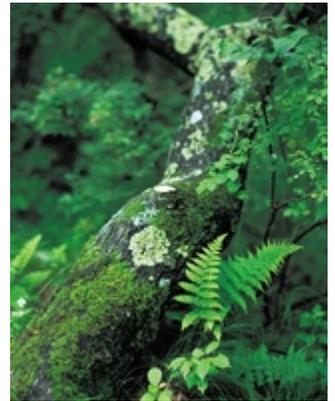


# The Plant Kingdom

By Cindy Grigg

<sup>1</sup> The plant kingdom has over 300,000 different species. They range from simple algae to complex trees and flowering plants. All members of the plant kingdom are made up of many cells that are surrounded by cell walls. Their cells contain a material called cellulose. Most plants make their own food by photosynthesis. Plants are generally anchored in place and do not move from place to place. Therefore, they must get everything they need from their environment. Plants are classified into major divisions. In one of the divisions, the plants are **nonvascular plants**. These are plants without vessels. Most of them absorb water without the help of roots, stems, or leaves.



<sup>2</sup> Nonvascular plants include some algae and the mosses and liverworts. Because nonvascular plants must absorb water to survive, you will find these plants only in moist areas.

<sup>3</sup> The mosses and liverworts group contains many-celled green plants. They make their own food and have a root system of rhizoids. They grow in moist areas on land and reproduce from spores in capsules.

<sup>4</sup> **Vascular plants** are plants with vessels. The vessels in plants are a system of tube-like structures that move water with nutrients to all parts of the plant. Vascular plants have three main divisions. They are the ferns, and seed plants. The first land plants, similar to present-day mosses, appeared in the fossil record during the Silurian Period between 408 and 438 million years ago.

<sup>6</sup> Ferns are many-celled vascular plants. They are green and make their own food. Ferns have feathery leaves called fronds. They live on land or in water. They reproduce by forming spores. The first ferns and cone-bearing plants appeared in the Devonian Period from 360 to 408 million years ago.

<sup>7</sup> Seed plants are complex vascular plants with roots, stems, leaves, and seeds. They reproduce by means of seeds that are produced inside a fruit or in cones. The seed plant division is further divided into angiosperms, or flowering plants, and gymnosperms, or conifers. Seed plants became common in the fossil record during the Permian Period. This was between 259 and 299 million years ago. The first "modern" trees (conifers, ginkgos, and cycads) appeared during this time. The first flowering plants didn't appear until the Cretaceous Period, from 66 million to 144 million years ago. Flowering plants became the most common kind of plant in the fossil record during the Tertiary Period from 1.6 to 66 million years ago.

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<p>1. Name three things that most members of the plant kingdom have in common.</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>2. What process do most plants do to get food:</p> <p><input type="radio"/> A Fermentation</p> <p><input type="radio"/> B Cellular Respiration</p> <p><input type="radio"/> C Photosynthesis</p>
<p>3. The two main divisions of the plant kingdom are:</p> <p><input type="radio"/> A Gymnosperms &amp; Angiosperms</p> <p><input type="radio"/> B Vascular &amp; Non Vascular</p> <p><input type="radio"/> C Mosses &amp; Liverworts</p>	<p>4. Why do non vascular plants have to live in moist environments?</p> <p><input type="radio"/> A they must not want a tan</p> <p><input type="radio"/> B they must absorb water from their environment</p> <p><input type="radio"/> C they don't live in moist environments</p>
<p>5. Mosses &amp; Liverworts have a root system of:</p> <p>_____</p>	<p>6. Ferns reproduce by forming</p> <p><input type="radio"/> A Sperm</p> <p><input type="radio"/> B Eggs</p> <p><input type="radio"/> C Spores</p>
<p>7. What are gymnosperms?</p> <p><input type="radio"/> A Ferns</p> <p><input type="radio"/> B Conifers</p> <p><input type="radio"/> C Flowering plants</p>	<p>8. What are angiosperms?</p> <p><input type="radio"/> A Ferns</p> <p><input type="radio"/> B Conifers</p> <p><input type="radio"/> C Flowering plants</p>