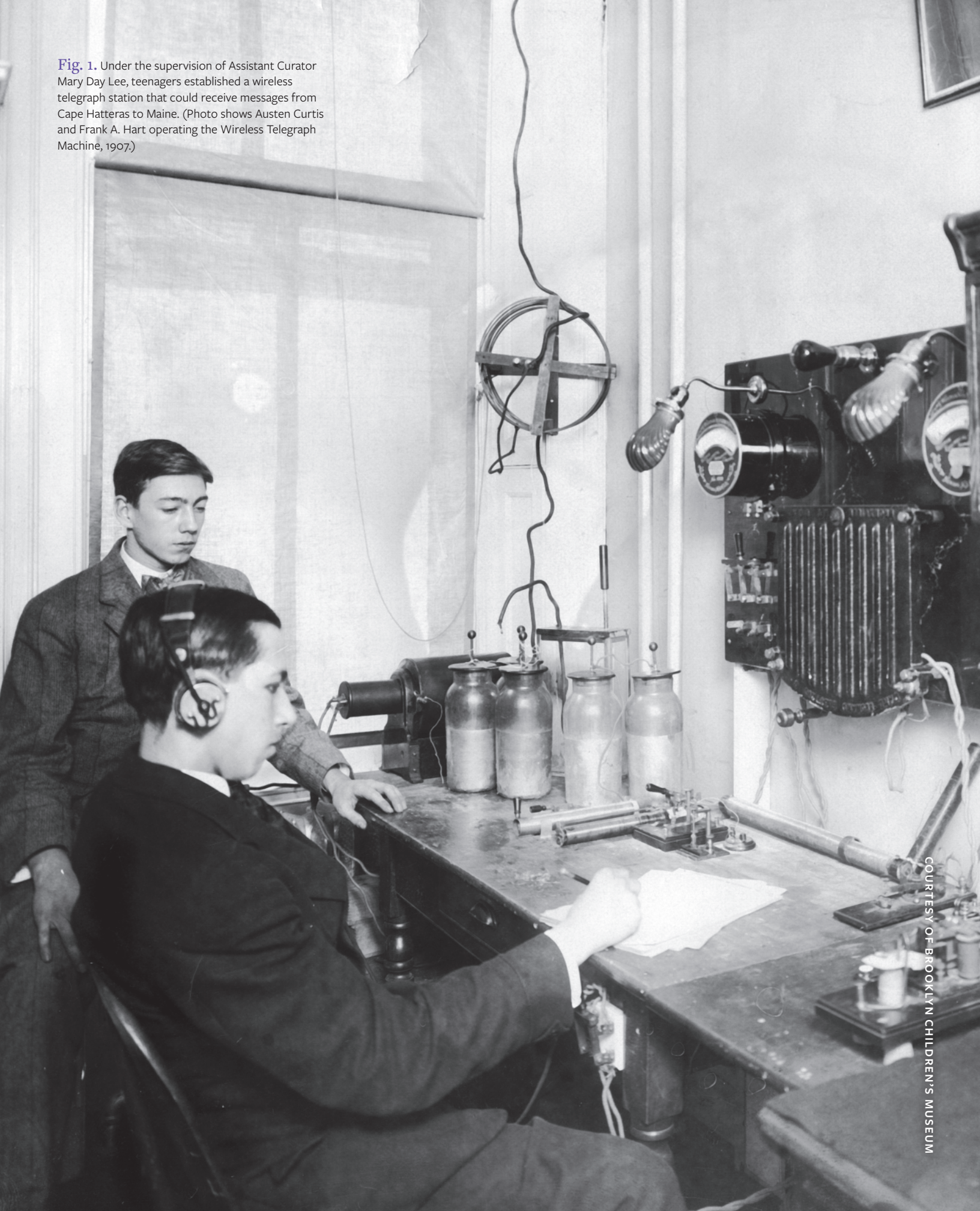


**Fig. 1.** Under the supervision of Assistant Curator Mary Day Lee, teenagers established a wireless telegraph station that could receive messages from Cape Hatteras to Maine. (Photo shows Austen Curtis and Frank A. Hart operating the Wireless Telegraph Machine, 1907.)



