



Teachers Guide to Worm Composting

Why compost with worms

Composting with worms is a great way to bring science alive in your classroom!

- Students can observe the worms life cycles, anatomy, and habitat.
- Worm composting (vermiculture) is a fantastic opportunity to reduce your classes food waste, and save energy
- Worms produce fertilizer for your school garden or potted plants.
- Worm bins are easily maintained, low cost, and can be done in the classroom

How to collect your worm castings

The simplest way to collect worm castings is to use the worms dislike for light to guide the worms out of the castings. Dump the contents of the worm bin on a large tarp in a tall pile. The worms will move downwards leaving the top free of worms and ready to be harvested. If some worms end up in your finished worm castings that is ok! They are beneficial for the garden. You can also use a shifter to ensure you only get fine particles in your harvested castings.

How to use your worm castings

Worm castings make fantastic fertilizer for your potted plants or garden soil. Have your students mix the castings into the existing soil to get it ready for Spring planting.

Things to remember

- A Worm bin is a tiny ecosystem. If things get out of balance it's ok- they can be restored! Worms can be reordered, and bins can be cleaned out and started fresh at the beginning of the next school year.
- It is important to not overfeed the worms. Best practice might be to have one student (maybe the student of the day) feed the worms small part of their lunch everyday. This will be plenty of food for the worms. Worms will be eating the bedding (newspaper) as well. Worms enjoy food that is easy for them to digest. This is material that is already at least partially decomposing, or crushed up into little pieces.
- Worms like moist environments. Be sure the bin is moist "like a wrung out sponge". Make sure worm bin is moist but not too wet or too dry. Too wet can lead to worm death.

Troubleshooting

Why is my worm bin smelly?



- Smell is most often caused by the compost not getting enough oxygen, so the “bad” microbes are taking over. Common ways to fix this may be to add water, add more bedding, remove some worms if they are overcrowded.
- Make sure to not overfeed the worms! If the worms don’t have time to break down the material other microorganisms might try and take over, which can be a cause of smell

Why are worms leaving worm bin?

- This can be caused by many reasons, so do not be alarmed! Worms like to explore their environment and will take opportunities to do so.
- Worms are light sensitive, so when it is dark in the classroom they will move freely. Worms leaving the bin is most likely to happen at night. The easiest way to stop this is to leave a small lamp on above the worm bin. This will encourage the worms to stay inside the bin.
- Worms will also leave bins if it has become an inhospitable environment. This can happen to a number of reasons, the most common is being over feed.

Where do I store my worm bin?

- I recommend storing your bin somewhere where you can see it everyday. This way you will be able to check on it and notice when things are changing.
- Worms don’t like super cold or super hot weather. Right in front of the heater or air conditioner won’t be a good spot.

For most troubleshooting we recommend consulting the book Worms Eat My Garbage by Mary Appelhof. There are extensive explanations and examples of how to troubleshoot any issues you may come across.

Additional curriculum resources

California Education and Environment Initiative: <https://www.californiaeei.org/>

Do the Rot Thing Curriculum Guide:

http://www.cvsdmd.org/uploads/6/1/2/6/6126179/do_the_rot_thing_cvsdmd1.pdf

California Recycle Curriculum Recommendations:

<https://www.calrecycle.ca.gov/education/curriculum>

Childrens Books: Worms! by Rachel Lassman, Diary of a Worm by Doreen Cronin, Yucky Worms by Vivian French, and so much more!

https://www.amazon.com/s/ref=nb_sb_noss_2?url=search-alias%3Daps&field-keywords=childrens+books+worms

Critters of the Worm bin video by our Farm Manager: <https://vimeo.com/97023074>



Additional worm composting resources

Worms Eat My Garbage by Mary Appelhof

Uncle Jims Worm Farm:

https://unclejimswormfarm.com/order-stuff/composting-worms/?gclid=Cj0KCQiA-JXiBRCpARIsAGqF8wXkQWFO7SLANysJUC9TyF7VypH7GRXXK8Q-V5bDRaLPfWQZsPKP8MaAi3SEALw_wcB

Vermiculture and Recycling: <https://www.calrecycle.ca.gov/organics/worms>

Need to order more worms? I recommend shopping locally with Sonoma Valley Worm Farm <http://sonomavalleywormfarm.com/products.php#c>