

# Lesson 8

# WORMS, NATURE'S RECYCLERS!



## TEACHER'S PREVIEW

**Grade Level** 2-3

**Learning** Science

**Outcomes**

1. Demonstrate knowledge of what animals need to survive.
2. Describe the structures that enable animals to survive in different environments.
3. Explain how animals interact with each other.

**Environmental Message** Worm composting improves soil and reduces waste.

**Important Vocabulary** compost      egg      organic      worm bin  
life cycle      red wiggler      habitat      castings

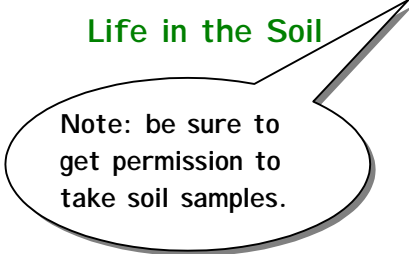
**Equipment and Material** shovel  
clean recycled plastic jars  
sample of finished compost

Teaching Aids: "Meet a Worm" (see lesson 5), "Worm Composting" (see lesson 5), and "Organic Household Waste Survey"

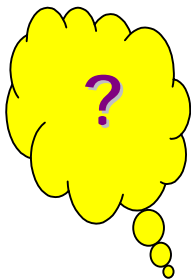


## 1. INTRODUCTION

### Life in the Soil



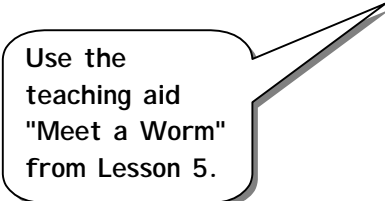
Note: be sure to get permission to take soil samples.



- A. Bring in a sample of soil, or take the students for a walk outside to collect soil samples in reused jars.
- B. Label each sample to indicate where the sample was taken (e.g., in the woods, a garden, the school playground, etc.).
- C. While you are taking the samples, note the animals that you find living in the soil.
- D. Back in the classroom let the children examine the samples.
- E. Ask the children to describe the soil samples - make a list on the board of the words they use.

- \* What does soil look and feel like?
- \* Are there differences between the samples?
- \* What is soil made of? (Soil is made up of particles of sand, silt, clay and organic matter.)
- \* What animals make soil their homes? (Worms, moles, burrowing mammals, insects, etc.)
- \* What would an animal need to live in the soil? (Food, water, air.)
- \* How do they get those things in soil? (Water and air are found between soil particles and food is either algae or other small animals living in the soil or decomposing organic material.)
- \* Why are animals that live in the soil good for our gardens? (Worms and other creatures break down plant matter into the organic part of soil and also help to aerate soil by creating tunnels.)
- \* How does this help the ecosystem? (Soil organisms make the nutrients in organic matter usable to plants.)

### Worm Adaptations

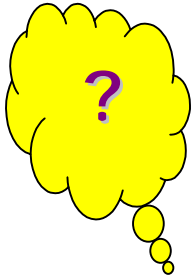


Use the teaching aid "Meet a Worm" from Lesson 5.

- \* What do worms need to survive? (Soil, water, air and organic matter to eat.)
- \* How are worms adapted to life in the soil? (They like dark places and have no eyes, they move through the soil by making tunnels, they eat fallen leaves and other organic matter.)
- \* Has anyone ever seen a "pet" worm? (Yes - in a worm bin.)

## Worm bins

Use the teaching aid "Worm Composting" from Lesson 5.



A worm bin is a home for worms which people use to compost organic waste. To make a worm bin, worm habitat needs to be created.

- \* What things do worms need that must be put in a worm bin? (Bedding of newspaper or leaves, air, water and food.)
- \* What is the name of the special worms we use in our worm bins? (Red wigglers are special worms that help us compost.)
- \* What would you feed your worms? (Fresh fruit and vegetable scraps.)
- \* What do we get from the worm bin? (Compost.)
- \* What is compost? (Organic matter that has been broken down by worms and other organisms.)
- \* What can it be used for? (It can be dug into the earth to improve the soil and help plants grow better.)
- \* What is another way to make compost at home? (A compost bin.)

## 2. PRACTICE

Note: Worms like to lay their eggs in eggshells!

- A. Make a list on the blackboard of the things that could be used to feed worms in a worm bin.
- B. List things that we should not feed worms. (Meat or bread.)
- C. List things that we throw away from our lunches that worms would like to eat.

## 4. POSSIBLE ASSIGNMENTS

Use the teaching aid "Organic Household Waste Survey"

- A. Ask the students to conduct a survey at home of what happens to organic waste.
  - B. Summarize the results on the board for the class.
- \* Why is it important to compost? (Organic waste comprises up to one-third of our household waste. Worms and other soil organisms need organic matter in order to live. If it ends up in the landfill, we waste this resource.)
  - \* What are some ways we could compost more at school? At home?

## 5. SHARING

### It's A Worm's Life

- A. Using old socks, make Earthworm puppets.
- B. Working in groups, have the class make up a story about a day in the life of their puppet worms.
- C. Children might enjoy presenting their puppet shows to a younger classroom.

## 5. CLOSURE

- \* How do worms help people? (They eat garbage/organic waste and make compost.)
- \* What other living things benefit from worms? (Plants benefit because worms aerate the soil and make it easier for the plant's roots to grow, and also make rich soil. Birds and other animals benefit because they feed on worms. All animals also depend on plants, which depend on worms.)
- \* How does composting help the ecosystem? (Composting takes place in nature all the time. It facilitates the release of nutrients to be used again.)
- \* What would the world be like if composting did not happen? (Leaf litter would not be broken down and would pile up to the sky.)

## 6. EXTENSION ACTIVITIES

Make a worm bin at Delta Recycling Society. The *Worm Watchers* Ecotour offers two options for worm bin demonstrations.

## 7. SUPPORT DOCUMENTS

'No Time to Waste', a GVRD publication for the Elementary Education Program.

'Guide to Worm Composting', GVRD 1993.

'Worms Eat My Garbage', Mary Appelhof. Kalamazoo: Flower Press, 1982.

'Earthworms', Keith Pigdon and Marilyn Wooley.

