## Witte exhibit makes Leonardo designs a reality

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Leonardo da Vinci's multifaceted genius and influence is indisputable.

Leonardo da The "Mona Lisa" and "The Last Supper" often steal the spotlight. But it could be argued that his hand-rendered engineering visions - dreams of flying machines, walking on water, mechanical efficiency and mighty military weapons - are as aesthetically gorgeous as his most famous paintings.

The Witte Museum is betting on it.

"We've been trying to get a full-scale Leonardo da Vinci exhibit for a long time," said Marise McDermott, president and CEO of the Witte Museum.

The Witte Museum's "The Genius of Leonardo: Machines in Motion" opens Saturday and marks the American debut of the interactive exhibit, which focuses solely on Leonardo's engineering designs and features 40 full-scale operational machines based on those designs - including a suit of armor that activates when one walks near it.



"We're the first ones to have it in the United States. It's such a mind blower," McDermott said. "We're thrilled we could get it for the summer. When you say 'Leonardo da Vinci,' people snap to attention."

The exhibit runs through Sept. 7.

How big a deal is it?

"Holy cow!" said David Temple, curator at the Houston Museum of Natural Science, who oversees his museum's popular Leonardo exhibit, which features some full-size models, but mostly working-scale models. "He is perhaps the most famous man of science and letters there is in human culture. Next to Jesus, Leonardo is the most studied man in history. He's bigger than the Beatles."

San Antonio-based Evergreen Exhibitions owns the touring exhibit, which was developed in Florence, Italy. Evergreen President Mark Greenberg said visitors should be impressed by how many of the models - which are built with materials, tools and technology from Leonardo's lifetime - they will be able to operate.

"It's most of them, over 30 you can touch and turn handles and make wheels move and so forth," said Greenberg. "So, yeah, you won't be actually grinding a mirror or squeezing olives to make olive juice, but the vast majority are hands-on activities."

Within reason.

Don't expect to ride Leonardo's bicycle or fly away on his winged contraptions. The parachute is off limits, too. So is the multibarrel machine gun.

The exhibit includes "Leonardo's Workshop," where visitors can build an arch, construct a self-supporting bridge, operate a model submarine, test the flight patterns of paper birds, use a perspectograph for drawing and manipulate a small catapult.

Leonardo's brilliant sketches and inventions from the 15th century remain iconic and thought provoking in the modern era. They come to life off the page.

The new exhibit allows visitors to experience the artful engineering feats in full-scale, three-dimensional glory. Even Leonardo rarely got to see the futuristic marvels, except in his imagination.

"They are mental exercises," Greenberg said. "But people walk away thinking just how far ahead of his time the guy was. He was the foundation for these things that actually came into being. I don't think as many people know about his engineering feats as they know about the art he's created."

Temple, the Houston Museum of Natural Science curator, agrees.

"A lot of his inventions were in books, but not necessarily built as full-scale models," he said. "Many of the things in his notebooks were never built full-scale."

Leonardo often purposely put mistakes in his drawings (which were often commissioned) to prevent copying. The full-size models represent their true wonder.

"Every one of those models is an 'aha' moment," Temple said. "He was either thinking abstractly or someone had approached him with a problem."



The presentation is divided into four sections based on the machines' working applications: earth, wind, fire and water.

McDermott said the museum is braced for another blockbuster-style run. "The Genius of Leonardo" follows the record-breaking success of "Our Body: The Universe Within," which attracted 140,500 visitors in four months.

The Leonardo exhibit will be complemented by virtual reality apprentices "that are paintings sort of like in 'Harry Potter' that all of a sudden come to life and talk to you," McDermott said.

Remember the Witte's cutesy chili queens from its "A Wild and Vivid Land" exhibit?

"They're better than that," McDermott said. "They're going to pop out a lot more. We learned from the chili queens."

Young (and quite human) costumed actors also will assist visitors.

Leonardo is considered a home run in the museum biz.

"What is so amazing about Leonardo da Vinci is that he operated in brilliant spheres at every level," McDermott said. "He was a brilliant artist. He was a brilliant scientist. He knew biology. He was a brilliant engineer. And his engineering was so beautiful. These machines are aesthetically magnificent."