The Leaves

- ✧ Functions:
  1. Photosynthesis CO2 + H2O (with sunlight) -> CHO (starch) + O2
     - Green color in stem indicates that chlorophyll is present, possible photosynthesis
     - Sunlight – electron will be displaced then excites another electron
  2. Respiration CHO + O2 (from atmosphere through stomata or lenticel) -> CO2
     - Addition of oxygen
     - Young stem (green)
       - Photosynthesis & respiration can occur because chlorophyll in chloroplast (inside stomata) is present
     - Old stem (bark)
       - Lenticels are present *(note: leaves don't have lenticels)*
     - Periderm *(note: found only in stem)*
       - Lenticels facilitate gas exchange but photosynthesis doesn't occur because stem is not green anymore, so chlorophyll is no longer present
       - The outer suberized layer that protects underlying tissues
       - Tissues consisting the periderm: (review)
         - Phellogen (cork cambium)
         - Phellem (cork)
         - Phelloderm
     - Photosynthesis can occur in
       - Leaves
       - Young stem
     - Lenticels
       - Only contain oxygen because there are no chloroplasts present, they disintegrated
       - Only carbon dioxide enters
     - Respiration is a two way process:
       a) Inhalation
       b) Exhalation
       - Carbonic acid is released
  3. Transpiration
     - Release of water which passes through stomata by water vapor
       *Stomata – entry of O2 and CO2

       - release of water
     - Release of water through lenticel by water vapor
     - Guttation
       - Water is exuded *by hydathode (*modified pore)
       - Occurs in leaf margin and leaf tip

The Flower

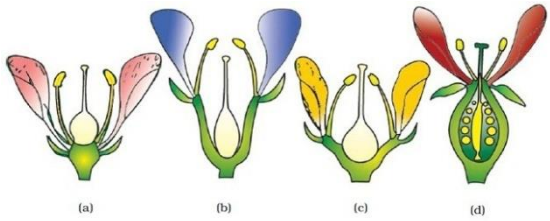

Figure 13. Position of floral parts on thalamus : (a) Hypogynous (b) and (c) Perigynous (d) Epigynous

- ✧ Importance: Reproduction
- ✧ Fruit – ripened ovary
- ✧ Location or position of ovary
  - Hypogenous – below
  - Epigenous – above
  - Perigynous – same level
- ✧ Parts of a flower:
  - Calyx composed of sepals (outer whorl)
  - Corolla composed of petals (inner whorl)
  - Androecium of stamens (male reproductive part)
  - Gynoecium composed of carpels (female reproductive part)