



Intellectual Talent

STEM Queen inspires girls to think outside the box

BY PAM GEORGE

A crisp white lab coat is an essential part of a scientist's wardrobe. Jacqueline Means, however, might pair it with a sash and tiara. The Wilmington, Del., resident is the first from her state to hold the Miss Black USA Talented Teen title.

But the 19-year-old University of Delaware student was already a state celebrity. In 2014, Means founded the Wilmington Urban STEM Initiative, which introduces science, technology, engineering and math to girls of color in underprivileged communities. Means empowers girls to embrace STEM by speaking at schools and community centers, where she conducts hands-on workshops and leads various STEM activities. She also posts instructional

STEM-related videos on YouTube.

The TEDx speaker has conducted experiments for Mario Lopez on *Access Hollywood*, made "dry-ice ice cream" on *The Steve Harvey Show* and melted metal on the CBS program *Mission Unstoppable* — all while rocking a bedazzled lab coat and pastel-pink nails.

PURSUING A PASSION

Means owes a love of science to her brother Johnny's school project: a papier-mâché volcano. Although she was forbidden to touch it, the then-7-year-old crept downstairs at night to mix baking soda and vinegar and create the "explosion." Soon, she was playing with a science kit. Her girlfriends rolled their eyes. "I'm going to prove to little girls that science is amazing," she told herself.

Means started her organization at age 12, a time when many girls experience peer pressure and self-doubt. Means was no different. "When I was in middle school, I was always a big nerd," she recalls. "It was common for people to make fun of me — not just for STEM. I liked anime and was trying to teach myself Japanese."

Her parents

encouraged her interests. "I was never good at math because I was a typical girl who didn't raise her hand — I always felt stupid asking questions, especially as a minority," says her mother, JoAnn Means. "I said to Jacqueline: 'Raise your hand. You don't want to fall behind like I did.' I want my kids to have everything in this world because I struggled."

Like her brother, Means attended the Delaware Military Academy, a charter high school, where she thrived. She says she was a cheerleader, chess club president and track-and-field captain. Determined to attend college, she entered pageants to earn scholarship money, and in 2019, she received the Miss Delaware's Outstanding Teen title.

DEVELOP, DIVERSIFY AND DESTIGMATIZE

Participating in pageants polished her public speaking skills, a valuable asset for TV appearances and landing sponsors like Wilmington-based specialty materials company Ashland.

"We are working every day around the globe to encourage a broader participation of women and minorities in STEM and STEM-related fields," says Carolmarie Brown, >

Ashland's senior director of corporate affairs. "STEM programs offer students a pathway to economic mobility."

Other financial supporters include the Delaware Foundation for Science and Mathematics Education, JPMorgan Chase, Inspiring Women In STEM and the All Things:13 nonprofit charitable organization.

Though Means now has some benefactor support, her mother paid for supplies when the project started, and Means sold cupcakes to raise money for workshop materials. With rare exceptions, Means insists on hands-on experiences. "I am a kinesthetic learner, which means I like to get my hands dirty," she explains. "Kids like to do it themselves."

Peggy Prevoznik Heins approves. She is president of Serviam Girls Academy, a tuition-free private school in Wilmington offering classes to fifth-through eighth-grade girls in underserved communities.

"Science and math, in particular, can be intimidating if the students don't experience real-world applications," says Prevoznik Heins. "The

more experience they have discovering and making connections to their life every day, the more likely they're interested."

Fun science experiments Serviam students enjoy include making worms out of sodium alginate, a food-grade thickening agent, and "elephant toothpaste," a foamy substance that initially explodes.

POSITIVE MESSAGES

The STEM Initiative has featured motivational speakers, and with financial help from Ashland, Means took a bus full of girls to the Franklin Institute science museum in Philadelphia.

Means, who is majoring in medical diagnostics and minoring in neuroscience, does not always wear her pageant crown with her lab coat at public appearances, but when she does, she is sending a strong message.

"They say, 'Don't get your nails or hair done, don't wear makeup, don't wear heels — don't be girly at all,'" she explains. "But I say, 'Embrace your femininity. STEM needs more femininity in it.' If you diversify the input, your outcome will be better; it will apply to more people." ■



Jacqueline Means shares her passion for STEM education by appearing at schools and hosting trips to places such as the Franklin Institute in Philadelphia.