Do-it-yourself microscopes spark discovery

By Ruth Campbell rcampbell@oaoa.com | Posted: Tuesday, June 2, 2020 3:09 pm

Foldscope, an inexpensive microscope developed by Stanford University researchers may be the passport to Ector County ISD students discovering secrets of their surroundings.

LBJ Kindergartener_Patrick T._black ant.jpeg

LBJ Elementary School kindergartner Patrick Thomasson uses a Foldscope to get a close up look at a black ant.

“We originally ordered several hundred Foldscopes with the intent to try to get them in the hands of kids to see how they would react to it with the ultimate goal of if things went well, we’ll do more of a districtwide distribution,” Chief Innovation Officer Jason Osborne said.

A pilot program was conducted this year with Austin Montessori Elementary teacher Louigina Vasquez and the reaction has been amazing, Osborne said.

“The Foldscope is really, really cool for at-home learning. It’s a great way to tie in many things cross-curricular, as well as engage in discovery, hands-on learning and then also engaging parents,” Osborne added. “So we’re seeing that on Twitter, as well. Parents working with their child … and what an amazing tool to stimulate interest at home in the learning process. It’s super inexpensive. It’s easy to distribute. It’s a do-it-yourself microscope. The kids get to keep the microscope, so they can continue to discover. There’s an online forum that kids can sign up to and they can share their images to anyone in the world.”

The Foldscope platform was started and created at Stanford University.

“Discovery is such a natural trait for us as people. We’re always curious. The more we can stimulate curiosity and get things into the hands of kids that promote discovery and curiosity, it’s just a natural way of learning …,” Osborne said.

Students may also be able to find something scientifically significant at home, write about it and share it on social media, online platforms or through their teacher.

“Kids really they get excited when an adult gets excited,” Osborne said.

Next thing you know, it creates a natural learning process and environment.

“We’re really excited … We did a Twitter challenge. We pushed it through our CW ECISD@Home program, as well as through other means of social media and staff email. Hundreds of kids were reaching out, getting Foldscopes to do the challenge of seeing what’s in their back yard, or in their house, or what could they put underneath the lens and discover,” Osborne said.

Foldscopes are going to roll out to fifth grade in the fall and Osborne said that's 3,000 students in the district.

"They are pretty durable. It has a real lens in it and the magnification is super high, so you can see things at the cellular level which is absolutely amazing. We've partnered with Stanford University and they are at our fingertips with any interactions with our students as far as reaching out via Skype. We planned originally to bring Stanford researchers to ECISD this year, but with COVID-19 it was restricted, so now we might at the very minimal do a Skype session, or eventually have them come out and do workshops where we can engage more teachers into hands-on learning with Foldscope," he said.

Lisa Wills, executive director of curriculum and instruction, said having the Foldscope is exciting.

"… I think it allows kids to get out there and look at things that are out there in their own environment. It's not many kids that get to have a microscope right in their hands. From a piece of hair, to a bug to water, whatever it is they want to look at," Wills said.

She added that it goes back to personalized learning.

Osborne said it appeals to people of all ages.

"It's awesome to see. And equally interested are high school students, so what better program or project to push to the district is one that is for all grade levels?"

Something else that is coming up is he's in discussions regarding a partnership with University of North Texas and multiple other universities for the new neuroscience course at George H.W. Bush New Tech Odessa this coming year.