

## Michigan Junior Master Composter (JMC) Case Study Series from Washtenaw County Area Schools

### School Lunchroom Composting using an outdoor red worm bin

**Where:** Eberwhite Elementary School, 800 Soule, Ann Arbor. Eberwhite is a K-5 Ann Arbor public school with ~400 students. <http://www.a2schools.org/Domain/19>



**Food scrap composting snapshot:** Students put their surplus lunchroom fruit and vegetable scraps into a marked 5-gallon bucket that is lined with a compostable plastic bag. Student volunteers empty the compost bucket into the outdoor worm bin each day and return the compost bucket with a fresh liner to the lunchroom.

**Worm bin details:** Dave Corsa, 2<sup>nd</sup> grade teacher and certified Michigan Master Composter, built the worm bin with local red worm farmer Jesse Raudenbush\* in 2014. The outside 2-6 foot worm bin is 2 feet underground and one foot above ground. The sides are built of cement blocks with a wire mesh base (to keep out moles). A \$5 re-

purposed folding door serves as the roof, which is then covered with a weighted, waterproof tarp. The worm bin is situated outside a classroom, under a tree to provide shade in the summer. The initial bin supplies cost about \$150, plus a pound of ~3000 red worms (*Eisenia foetida*). The bin is actively used during the school year, September to mid June. As the outdoor temperature heats up, dry leaves are added to the food scraps in order to soak up excess liquid. The majority of the



food material is digested into vermicompost by late August. The vermicompost is harvested at the fall start of the school year and the cycle starts over. The finished compost is used by the school Gardening and Grounds committees. Compost tea is applied to the turf and school plantings. The raised garden beds are top-dressed with vermicompost after the fall harvest.



**Metrics/waste diversion:** Eberwhite diverts 10-20 pounds/day (~100 pounds/week) of fruit and vegetable lunchroom scraps for on-site composting. Fruit and vegetable food scraps are collected from the lunchroom and participating classrooms.

#### Tips:

1. An 18-page overview compiled by the nonprofit Project Grow gives a detailed account of Eberwhite's composting efforts from 2008-2013, along with composting directions, curriculum suggestions and links to composting resources. This document is posted online at: [http://projectgrowgardens.org/uploads/media\\_items/aapsschoolgarden-bestpractices-composting-1.original.pdf](http://projectgrowgardens.org/uploads/media_items/aapsschoolgarden-bestpractices-composting-1.original.pdf)
2. Parent, teacher and student involvement with environmental projects related to the annual Michigan Green Schools certification helped lay the groundwork for composting efforts. Eberwhite parent Melina Adler began volunteering on school composting projects as part of her

2010 Master Composter certification requirements. Since 2011 there has been strong school administrative support for composting.

3. The worm bin composting project received funding from the Eberwhite PTSO and support from the other PTSO committees for Gardening, Grounds, and Michigan Green Schools (<http://www.michigangreenschools.us/>).
4. Parents assist in the lunchroom each fall to help train students to correctly separate fruit and veggie scraps from recyclables, stacked food trays, and trash.
5. After the first few weeks, the normal lunchroom staff is able to handle the lunchroom recycling/composting separation.
6. The food composting student volunteers make presentations to the other classrooms to explain how the program works and why.
7. Using a certified biodegradable plastic liner bag inside the 5-gallon collection bucket eliminates cleaning—and the bags decompose within the worm bin.
8. The sign on the food scrap collection bucket has colorful photos, minimal text, and is laminated for durability.
9. Some classrooms have compost buckets for collecting scraps from snack times and periodically swap out their collection buckets with an empty one from Mr. Corsa's classroom.
10. The 5-gallon plastic compost collection buckets with lids can be reused “drywall buckets,” restaurant “pickle buckets,” or purchased new from hardware stores.
11. In 2014/15 five, 5<sup>th</sup> grade volunteer students scheduled themselves to work in teams of two each day during their recess to empty the lunchroom compost scraps bucket into the outdoor, in-ground worm bin.
12. In 2015/16 a fourth grade class will take over the lunchroom food scrap collection responsibilities. “Nature’s Recyclers” is a fourth grade unit, and this particular classroom’s windows and exterior door overlook the outdoor worm bin, which helps make a natural ownership for this program.



13. Red worms are available from certified Master Composter and Master Gardener \*Jesse Raudenbush, who is also available for consultation, [www.starrvalleyfarms.com](http://www.starrvalleyfarms.com). If possible, checking with an experienced red worm composter before installing a large bin will save unnecessary effort and expense.
14. For additional information on Eberwhite’s food scrap composting program, you may contact teacher Dave Corsa at [cora@aaps.k12.mi.us](mailto:cora@aaps.k12.mi.us) or Jesse Raudenbush at [jesse@projectgrowgardens.org](mailto:jesse@projectgrowgardens.org) or Joet Reoma at [joet@projectgrowgardens.org](mailto:joet@projectgrowgardens.org). # # #