

# Plant Classification

Grouping plants by their similar  
characteristics

# Plant *Taxonomy*

Taxonomy  $\equiv$  Classification

# Scientific Classification

- Binomial Nomenclature (2 names)
- Latin - Never changes, a universal language
- Developed by Carolus Linnaeus



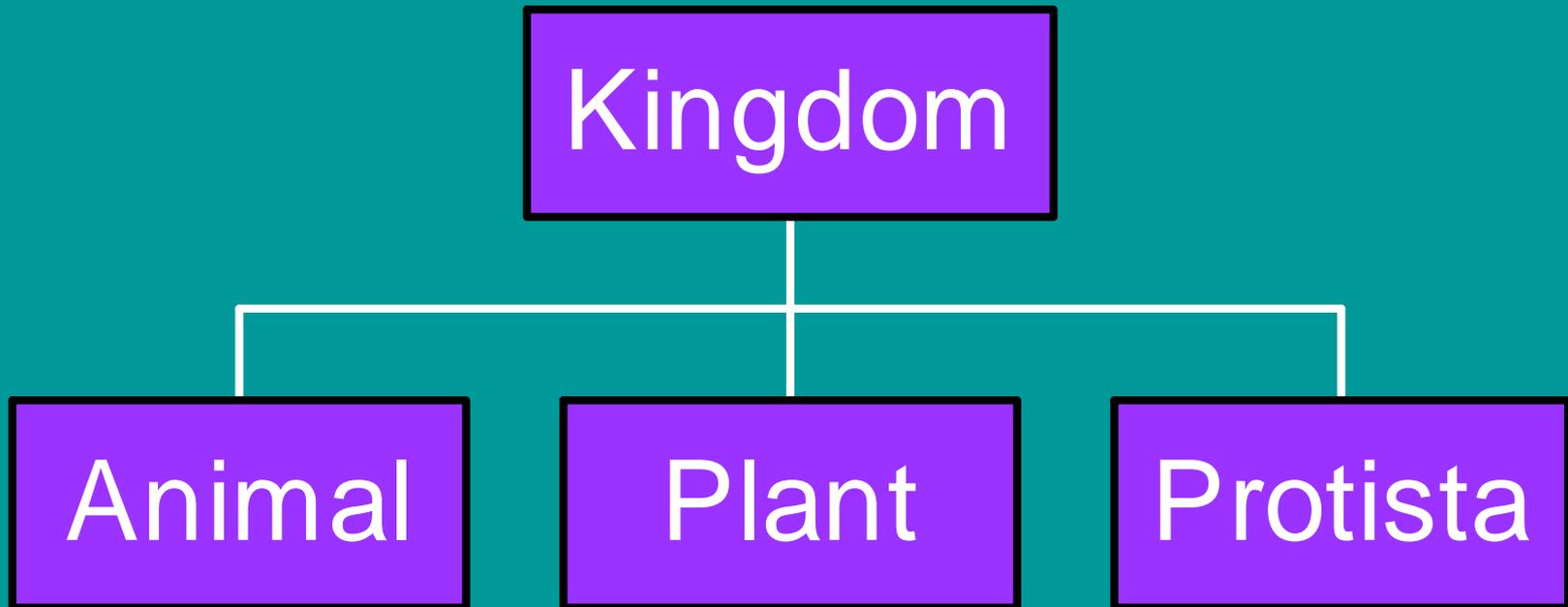
# Scientific Classification

- Kingdom
- Division (Phylum)
- Class
- Subclass
- Order
- Family
- Genus
- Species
- Variety

