The square-wheeled tricycle is MoMath's most popular attraction.

Photo: National Museum of Mathematics

Problem Solved
Math museum delivers fun for adults and kids

By Nadine Matthews

Who can forget actress Taraji P. Henson's thrilling scene as Katherine Johnson, perched on a bright-yellow ladder at a ceiling-high blackboard, furiously calculating math problems in the film, "Hidden Figures"? Johnson had to come up with the calculations that would safely get American astronauts into space and back.

Those who run the award-winning National Museum of Math, or MoMath, in New York City say math is as exciting as it appears in the seminal film once we get past our fear of it. Nestled on the northern end of Madison Square Park in Manhattan's Flatiron district, MoMath is a welcoming space that aims to get both adults and children to understand that "math is really just problem solving, about thinking rationally; figuring out what will happen if I do this," as executive director Cindy Lawrence puts it.

The idea for the museum was spawned when the math-centered Goudreau Museum in Long Island, N.Y., closed in 2006. Lawrence, who worked as a volunteer at Goudreau, and MoMath's eventual co-creator, Glen Whitney, still saw a need for such an institution and with the assistance of professors from the State University of New York at Stony Brook, opened MoMath in 2012. Since then, the muse-um has welcomed more than 700,000 visitors. Most of the museum's funding comes from foundations that are run by individuals and from corporations. However, "anybody who wants to get involved can go to momath.org, and there's a link at the top where you can support us and donate. Every amount helps," Lawrence explains.

Walk through MoMath's glass doors with their bright-red, pi-shaped handles and you immediately notice a hum of excitement. There's the Dynamic Wall in the entryway generating sundry wave forms at random. Awestruck adults and children pedal Square Wheel Tricycles on a curved, undulating yellow "road," arguably the Museum of Math's most popular attraction. Some visitors are getting help from a robot to improve their free throws at the Hoop Curves exhibit. Others are designing their own three-dimensional sculptures, which museum goers vote on throughout the day. The winning sculpture is printed on the museum's 3D printer and put on display. There are more than 35 exhibits on the museum's two floors, which you access via a spiral staircase abutting the parabola-shaped, floor-to-ceiling String Product exhibit. The museum also offers lectures and special programs, such as Family Fridays, Twin Primes book club and a Roundtable series for math educators. Turning the stereotype that math enthusiasts aren't interested in being social on its head, MoMath also knows how to party! They throw "no-parents-allowed" parties for 6th through 9th graders, as well as parties where everyone is invited.

"Interpreters" in yellow shirts explain the exhibits for the wide variety of people of all abilities. "They will very quickly figure out when someone comes in how much math they know, how affectionate or disaffectionate they are towards mathematics, and they will adjust their entire explanation, description, conversation accordingly," says Lawrence.

Chandler McArthur a recent graduate of Louisiana State University with a dual major in Classics and Math was one of my tour guides. "Working at MoMath is a most rewarding experience for me because I get to communicate math to a diverse range of people from three years old to PhDs," she says.

In choosing interpreters, the key is not just to find someone who has skills in mathematics, Lawrence says. "It's finding someone who likes it enough that they're jazzed about sharing their love of mathematics with others. So if you come in and you don't have a math background you can still experience the joy of mathematics." **TNJ**