

## ECISD eyes neuroscience cross curricular

Osborne

**BY RUTH CAMPBELL**

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With training from Backyard Brains Do-It-Yourself Neuroscience under their belts, educators from Ector County ISD are preparing to roll out the course in the 2020-2021 school year.

Chief Innovation Officer Jason Osborne said a total of nine people attended training in Ann Arbor, Mich., with Backyard Brains, including an English Language Arts coordinator, instructional specialist, an elementary school and middle school teacher.

Osborne said having the secondary ELAR coordinator, Elisha Vega along proved to be “super beneficial because we’re very interested in cross curricular alignment.” The English language arts piece, he said, will help students with descriptive writing and any research project they might do so they can share it with others.

“That’s a huge component. Everything you do in science and technology has to be written. It has to be shared. So how do you share your results? And it was beneficial to have this person along. She saw great value in this and is super excited to start incorporating into lessons and then tying into our Texas standards,” Osborne said.

Instructional specialist Ashlie Thomas at Hays STEAM Academy also will train other instructional specialists, he said.

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**Top left is Azul Purcell**, a teacher at Nimitz Middle School, and **Lorynaly DeLeon** (top right), a teacher at NTO, with secondary ELAR Coordinator **Elisha Vega** (bottom) at their training in Ann Arbor. They are comparing human heartbeats with that of a clam.

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George H.W. Bush New Tech Odessa will be rolling out neuroscience in three sections next school year. Osborne said neuroscience research and design will be the course description and it will include a lot of hands-on and Backyard Brains materials, as well as university partnerships where students will work with real data and do real analysis. Teachers will be able to tie this into the standards that students need to learn and students can create their own research projects.

“... We plan to create a journal club in this course where kids look at scientific texts and try to direct that text and then have debates in the classroom around the text that they are presenting with the anticipation of them eventually writing their own descriptive texts, whether in a journal format or scientific poster,” Osborne said. He added that bioengineering is offered in the career and technology education health sciences practicum. NTO Principal Gerardo Ramirez said in January and February the high school counselor Clelia Carrillo, will talk to sophomores and juniors on educational planning.

“We are ecstatic to offer neuroscience as a science and elective course to our learners,” Ramirez said in a text message. “We felt it was an innovative course that aligned with our project-based learning design on teaching and learning. It would also assist in preparing learners for college and career fields in medicine and STEM,” Ramirez said.

STEM stands for science, technology, engineering and math.

Bernadette Barragan, an anatomy and physiology teacher at NTO, was one of the teachers that went to Ann Arbor.

“This past fall semester, we surveyed learners on offering the course and received positive responses and high interest. The collaboration and support with ECISD’s PICK Education was essential. It will assist Mrs. Barragan in professional learning and also linking her to collaborative groups at the higher education and medical field levels,” he added.

Osborne said he hopes other campuses will offer neuroscience, too.

“Through Backyard Brains, we will have ties with University of Michigan and their partnerships; also the University of Minnesota. As a district, we’ll have the opportunity to do behavioral neuroscience working with organisms such as the cuttlefish. This is super exciting because the students and teachers learn cuttlefish behavior, they will also learn the applications of machine learning, machine vision and ultimately artificial intelligence while doing neuroscience,” Osborne said.

Other programs are in the works as well.

Osborne said his department is in the process of getting Manu Prakash, a Stanford University researcher who was part of the team that developed the Foldscope, an inexpensive microscope, to present to students.

“What we would like to do with Foldscope is tie it in with all our current PICK Education initiatives, so if you want to look at micro samples and paleontological studies, or geological studies you can. If we’re going to look at brain tissue, we can get some of that from Backyard Brains and other partners so kids can set up their own microscope, their own slides so they do their own sampling. They can look at the images, then they can share these images through a global blog platform which is really fascinating; here’s the ELAR piece coming back in,” Osborne said.

“This is a way to really get kids curious. It sparks that discovery piece that’s in all of our brains as humans that we love to do. We like to see, feel and touch things and analyze things and discover things, so this gives them the hands-on piece and that ownership piece so they have something of their own. Then their own data, their own processing of data, so we’re super excited about that so that one’s coming up,” he added.