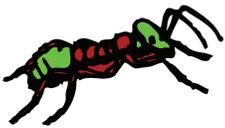




Decomposers

Decomposers - Nature's Great Recyclers

Decomposers come in many different forms. Some, are called micro organisms, and are too small for us to see. Others are bigger, such as fungi, insects and worms that we can easily see.



No matter how big or small decomposers are, they play a very important role in nature. They break down organic matter (eat dead plants and animals), and release the **nutrients** back into the earth.

If decomposers did not do their job and break down the dead materials, the soil would not get the nutrients needed for plants to grow.

Decomposed materials act like a sponge in the soil. When it rains or snows, it helps the soil hold more water and hold the water for a longer time. This is very helpful during the hot, dry summer months. The **moisture** saved in the decomposed materials helps the plants grow. The moist soil helps it stay in place instead of being blown away in a wind storm.

Those broken down organic materials in the soil can create empty spaces in the soil. This allows water from **precipitation** to easily enter the soil. If there were no empty spaces the soil would be packed down and rain water would just flow right over it and take the soil with it.

Decomposing happens in all **ecosystems**: forests,

prairies, deserts and in lakes, rivers and oceans. Each different environment has different types of decomposers that have evolved to break down organic matter.

Take a walk in your neighborhood park or a nearby forest. Grab a magnifying glass, if you have one, and get down on your hands and knees. What types of decomposers can you see?

Did you know that you can get the decomposers to work for you, and decompose the yard and food waste that your family creates?

Do the "Rot" Thing for Our Soil

Every human being on the planet needs food to survive. From pickles to pizza, all food comes from the earth!

In order to grow food, we need healthy soil and one way to keep soil healthy is to add compost.

Compost comes from things that rot like autumn leaves, grass clippings, and old food. It is rich in nutrients. Compost acts like a vitamin pill by adding important things back into the soil. Just like people need vitamins to stay strong and healthy, so do plants!

When the soil is full of these good things, more plants are able to grow. Compost can help produce more food for people in a natural and earth-friendly way.



Two Options for Composting at Home

Compost Pile

Here is an easy way to make compost in your back yard.

- First, you will need to find a place to start your pile. It should be close to your garden or flower beds and close to a water faucet.
- Then think about what type of bin you want to hold the pile together. It can be something bought from the store or one you make yourself with wood, wire, or bricks. Size should be no bigger round than a hula hoop (about 3x3x3 feet).
- Next, collect the things you will put in a pile. You can put leaves, grass trimmings and fruit and vegetable waste into the pile. You will want a good mixture of stuff like two parts grass clippings to one part dry leaves. As you mix, add just enough water to make it as wet as a wrung out sponge.
- After the compost pile is built, watch how it changes. The pile might get very warm and it might shrink in size.
- If you want to have finished compost quickly, you will want to turn the pile every week so you can mix up the materials and make sure the pile stays moist. If you turn the pile weekly, you could have finished compost in just over a month. But, don't worry if you don't turn the pile. It will eventually turn into great compost to add back into your soil.



Composting with Worms

Make decomposers work for you! Worms help make compost.

They eat old food and plant scraps and the castings they make is compost. Castings is just a fancy word for worm poop! Compost can be made at home or school using a



worm bin. The best worms for living in a bin are called red wigglers. They can eat up to half their weight in food scraps each day.

Here is what worms need to be happy composters:

- A home (this can be a plastic bin, wooden box, or large bucket where they have room to move. Worms don't like the light so it should have a lid, too.)
- Bedding (shredded paper is best)
- Air (breathing holes in the bin are important!)
- Water (worms are mostly water so need to live in a damp home. Keeping their bedding moist is the best way to give them water.)
- Food (plant-based food scraps are what they like!)
- Comfortable temperatures (not too hot or too cold)

Red Worm Facts:

- Is both male and female
- 8 adults can produce 1,500 offspring within six months
- Has 5 hearts, no eyes and no teeth
- Breathes through their skin
- Needs to live in dark, moist surroundings

Word Ladder

Members can earn 5 points by completing activities on this page!

Make your way from RAIN to SNOW by changing just one letter on each step to make a new word. There are 7 steps in this word ladder, each with helpful word definition hints.

R	A	I	N	
R	A			A sudden attack
	A		D	Stated
S			D	A fun way to get down a snowy hill
S	L			_____ & Slide
S			P	To spill or splash
S	L			Not fast
S	N	O	W	

Match the Definition

The topic of decomposers may have taught you some new words to add to your vocabulary. Draw a line to connect the word with its definition.

decompose	Rain, snow, sleet, dew, formed by condensation of water vapor in the atmosphere.
ecosystem	Component in foods that an organism utilizes to survive and grow.
moisture	Water or other liquid diffused as vapor or condensed on or in objects.
nutrients	A system involving the interactions between a community of living organisms in a particular area and its environment.
precipitation	To separate into component parts or basic elements. To rot or cause rot.



EnviroKids' Club

EnviroKids' Club
c/o Spokane Regional Clean Air Agency
3104 E. Augusta Ave.
Spokane, WA 99207

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**See inside for
Activity Details!**
Members can earn 5 points
by completing each special
EnviroKids' activity that is
marked with a gold star!

EnviroKids'... caring for the Earth

EnviroKids' Club provides its 200+ members with information and activities to explore aspects of the environment: air, water, weather, garbage and recycling, plants and animals. The Club is open to all Spokane County residents who are in grades K-6.

Club members receive a newsletter in the mail four times a year. The newsletter contains activities to complete and ideas for activities at home or in the community. Members who are interested can complete activities and/or participate in some of the events to earn points. Earned points can then be used to trade-in for prizes. **Members need to participate in at least one activity per calendar year to receive newsletters.** For more information, visit www.SpokaneEnvirokids.org.

To earn points, mail your completed activities by January 31, 2015 to:

EnviroKids' Club c/o National Weather Service
2601 N. Rambo Rd. Spokane, WA 99224

Fill in this form with the activities page complete and send it back to us to earn your points! Do you have a friend or sibling who would like to join EnviroKids' Club? Copy this page for them to send in and be added to our mailing list.

Name: _____ Age: _____ Grade: _____ School: _____

Home Mailing Address: _____ City: _____ Zip Code: _____

E-mail Address: _____ Phone: _____

My child has permission to participate in EnviroKids' Club activities that I accompany him/her to and permission is granted to use his/her photo that may be taken at such event, for promoting the Club (newsletter, flyers, ads, website, etc.)

Parent Signature. Please print name, then sign and date

EnviroKids' Club Partners: City of Spokane Water Quality & Solid Waste Departments, National Weather Service, Spokane Aquifer Joint Board, Spokane Conservation District, Spokane County Water Resources, and Spokane Regional Clean Air Agency.

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