- Monocots
  - Single seed leaf (one leaf when they first sprout)
  - Leaf veins are parallel
  - Flower parts in multiples of 3
  - Scattered vascular tissue in stem
- Dicots
  - Two seed leaves
  - Leaf veins are net like
  - Flowering parts in multiples of four
  - Ringed vascular tissue
- Also classified based on life span
  - Annual- complete life cycle over in one year (corn and most garden flowers)
  - Biennial- two years to complete life cycle (carrots)
  - Perennial- lives for more than two years (trees)

Plant Cells and Tissues

- Plant tissues are made of thee basic cell types
  - Parenchyma- stores starch, oils, and water for plants. Also where photosynthesis takes place.
  - Collenchyma- Flexible cells that stay put and give plants structure.
  - Sclerenchyma- the strongest type used for support, have a second cell wall hardened with lignin.
- Plant organs are made of thee tissue systems
  - Tissues are groups of cells working together to perform a function
  - Dermal Tissue- covers the outside of the plant. Also called epidermis.
    - Made of parenchyma cells
  - Ground tissue- most of the inside part of a plant. Provide support and storage in roots and stems, and photosynthesis in leaves.
    - Made of parenchyma, collenchyma, and sclerenchyma cells.
  - Vascular tissues systems- transport water, mineral nutrients to all parts of the plant.
    - Xylem- vascular tissue that carries water
    - Phloem- transports food (products of photosynthesis)

The Vascular System

- Water and dissolved minerals through xylem
  - Does not require energy to move water- passive transport
  - Cohesion- tension theory- polarity of water allows it to move
    - Water molecules stick to each other and the walls of xylem
      - Cohesion- water stick to water
      - Adhesion- water sticks to other things.
    - Water moves from roots up the stem, to the leaves where it can evaporate