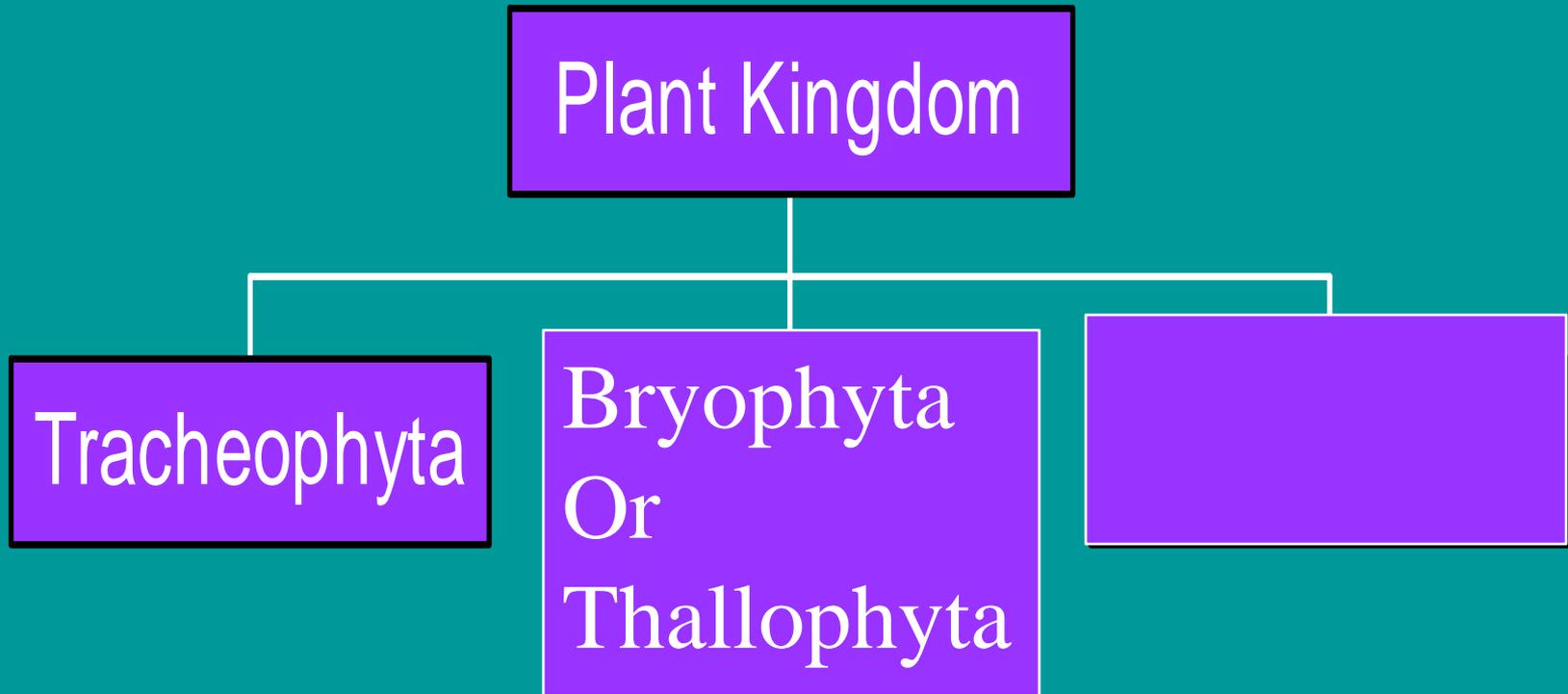
How to remember the  
order!!

King David Came Over  
For George's Sword

# Scientific Classification



# Plant Divisions



# Plant Divisions

## ■ Tracheophyta or Spermophyta

- Seed Producing plants that bear flowers
- Pterodophyta - a class of Tracheophyta that does not produce seeds (Ferns, reproducing with spores)



## ■ Thallophyta

- Fungi and bacteria



# Plant Classes

Tracheophyta

```
graph TD; A[Tracheophyta] --- B[Gymnosperms]; A --- C[Angiosperms]
```

