

## SECTION 9 - 4

## SECTION SUMMARY

## Plant Responses and Growth

## Guide for Reading

- ◆ What are three stimuli that produce plant responses?
- ◆ What functions do plant hormones control?

A plant's growth response toward or away from a stimulus is called a **tropism**. **Touch, light, and gravity are three important stimuli to which plants respond.**

A **hormone** produced by a plant is a chemical that affects how the plant grows and develops. **In addition to tropisms, plant hormones also control germination, the formation of flowers, stems, and leaves, the shedding of leaves, and the development and ripening of fruit.** One important plant hormone is named **auxin**. Auxin speeds up the rate at which a plant's cells grow. Auxin controls a plant's response to light by making some cells grow faster than others so that the plant bends toward the light.

Flowering plants that flower and die in the same year are called annuals. Annuals include marigolds, petunias, and pansies. Wheat, tomatoes, and cucumbers are also annuals. Biennials complete their life cycle in two years. Parsley and celery are biennials. Flowering plants that live for more than two years are called perennials. Oak trees and honeysuckle are examples of perennials.