

FISH FARMING

A group of fourth-graders squinted at the clear plastic cup of water, bobbing and weaving in an effort to spot the teeny-tiny, classroom-raised shad that they had fostered for the past week.



Monica Holland

"I see it! I see its eyes! It's really in there!"
 There near the bottom, two

black poppy seed-sized eyeballs sat in front of a thin tail. The kids shrieked and clapped as if they were looking at a killer whale.

As fish-friendly fourth-graders at E.E. Miller Elementary, they had been part of a Shad in the Classroom pilot program designed to educate kids about fish population restoration, habitat, biology and more.

"It really connects, not only the history, but also the future of shad and what these kids can do," Pechmann Fishing Education Center Director Kris Smith said. "So, hopefully, a program like this will encourage them to become stewards of their environment."

Searching for a way to create a program that would bring fishery education into the classroom, Smith discovered the Washington D.C.-based Living Classrooms program, which enlists about 4,000 students from 53 schools.

He took their classes and brought some of their tanks back to Fayetteville.

Already familiar with E.E. Miller students and faculty thanks to their regular field trips to the Pechmann Center, Smith selected students of Kristy Schue and Jim Smith to start Shad in the Classroom.

"It matches up with the fourth-grade curriculum almost by the letter," Smith said.

During the month-long program, students learned to test their tank water's pH, ammonia and chlorine levels.

They used that data to create graphs and spreadsheets for two weeks before the eggs arrived. Smith brought the eggs during the program's third week, and they hatched within a couple of days.

The teachers based reading and writing assignments on the program, too.

Shaun Woodard even used what he learned about shad to tackle a migration project for his academically gifted class.

"I learned that shad are anadromous fish," he said. "They go upstream to spawn and they go out to sea and then come back to the river to spawn."

"It feels good to put them in the river because I know that the shad are decreasing because of dams and pollution."

Restoring fishery

Shad restoration has been an important project for the N.C. Wildlife Resources Commission since a sharp decline in population in the late 1900s. In the state, only the Cape

Fear, Neuse, Tar and Chowan rivers support adequate stocks of American shad. Locks and dams can impede their progress upstream, but lockmasters actually lock fish up and down the river to help them get to and from spawning grounds.

Learning about the locks and dams on the river also intrigued students. Damien Hobbs, who had his parents to come into his classroom to see the little fish, talked his mother, Dana, into a trip to the William O. Huske lock and dam just outside of Fayetteville.

"Fish die when they can't get through the river," Damien said. And his mother was thrilled that the program had taught how we

are actually taking care of ourselves when we take care of our environment.

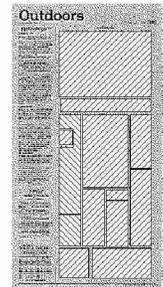
"For them to go to the Cape Fear River and to be part of releasing fish into the river, that makes it relevant to them," Schue said.

Strong turnout

Twenty-one parents helped transport 31 students to the wildlife commission boat ramp on the Cape Fear off N.C. 87. There, Pechmann Center fisheries instructors Marshall Ray and Gerald Klauss taught the kids about boating safety, testing chemical levels in water and how to tell a fish's age by reading rings on its otolith, or ear bone. The latter was very popular.

"Can I touch it?"

"How old is it?"



"Where's his brain?"

The questions started coming before the fish was even out of the cooler.

"He's going to pull out the ear bone!"

"Yesssss!"

Although most of them watched through their fingers as the otolith was removed, fish anatomy was not new to these kids. Smith had walked them through a dissection during his time in the classroom, where he's reached superstar status.

Melissa Woodard found Mr. Smith's autograph on a deck of her son's playing cards. "He's famous to us," her son, Shaun, said.

In Woodard's household, fishing has become a hobby since a school field trip to the Pechmann Center last year. She spent Mother's Day with Shaun and Laik, casting to stocked ponds at the old hatchery.

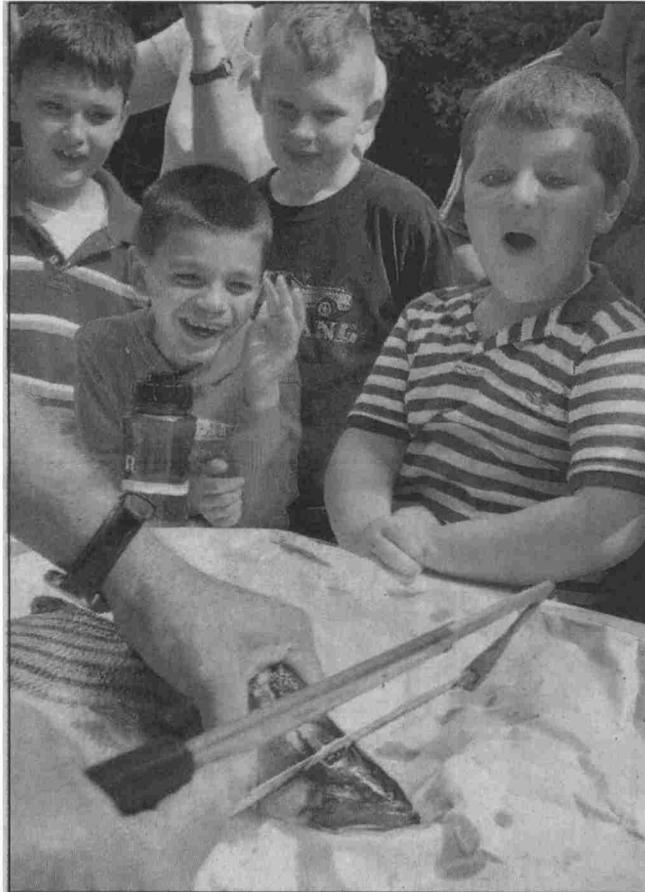
"We never fished before in our lives," Melissa said. "So the school has really promoted this. And then to add this shad release on top of the educational program at Lake Rim, it seems to have worked out very well."

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SHAD FACTS

- American shad are the largest members of the herring family.
- They are anadromous, meaning that they spend the majority of their adult lives in the ocean before entering fresh water to spawn.
- Most shad make their first spawning run when they are 4 or 5 years old, returning to the rivers and streams where they were hatched
- American shad typically live 5 to 7 years and may reach a weight of 2.2 to 6.6 pounds.

Source: N.C. [Wildlife Resources Commission](#)



Joseph Hoyer, Corran Thomas, Shaun Woodard and William Cline watch as inland fisheries technician Marshall Ray cuts into a striped bass to find its otolith, a bone that is used to determine fish age.



Staff photos by Raul R. Rubiera

Fourth-graders from E.E. Miller Elementary release American shad that were hatched in their classroom into the Cape Fear River as part of the N.C. Wildlife Resources Commission's Shad in the Classroom program.



Cailin Baxter, left, and Daniela Lezama look in a plastic cup to find the tiny shad that had just hatched two days earlier.