# 100+ Years of FUN

## An Abbreviated Timeline of Innovation, Inspiration, and Trailblazing in Museums and Exhibitions

Cheryl Bartholow

Before 1899 – when the world’s first children’s museum opened – museums had probably never been associated with the idea of FUN. A century later, FUN had thoroughly infiltrated museums (along with innovation, experimentation, and participation)...and children’s museums led the way.

The first children’s museums were object-based, like their traditional counterparts, but they were born from the realization that children learn differently than adults. These new museums offered many of the same topics as traditional museums, but in ways that would appeal to children, employed a child’s perspective, and were based on progressive educational theories.

The world’s first children’s museum was the Brooklyn Children’s Museum in New York. Within one year of its opening in 1899, visitors were coming from

around the country to check it out and to plan their own. By 1925, more new institutions had opened: the Boston Children’s Museum (1913), the Detroit Children’s Museum (1917), and the Children’s Museum of Indianapolis (1925).<sup>1</sup> These early pioneers began in former mansions, carriage houses, or even classrooms. They began with a desire to augment teacher resources and to provide children with access to touchable collections, tools, and live animals (some collected in outings at local parks). They encouraged children to follow their own interests. Classes and clubs formed around those interests, which meant that topics broadened. For example: members of a club for wireless telegraph enthusiasts (fig. 1) who trained in their hobby at the Brooklyn Children’s Museum were able to secure employment with commercial companies.<sup>2</sup>

What follows is a highly subjective, by no means comprehensive, look at the first 100+ years of fun in museums in the United States. It’s a highlights reel, or a snapshot album, of innovative, inspiring, model-changing – oh, and FUN – exhibits.

These examples of experimentation stand out because they moved forward the idea of what it meant to help children and families learn in a museum, and they have significantly helped change the notion of what a museum could be. These museums imagined something different: a different way of interacting or participating in a museum; a different way of engaging audiences. They explored different spaces, trusting that coming up with something different was okay to try.



# 1899

## Brooklyn Children's Museum

New York

### The first museum for – and run by! – children

When it opened in 1899, the Brooklyn Children's Museum allowed access every day, all day. Natural history collections (fig. 2) and models were available to

handle and share, and older children taught the younger ones. The degree of children's autonomy and involvement in museum activities was unique at that time. Thousands of children (an astounding 400,000+ in 1929<sup>3</sup>) swarmed two old mansions converted into learning spaces.

Children seem to have always been partners in running the museum. An article in the October 4, 1942, *New York Times* titled "A Museum Run for and by Children" described just how true that was.<sup>4</sup> That year, when the Depression-era Works Progress Administration (WPA) was being disbanded, the museum

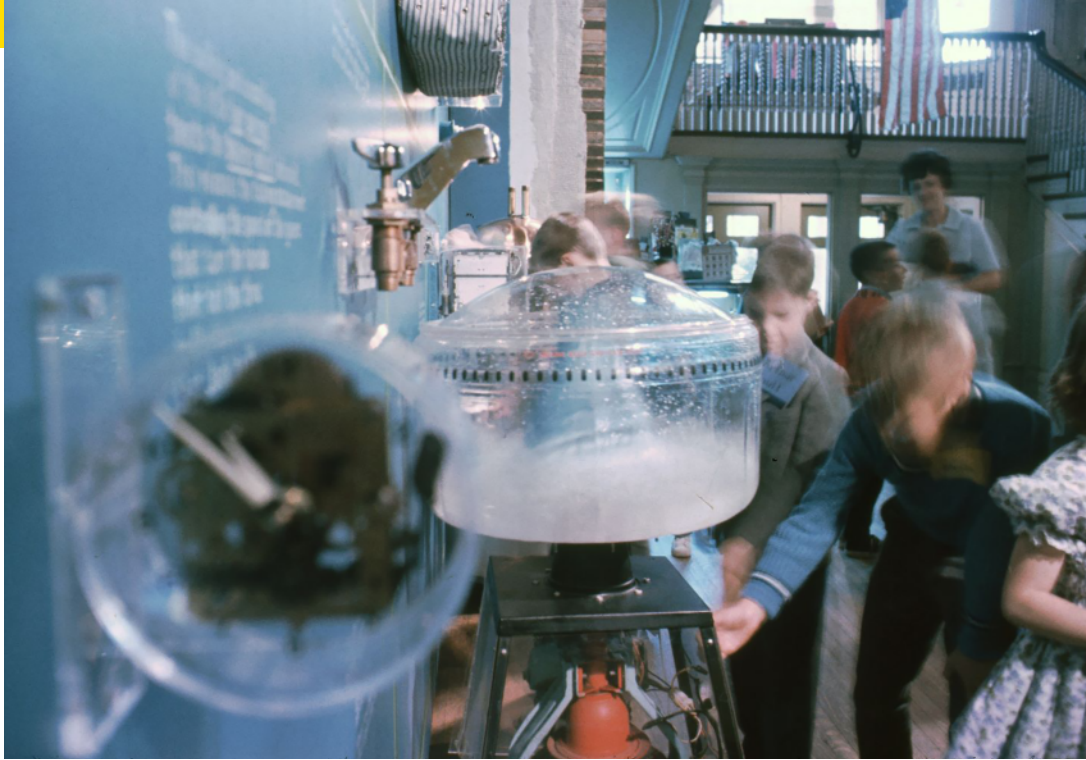
lost 65 workers, leaving just eight staff "to run two buildings full of exhibits (some of them alive), with children swarming at the rate of hundreds a day – on Saturdays thousands." When staff planned to cut hours, the children countered that they could look after the animals, run the printing presses, make mountings, fix lab equipment, and teach the younger children. Children ages 8 to 16 filled out applications for jobs, and along with the adults, continued to run the museum at full capacity. The chief curator reported that children had considered themselves in charge for years. Since the museum opened, "children have taken it for granted that the sign 'Children's Museum' over the door means just that." Those children and museum adults proved the idea that given the right tools and environment, children teach themselves.