Gymnosperms

Angiosperms

# Plant Classes

## ■ Gymnosperms

- Woody Plants that produce “naked seeds”
- conifers

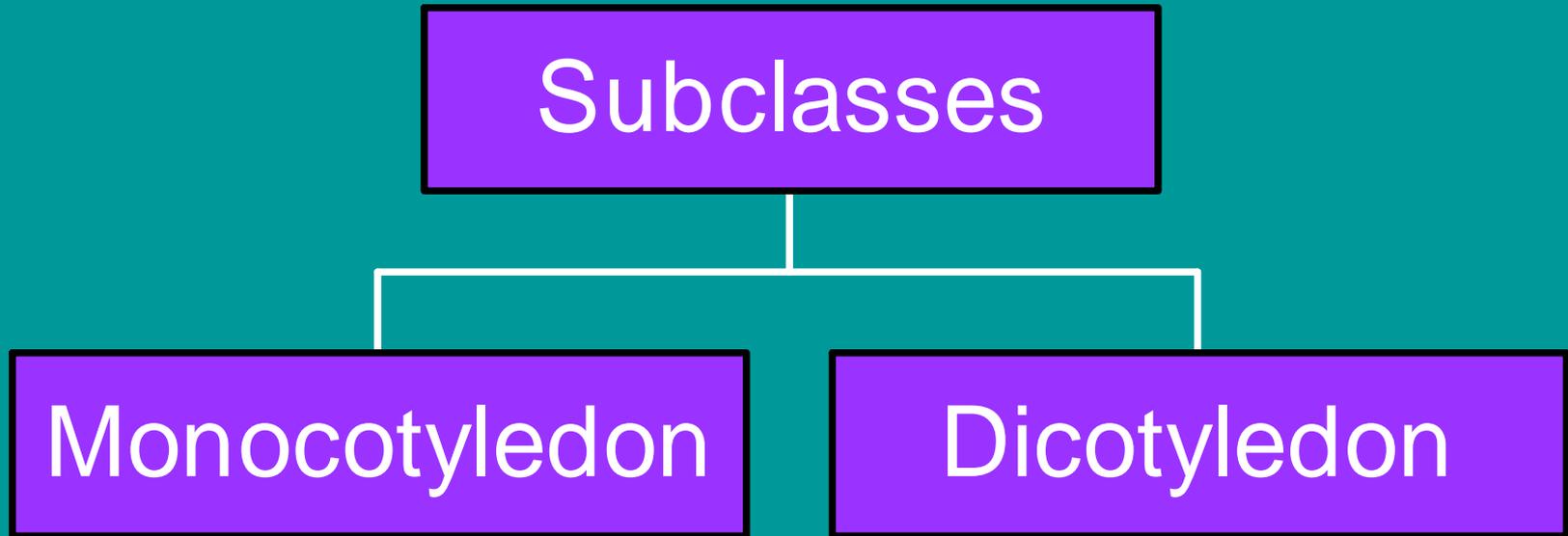


## ■ Angiosperms

- Flowering plants with seeds covered in an ovary



# Plant Order



# Monocots vs. Dicots

## ■ Monocots

- one seed leaf
- parallel venation
- petals in groups of 3

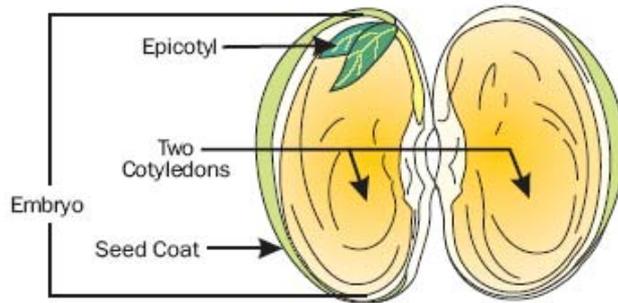


## ■ Dicots

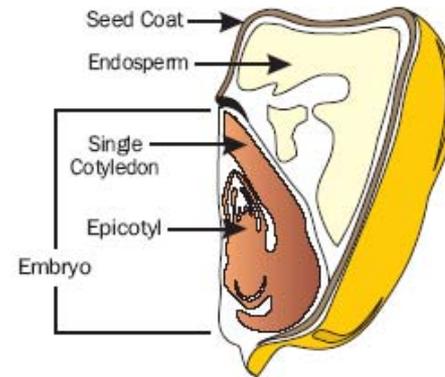
- two seed leaves
- netted venation
- petals in groups of 4 or 5



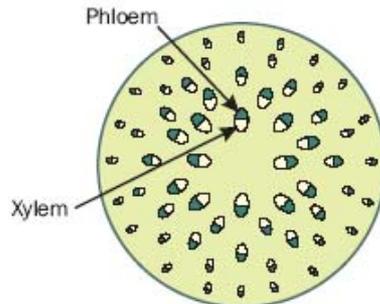
# DICOTS AND MONOCOTS



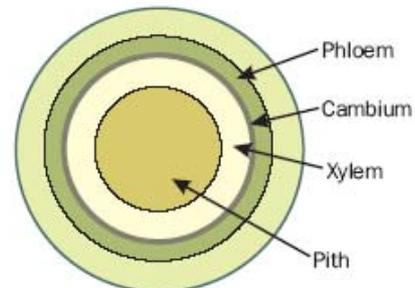
**Bean Seed (dicot)**



**Corn Seed (monocot)**



**Monocot**



**Dicot**

# Plant Families

## ■ Grass Family

- Corn
- Sorghum
- Orchard Grass
- Bentgrass
- Bluegrass
- Sugarcane
- Crabgrass
- Quack grass
- foxtail



