

## 80 - Worms

There could be over a million earthworms under the ground in a space the size of a Little League baseball field! But are earthworms good for the Earth? How do they get around with no arms or legs? And can a worm bite you?

If an earthworm has no arms or legs... how does it move? The way it works is this -- earthworms have long muscles that run the entire length of their body, and muscles that encircle their bodies, plus little bristles on their skin called: setae. The setae help keep them from slipping, as they stretch and contract their segmented bodies to push forward, or backward, through the soil. Sort of how you might move if you were in a sleeping bag and the zipper broke.

Earthworms don't have lungs. Instead, they breathe through their skin. A worm's skin has to stay moist, so they can absorb oxygen straight through their skin and into their bloodstream. And, they need to pump all that oxygenated blood to their muscles to move through the soil. To help them pump all that blood they have five hearts. Earthworms have both male and female reproductive organs... So all worms lay egg capsules. Then in 2-3 weeks, 1 to 5 baby worms will hatch from the tiny cocoons -- they'll be smaller than an inch long. They'll reach their full size in about a year. For some, they'll remain little- like an inch- while others can grow up to around 14 inches -- which is a little longer than a sheet of loose-leaf paper! (But, those are just the local worms, here in the U.S.) Some types of earthworms can become enormous!

### Things You Will Learn

1. How do earthworms move, breathe and eat?
2. Why are worms so important to the food you eat and the air you breathe?
3. Can a worm grow back its missing tail or head if it were to get cut off?

### Activities

1. Grab an adult and find a space where you can dig! It's time to go worm hunting! Gardens, flower beds, compost piles, and under downspouts are great places to look without digging up grass. Be gentle, but you can handle them and see how they move and feel. Make sure to put them back in the dirt when you are done!
2. Take a magnifying glass with you on your worm hunt. Does the worm look different under magnification? Can you see how it crawls or tell which end is the front and which is the back?
3. Ask an adult if you can make worms and dirt for dessert! It sounds gross but it's really chocolate pudding, cookie crumbs, and gummy worms! The gummy worms go in the chocolate pudding and you sprinkle the cookie crumbs on top. Yum!

## Additional Resources

Want to learn more about earthworms? [National Geographic Kids](#) has information on the earthworm's habitat, diet, and lifespan. If you would like to encourage worms to make a home in your backyard, [here](#) are some kid friendly tips on composting and starting your own garden.

## Kid News

The biggest painting in the world just sold for \$62 million dollars. The artist, Sacha Jafri, painted it in an empty ballroom and used over 1,000 paint brushes! His inspiration came from artwork children sent to him. Mr. Jafri initially wanted to cut up the painting and sell the pieces for charity but when it went to auction, one person bought the whole thing for more than double its anticipated selling price. He plans to use the money to help children around the world. Read more about this larger than life painting [here](#).<sup>1</sup>

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<sup>1</sup> This activity guide is for the Who Smarted? podcast [www.WhoSmarted.com](http://www.WhoSmarted.com)