

Folks from ECISD have a whale of a time

Students, teachers and administrators learn more about the giant mammals

BY RUTH CAMPBELL

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Students, administrators and teachers got **to** learn about some of the largest mammals on Earth in a presentation by Joy Reidenberg, a professor at the Icahn School of Medicine at Mount Sinai in New York City. Titled “Weird & Wonderful Whales,” the event brought at least 700 people — mostly secondary students — **to** the Odessa High School Performing Arts Center. With a projection screen behind her, Reidenberg showed the audience photos of whales, and real whale teeth, fossils, baleen strips and vertebrae that show their similarity **to** humans. “I’m a comparative anatomist. I am a teacher and a researcher, so I both teach science and I teach the public science, but I also do the science behind the teaching so it’s both,” she said. Baleen, which is smooth on one side and has varying thicknesses of hair on the other, is used by different types of whales, like humpbacks and right whales, **to** filter seawater from the fish they’re eating. Reidenberg said the whales don’t drink seawater because it’s too salty. Some of the baleen whales can disconnect their lower jaws and throw them **forward to** get the most volume of water. Then they swim their head over the top of their jaw. Reidenberg reviewed how whales’ ancestors lived in land, how their teeth changed, how they move, mate, consume food and just how large they are. A baby sperm whale is the size of a bus. Squid is their favorite food, but if giant squid is available, that’s even better. An adult whale is the size of three buses and almost as big as a 737 jet. She illustrated the size of whales for students by having two of them take a tape measure around the auditorium and telling them a whale would not fit on the space.

Whales’ vertebrae can’t move side **to** side they have **to** move up and down. Their flippers and fins keep them heading in the right direction and stop them from rolling over, for instance.

When whales lived on land, she said, they had a galloping style of motion. When whales swim up and down, they’re galloping in the water.

Wilson & Young Medal of Honor Middle School students Kylie Reyes and Brenna Solis, both 13-year-old seventh-graders, and 11-year-old sixth-grader

Barragan said this was the best professional development she’d ever participated in and she wanted **to** thank the Education Foundation for funding the trip. She added that trips like these are of the utmost importance **to** teachers **to** they can bring back pictures and stories **to** tell their students.

“We don’t have any other way **to** do that than **to** get out there and do these things,” Barragan said. “If we didn’t have these opportunities, then we can’t share that with our kids.”

“It makes it more real for the kids, too, whenever I can say I bent down and picked this up. ... Whenever I have a story attached **to** it, we have a personal connection. Therefore, they have a personal connection **to** that,” Boen put in.

Shauna Standard, who teaches physics and chemistry at Plains High School, bought 35 students with her Wednesday. The majority was ninth-graders, but the group included top sixth, seventh and eighth-graders.

Plains ISD has partnered with Osborne and the PICK Education initiative for opportunities like these.

“Most of these kids haven’t even been **to** a lake, let alone the ocean. ... They didn’t understand how big they actually were,” Standard said.

“This is an awesome compare and contrast for us because some of these kids don’t know as much about marine mammals as they do, say about animals you would find on a farm or out here in West Texas, so we can compare our large animals **to** marine large animals so that will be pretty cool,” Standard added.

Osborne said he thinks programs like this impact students because it makes learning tangible.

“We live in the middle in the desert. She’s talking about oceans and whales and exposes them **to** that, bringing the real biology with her so they can see the real, tangible things for learning,” Osborne said.

He added that cards were passed around with career opportunities the students could look up. That way they can see the relationship between what Reidenberg is talking about and possible future jobs.

Trenton Jones were all surprised by some aspect of Reidenberg's talk.

Reyes said she learned that mist comes out of a whale's blowhole instead of water and that they're closest relative is a hippo.

Solis said the presentation was inspiring **to** her.

"I love marine biology," Solis said. "It's one of the things I want **to** do when I get older. ... This just inspired me **to** do what I want **to** do even more."

Jones said he had never really looked into marine biology, but he was going **to** now.

"It definitely brought the thoughts **to** me," Jones said.

He added that he always knew whales were big but "being bigger than this auditorium, that's crazy."

Reidenberg's Odessa appearance capped off two previous days of fossil exploration for 11 teachers and administrators, Reidenberg and field experts from the Dallas Paleontological Society.

The first day was spent on a ranch in Spring Creek, north of Denton, searching for cretaceous fossils and the second day included a trip **to** an older fossil site in Jacksboro **to** hunt for more ancient critters, a news release said. Bernadette Barragan, a 12th grade science teacher at George H.W. Bush New Tech Odessa, and Kira Boen, a seventh-grade science teacher at Bowie Middle School, were two of the instructors who participated.

"We brought back a lot of resources **to** use," Barragan said. "The whole time we were out, we were thinking how can we bring this back and use this in our classrooms. It was so great **to** have the science facilitators and teachers. We were just shooting off ideas with each other. We thought, we can bring this back and have them make dichotomous keys with the fossils we brought back and be able **to** show them actual items from history and have that real-life connection."

Dichotomous keys help identify items in the natural world, the Oregon State University website said.

Boen said they discussed transporting her fossils **to** Barragan's school for her **to** use and then sending hers Boen's so they could have a larger collection when they presented them **to** the students.

Reidenberg, who grew up in Norwalk, Conn., and lives in Rye, N.Y., conducts educational presentations about eight **to** 12 times a year.

"This is kind of for fun. It doesn't pay well, but it's fun. And I do it because I get **to** go **to** really cool places and meet cool people," she said.

What she enjoys about talking **to** students is when the youngsters feel the passion for what they're learning.

"You see them smile and they get excited and they just can't wait **to** have their question answered and they're raising their hand with such vigor. I love that," Reidenberg said.

Whales are her favorite animal. She loves the way they looked and how they were able **to** hold their breath for a long time, swim fast, nurse their babies underwater, make sound underwater and mate underwater, among other things.

"What drew me **to** whales is probably a combination of childhood fascination with Jacques Cousteau, the TV series 'Flipper' and 'Mutual of Omaha's Wild Kingdom.' It wasn't necessarily about whales, but it was just about investigating nature, understanding the environment and understanding the animals in it," Reidenberg said.



“My lesson plan that I was writing in my head as we were doing all this is I’m actually going to have my kids help me clean and identify most of these fossils,” Boen said.

Joy Reidenberg, a world renowned anatomist, displays two whale baleens that illustrate the size of a whale’s mouth compared to a human during her presentation ‘Weird & Wonderful Whales’ Wednesday morning at the Odessa High Performing Arts Center. The baleens are found in baleen whales and are used as filters during feeding. ECISD and Plains ISD students attended the presentation that is part of the PICK Education program this year.

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