COURTESY OF BROOKLYN CHILDREN'S MUSEUM



Fig. 2.

Children could handle the specimens as well as look at displays that were identified and labeled by other youth.



**Fig. 3.**

*What's Inside?* followed children's naturally inquiring minds – by opening up everyday objects for their inspection.

**1963/1979**

## Boston Children's Museum

Massachusetts

**Introduced (or at least made famous) “hands-on” learning**

Things were pretty much as they ever were when exhibit designer and educator Michael Spock (son of famed pediatrician Dr. Benjamin Spock) was hired at the Boston Children's Museum.

Like its Brooklyn counterpart, the museum's first half decade presented child-friendly collections, but they were still largely static displays. The museum was hoping to change that. Spock was “looking for a topic that would move us away from displays in exhibit cases (the visitor experience at that time).”<sup>5</sup> He created an experimental display of everyday objects, such as a washing

machine, toilet, baseball, or toaster, sliced in half and opened up in order to see inside and learn how they worked. *What's Inside?* (fig. 3) catapulted audience engagement from viewing static displays to putting your hands (and bodies) on and in them. Spock moved the visitor to the center of the experience and encouraged staff to experiment with ideas. Exhibitions on zoetropes (*How Movies Move*)



**Fig. 4.**

*City Slice* showed children what's behind, under, inside – and how it worked.



**Fig. 5.**

Exhibits and programs at the MUSE featured live animals, collections, and activities.

and *What if you Couldn't? An Exhibit About Handicaps* followed.

When a new, much larger facility opened on Boston's waterfront in 1979 (fig. 4), the object slices also got larger. *City Slice*, a three-story cutaway of a Victorian "Grandparent's House" along with a city street, was installed. *City Slice* exposed what is usually hidden behind walls – wiring, plumbing, lathe, and masonry – and let visitors compare carpentry methods as they progressed through the ages. "Grandmother's Attic" was filled with try-on antique clothing and furnishings. The slicing didn't stop at street level: Children could climb down into a sewer or view underground telephone system cables. Spock and his team continued to innovate in their new space. The city of Kyoto, Japan, gave the museum a silk merchant's house, which was reassembled within the museum by Japanese craftsmen and opened to the public in 1980.<sup>6</sup> Notably, the team took risks: each new exhibition tried out new ways of engaging children and the adults who came with them.



BROOKLYN CHILDREN'S MUSEUM

## 1967

### MUSE

(Bedford Lincoln  
Neighborhood Museum)  
Brooklyn, New York

#### **Experimental, a model for community-based museums**

MUSE (fig. 5) was the interim home, in a former pool hall and auto dealership, for the Brooklyn Children's Museum while a new building was being designed and constructed. Neighborhood families were canvassed to determine the interests for exhibitions and programs.

