

In an earlier topic, we discussed the [diversity of plants](#). The most complex of them are the angiosperms and by taking a closer look at them, we will be able to understand plant form and function better.



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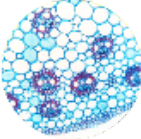



### Monocots vs. Eudicots/Dicots.

On the basis of several structural features, botanists classify angiosperms into two major clades (related by evolution): **monocots** and **eudicots**, which refer to the first leaves on the plant embryo--the seed leaves or **cotyledons**; with monocots having one seed leaf and a eudicot having two.

Monocots include orchids, bamboos, palms, and grasses while most flowering plants are eudicots. The following table summarizes the characteristics of the two major groups:

Structure	Monocots	Eudicots
Seed Leaves	One cotyledon	Two cotyledons
Leaf Veins	Veins usually parallel	Veins usually branched
Stems	Vascular tissue scattered in a complex arrangement	Vascular tissue arranged in rings
Flowers	Floral parts are usually in multiples of three	Floral parts usually in multiples of four or five
Roots	Fibrous root system	Taproot usually present

For a more visual representation of the table, see the following image:

MONOCOT		DICOT	
Single Cotyledon		Two Cotyledon	
Long Narrow Leaf Parallel Veins		Broad Leaf Network of Veins	
Vascular Bundles Scattered		Vascular Bundles in a Ring	
Floral Parts in Multiples of 3		Floral Parts in Multiples of 4 or 5	

"[Monocot vs. Dicot](#)": This diagram is showing the differences between monocotyledonous flowers and dicotyledonous flowers. Image by Flowerpower207 is licensed under [CC BY-SA 3.0](#).

As we saw previously with [animals](#), a close look at structure often reveals its function. Up next, we will look at the basic organs of a typical plant.