

# STAMFORD ADVOCATE

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Soundwaters Educator Jess Castora helps sixth graders from Dolan Middle School, including Gera Chavez and Sarahi Rodriguez, learn about how plastics enter the ecosystem in conjunction with the The One Million Bottle Cap Challenge on Friday at the Soundwaters headquarters at Cove Island Park in Stamford. SoundWaters has launched the initiative with Stamford Public Schools to have students remove one million bottle caps before they reach the Sound.

## Students embrace project to keep plastics out of Sound

By Sophie Vaughan

STAMFORD — There's an old parable that tells of a young boy on the beach who throws starfish, one by one, back into the ocean following a high tide that washed the aqueous animals ashore.

An older man walks by and asks the boy what he's doing and the boy says he's saving the starfish. "Son, there are thousands of starfish and only one of you. What difference can you make," the older man says.

In response, the boy says, "I made a difference to that one!"

Sixth graders throughout Stamford have embraced the boy's mentality in their effort to collect, one by one, 1,000,000 plastic bottle caps

before they reach Long Island Sound.

Spearheaded by SoundWaters, a Stamford-based environmental education nonprofit, the "One Million Bottle Caps" challenge launched this fall in collaboration with the Stamford Public Schools and funded through a three-year, \$200,000 grant from the National Oceanic and Atmospheric Administration.

"It taps into student energy around wanting to fix things. We've been excited and surprised beyond belief about how much this idea is taking off," said SoundWaters President Leigh Shemitz.

The project seeks to address the ubiquitous but

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Sixth graders from Dolan Middle School Jayden Howard, Tyler O'Grady and Litzi Najera display some of the bottle caps they collected to learn about how plastics enter the ecosystem.

## PLASTICS

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often invisible problem of microplastics in Long Island Sound, said Shemitz.

People toss bottle caps and other plastic sources in the street, parking lots and down storm drains, and the plastic ends up in the Sound where it breaks into tiny pieces that animals ingest, said Shemitz, who holds a PhD in environmental health from Yale University.

When animals ingest plastic, it can get stuck, causing life-threatening problems. Microplastics also adsorb and concentrate other chemical contaminants, such as lead, pesticides and PCBs, according to Michael Willig, director of the Center for Environmental Science and Engineering at the University of Connecticut.

"These attributes mean microplastics could potentially magnify exposure of various wildlife species and those fishing these waters to contaminants, with possibly significant effects on humans and top predators," said Willig.

The gravity of the problem of microplastics and the

ambitious goal of one million caps has not hampered students' desire to be part of the solution. As soon as the challenge kicked off in a "pep rally" style event at each school, the students started coming in with "bottle caps galore," said Laura Dickey, a sixth-grade science teacher at Dolan Middle School.

"It's been totally student driven. We had no idea it was going to be this big," said Dickey.

Brian Ruckdeschel, the other sixth-grade science teacher at Dolan, agreed. "They feel empowered to make a positive change," he said.

Each classroom has a clear bin where students can toss their caps and throughout the fall each sixth-grade class is spending a day at SoundWaters' Cove Island Park headquarters to test the water quality for microplastics and learn about watershed ecology.

On Friday, half of the Dolan sixth graders spent the day at Cove, among them Hailey Riveles, who Ruckdeschel said has been a star in the challenge.

"It's been really fun," said Riveles, adding the project has taught her to pick up



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**Sixth graders from Dolan Middle School, including Hailey Riveles, Liah Bailey, Anson Zhu and Cal Gillin, work on experiments to learn about how plastics enter the ecosystem in conjunction with The One Million Bottle Cap Challenge on Friday at the Soundwaters headquarters at Cove Island Park in Stamford. SoundWaters has launched the initiative with Stamford Public Schools to have students remove one million bottle caps before they reach the Sound.**

bottle caps and other trash as she walks the streets of her Springdale neighborhood. She's even gotten her extended family and mom's co-workers involved, one of whom gave her a bag of 656 caps, she said.

The fun aside, both Riveles and her fellow classmate Katie Ho, said they understand the project's deeper purpose.

"I just think it's really important to preserve our environment," said Ho.

"It's where we live," Riveles added, saying scientists predict that by 2050

there will be more plastic than fish in the world's oceans, a finding outlined in a 2016 report from the World Economic Forum.

"If we don't take care of the environment, it will happen even faster," Ho said in response.

Just a few months into the project, students have already collected 44,056 caps, according to the SoundWaters website. Dolan has collected the most, with 16,529 caps, followed by Rogers International School at 13,468 and Scofield Magnet School at 9,818. Schools

across Fairfield County have also heard of the challenge and requested bins, as have local companies and organizations, including Chelsea Piers, Tronox Inc. and the Cornerstone Community Church.

The project is successful because it allows for the visualization of both the problem and the solution, said Shemitz.

"The idea of a challenge drives them," said SoundWaters educator, Christina Genz, to which Shemitz added, "I think it's a universal human trait."

The goal of one million bottle caps may seem audacious, but Shemitz said she's not concerned the students will meet the goal, and at the end of the challenge Shemitz said SoundWaters plans to showcase the caps through an installation at the Stamford Government Center during Earth Week in April and then have the caps melted into something the schools can use, perhaps a bench.

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