Visitors are rewarded for pledging to take action against climate change with stickers they can decorate on a pledge wall as they go, physically demonstrating that we are not alone in the fight against climate change.



The Climate Museum

Taking Action

A temporary exhibition (June 7–October 27, 2019)

A critique is a writer's professional and personal assessment of an exhibition, formed without consulting its creators, and shaped by his or her expertise and experience. Its audience is the profession. Each issue of the journal features a critique of a current or recent exhibition.

Acting with Hope

Leah Golubchick

As a science educator, I once met a scientist who collected meteorites and moonrocks scattered on the ice sheets of Antarctica. I asked him how his work was affected by climate change. He told me it's not the science that we need to worry about, it's the society that is able to support scientists that is the biggest threat of climate change. We can't do science if we are unable to survive the challenges that lay ahead. This summer, the Climate Museum installed a temporary exhibition on Governors Island in New York Harbor. The island is a unique site that has risen into a high-profile destination for New Yorkers over the last years. Just 800 yards off the southern tip of Manhattan, it was a military base from 1783 until 1996. In 2005 it was opened for public use, accessible by a revitalized harbor ferry system. Twentytwo acres are operated by the National Park Service, with the remaining 150 acres under the jurisdiction of the Trust for Governors Island. Today, the island is one of New York City's most distinct parks. Famous for its annual three-day outdoor music concert, the Governors Ball, the island is host to artists and temporary galleries, organizations focused on science education and research, including the Billion Oyster Project, and a high school for teens focused on nautical skills and marine preservation. Governors

Island is a fitting location for a conversation on climate change and how to create a future for a water-bound city, and I was curious about how the Climate Museum, within this unique environment, would approach engaging the public on a topic fraught with political discourse and experimental solutions.

The Climate Museum is a nonprofit organization; it creates installations that teach the world about the current threat we are under. Its mission is action-focused, moving beyond simply educating the public to spurring people into doing something to make change. As described on their website,

The Climate Museum is catalyzing a cultural transformation around climate, inviting people from all walks of life into the conversation and building community around solutions. Transcending traditional disciplinary and societal boundaries, the Museum brings people together to learn about the problem, grieve what has been lost, actively engage with solutions, and join the fight for a brighter future.¹

1 Peter S. Knight and Miranda Massie, "Our Vision," *Climate Museum*, November 17, 2019, https://climatemuseum.org/vision.

Miranda Massie founded the Climate Museum in 2015, leaving her career as a lawyer to meet a need she saw missing from climatechange research centers and groups: a broad effort to educate the public.² In the aftermath of the urban destruction wreaked by Hurricane Sandy in 2012, the Climate Museum is about New York, but is without a permanent exhibition location in the city. In many ways, this format fits well with their approach to engagement. From their writing and installations, they make clear that the solutions for climate change must be fast, affordable, and accessible to the people, solutions that can be used to address reality now. Previous installations have included Climate Signals - which used solar-powered highway signs in unusual places to display climate-change alerts - and the Climate Hub, an installation and forum on Governors Island, which served as a place to highlight individuals fighting climate change and as a meeting space for public conversations and action groups.

Taking Action was installed in a Victorian era Army officer's home in a section of Governors Island called Nolan Park, part of a row of similar homes now repurposed for arts and culture installations. Entering the exhibition is like walking into someone's home, and as you circle the three-room space you have a sense that *Taking Action* is taking the fight for climate change quite literally to the "home front."

Upon entering, you are confronted with large text explaining the goals of *Taking Action*, with three large columns of color running down the wall into arrows on the floor. Each column of yellow, blue, and green connects to a color-coordinated exhibit on how people and their governments around the world are taking action and finding climate solutions (fig. 1). The sign above clearly states, "The tools already exist. Three of the most essential are smart land use, clean energy, and energy efficiency," again, color coded to the room. Each of the three installations in this room have the same three elements: a large label explaining the national and international solutions; a map of New York highlighting the local efforts happening right now; and an interactive station to highlight a solution.

