

Stems

Stems are the central structures of shoots. They generally hold up the rest of the shoot to the sun and air. Stems are usually soft and green at first but may become hard and woody as they mature. Stems are usually branched. Stems consist of alternating nodes and internodes.

The nodes are the places where the leaves emerge and where there is always one bud just above each leaf. The internodes are the spaces between the nodes. Sometimes the internodes are so short and crowded that you cannot see them.

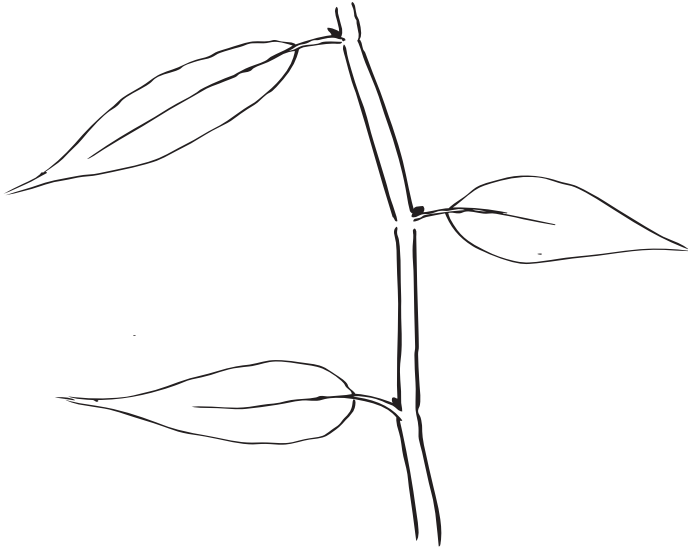


Illustration 3. *Stem*

Stems are usually erect, rigid and strong with long internodes so that they hold up the leaves to the sun, but in climbing plants the stems are weak so that the plant must support itself by twining up through other plants. In some of our local environmental weeds (kikuyu grass, wandering jew, lippia and morning glory) the stems are weak and trail over the surface of the soil where they form dense mats, often rooting wherever they touch the soil.

One of our local climbing environmental weeds – Madeira vine – has both climbing above ground stems and underground stems; the underground stems are short and fat and form stem tubers with buds from which the plant can regrow after control. Johnson grass develops far-creeping underground stems (rhizomes) which spread the plant to form dense clumps.

The main stems of most grasses and of basket and climbing asparagus remain just below the soil surface as crowns, from which slender spreading or climbing stems emerge.

Cacti have no real leaves but the sections of stem act as leaves. Any section of stem that falls to the ground will put out new roots and regrow into a new plant.