

How Leaves Arrange on the Stem

Understanding Phyllotaxy in Plant Morphology

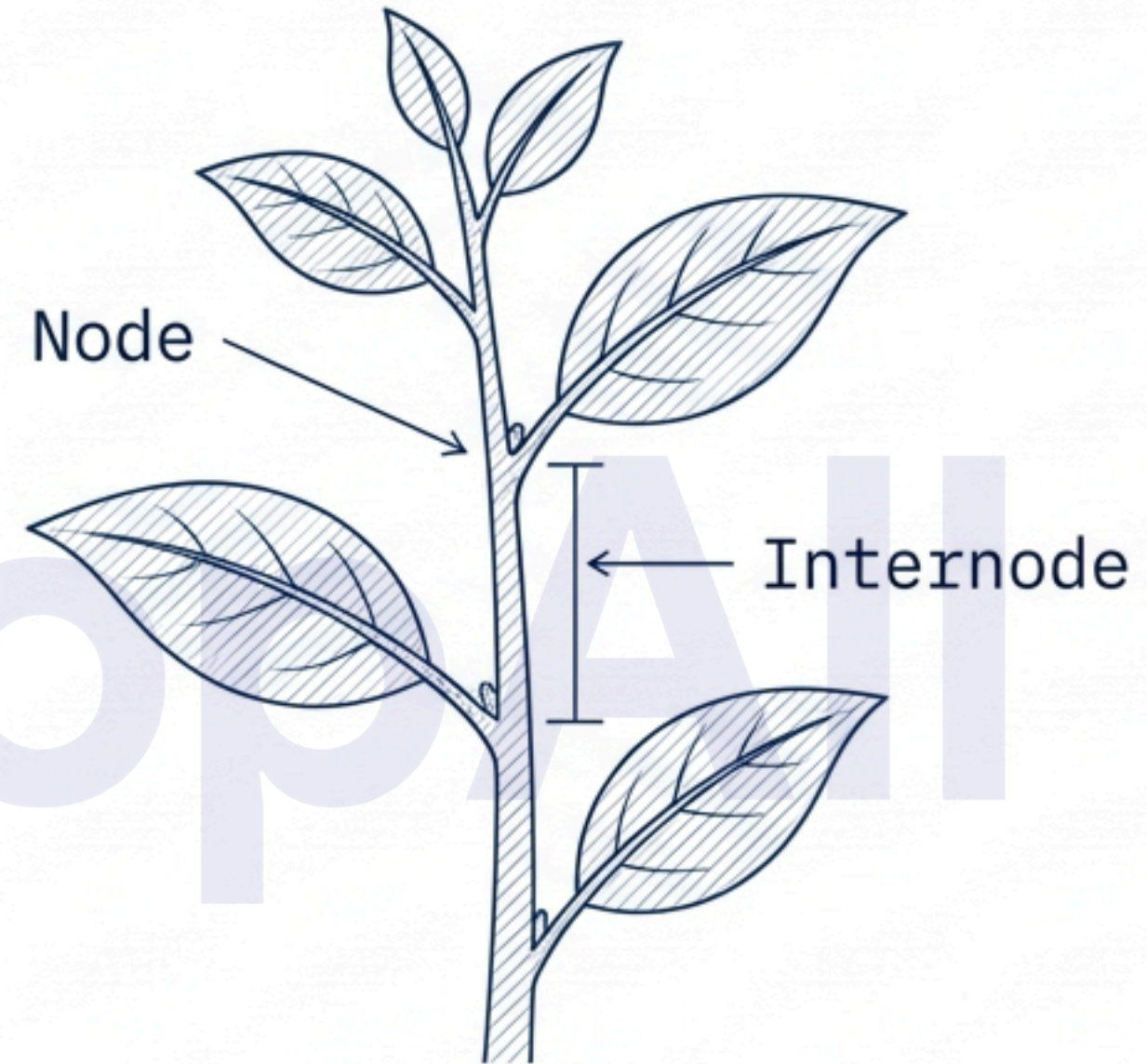


The Meaning of Phyllotaxy

Phyllotaxy is the specific pattern of arrangement of leaves on the stem or branch of a plant.



The pattern is determined by exactly how many leaves arise at a single node.



