

# Worms

By Cindy Grigg

<sup>1</sup> All worms have some things in common. All of them are invertebrates. They all have long, narrow bodies without legs. All worms also have tissues, organs, and organ systems. Worms have bilateral symmetry. Unlike sponges or cnidarians, worms have distinct head and tail ends.



<sup>2</sup> Worms are the simplest animals with a brain. Worms' brains are very simple; just a knot of nerve tissue located in the head end. Connected to this is a nerve cord that runs the length of the body. But because of this, a worm can detect objects, food, mates, and predators quickly. It can respond quickly, too. The sense organs, sensitive to light and touch, pick up information from the environment. The brain interprets that information and directs the animal's response. If an earthworm on the surface of the ground senses a footstep, the worm will quickly go underground.

<sup>3</sup> Not all worms are small, slimy, and wiggly. Some tape worms can grow to be ten to twelve meters long. Christmas-tree worms resemble a bristly tree. Worms are classified into three major phyla, or groups. They are flatworms, roundworms, and segmented worms.

<sup>4</sup> Flatworms belong to the phylum Platyhelminthes (plat ee hel MIN theeze). Most flatworms are parasites that obtain their food from a host animal. A parasite lives inside or on another living organism. Sometimes a parasite will kill its host, but usually the host survives. Flatworms' bodies are flat and as soft as jelly. Some common ones are planarians, flukes, and tapeworms.

<sup>5</sup> Roundworms belong to the phylum Nematoda (knee ma TOE da). Roundworms may be the most abundant animals on Earth. About a million roundworms live in a spoonful of damp soil or sand. Roundworms have cylindrical bodies. Some are carnivores, some are herbivores, and some are parasites. Unlike flatworms or cnidarians, roundworms have a tube-like digestive system that has two openings. Food enters through a mouth and wastes exit the other end of the digestive system. This is an efficient system of digestion, and most complex animals have this system of digestion.

<sup>6</sup> Segmented worms belong to the phylum Annelida (an nee LID ah). Earthworms and other segmented worms have bodies made of many sections

called segments. Annelids also have a digestive system that has two openings. They also have a closed circulatory system. Blood is enclosed in the heart and blood vessels. Segmented worms have several body organs and systems. They have five paired organs that act like hearts to pump their blood through large blood vessels. They have a brain and nerve cord. They have reproductive organs and waste-removal organs. Well-developed muscles let the worms crawl through the soil or on top of the ground. To crawl, an earthworm sticks its bristles, found on the outside of each body segment, into the ground and pulls itself along. Segmented worms are found in nearly all environments.

<sup>7</sup> The three main worm phyla are flatworms, roundworms, and segmented worms. Roundworms have a digestive tube that has two openings. Segmented worms have a closed circulatory system in which blood is enclosed in blood vessels. These are important steps in the evolutionary development of animals.

Name \_\_\_\_\_

Science Pd: \_\_\_\_\_

## Worms

<p>1. What characteristics do all worms have in common?</p> <p><input type="radio"/> A They are invertebrates.</p> <p><input type="radio"/> B They have long narrow bodies without legs.</p> <p><input type="radio"/> C They have bilateral symmetry and organ systems.</p> <p><input type="radio"/> D All of the above</p> <p><input type="radio"/> E None of the above</p>	<p>2. Describe the brain of a worm.</p> <p>_____</p> <p>_____</p>
<p>3. How many main groups (phyla) of worms are there?</p> <p><input type="radio"/> A Five</p> <p><input type="radio"/> B Two</p> <p><input type="radio"/> C Three</p> <p><input type="radio"/> D Four</p>	<p>4. Platyhelminthes are the:</p> <p><input type="radio"/> A Round worms</p> <p><input type="radio"/> B Flatworms</p> <p><input type="radio"/> C Segmented worms</p> <p><input type="radio"/> D Parasite worms</p>
<p>5. Annelida are the:</p> <p><input type="radio"/> A Parasite worms</p> <p><input type="radio"/> B Segmented worms</p> <p><input type="radio"/> C Flatworms</p> <p><input type="radio"/> D Round worms</p>	<p>6. Nematoda are the:</p> <p><input type="radio"/> A Round worms</p> <p><input type="radio"/> B Segmented worms</p> <p><input type="radio"/> C Parasite worms</p> <p><input type="radio"/> D Flatworms</p>
<p>7. How many "hearts" do earthworms have?</p> <p><input type="radio"/> A Five</p> <p><input type="radio"/> B Two</p> <p><input type="radio"/> C Three</p> <p><input type="radio"/> D Four</p>	<p>8. Earthworms use _____ &amp; _____ to help them move through soil.</p> <p><input type="radio"/> A arms and legs</p> <p><input type="radio"/> B arms &amp; bristles</p> <p><input type="radio"/> C muscles &amp; legs</p> <p><input type="radio"/> D muscles &amp; bristles</p>