



Educational Outreach
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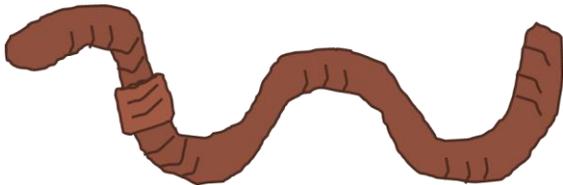
DIY Air Force Activities: Compost Challenge



Materials:

- clear 2 liter bottle
- black and white newspaper
- garden soil
- dark construction paper
- tape
- scissors or exacto knife
- spray bottle with water
- spade or shovel
- worm food scraps to compost: egg shells, fruit/vegetable peels, coffee grounds, grass clippings, pasta, tea bags, stale bread (do NOT use dairy products, meat, or oils)
- worms: can be collected in your yard or while hiking.

*** Worms are living creatures, and will require you to feed them and keep them in a safe environment. Once you have finished, set them free!



Worms make some people squirm, but they are nature's composters! They convert decaying organic matter into nutrient rich castings (worm poop!) that can be used to fertilize your plants. The official name for worm compost production is vermiculture. The humble worm is an essential part of a thriving ecosystem. In the following activity you will learn how to build your very own worm composting farm. Be sure to farm responsibly! Before you start, check in with an adult to make sure you have permission. Your worm habitat will need to be stored in a cool place out of direct sunlight. Building a worm compost habitat:

1. Cut the top off of your 2 liter bottle. Poke some small holes in the bottom of your bottle. You do not want your worm house to be too wet and the worms require oxygen! Have an adult assist you with this step, you do not want to get cut! Stand the bottle in a small plate or dish.
2. Next shred your newspaper. You want to break it down into thin strips. Spray the newspaper with your spray bottle to make it damp. If your garden soil is dry, moisten that too.
3. Layer the worm house with newspaper and garden soil. Make each layer about 1.5-2 inches wide with the top layer being dirt and the bottom newspaper. Only fill the worm house $\frac{3}{4}$ of the way, you should be able to flip the top you removed over and insert it as a lid without it touching the top layer.
4. Wrap the outside of the bottle with the dark construction paper and use a piece of tape to secure it. You will want to be able to remove it so you can peek inside, but worms prefer the dark. Remember to rewrap the worm house when you aren't making observations.
5. Head outside and collect some worms! Be gentle so you don't hurt them! Some good places to look are under pieces of wood, logs, and rocks. Make sure to ask permission before you dig any holes.
6. Place your worms in their new environment. Give them a few hours to settle and then mix some "worm food" into the top layer. Make observations daily! Feed them a little worm food each morning! Keep the environment moist but not wet; add more shredded paper if your worm house gets soggy.

When the castings start to build up, scoop them away and add them to your potted plants or garden. If the worms are happy you will see the worms lay eggs and new worms will emerge!

Air Force Associations:

At Maxwell Air Force Base in Alabama, the Maxwell Compost facility recycles natural materials on base. This compost consists of leaf, grass, and shrub clippings as well as horse manure. Once it has decomposed and gone through a compost screener, the resulting mulch and compost is provided to all Department of Defense employees, retirees, and their families.