There are three primary patterns: Alternate, Opposite, and Whorled.

TYPE 01

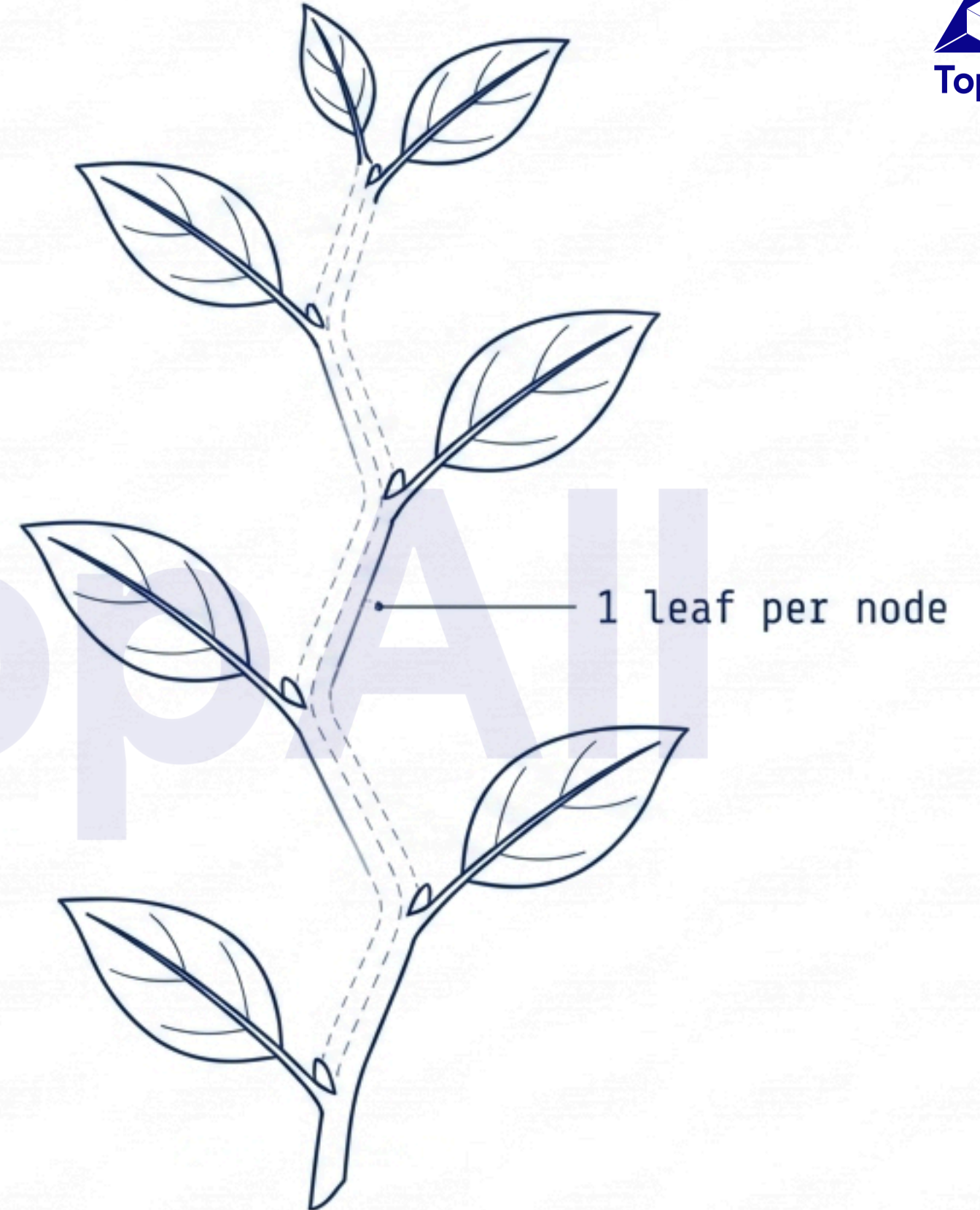
Alternate Phyllotaxy

A single leaf arises at each node in an alternating manner along the stem.

