THE WALL STREET JOURNAL.

New Museum Really Adds Up

The new museum's building on East 26th Street.
BRYAN THOMAS FOR THE WALL STREET JOURNAL

By Jennifer Maloney
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Most people rarely use the words "mathematics" and "fun" in the same sentence, but Glen Whitney thinks he's come up with a formula to change that.

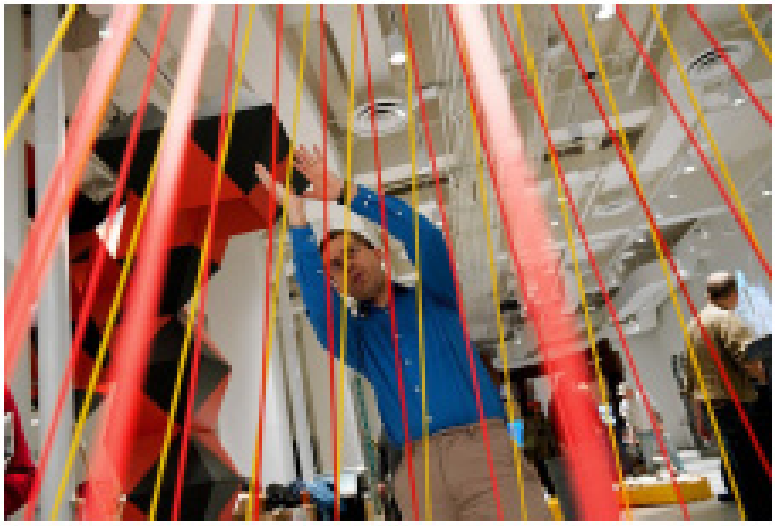
Mr. Whitney, a mathematician and former hedge-fund algorithm manager, is getting ready to unveil the sum of his past four years' work: a museum devoted to math.

It's a romp through the unexpected quirks of mathematics, with exhibits designed to turn math into play.

"You discover things that are beautiful and surprising," Mr. Whitney said. "You discover extraordinary things."

The National Museum of Mathematics, nicknamed MoMath, is scheduled to open Saturday on East 26th Street facing Madison Square Park. On a recent afternoon, construction workers and museum staff were racing to ready the facility.

As workmen put the final touches on an installation at the center of a spiral staircase, Mr. Whitney beckoned for colleagues to join him in a demonstration of a giant touchscreen embedded in the floor.

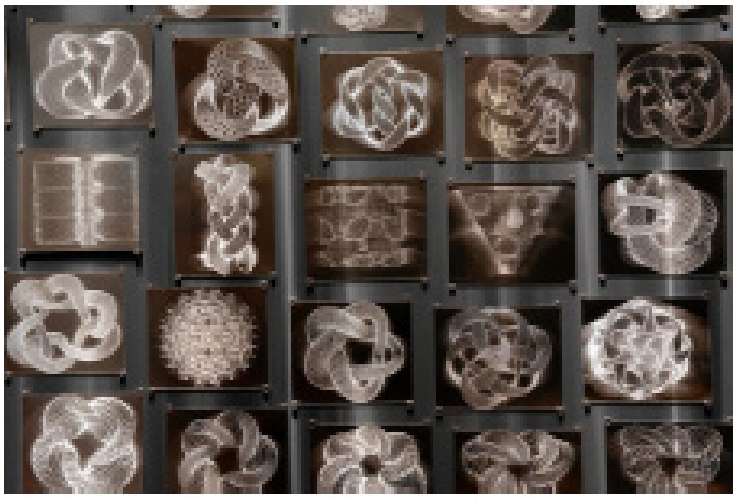


Glen Whitney explains an exhibit at his National Museum of Mathematics. BRYAN THOMAS FOR THE WALL STREET JOURNAL

Lines appeared on the screen, indicating the shortest network linking them all, looking like a brightly lighted railroad map. As the people shifted—sometimes by just inches—the lines jumped to form new routes.

It's a museum designed to surprise. Tricycles will roll on square wheels across a scalloped surface. Clear plastic cubes, when held just so in a curtain of laser light, will reveal hexagonal crosssections. And little cars on a movable racetrack will reach their destinations faster on routes that aren't straight.

Many of the activities will allow visitors, through simple tinkering, to discover a shape or a pattern that may never have been seen before.



Designs by Matthew Brand on display. BRYAN THOMAS FOR THE WALL STREET JOURNAL

"We love to build exhibits where we don't know what people are going find," Mr. Whitney said. "The fact that people are coming and discovering new things and contributing to our knowledge of mathematics—that's the biggest form of success."

Mr. Whitney, who is 43, sees math everywhere. He studied math at Harvard, then earned a Ph.D. in mathematical logic from UCLA. He began his career teaching at the University of Michigan, and in 1997 joined the hedge fund management company Renaissance Technologies as a quantitative analyst.

He quit in 2008 and raised $22 million to create the museum, striking a chord particularly with donors, he said, "who owe at least part of their success to mathematics."

The two-level, 19,000-square-foot space cost roughly $15 million to renovate and build out, he said. Construction was delayed for two weeks by superstorm Sandy, and one or two of the 30-odd exhibits originally expected to be ready for the opening won't be working by Saturday, he said.

For opening weekend, which will feature a special group construction project, admission will be $20 for adults and $14 for children, students and seniors. After that, tickets purchased online will cost $15 for adults and $9 for children, students and seniors. Tickets purchased at the museum will cost a dollar more.

Cindy Lawrence, the associate director and chief of operations at the Museum of Mathematics, with an interactive sculpture. BRYAN THOMAS FOR THE WALL STREET JOURNAL

One notable aspect of the exhibits is that they will recognize visitors by their ID tags, and will present information differently according to their familiarity with math. If a child selects a basic level in the first activity she does, the next exhibit she visits will set itself to the same level. At a puzzle station called the Enigma Café, small screens in the tabletops will offer hints.

The centerpiece of the museum is a columned structure dubbed the Mathenaeum. Mr. Whitney stepped inside and approached what looked like a crystal ball. In fact, it was an oversize glass trackball that visitors can use to design their own three-dimensional shapes.

"This is essentially your potter's wheel, if you will," he said.

Mr. Whitney selected a dodecahedron, or 12-sided polyhedron, then sliced off its corners to create a more complex shape. Now it was an icosidodecahedron, with 20 triangular faces and 12 pentagonal faces. He colored it yellow and green, then sent it to a large screen where visitors will be able to vote for their favorites.

The winning designs will take physical form in a 3-D printer, which each day will spit out eight plaster objects bound for a honeycomb-shaped display case.

Now Mr. Whitney is focused on a new number: His target for attendance is 60,000 visitors a year.

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