Weed Botany Basics

Roots
Fibrous roots: Root system made up of numerous long, slender roots of about equal size. No single root is the largest. (Many grasses, plantain, nipplewort, creeping buttercup)
Taproots: A primary root that remains the largest root of the plant and continues its growth in a downward direction, with all other roots branching off from it. (Red clover dandelion, dock, burdock)
Fleshy roots: Roots that become very large in order to store food. These may be part of taproot or fibrous root systems. (Examples: Wild carrot, thistle, Himalayan blackberry).

Underground Stems
Rhizomes: A 'horizontal stem growing beneath the surface often mistaken for roots, but they have joints (called nodes) which produces leaves and roots. Each piece of a rhizome can produce a new plant. Hard to control but usually will eventually die if all growth kept cut back (Quack grass, bindweed, Canada thistle, mint)
Tubers: Rhizomes that become enlarged at the growing end by the accumulation of stored food. Each tuber becomes a new plant the following year. (Potato, Jerusalem artichoke)
Corms and Bulbs: Short thick rhizomes or rootstocks that store food for dormant periods. Buds or scales can form to produce new plants. (Daffodil, crocus, onion).

Aerial stems
Root climbers: Climb by means of roots that occur along the stem in contact with its support. (Ivy)
Rambler climbers: Stems rest on top of other plants, often of bushes and rapidly growing herbs, often with prickles or spines, which enable them to stick to their support. (Himalayan blackberry)
Tendril climbers: Modified stems or leaves that climb or twine (bindweed, Boston ivy, bittersweet nightshade).
Creeping stems: Trail along the surface of the ground and take root at the joints and give rise to a new plant (Creeping buttercup, blackberry)

Life Cycles
Annual: Plants that arise from seed, flower profusely, go to seed, and die in one growing season (Examples: Nipplewort, miners lettuce, geranium)
Biennials: Plants requiring two years to reach maturity and seed. During the first season seeds germinate and young plants usually form a rosette of leaves and store up food in the roots for the following year's growth. During the second growing season they reach maturity usually sending up a flowering stalk, flower, seed and die. (Foxglove, dock, mullein)
Perennial: Plants that live for two or more years, sometimes hundreds of years. Generally of two types;
   Herbaceous: Aerial stems die to the ground each year. (Dandelion, dock, bindweed)
   Woody: Aerial stems live for many years. (Himalayan blackberry, English ivy)