[China rose]

[Mustard]

[Sunflower]





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$$E=mc^2$$



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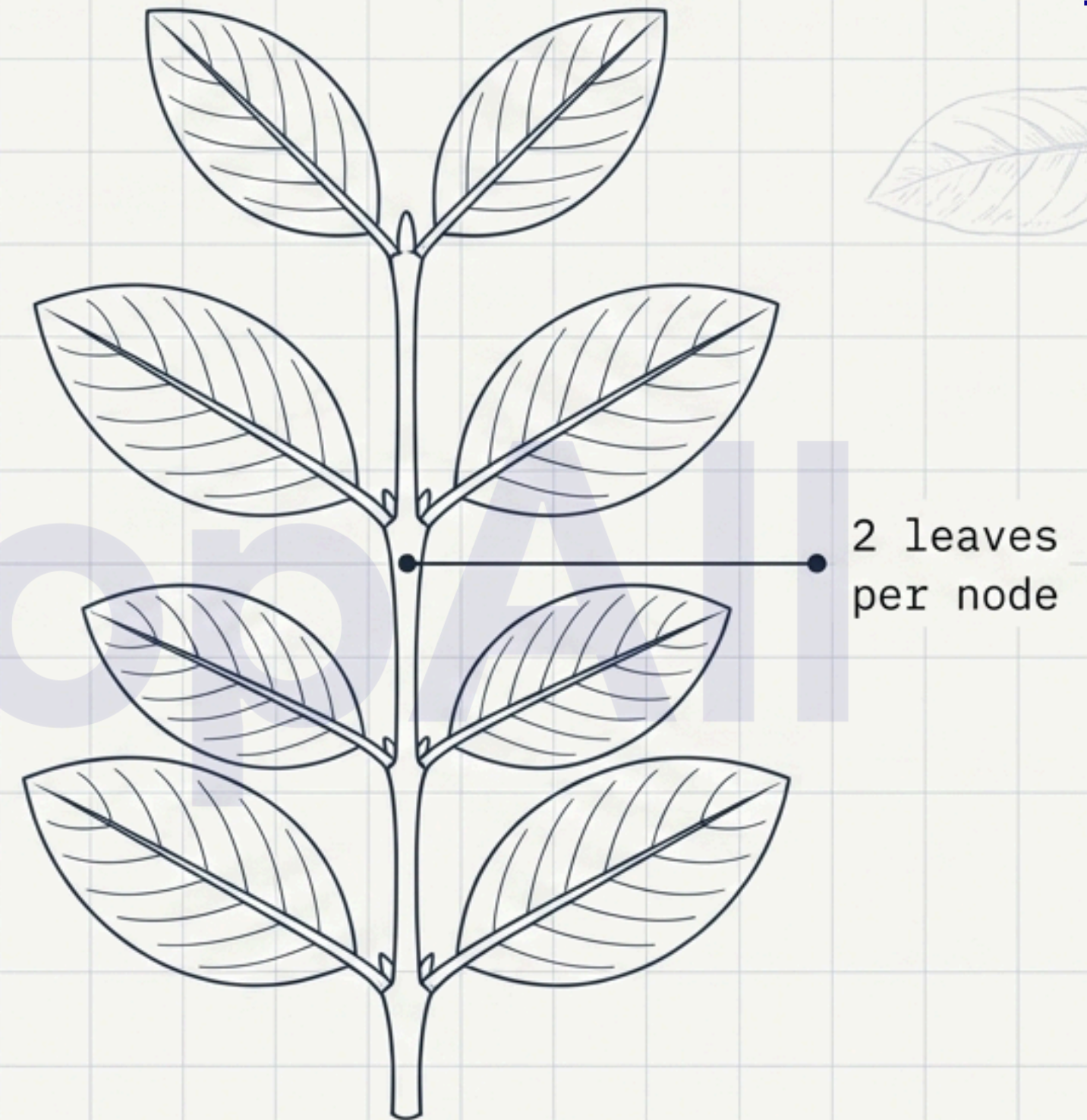
TYPE 02

Opposite Phyllotaxy

A pair of leaves arises at each individual node, lying directly opposite to one another.

