

Connections students learn about recycling through project that upcycles bottle caps

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By **KIRSTEN JOHNSON** Hawaii Tribune-Herald

A chorus of "Row, Row, Row Your Boat" rang out Friday at The Makery in Hilo.

Inside, Damien Lucas and a scattering of his classmates from Connections New Century Public Charter School hovered over an injection molder. They were watching a mix of ground-up plastic bottle caps get pressed into fish-shaped, token-like devices to be used to wind up headphone cords.

"It heats (the plastic) up and melts it," Lucas, 17, explained, as the song wrapped up — used as a timer to gauge the duration of pressing. "And then we can (press) them into the shapes."

Lucas and his classmates were demonstrating upcycling, the process of reusing and converting unwanted materials into something of higher quality.

Connections is partnering with Recycle Hawaii on the effort, called the CAPture Bottle Cap Reclamation Project. It's funded by a \$10,000 grant from the Atherton Family Foundation through the Hawaii Community Foundation.

The project aims to promote recycling and show students how to divert the plastic, which ends up in the landfill or the recycle stream. Along the way, students are getting a hands-on, science, technology, engineering and math (STEM) lesson focused on engineering and design.

Students collected at least six grocery bags filled with plastic bottle caps this year and have created more than 300 tokens to date.

"We were looking for a STEM project for the students that would foster recycling and resource management," said Recycle Hawaii Executive Director Paul Buklarewicz. "So the kids collected the bottle cap tops — that's the source — and they're taking them and turning them into another type of product. It's recycling but you're adding value to the product."

The students are part of Connections' pre-engineering makery class and makery after-school program. Makery teacher Adam Low said he tries to incorporate the CAPture Bottle Cap project into the curriculum when possible so students can "see and learn and do."

The makery students are next working to create their own token mold depicting an image of Hilo. The makery curriculum also dabbles in drones, 3-D printing and laser cutting.

Low said students also participate in community service when possible — for example, Connections students are currently laser cutting signs for Hilo Bay Cafe.

He said the bottle cap project remains among the most popular activities.

"Whenever we get a big batch of bottle caps, kids want to go grind," Low said. "As soon as their normal work is done, they'll say 'Can I go grind?' And after grinding, they can start pressing. And once the pressing

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gets started, there's such enthusiasm. Kids are saying 'Oh can I bring that to my aunt? Or to my mom?'"

"So I'd say, there are hundreds of these little fish tokens all around the Connections charter school community network," Low continued. "If they get made in Hilo it's probably us. But to me, it's all about getting them excited about upcycling. If you're a kid at the school now and you've got a bottle cap, you know, that thing's got a use and it can be turned into a new life."

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The school should also consider joining some of the soft drink company promotional giveaway sites - coke used to have a good one, not so much now, but sometimes they offer gift cards for places like amazon or target where a class could buy something. The codes are printed on the caps.

Great idea for upcycling!

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