This layout is an effective way to break down a lot of information. Rather than feeling like I was reading a textbook, the pattern encouraged me to circle back and compare information across the three sections. The interactives, each facilitated by Climate Museum staff and volunteers, were fun and connected well with the message each section communicated. My favorite was the table with the section titled "Smart Land Use," featuring toy foods weighted to demonstrate their relative impact on the environment (fig. 2). For example, a locally grown New York State apple was as light as a hollow plastic toy, a banana grown in Chile was a solid paperweight, and a cheeseburger with lettuce and tomato was a heavy as a brick, surprising adults and kids alike when they tried to pick it up. This is a fun physical connection to the very abstract "weight" our food choices put on the environment.

Following the section on land management was "Clean Energy." Utilizing the sunny windows of the former parlor, small UVpowered robots jittered in the sun. A facilitator stood nearby with a solar-powered windchime that she pushed in and out of the sunlight to show how quickly solar energy could be used. There were also UV flashlights

² Lisa W. Foderaro, "A Lawyer Quit Her Job to Start a Climate Museum in New York," *New York Times*, August 21, 2015, www.nytimes.com/2015/08/23/nyregion/a-lawyer-quit-her-job-tostart-a-climate-museum-in-new-york.html.



SMART LAND USE

SMART LAND USE Agriculture—that is, food production—is one way to use land. Within agriculture, different foods have different carbon footprints. Another way to use land is to grow trees. In this image, farmers from the Humbo region of Ethiopia intersperse trees with crops, increasing carbon capture and protecting young food plants from wind, sand, and flooding, while intensely cooling the soil and the air. On a global basis, the nations and populations that have contributed least to the climate crisis suffer its impacts earliest and hardest. The reinstatement of sub-Saharan agroforestry and other precolonial and sustainable agricultural techniques represents both climate progress and social resilience. gricultural techniques represents both climate progress and social resilience



Fig. 1. The entrance to Taking Action encourages visitors to make connections between different actions being taken to solve the climate crisis.

Fig. 2. Weighted fruit gives visitors a tangible experience with the weight of their choices.

on hand for visitors to add power to the jittering robots on a cloudy day. These robots were made from kits that could easily be purchased online and built by curious young engineers. The third interactive, "Energy Efficiency," was the most elaborate. Visitors could turn a crank to create energy used to light up traditional lightbulbs, then flip a part of the circuit to turn the same crank and light up energy-efficient LED light bulbs (fig. 3). This was a familiar but easy-to-understand comparison for why certain lightbulbs use less energy with better results.

As you moved away from solutions, the second room of the exhibition examined the reasons why these solutions were not being implemented. This room was largely filled with colorful text and small flip panels that posed different questions about impediments to climate change solutions. While the installation was relatively flat and straightforward, the content was remarkable. The exhibit put the blame squarely on the parties shouted down during climate marches across the country: banks, fossil fuels companies, and corrupt politicians in debt to those corporations. The exhibit doesn't shy away from the clear influence well-financed lobbyists have on our government policies. In one panel the exhibit asks, "How much does the fossil fuel industry spend lobbying American public officials?" The answer under the flip-up reads, "Since the Paris Agreement was signed in December 2015, \$128,000,000 per year. The gun lobby spend less than one tenth this sum per year."

This section also details the difference between the time Americans spend worrying about climate change and the amount of time climate change is discussed on broadcast TV news. This section drives home the reality that while climate change is a real fear for Americans of all ages, and a steady stream of influence for our elected officials, it isn't a socially acceptable topic of conversation. Climate change is, by design, relegated to a private worry rather than a national conversation (fig. 4).

The third room of *Taking Action* tries to bridge that distance. Facilitators greet visitors with iPads[®] that encourage them to take targeted actions to address climate change. It was interesting to see technology that could have easily been used as a guest book intentionally run as a conversation. The young volunteer told us she was a high school student in New York, and became invested in the fight against climate change during the student-led "Zero-Hour" climate march of 2018 This facilitation made it hard for me to ignore the questions on the iPads, and meeting a young climate activist drove home the exhibition's emphasis on youth leadership in this conflict. Options for targeted actions to address climate action included very specific directives, including contacting a local government

Fig. 3. A young visitor with an interactive circuit board tests how much energy goes into powering a city.





