

# Kids Explore Wiggly World of Worms

By Sue Smith-Heavenrich

On the last Wednesday of March the second-graders at Northeast Elementary School got some new classroom pets: worms. Mila Fournier, outreach coordinator for Cornell Cooperative Extension's compost education, and two volunteers, Juliet Barriola and Margit Chamberlain, visited the classrooms, where they trained students to become "wormologists."

The first lesson is worm anatomy. As students tape a pre-cut paper intestine onto the whiteboard, Fournier explains that worms are basically eating machines. They chow down on banana peels, apple cores and used tea bags, converting food waste into worm waste. That worm waste, called castings, is valuable stuff to gardeners.

Worms don't have teeth, so they need to grind their food. That happens in the gizzard, where small parts of food mix with sand or topsoil and get ground into even smaller particles. If you're looking for a pet with heart, worms have a lot—five hearts in all. They also have bristly hairs on each of their segments (setae) which help them move.

If you took a worm from the garden and put it into a compost bin, it wouldn't be very happy, says Fournier. Those earthworms are architects, building tunnels deep down in the soil. But red wigglers hang out in the top six to eight inches of garden soil, and they're very happy living in worm bins. As Fournier introduces the students to the red wigglers, she notices a worm cocoon—a tiny seed-sized egg case that would hatch out two baby worms sometime in the next month.

Soon the budding wormologists are busy tearing newspaper to create a home for their new classroom pets. Torn strips of paper makes great bedding because it is light-



Photo by Sue Heavenrich

**Cornell Cooperative Extension compost educator Mila Fournier introduces second-graders at Northeast Elementary to their composting worms.**

weight and holds air. "And it's a way to recycle old papers," one kid says.

Worms must keep their skin moist to breathe, so their bedding must be moist but not soaked. "About as wet as a wrung-out sponge," says Fournier. After squeezing water out of the newspaper, it was time to add the worms, along with a handful of soil. "Remember, that's for their gizzard, so they only need a little bit," she says.

"What do worms eat?" the kids ask. This kicks off a discussion of biodegradable stuff (avocado peels, pizza crusts) and non-biodegradable stuff (plastic cups, sneakers). Worms are vegetarians; they don't eat meat or anything made out of milk. So that means no cheese and no ice cream. "But

they love melon rinds," says Fournier. She showed the students how to pull back the bedding and add a small handful of food scraps.

"That's all?" The students had hoped to recycle lunchroom scraps, but the amount of food garbage produced each day is way more than the worms can handle. Even if every classroom had a worm bin, there'd still need to be an outside composting bin to handle all the food waste, Fournier explains. The worms will eat about their body weight in food each week, she says. But even when their population doubles, and doubles again, that's only about a quart of food scraps each week.

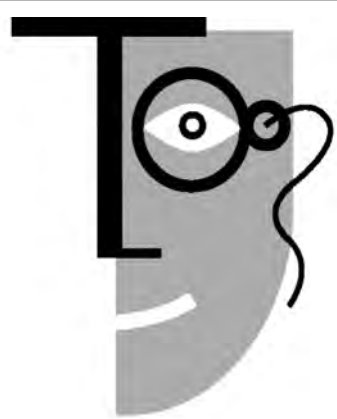
Worms are easy pets, Fournier says, as long as you remember that the bin is an ecosystem. The wormologist's job is to keep that sys-

tem in balance. This means checking to make sure the bedding is not too wet or too dry and that the worms are eating the food. If there's too much food, it will get moldy and start to smell. "That's easy to deal with," Fournier says. "Just take out the moldy food and add fewer scraps." On the other hand, if there's no food, the worm handlers need to increase the amount of food given.

Caren Arnold has integrated the worm compost into a larger study unit she calls "We Are Environmental Ambassadors: We Can Make a Difference!" Funding from an IPEI grant will allow them to take field trips to Tompkins Solid Waste—to see where recyclables go when they leave Northeast Elementary—and to Cayuga Compost.

In Arnold's classroom, Wednesdays are Worm Day. That's when the children feed their worms and record their observations. "The worms prefer black and slimy banana peels over dried-out peels," says Arnold. "And they don't seem to like the tea bags at all!" So the students added a pear and apple core along with some lettuce and coffee grounds. "They're checking the worms every few days to see if we can observe which foods they like best." Some children are so excited about the worm project that they've started their own compost bins at home.

Lest you think kids have all the fun, Fournier and her worm-composting helpers held a class for adults at the Cooperative Extension building on March 28. If you missed the workshop and would like to learn about worm composting, go to <http://compost.css.cornell.edu/worms/basics.html>. The master composters also staff the "Rotline," a composting hotline where you can get answers to all kinds of compost questions. The number is 272-2292, ext.124.



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