

PROFILE:
**Gateway
to Science**



2015 GHD total
\$48,925

In Bismarck, situated at the anatomical midriff of North Dakota and the center of the Great Plains, an education program called Gateway to Science is tapping into a natural resource more valuable than the state's incredible Bakken oil boom.

2014 GHD total
\$34,455

That resource is curious young minds, and Gateway's goal is to inspire their discovery of science through fun, "please touch," hands-on experiences.

2013 GHD total
\$9,450

Hardly a new idea. In fact, it's a throwback to an old Chinese proverb attributed to Confucius more than 2,500 years ago: "I hear and I forget. I see and I remember. I do and I understand." Translation: you must experience something to understand it.

2014 visitors
30,282

This simple concept has mostly eluded the grasp of the educational establishment despite a litany of national programs designed to encourage youngsters to pursue careers in fields like physics, chemistry and biology.

39% of those served are in afterschool programs, summer camps, preschool programs

"They're admirable efforts aimed at making science approachable and entertaining," says Beth Demke, executive director of Gateway to Science program. "It breaks my heart that it has been so difficult to achieve."

Starting with the Sputnik crisis of 1957, when the Soviet Union beat the U.S. into space by launching the first Earth-orbiting satellite, the push for practical science education continues today.

It's a mantra that has become a cliché: science matters?

Dakota Medical Foundation's Giving Hearts Day, however, is playing a part in addressing that problem, helping make what was once a small volunteer program into a major destination site in Bismarck. Started by community volunteers in an abandoned shopping mall space in 1994, the Gateway to Science program is about to become a \$30 million complex — the size of a football field if both of its proposed two stories could be spread out — on the Bismarck State College campus.

The success of Gateway to Science is reflected in Giving Hearts Day donations that keep trending upward. Their hard work raised \$34,000 in 2015, topping the \$30,000 raised in 2014. "It's been infectious, giving us and other Bismarck area nonprofits more credibility and bringing us together, seeding broad-based increase in community charity. Giving Hearts has been a lifeline for us and a boost to our new future."

The only hands-on science center like it between Bozeman and Minneapolis, the Gateway program offers children and families learning experiences disguised as play. Its gallery of 90 interactive exhibits cover subjects ranging from physics and nature to mathematics and beyond.

It also organizes summer camps, after-school clubs and family events, from the popular Family Rocket Day (Who doesn't like rockets? Demke says) to an evening adult fundraiser called Einstein on Wine (280 attended last year's event). Its annual Environmental Festival brings teachers and their students together with professionals working in science fields.

In 2005, the Gateway program moved out of the mall into space in the old Masonic Lodge, a slightly larger area at 3,200 square feet, about the size of an average residential house.

Despite cramming all 90 of its exhibits into those close quarters, the program's popularity continues to grow. Annual visitors increased from 7,500 in 1994 to 19,000 in 2014. "But our current gallery restricts the group size to 50 at a time," Demke said.

Those 90 exhibits may expand to more than 300 once Gateway moves into its new 50,000 square foot facility, taking better advantage of its proximity to explain the science of agriculture, energy, environment or weather while reaching out to a larger region. Groundbreaking is planned in spring 2015 with a move-in date two years later.

The Bismarck City Commission has already donated 7 acres of land for the new Gateway program. Overlooking the Missouri River, it will include community gathering space, an observation tower, a green roof, lab classrooms, nature trails and possibly a partially-domed theater.

The Legislature has also fronted \$5 million of the project through the Department of Public Instruction.

Why the investment? In poll after poll, the majority of high school students say science, the stuff and substance of life, is boring. Science classrooms and even labs are too often mired in rote memorization, or facts without context and theory.

"I understand the problem," Demke said. "Making science fun is hard, messy work, and doesn't often fit into mandated testing schedules in the schools. But we also need better training in this area for teachers."

Science, she said, is so increasingly relevant to our everyday lives and our future. "In a world where science and technology are advancing so fast, how can citizens expect to make wise policy decisions on such complex subjects as climate, health, energy and agriculture unless they are literate in science?"

As Demke has seen over and over in her exhibition gallery, "when you see the light bulb go off in a kid's head after pumping air into a bottle rocket launcher and then watching the rocket blast off — understanding that what he did actually caused the reaction — that's the eureka moment that drives science."

Gateway to Science
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