

## District's Sunshine State Scholars want to spark love of STEM in children

Buchholz High School junior Jeffrey Xue and Eastside High School senior Bill Zhao are both passionate about STEM subjects (science, technology, engineering and math). They both also recognize that many other students don't share their enthusiasm and want to change that.



"We need our future generations to be more involved and invested in stem to unlock our true potential as a nation," said Xue. "It's our responsibility as their community, their teachers and their peers to expose them to STEM early on to develop their interest and to provide a pathway for their careers."



"The greatest challenge America has in the STEM-related fields is the disparity in STEM achievement based on socio-economic status," said Zhao. "We have to close the gap in achievement and provide a level playing field for everyone who wishes to pursue STEM."

Both Zhao and Xue have been recognized as Sunshine State Scholars—Zhao for 2020, Xue for 2021. The Scholar program was established more than twenty years ago to recognize Florida's top 100 11<sup>th</sup>-graders for outstanding STEM achievement. The award criteria include advanced coursework and grades, test scores, extracurricular activities, awards and honors earned and an essay.

For his essay, Xue wrote about his efforts to spark an interest in STEM among other young people. For years he's been a volunteer presenter at a community-wide Chemistry Day, conducting experiments and demonstrating scientific concepts for children. He's a Camp Teacher Assistant at the Florida Museum of Natural History. He's taught rising middle school students in BHS' summer math camp. He even started the Computing-Oriented Mathematics Problem Solving Club at BHS to show fellow students how math can be used to solve real world problems.

Those experiences have shown him that kids are interested in STEM—even if they don't know it. He says exposure is the key, particularly up-close, hands-on exposure.

"Kids naturally want to try things for themselves," he said. "They'll say 'Oh, I want to hold that' or 'I want to do that.' They become more interested, more curious if they get the chance."

Zhao has also given his time to promote a love of STEM among other young people. Like Xue, he has worked as a Camp Teacher Assistant at the Florida Museum of Natural History and as an exhibit docent. He's also volunteered with the Lincoln Middle School Science Bowl Team, helping introduce students to and prepare them for competition.

"We need to provide programs that engage the curiosity of children at a young age," said Zhao. "They need to be exposed to it in a way that they would enjoy and become interested in it."

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Both students are themselves active in STEM activities. Xue is a member of BHS national championship math team and has won many individual math honors at the state and national level. He's been a very successful participant in regional and state science fairs and other science-related competitions. That includes his selection as a nominee to the prestigious U.S. National Chemistry Olympiad in both 2019 and 2020 and as winner of the Sportsmanship Award at the 2017 VEX World Robotics Championship.

Zhao also has an extensive and impressive STEM-related resume. He's won numerous awards in math and science competitions at the local, state and national level, including the U.S. National Chemistry Olympiad, the Florida Chemathon, and the American Mathematics Competition. He's also served in leadership roles with his school's Math Honors Society and Science Bowl Team.

But STEM isn't the only interest for these students. Xue is involved in BHS' Academy of Entrepreneurship and serves as Chief Financial Officer of the Buchholz Spirit Spot, the school store. He's also a member of the school's soccer and golf teams, and even plays piano. Zhao plays first violin in the Alachua County Youth Orchestra and is also an avid swimmer.

Although their post-high school plans are not set, both expect they will make a career in a STEM field.

Both Zhao and Xue will be recognized as Sunshine State Scholars at the February 16 School Board meeting.

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