

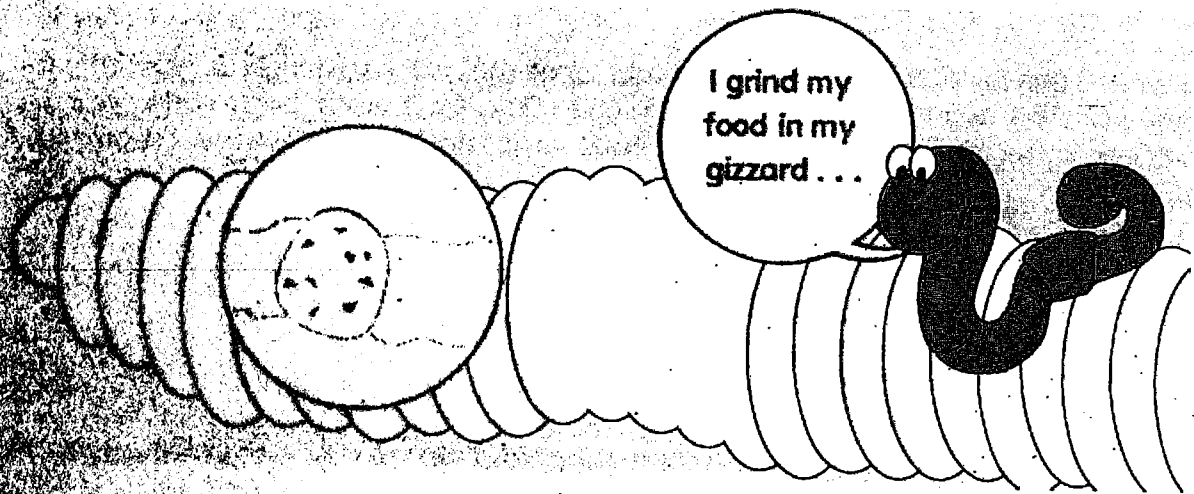
# Worm Digestion

My mouth is very small. So I can only eat very tiny things like bacteria, fungi and protozoa which you can't see unless you are looking through a microscope. I also eat organic matter like plants (leaves, stems) and decaying animals. I guess that sounds sort of yucky, but you humans eat dead animals and birds too.

Sometimes the bits of food are too big for my mouth, so I moisten them to make them soft and suck them right into my mouth. (Don't try this at home, human parents tend not to like this.)

Since I have no teeth, I cannot really chew my food like you do. I do have something inside of me close to my mouth called a gizzard. You might have heard this word before because birds, including chickens and turkeys, have a gizzard almost like mine. As I eat my food some grains of sand and soil get into my gizzard. These grains of sand and soil push against each other, mix with moisture and grind the food into tiny pieces (kind of like my own personal food processor).

When the food leaves my gizzard, it goes into my intestine. The food is dissolved there and absorbed into my blood. Then it is carried to all parts of my body to keep me strong, healthy and slimy.



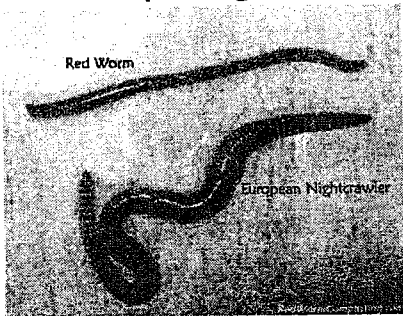
## Questions

- 1. Do any other animals use gizzards?
- 2. How do humans process their food? What ways do humans process their food?

# Why Worms?

Now comes the fun part – choosing your worms. No garden-variety worms for you. In fact, you'll want to avoid nightcrawlers and other garden worms, they don't survive well in a worm bin.

Vermicomposting is a fancy word for using worms to make compost. The best worms for vermicomposting are redworms.



The redworm is also known as: red wiggler, manure worm, red hybrid, striped worm, trout worm. Whatever it's called, the redworm is the worm capable of reproducing quickly in captivity, while chomping copious quantities of food waste.

How many worms should you start with?

You will need to calculate the average amount of food scraps your classroom or household produces per day. Use roughly 2 pounds of worms to 1 pound of daily scraps. You can buy worms by the pound (includes about 1,000 worms – our cups contain only 20 to 30 worms).

This 2 pounds of worms/ 1 pound of scraps would be enough to fill a 2x3 foot container.

Breeding worms can lay two or three cocoons per week that will hatch in 21 days, with each cocoon hatching two or three worms that will mature in 60 to 90 days. A worm population eventually stabilizes at levels that can be supported by the food scraps added, and by the availability of room to move and breed.

You can buy worms from growers, bait shops, some garden centers, or through the mail. Check online. Prices will vary but expect to pay about \$20 to \$30 per pound.

## Your Task:

There are 3,000 species of worms! We are comparing trout worms (also called redworms) with nightcrawlers.

Look at each worm using the hand lens. Write three observations about each one on your paper.

***\*These are LIVE ANIMALS!!! Treat them with RESPECT!!!!\****

## Discussion Questions:

3. Why do you think one worm might be better at making compost than another?
4. How many worms do you think you would need for the shoebox?
5. Aristotle called worms the "intestines of the soil". What do you think he meant?