Employment in occupations related to STEM—science, technology, engineering, and mathematics—is projected to grow to **more than 9 million** between **2012 and 2022.**
Source: stemedcoalition.org

En Español

Phoenix, Arizona , May 11, 2017

Peanut Butter and Jelly: The Edible Algorithm

How STEM and a Popular Sandwich Inspired Student Success

As a child, Dominique Browning approached playtime differently…

"I used to take my toys apart. While I *did* put the pieces back together…it still freaked my parents out," she said.

Behind this innocent destruction was destiny. With each doll, truck, and train Dominque disassembled, she built something else…her engineering skills.

"I'm fascinated by this profession," she said. "At a young age, I decided I wanted to learn about engineering and nothing was going to stop me."

In high school, Dominique joined the Arizona Chief Science Officer (CSO) Program. The organization, supported by State Farm, gets students involved in science, technology, engineering and math (STEM) activities, while teaching them about careers in these fields.

"STEM is all around us," said State Farm Senior IT Architect Ines Halloran. "Our mission is to engage with universities and high schools to build a pipeline of future IT talent."

So, how does peanut butter and jelly fit in?

During a CSO institute, State Farm volunteers used a childhood favorite – the PB&J, to demonstrate the importance of algorithms.

"It's a step by step process," said Dominique. "This was an awesome way to explain programming basics. It made us think about a simple process in a thorough, innovative way."
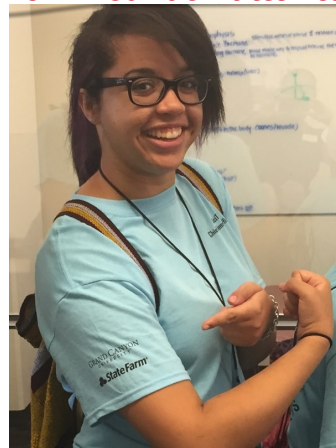
Students plotted the steps needed to build the perfect PB&J, then shared their algorithms with volunteers – who played the role of a computer. If the algorithm made sense, then the computer (a.k.a., the volunteers), would be able to create this end result:

Students like Clay Hauser and Calvin Rowell say the peanut butter and jelly challenge proves STEM is rooted in everyday life, no matter who you are or where you work.

"It's not just for scientists with doctorate degrees or highly trained medical professionals," said Calvin. "Sometimes the most influential workers are those with technical degrees, teaching degrees, musicians, actors. If you want to make something even better, STEM can help."

From Peanut Butter to Brain Power

The CSO program spans beyond peanut butter and jelly – from classroom to community success. Its unique learning opportunities inspired CSO students to start after-school STEM clubs, take part in science festivals, host innovative workshops, and network with State Farm IT employees.

This work has been recognized throughout the country, including the nation's capital.
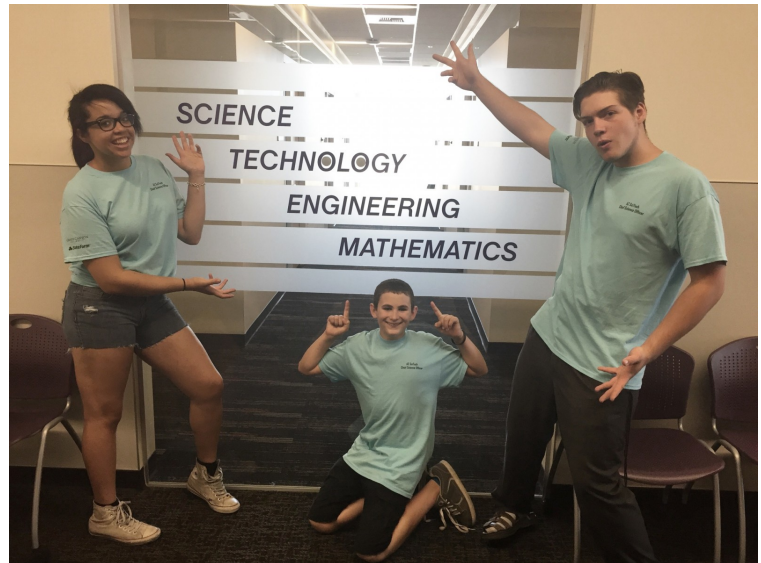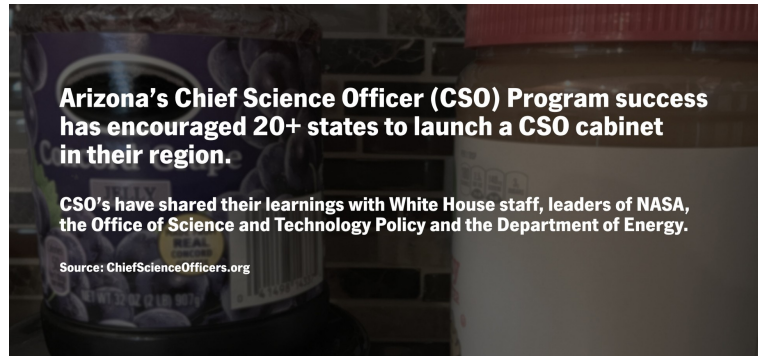
By exposing students to new ways of thinking, the CSO program hopes   to develop a diverse talent pool of future STEM leaders.

"I have worked with hundreds, maybe thousands of IT professionals over my 26 year career, and the differentiator is passion and determination to succeed." said Halloran.

And as for Dominique? The CSO program has inspired her to pursue her passion of becoming a mechanical engineer.

"Right now, it's a male dominated field, but this program proves gender doesn't matter when it comes to success," she said. "If your heart wants to experiment with science, robots or video games – do it. The CSO program taught me anything is possible when you put your mind to it."

Just like learning to make a peanut butter and jelly sandwich...it's a   simple lesson, with a satisfying result.

Arizona's Chief Science Officer (CSO) Program success has encouraged 20+ states to launch a CSO cabinet in their region.

CSO's have shared their learnings with White House staff, leaders of NASA, the Office of Science and Technology Policy and the Department of Energy.

Source: ChiefScienceOfficers.org

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