# Plant Families



- Legume Family
  - alfalfa
  - beans
  - clovers
  - vetch
  - white clover

# Plant Families

- Lily Family
  - Onion
  - Garlic
  - Chives
  - Daylilies
  - Wild Onion
  - Wild Garlic



# Plant Families



- Composite
  - Sunflower
  - Daisy
  - Ragweed
  - Thistle
  - Dandelion

# Plant Families

- Gourd Family
  - Squash
  - Cucumber
  - Pumpkin
  - Melons
  - Wild Cucumber



# Plant Families



## ■ Nightshade Family

- Potato
- Tomato
- Eggplant
- Tobacco
- Black Nightshade
- Horsenettle
- Ground Cherry

# Plant Families

- Parsley Family
  - Celery
  - Dill
  - Carrot
  - Wild Carrot
  - Poison Hemlock



# Genus Species

- Genus name is Capitalized
- species name is not
- Both are underlined if can't be written in *italics*



■ *Acer rubra* or Acer rubra

# Common Names

- Can be confusing and are localized
- *Capinus caroliniana* may be called American hornbeam or Ironwood
- Corn
- *Liriodendron tulipifera* is known in the United States as the yellow poplar, tulip poplar, tulip magnolia, whitewood, and tulip tree.



# Variety

## ■ Apples

- McIntosh
- Cortland
- Red Delicious
- Jonathon
- Liberty



*A subdivision of a species that has a difference and breeds true to that difference.*

# Cultivar

- *Cultivars* have distinguishing characteristics from the other plants in the species, but cultivars do not transfer those characteristics to offspring through sexual reproduction
- Names are written with a single quotes
- A cultivar of red maple is written as follows: *Acer rubrum*, 'October Glory.'