MUSE encouraged its young visitors to pursue their own interests: learning to play a trumpet; going on a "safari" for geological specimens; trying on costumes from around the world; or learning about live animals. It was "open day and night," observed a *New York Times* article, "and has become a community gathering/learning place that brings programs of excellent quality...so that the exhibits and activities are a true reflection of the needs and aspirations of the community."<sup>7</sup> As one of only a few community-based museums across the country, it informed the new experiences at the new children's museum and also served as a model for smaller community museums.

1969

## The Exploratorium

San Francisco, California

**Playful explorations  
of phenomena,  
blending science and art**

Founded by educator and physicist Frank Oppenheimer in 1969, the Exploratorium's first site was in San Francisco's cavernous Palace of Fine Arts, whose interior was like an airplane hangar (fig. 6). The exhibits explored phenomena and perception from both scientific and artistic perspectives. Visitors could watch staff as they built (and repaired) exhibits. They could also test exhibits at the earliest stages; staff brought them to the floor and adjusted them based on visitor feedback. Because most but not all

exhibits could be manipulated by visitors, the museum trained high school students as "Explainers." They demonstrated those exhibits that required it, answered visitors' questions, and made quick fixes. The Exploratorium also published a series of manuals titled *Exploratorium Cookbooks*, with "recipes" that explained how the exhibits worked – essentially open-source details of how they could be constructed – thus influencing future exhibits throughout the world.

JON WILSON, © EXPLORATORIUM, WWW.EXPLORATORIUM.EDU



**Fig. 6.**

Exploratorium floor  
in 1971.



Fig. 7.

Inside the Neon Helix People Tube at Brooklyn Children's Museum. As visitors walk through the tube, the arcs of light change colors.



ESI DESIGN

1977

## The New Brooklyn Children's Museum

**The building itself is where the FUN is**

“A Funhouse Built in a Fun Structure” was the headline in a *New York Times* article by architecture critic Paul Goldberger, who described the new museum as a “wildly exuberant structure that is itself the best exhibition of all.”<sup>8</sup> Architects Hardy-Holtzmann-Pfeiffer Associates’ design broke all the rules. To add rather than detract from its neighboring park, they covered a two-story concrete box with earth and buried it beneath a hill. At the top of that hill was the entry – a refurbished 1907 trolley-car kiosk that evoked the

borough’s transportation history. Once inside, visitors descended its four levels through a series of corrugated-steel drainage culverts – next to a running stream (fig. 7). The industrial look, which featured wood timber construction for its interior walls, brightly painted mechanical pipes,

a round gas storage tank used as an auditorium, and a huge freeway sign suspended over the rooftop play yard, communicated that this was not your typical museum.

The architecture was also the perfect backdrop to the “participatory learning environments,” as the

Fig. 8.

Each module in “Curved Space’s” structure represented a 16-billion-times enlargement of a diamond crystal. It also replicates a soap bubble froth.



PETER JON PEARCE



new exhibits were called, which included a steam engine, a windmill, and the unique sculptural climber “Curved Space,” designed by product designer and inventor Peter Jon Pearce (fig. 8) that allowed children to climb from one level to another. Common spaces, indoors and out, held the performances, classes, and programs inspired by MUSE. The reimagining of the museum’s building and its exhibits broke so many molds – exploding what galleries should look like, opening up park space, and creating a maze of discovery.

**Fig. 9.** Since its beginnings, *PlaySpace* supported parents, as well as children’s learning.

## 1979

# PlaySpace

Boston Children’s Museum

### Something for every age

Creating a safe, nurturing learning environment dedicated to preschool children was revolutionary, even in a children’s museum setting. What began as a temporary experimental exhibition,

*Before You Were Three* (1978), evolved into the first *PlaySpace* and its subsequent versions (fig. 9).<sup>9</sup> Its champion, Jeri Robinson, kept a focus on adult caregivers – their comfort, access to information, and their need to find a supportive environment – as well as the development and physical needs of children age four and under.<sup>10</sup> *PlaySpace’s* influential, guiding idea was that spaces in museums can be designed to support all visitors. Tot spaces are now found in nearly all contemporary children’s museums.



BOSTON CHILDREN’S MUSEUM





Fig. 10.

Raceways encouraged childrens' experimentation with the laws of motion.