[Guava]

[Calotropis]

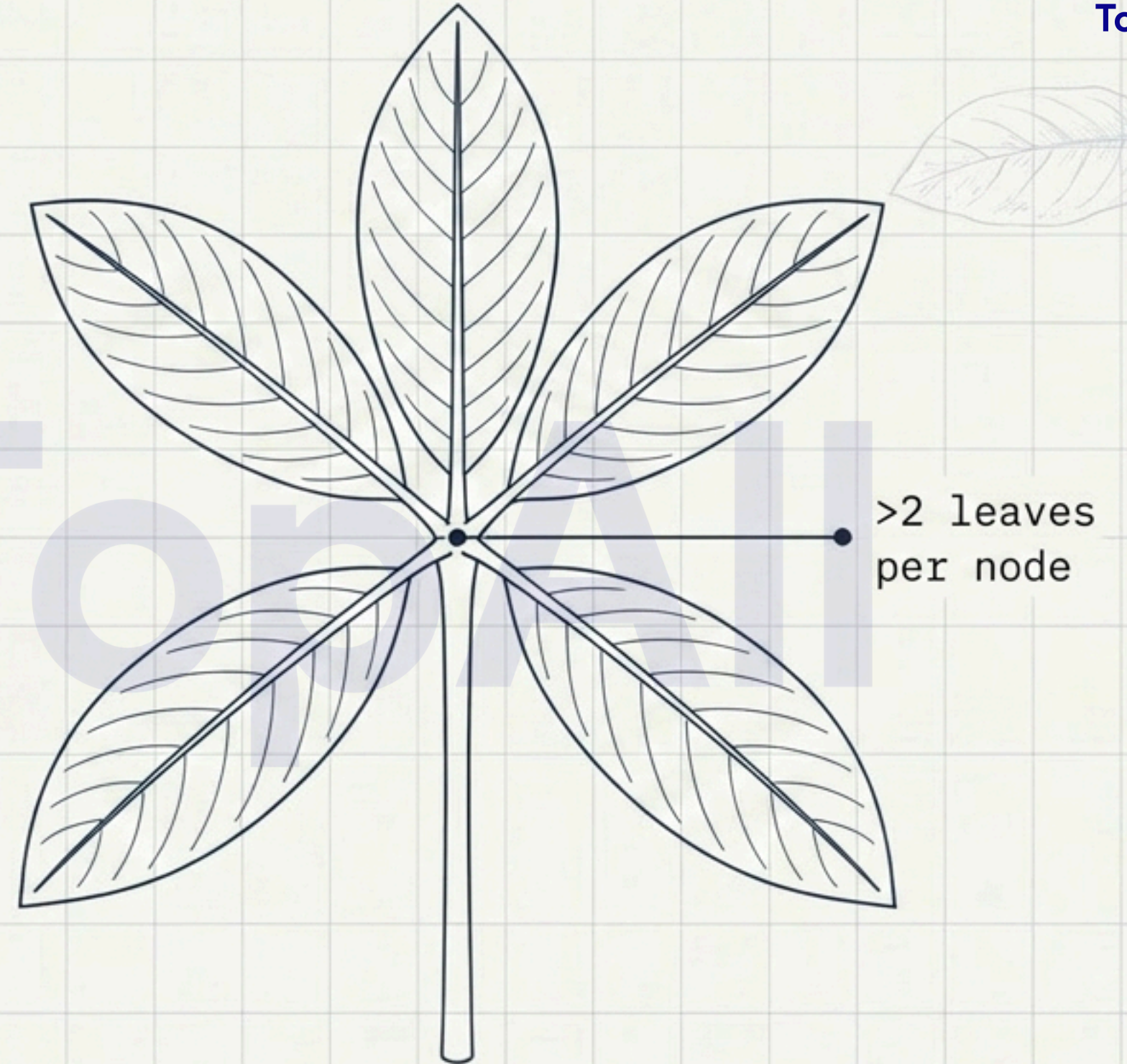


TYPE 03

Whorled Phyllotaxy

More than two leaves arise at a single node, forming a circular whorl around the stem.

[Alstonia]



Phyllotaxy at a Glance

Pattern Type	Leaves per Node	Visual Model	Key Examples
Alternate	1 Leaf		China rose, Mustard, Sunflower
Opposite	2 Leaves		Guava, Calotropis
Whorled	> 2 Leaves		Alstonia

Identifying phyllotaxy is a fundamental step in classifying and understanding flowering plants.



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