

Look around at the plants in your neighborhood. What do you observe? Tall trees and freshly mowed grass? Plants with flowers, seed pods, or fruit? Plants with leaves of every shape and color? Studying the range of characteristics that make plants unique is interesting. But it is also interesting to study the way plants move. Did you know plants are always in motion?

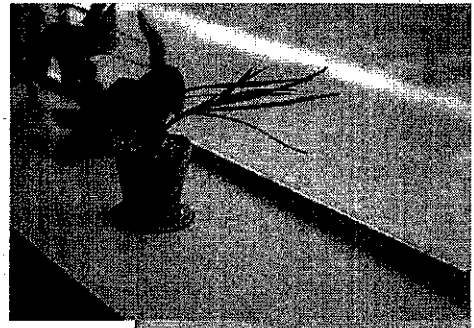
Several different factors affect which way a plant will grow. This growing motion of plants is called **tropism**. Have you ever wondered why some plants stand tall in the air while other plants extend themselves along the ground? An important part of the answer is tropism.

Most plants grow toward sunshine and other sources of light. This is called **phototropism**. Plants need light to produce food and energy. For a plant to thrive, it probably needs to grow near a good light source.

Even without light, plant shoots still grow upward. However, plant roots grow *downward*. Scientists believe the cause of this downward movement is gravity. As a plant grows, the cells in its roots are pulled toward the center of Earth; the rest of the plant's cells are pushed upward. This is called **geotropism**.

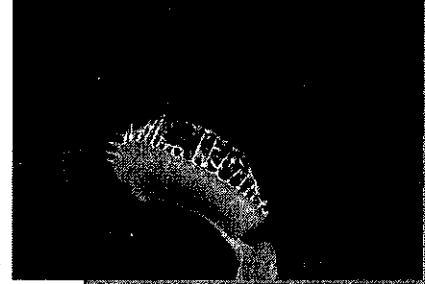
Thigmotropism refers to a plant's response to touch. As vines grow, many cling to trees, buildings, or other structures. The vine's stringy tendrils attach or curl around objects contacted by the tendrils. Scientists believe touching a plant releases chemicals in the plant's cells that affect the direction of growth.

The direction of a plant's growth is affected by other factors, including the presence of water and chemicals, as well as changes in temperature. All these types of tropism occur slowly. However, some plant movements are very fast.



Phototropism causes plants to grow toward sunshine or other light.

Rapid movements can help plants obtain food, defend themselves, and spread their seeds and pollen. Perhaps the most well-known moving plant is the Venus flytrap. When an insect lands on the leaves of a Venus flytrap, the plant snaps its leaves shut in a fraction of a second. Other plants set traps in pools of water, and a few plants have tentacles that help them snare prey.



A Venus flytrap captures and digests insects.

Some plants move to help themselves grow. For example, the telegraph plant moves its leaves throughout the day to soak up the maximum amount of sunshine. When squirting cucumbers are touched, they shoot out a liquid full of seeds. Some of these seeds stick to passing animals; the animals carry the seeds somewhere else to grow. Impatiens plants behave similarly, covering nearby insects with their pollen. The white mulberry plant, which grows in China and is eaten by silkworms, is the fastest plant in the world. The white mulberry shoots out pollen at half the speed of sound!

The mimosa pudica plant also moves to help itself grow; however, it also moves to protect itself. The mimosa's leaves fold shut and droop downward when the plant is touched; the leaves also fold during the night. This process helps the plant conserve energy when the sun is not shining; the process also keeps the plant from being eaten!

Plant movements are happening all around us. Just like people, animals, and other organisms, plants respond in many different ways to their environments. Next time you look around your neighborhood, think about all the action going on there!