1985/86

## Bubbles/ Raceways

Boston Children's Museum

### Open-ended experimentation

Other museums demonstrated scientific principles using bubbles. Boston's bubble exhibition let children actually make the bubbles, and in encouraging them to do it in different ways, to find the meaning for themselves. *Raceways* (fig. 10), opened a year later, provided various challenges that were intuitive in their design: inviting you to ask "what if"; pick up a ball and let it roll; and experiment.

Fig. 11. At Macomber Farm, the animals' senses are used to grant visitors the perspective of farm animals. This station of ocular differences changed the way that visitors saw animals.

The activities were first developed by scientist, artist, and staff member Bernie Zubrowski with students in after-school settings. These designs were the opposite of so-called "interactive" exhibits that largely involved pushing a button to produce a predetermined effect. Later, the museum began selling the plans for *Bubbles* and *Raceways* to interested museums and science centers, where they have become staples. The enduring legacy of these exhibitions are the intuitively designed activities that encourage open-ended exploration.

1981

## Macomber Farm and Education Center

Framingham, Massachusetts

### "See-like-a..." exhibits help children change perspective

Launched by the Massachusetts Society for the Prevention of Cruelty to Animals with the goal of sparking interest and concern for the welfare of farm animals, Macomber Farm helped visitor see with a new lens. Visitors could put on headpieces with lenses (fig. 11) that adjusted their vision to see the way animals see: the 80-degree visual field of a chicken, or the 270- to 330-degree visual field of a

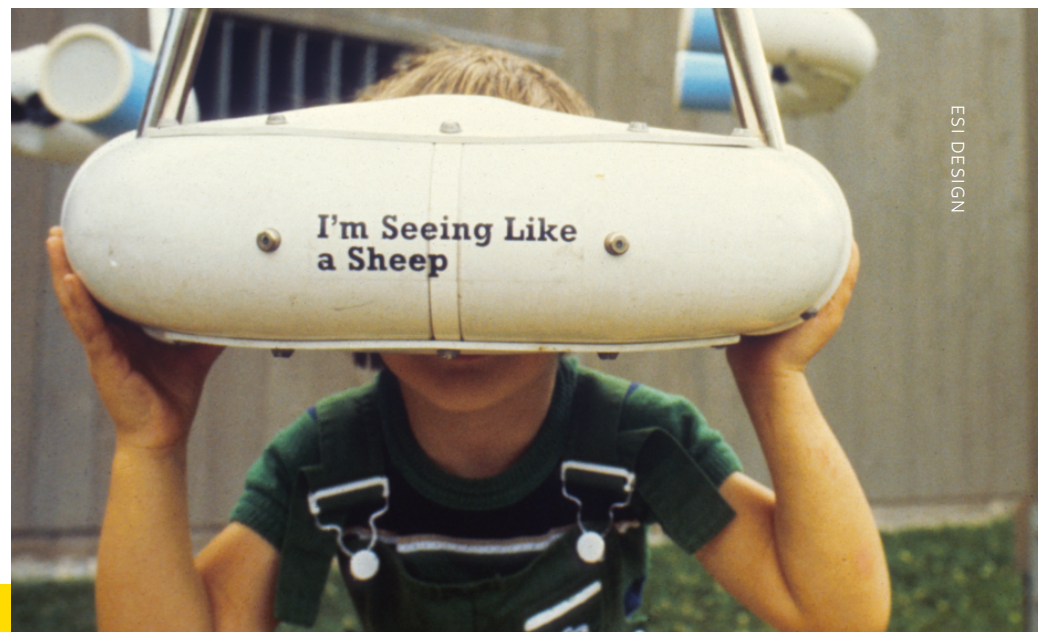


Fig. 12.

*Innovation Station* in Henry Ford Museum was a people-powered, multi-station interactive that required visitors to strategize and collaborate.



THE HENRY FORD

sheep with its rectangular pupils (humans average 155 degrees). The farm “that makes people care” also demonstrated energy transference with a solar-heated reception area and a methane generator that used cow manure to produce methane gas for the farm’s tractors.<sup>11</sup> Despite its success, the center closed after five years, but since then, the technique of allowing visitors to literally try on a different perspective has been widely used. Who hasn’t seen like a bee?