# Life Cycle Classification

## ■ Annual

– Completes life cycle in less than one year

- “Seed to Seed”
- petunia



## ■ Biennial

– Completes life cycle in two years

- carrot

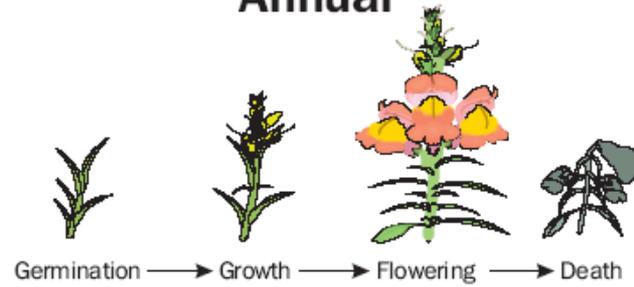
## ■ Perennials

– Indefinite Life Span

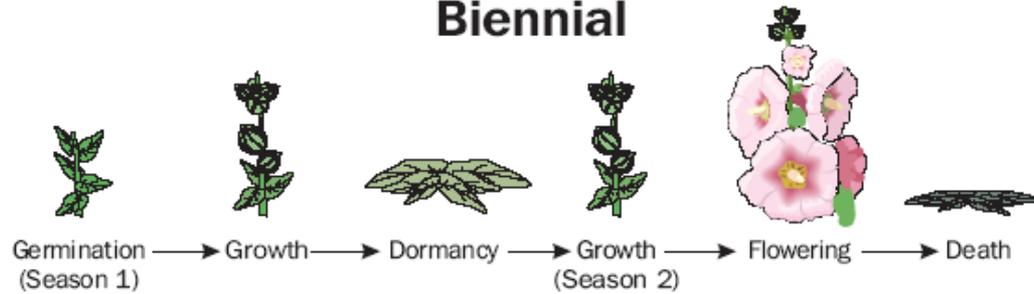
- oak tree, bluegrass, Astilbe



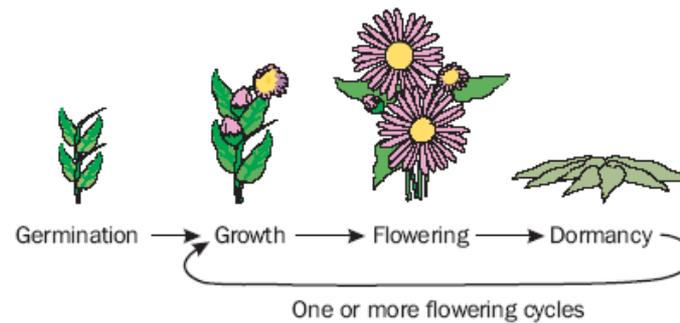
## Annual



## Biennial



## Perennial



# Sexual Expression

- Monecious -

- “One House” - both sex parts on same plant but at different sites

- Diecious

- Plant is either a female or a male

- Hermaphoditic

- Male and female parts within the same flower

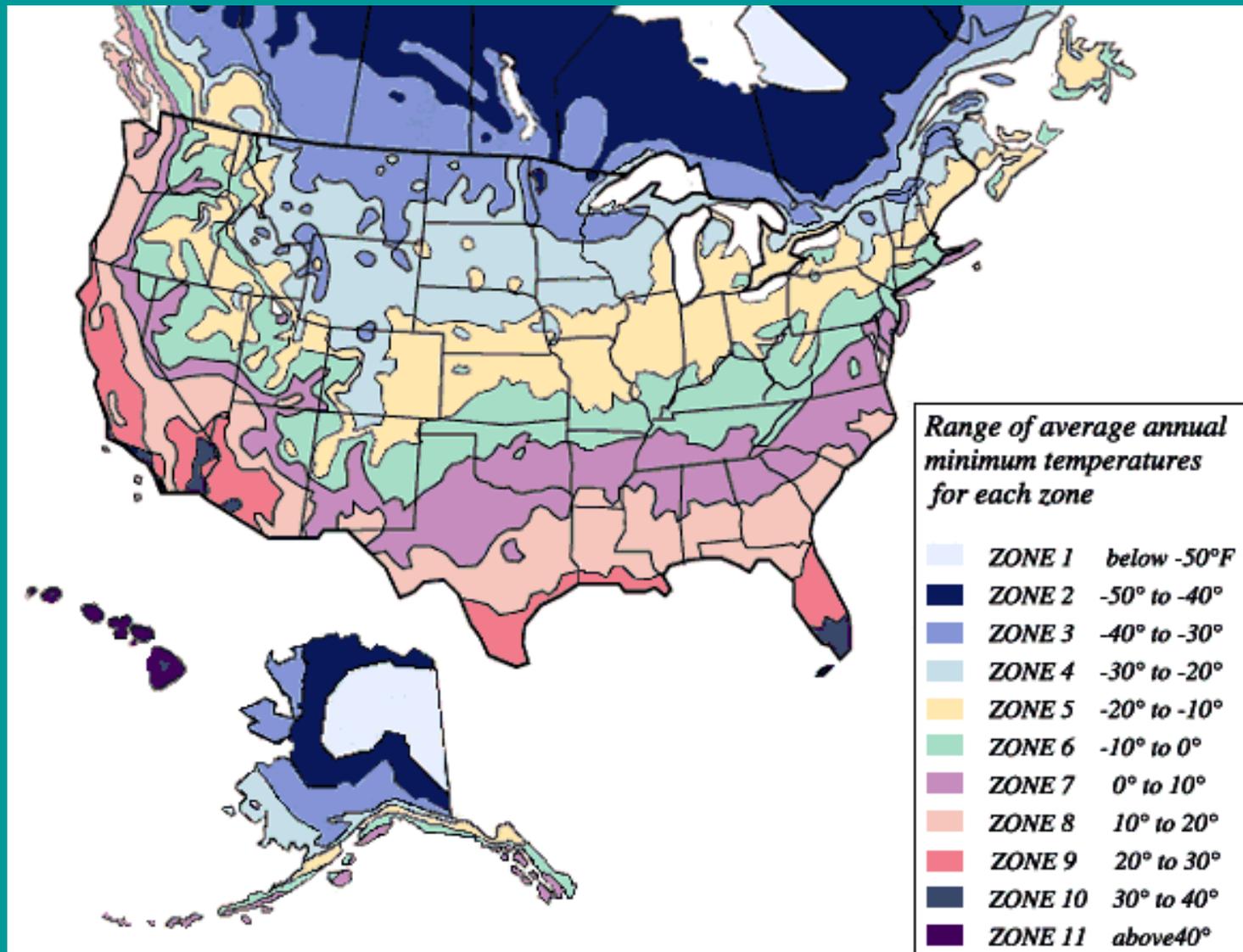


# Climatic Adaptation

- Tropical
- Subtropical
- Temperate
- Boreal



# USDA Hardiness Zones



# Water Requirement

- Hydrophyte - Water loving
- Mesophyte - Medium Water
- Xerophyte - Little or no water
- Halophyte - Salt water



Classification Quiz next time!!

You must study!!