



ACTIVITY SHEET

December 2008

Why talk about EARTHWORMS?



Aren't they gross, those creepy crawlers, oozing themselves side to side in a bed of slime, tangling themselves together into a pulsating mass? But they play the most important part in the ecosystem!

Earthworms have been dubbed "nature's tiny farmers" because of their ability to help plow, aerate, hydrate and fertilize the earth and produce plant food. So next time you encounter a worm, even if its in your own house after a rainy day, take care not to squash or kill it.

Name.....

School Name

Class..... Date.....

Gobar Gyan: Usually earthworms are hard to find, since they love dark and damp spaces under the earth. Ever noticed a tangled mess of earthworms on the sidewalk after a rainy day? These amazing creatures can even help you manage the waste produced in your own house! Let's find out how...

Activity 1: Take a walk down to a park near your house or peep into your own garden. See a patch of earth covered with vegetation? Try to locate a few creepy crawlies on leaves, on the stems and in the ground. Describe them by colour and appearance.

Worm

Description

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Did you notice any earthworms? Probably not.

Gobar Gyan: Every acre of soil is home to as many as 1 million worms. So what's so special about earthworms, and how do they help us? Did you know that an earthworm can consume about 1/2 of its weight each day? Do you eat that much? (I hope not!) Let's see how the great appetite of these little creatures is of use to us...



Hi! I am Pandit Gobar Ganesh. You will find me in Gobar Times—a magazine that tells you how your everyday life is linked to the world around you. Hooked, huh? If you want to know more about me and Gobartimes visit us at:

www.gobartimes.org

Activity 2: Make a list of the amount of kitchen waste your house generates in a day on an average basis. That includes vegetable peels, eggshells, fruit cores, even leftover pasta. Don't worry - you don't need to fish through the garbage, just weigh the amount of waste that is collected in the kitchen dustbin and make a note of it. Do this for at least a week.



DAY	AMOUNT OF WASTE IN KGS.
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Total	_____

How much of the kitchen waste generated in your house adds up to the daily garbage? Yeah! Don't squirm to find this out — you will have to weigh the garbage you dispose off your house everyday.

Gobar Gyan: A fresh estimate from the Ministry of Food Processing in India says a whopping Rs. 58,000 crore worth of agriculture food items get wasted in the country every year. Ever thought about how much do you contribute to that?

An easy way of reducing kitchen waste is to adopt vermicomposting. It's the process of using earthworms to turn organic waste into vermicompost — also known as vermicast or worm compost – a high quality natural fertilizer and soil conditioner. The worm compost can be used in the garden and for potted plants.

Vermicomposting

The Worms do the Work for you!

WHY?

Aerators

Worms add Oxygen for all the beneficial micro-organisms.

Turners

Like Tiny Plows, worms work throughout the material

Mixers

Worms move all kinds of organisms and nutrients throughout the compost pile adding many small aggregates.

Screeners

Worms eat the bedding materials and the feed and turn it into a rich soil product.

Accelerators

Worms can eat 1/2 to all their weight per day. A 5'x8' large scale Flow-through system can process 100 lbs of food scraps per day and will produce 78-80 lbs of castings per day.

Pathogen Controllers

Worms ingest and render useless, the "bad guys".

Activity 3: Make your own vermi-compost facility! How? There are many ways to practice worm composting. Search the web, talk to people around your house or the gardener and figure out the way that suits you the best. Write the steps you followed to prepare your worm composting facility in the space provided on the next page:

- To facilitate your work here are a few links:
- www.wormdigest.org
 - www.allthingsorganic.com
 - homepage.mac.com/cityfarmer/PhotoAlbum23.html
 - www.nyworms.com/vermicomposting.html

Gobar Gyan: Charles Darwin, the famous scientist who came up with the theory of evolution, once had this to say about the earthworm: "The plow is one of the most ancient and most valuable of man's inventions; but long before he existed, the land was in fact regularly plowed and still continues to be thus plowed by earthworms. It may be doubted whether there are many other animals which have played so important a part in the history of the world, as have these lowly organized creatures."



Activity 4: Just like in Activity 2, make a list of the amount of kitchen waste your house generates in a week. Only this time, use your vermi-compost bin to collect whatever waste your earthworms can eat, leaving out dairy or poultry products.

DAY	AMOUNT OF WASTE IN KGS.
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
Total	_____

Noticed a change in the amount of kitchen waste you generated?



Prepared by: Akshyeta Suryanarayan

If you found the activity sheet interesting, E-mail us at eeu@cseindia.org or write to: Activity Sheet, Centre for Science and Environment, 41 Tughlakabad Institutional Area, New Delhi-110062 or Call 29955124 Extension 219