Fig. 4. Taking Action's direct conversation about the role of money in the global fight against climate change is a surprising change from the tone of most museum exhibitions.

representative, learning how to switch to green energy sources in New York on your energy bill, or talking to three people in your life about climate change to break the awkward silence (including naming those three people you'll talk to). Visitors who complete this activity and provide their email for follow up by the museum receive a sticker, which they are encouraged to stick on the final wall as they exit (intro image). This last wall is a mass of overlapping stickers declaring "I Am Taking Action." As a reward for having a longer conversation, I was rewarded with a sturdier "I Am Taking Action" sticker to take home, a permanent reminder of my experience at the museum.

In my experience, a lot of public science education spends a great deal of time focusing on convincing people of the science of climate change, eventually getting around to the explanation of how we can help. *Taking Action* was a refreshing change in that it assumed from the beginning that visitors agreed that climate change is a threat. This exhibition was also refreshingly direct about the influence money and power have on politicians and mass media to slow down global efforts to stop the threat of global disaster.

During Climate Week 2019, a New York Citybased, multifaceted event to support the United Nations Secretary-General's Climate Action Summit, I had the opportunity to hear Anthony Leiserowitz speak about communicating climate change at my museum. Leiserowitz is the director of the Yale Program on Climate Communication, a research center focused on public knowledge, attitudes, and behavior towards climate change. According to the center's research, 69 percent of Americans are worried about climate change, and that number is growing every year.3 Americans are more and more in agreement that climate change is very real, but without the social support of knowing what others think about it, many are unsure of what to do. Additionally, the majority of

³ Abel Gustafson, Parrish Bergquist, Anthony Leiserowitz, and Edward Maibach, "Americans' Worry about Global Warming Is Increasing," *Yale Program on Climate Change Communication*, February 21, 2019, https://climatecommunication.yale.edu/ publications/a-growing-majority-of-americans-think-globalwarming-is-happening-and-are-worried/.

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Americans don't know if climate change will directly affect them at all. Leiserwitz summarized the research-based, best approach for communicating the reality of climate change:

- 1. Scientists agree...
- 2. It's real.
- 3. It's us.
- 4. It's bad...
- 5. ...but there's hope!

The best takeaway from *Taking Action* was a sense of empowerment relating to climate change. I thought the Climate Museum did a wonderful job of having visitors walk away with hope. Solutions are affordable, achievable, and direct. This spirit of engagement and direct action was emphasized in the exhibition design as well; decorating the walls are life-sized images of children in the School Strike for Climate of 2018, a global protest against adult inaction on climate change by schoolchildren and *Time Magazine's* 2019 person of the year, Greta Thunberg.

Across the country, science centers and natural history museums have highlighted the topic of climate change in the public eye. Installations range from interactive digital stations with climate data to see how the information scientists collect adds up to a complete picture, to digital maps and weather monitoring stations that show new coastlines with major American cities under water in 50 years. At this point, most science museums have made it clear: scientists agree – it's real, and it's us.

As Taking Action clearly illustrates, you don't need to be a large, powerful institution with an equally large endowment to engage with climate change right now. Taking Action is an inspiration for institutions to use the resources they have to spark public conversation and encourage the public to start acting now to help stop something of which we are already a part. Museums are considered the most trustworthy source of information by the American public.⁴ Examples like Taking Action are an inspiration for what can be responsibly done with that trust, and how museums can act as community spaces for important and much-needed conversations on where our society can go. Climate change is a global issue that not only threatens us as a species in the future, but is a threat right now to all of our communities. As the wildfires of California and Australia have shown us, cultural institutions cannot afford to assume neutrality will save them from the ravages of our violently changing world. I look forward to seeing future exhibitions by the Climate Museum that keep up the conversation on climate change. Every museum, national park, and science center has an obligation to be making a meaningful contribution to the conversation, regardless of budget. People who care about climate change are not alone: In action, there is hope.

4 "Museum Facts & Data," American Alliance of Museums, December 11, 2018, https://www.aam-us.org/programs/aboutmuseums/museum-facts-data/.

Leah Golubchick is Manager of Middle and High School Programs at the American Museum of Natural History in New York City, New York. All comments are her own opinion and do not reflect the stance of the American Museum of Natural History. Igolubchick@amnh.org