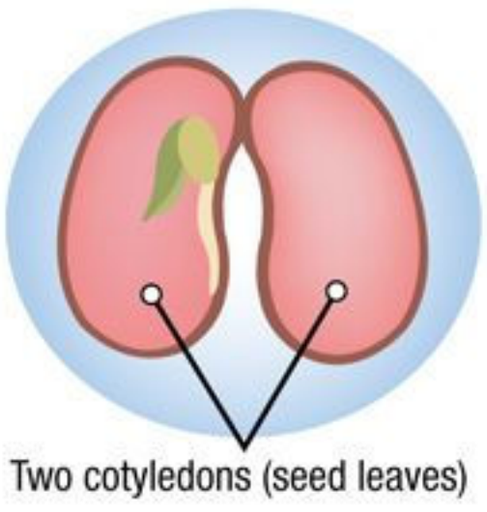
Exploring Monocots and Dicots

Angiosperms, or flowering plants, can be classified into 2 groups—**monocots** and **dicots**. Morphological differences in the number of seed leaves (cotyledons), root system structure, vascular bundle arrangement, leaf venation, flower parts in multiples, and pollen structure can help you distinguish between the classes. There are exceptions to this classification—some plants may have both monocot and dicot characteristics.

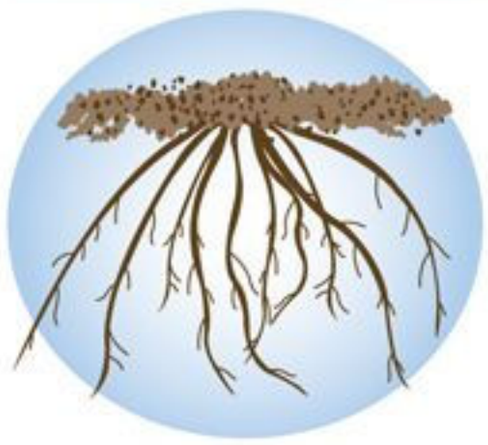
Embryo

MONOCOTS: One cotyledon (seed leaf)



DICOTS: Two cotyledons (seed leaves)

Root System Structure



Fibrous

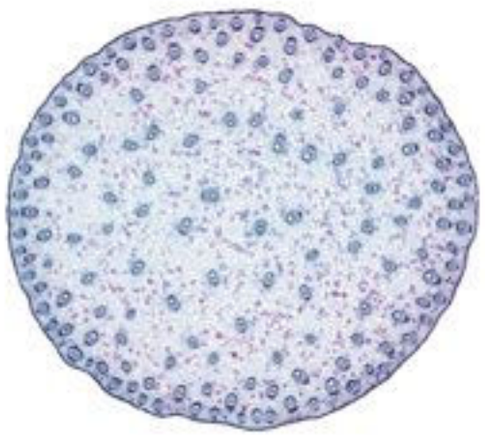
Taproot

Leaf Venation

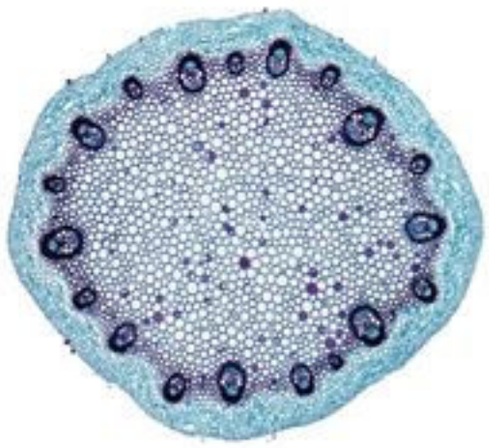
Parallel

Reticulated (netlike)

Vascular Bundle Arrangement in Stem

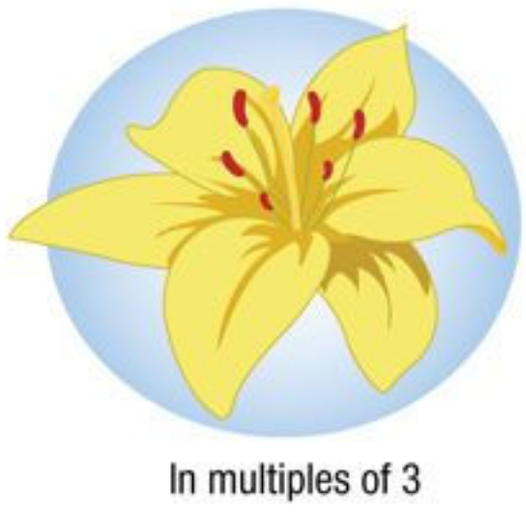


Scattered

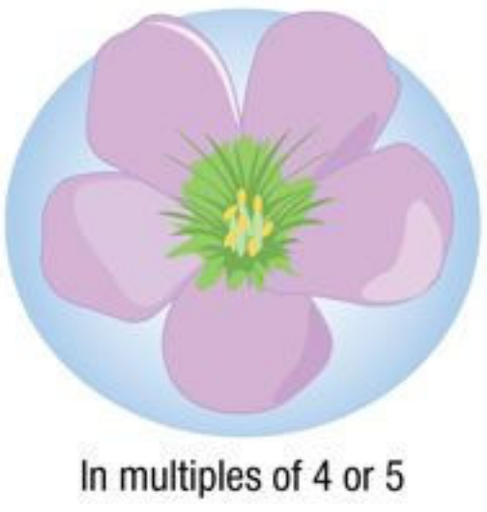


In a ring

Flower Parts



MONOCOTS: In multiples of 3



DICOTS: In multiples of 4 or 5

Pollen Structure

One furrow

Three furrows

Examples

Wheat, corn, lilies, daffodils, *Elodea*, orchids

Sunflowers, buttercups, apple trees, lilac, roses

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