## 1991

### ***Kids Bridge***

Boston Children’s Museum

#### **Hard topics that kids wanted to hear about**

The Boston Children’s Museum began introducing difficult topics in exhibitions on disabilities and death that helped children voice their questions and helped adults to talk with them. *Kids Bridge* tackled identity, belonging, and racism. “All About You” stations first focused on the individual, and then invited visitors to explore what they all had in common. A wall of small, look-in dioramas held artist-created vignettes that depicted cultural celebrations. But the exhibition didn’t skirt racism, giving voice to elementary students

as they recounted on interactive video personal incidents of discrimination, among them name-calling, bullying, and exclusion based on ethnic identity. Other students offered ways that they might respond to each incident. Smithsonian Institution Traveling Exhibition Services sponsored a version (1992 to 1997) that toured the country. *Kids Bridge* was a trailblazer for other exhibitions seeking to engage, support, and validate children’s experiences with discrimination.

## 1992

### ***Innovation Station***

The Henry Ford Museum, Dearborn, Michigan

#### **People working together**

Visitors (30 of them!) worked together to send thousands of color-coded balls through a series

of contraptions around a 3,200-square-foot exhibition (fig. 12). Facilitators guided competing teams of visitors as they worked to move the balls from “energizer” stations (26-foot-tall augers powered by exercise equipment) to overhead tracks, to distribution stations, and finally to sorter stations where more visitors turned cranks and levers and used pulleys and tools to further separate and sort the balls. Large banners asked teams to “Make connections,” “Find a way,” “Make mistakes,” or “Try again.”

The exhibition, which closed in 2002, was truly participatory. To operate this gigantic, people-powered machine required that visitors not only work and communicate with each other but also observe and see the big picture as well as the individual parts. This exhibition, designed for collaboration, proved that the whole can be greater than the sum of its parts.



1997

## The City Museum

St. Louis, Missouri

### Art as interactive (climbable) exhibits

Artists Bob and Gail Cassilly opened the City Museum (fig. 13) in an abandoned shoe factory in downtown St. Louis in 1997. They utilized salvaged

architectural remnants (including the planetarium dome from the St. Louis Science Center) and mosaics featuring fantasy creatures in imaginative environments that invited visitors to explore a labyrinth of caverns and creatures, slide down multistory slides, enjoy a performance of a resident circus, or join local artists as they demonstrated their crafts in Art City, their studios within the museum. The museum challenges ideas of risk taking as it celebrates a unique community vibe and the singular vision of its artist founders.



CITY MUSEUM

Fig. 14.

The immersive landscape of the *Valley of the Unknown* held the activities and clues needed to solve the challenges of this multi-visit adventure.

1999

## Adventure into the Valley of the Unknown

COSI (Center of Science and Industry), Columbus, Ohio

### Immersive, game- and role-playing experience

Decades before “escape-the-room” spaces and mystery weekends, the Center of Science and Industry (better known as COSI) created an immersive, multiplayer adventure. Upon entering, visitors embarked on a search for the Treasure of Knowledge, which was hidden somewhere in the nearly 9,000-square-foot *Valley of the Unknown* (fig. 14). Caverns, shrines, temples, dig sites, statues, and more (so much more) held the clues to finding the treasure. Visitors could decode messages, dig to uncover skeletons, discover optical illusions, or solve simpler challenges that would reveal more

Fig. 13.

One of the first installations at City Museum was a bow whale that “swallows” an accessibility ramp between the floors.



excitement – a laser maze, doors that opened to secret chambers, or a swinging bridge over a pit. The casual visitor could simply visit the exhibition, enjoy its otherworldly beauty, and explore the activities. Or, they could imagine themselves in the roles of archaeologist, mathematician, and scientist as they used questioning, reason, observation, inspiration, and a lot of perseverance to solve a remarkable experience. The exhibition was complex and challenging, and the museum sold annual passes to accommodate the multiple visits needed to complete the adventure.

Opened in 1999, *Adventure* closed in 2004 due to budget cutbacks, but reopened in 2010 and ran through 2016. It was truly awe inspiring because it didn't hold back. It threw everything at an experience that supported problem-solving, long-term engagement, and developing science skills – and it was FUN.

This quick trip through the decades of FUN highlights some key innovations that paved the way for a major change in the way all types of museums viewed their audience and approached exhibitions – welcoming the whole family, playful learning, embracing challenging topics, open-ended exploration – and have succeeded in making the audience central to the experience.

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