

# Worms wiggle while they work!

A friendly introduction to students at a young age can help them recognize the value of animals that may not seem appealing at first glance.

## Curriculum Connection

**Alberta Education Program of Studies: Science (1996)**

### Grade 1:

**1–11** Describe some common living things, and identify needs of those living things.

### Grade 2:

**2–10** Describe the general structure and life habits of small crawling and flying animals; e.g., insects, spiders, worms, slugs; and apply this knowledge to interpret local species that have been observed.

### Grade 3:

**3–10** Describe the appearances and life cycles of some common animals, and identify their adaptations to different environments.

### Grade 4:

**4–5** Recognize that human activity can lead to the production of wastes, and identify alternatives for the responsible use and disposal of materials.

**4–10** Demonstrate knowledge and skills for the study, interpretation, propagation and enhancement of plant growth.

### Grade 5:

**5–10** Describe the living and nonliving components of a wetland ecosystem and the interactions within and among them.

## Objectives

Students will:

- Describe how worms are beneficial to the environment.
- List ways worms can help reduce waste through composting.

## Activities

### 1 Wormy Websites

There are several websites that introduce young students to worms in a fun and friendly way. These can help children get over fear they may have of worms and perhaps other small creatures so they can begin to see how beneficial they are to the environment. Here is a selection of such sites:

#### **Worm World: the yuckiest site on the internet!**

Get all the dirt on worms, from Wendell, Ace reporter worm. Lots of games and fun stuff.

<http://yucky.discovery.com/>

#### **The Adventures of Herman**

The autobiography of Squirmin' Herman the Worm contains fun, kid-friendly (and worm-friendly) activities that teach young students all they want to know about earthworms – and more.

<http://urbanext.illinois.edu/worms/>



## Worms wiggle while they work! (continued)

### The Adventures of Vermi the Worm

Go on an adventure with Vermi the Worm as he visits a school garden and hooks up with his buddies, Bubba the Worm, Hugh Hammer, Sunny Flower, and Trashcan. At each stop, you will learn something about vermicomposting or the 3Rs and have a chance to help your new buddies.

[www.calrecycle.ca.gov/Vermi/](http://www.calrecycle.ca.gov/Vermi/)

### WormWatch

WormWatch is a science-based education program that makes learning about the soil ecosystem fun. It is also part of a national volunteer monitoring program used to identify ecological changes that may be affecting our environment. This site describes the importance of worms as an indicator of soil biodiversity, introduces you to worm anatomy and ecology, and provides tools and resources to enable you to identify and monitor worms.

[www.wormwatch.ca](http://www.wormwatch.ca)

## 2 Wiggling your way to the truth

Make copies of the student activity sheet and let students go on a cyber search through the websites listed above.

Just for fun, let students wiggle their way through the maze on the *Wiggling while they work* activity sheet.

### Solutions to *Wiggling Your Way to the Truth* Activity Sheet

1. True, but they can sense light, especially at their anterior (front end). They move away from light and will become paralyzed if exposed to light for too long (approximately one hour).
2. False; they are cold-blooded, which means they are very sensitive to temperature changes.
3. True, but only about 25 species have been found in Canada.
4. True. Slime, a secretion of earthworms, contains nitrogen. Nitrogen is an important nutrient for plants. The sticky slime helps to hold clusters of soil particles together in formations called aggregates.
5. False. However, earthworms have the ability to replace or replicate lost segments. This ability varies greatly depending on the species of worm you have, the amount of damage to the worm and where it is cut. It may be easy for a worm to replace a lost tail, but may be very difficult or impossible to replace a lost head if things are not just right.
6. False. Baby worms are not born. They hatch from cocoons smaller than a grain of rice.
7. False. If a worm's skin dries out, it will die.
8. True. All of these hearts pump blood through blood vessels just like people's one heart.
9. True. Worms do not have lungs but breathe through their skin. They take in oxygen through the skin and it goes right into the bloodstream. A worm's skin must stay wet in order for the oxygen to pass through it, but if it is in too much water it will drown – although if the water has lots of air in it, the worm can stay under for a long time.
10. False; they have a mouth but no teeth. Their mouths are very small, so they can only eat very tiny things like bacteria, fungi and protozoa which can only be seen through a microscope. They also eat organic matter like plants and decaying animals.

# Worms: *Wiggling your way to the truth*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Can you figure out which of these are true? Write "T" or "F" beside each statement.

1. \_\_\_ Earthworms have no eyes.
2. \_\_\_ Worms are warm-blooded animals.
3. \_\_\_ There are 2,700 species of earthworms.
4. \_\_\_ Worms add nitrogen to soil.
5. \_\_\_ If you cut an earthworm in half, each half will become a whole worm.
6. \_\_\_ Earthworms give birth to "litters" of baby worms.
7. \_\_\_ Earthworms don't need water.
8. \_\_\_ Worms have five hearts.
9. \_\_\_ Worms breathe through their skin.
10. \_\_\_ Earthworms don't have a mouth.



# Worms: *Wiggling while they work*

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Worms do lots of great things for the environment. They help turn trash like apple cores and other food waste into nutrients that help flowers (and other plants) grow. Start from the lower left and help the worm get through the compost.

