

▲ Weather Alert

Winter Weather Advisory

http://www.breezejmu.org/news/science-sunday-for-girls-combats-classroom-stereotypes/article_529a4900-d880-11e7-9f7a-53f45a3ab4fc.html**'Science Sunday for Girls' combats classroom stereotypes**

Matthew Sasser | The Breeze Dec 3, 2017



The program combats stereotypes about science and allows girls to pursue what they are interested in.

Alyssa Antonio | The Breeze

Draw a scientist.

“The traditional caricature is a white male, lab coat, crazy hair, glasses, beaker socially awkward, bent on world destruction — you’re getting the Hollywood stereotype,” Shanil Virani, director of the John C. Wells Planetarium, said. “That is not what I or my friends are like.”

The Science Sunday for Girls is an event designed to combat those stereotypes by providing a forum where like-minded individuals can come together and explore science together. This is accomplished through hands-on activities that make science more fun and interesting than what’s typically presented in the classroom.

This is the second year of the program, which is designed for girls as young as four years old up to the high school level, and meets once a month.

Jenifer Hiner brought her two daughters, ages 10 and 11, to Science Sunday for Girls.

"We want to instill science into our kids," Hiner said. "This is the perfect place to do that."

Hiner's hope is that her children learn that there are a lot of opportunities in science for women.

"Anytime you can get a kid out of their natural setting or their elementary school ... it instills in them a different experience," Hiner said.

Science Sunday for Girls emerged from the planetarium's Space Explorer Camp. Parents would mention to the staff that their daughters loved the program, but when they went back to school, their classmates would say science isn't for girls.

Staff also noticed that their programs designed for a younger age group were full of girls, while the programs designed for older kids had very few.

"We wanted to create a space for girls to feel like they can participate and engage in a subject that they enjoy, but might not necessarily show in a school setting," Paige Collins, a graduate student of education, said.

Science can be portrayed as a male-dominated field, so one of the goals for this program is to provide an outlet where young girls can develop their science, technology, engineering, and mathematics (STEM) identity.

Science Sunday for Girls

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This year marks the second year Science Sunday for Girls has been held.

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"A lot of young girls, in the second to third grade is when they determine 'Science is or isn't for me,' so we want this program to show them that they can get excited for science," Collins said. "We want them to be around other girls so they don't feel that they are held back."

This program has grown a lot from its first event, which only had two participants. Their most recent arboretum event attracted about 100 girls, as well as their families.

Dan Cullers also expressed how important it is for his seven-year-old daughter to get the hands-on experience this program provides.

"This program operates at a more advanced level than what they are learning in elementary school," Cullers said.

Culler said his daughter wants to come back to the Science Sunday for Girls each month.

So far, topics covered in this program have included astronomy, geology, physics and genetics.

At the most recent event, hosted today, the focus was on genetics. Participants learned about different traits people had and then created a graph reflected their results. Next, they flipped a coin to determine what traits a creature they had to draw would have. Since the flipping was random, it showed how no drawing was the same as someone else's drawing.

The event's main activity gave each participant a small cup of a smoothie, which they then stirred with soap. After a few minutes of stirring, their concoction resembled real DNA.

For each event, the National Science Teaching Association provides female JMU students from various clubs who can lead activities and engage with the kids.

By providing role models who aren't the stereotype, the goal is to change the way society views scientists and allow for positive adults the young women can emulate. Each program isn't just lectures and powerpoints, but hands-on activities designed to engage each individual.

Carey Reinicke brought her six-year-old daughter all the way from Charlottesville.

"I think it was explained in a way that was helpful for her to understand, but also for her to learn the basics so she can apply it later on it further lessons," Reinicke said. "It's a great opportunity for her to be around her peers and learn about STEM opportunities."

Science is presented through this program not just as facts and formulas that can be memorized, but as a way of thinking of why the world operates the way it does.

One of the program's goals is to allow children to tinker and play, while still gaining important knowledge, which may be absent from their education at school.

"Play is the sandbox of science," Virani said.

Virani finds that the values in this program can even be transferred to his experience teaching at JMU.

"It's true to this day that I will have a large number of JMU students say 'I don't do math, I can't do science,'" Virani said. "There is no gene for math, no gene for science. The only prerequisite is curiosity — I firmly believe that every five-year-old is a scientist."

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