

- Cerebrum (telencephalon)
  - Lobes
    - Frontal lobe
    - Temporal lobe
    - Parietal lobe
    - Occipital lobe
  - Gyrus- hills
  - Sulci- valleys
  - Longitudinal fissure-
    - separates right from left hemisphere
    - Separates the occipital lobe into two
  - Central sulcus- separates frontal from parietal lobe
    - Pre central gyrus anterior
    - Post central gyrus posterior
- Diencephalon
  - White matter
  - 4 ventricles
- Brain Stem
  - Thalamus
    - Nuclei within it
    - Relay station for sensory
    - Coordinates motor activity
    - Integrates sensory and motor pathways
  - Hypothalamus- know all of functions
    - All connected to pituitary gland

- Midbrain- mesencephalon
  - Substantia nigra
    - Regulates activity in the basal nuclei
- Pons
- Medulla (oblongata)
- Meninges- covers the CNS (over brain and spinal cord)
  - Dura mater- tough mother
    - Outer covering most superficial
      - Endosteal layer (dura mater)
        - Falx cerebri- attaches to crista galli to tentorium cerebelli
        - Tentorium cerebelli
        - Falx cerebelli-
        - Diaphragma sellae
    - Dural sinus
      - Straight sinus\*
      - There are a bunch collect blood from the brain
    - Meningeal layer (dura mater)
    - Folds of dura mater stabilize position of the brain
  - Arachnoid- a spider like film
    - Outer covering middle but lays over the gyri and sulci
  - Pia mater- soft mother
    - Follows the brain tissue so follows the gyri and sulci
- Superficial to deep in brain
  - Bone- epidural space (potential)
  - Dura
    - Endosteal layer

- o Sinus- venous blood
  - o Meningeal layer
- Subdural space- where blood collect
- Arachnoid
  - o Sub arachnoid space (cerebrospinal fluid)
    - CSF ventricles
    - CSF goes all the way into the sulci
- Pia
- Brain
- Blood brain barrier
  - Isolates brain tissue from general circulation
  - Astrocytes
  - Intact through the CNS
  - Does not allow for any more than exchange of glucose, O2 and CO2
- Primary functional areas of cerebral cortex
  - Frontal lobe
    - o Primary motor cortex- conscious control of skeletal muscle
    - o Pre-central gyrus
  - Parietal lobe
    - o Primary sensory cortex- conscious perception of sensation
    - o Post-central gyrus
    - o Tough pressure vibration pain temperature and taste
  - Occipital lobe
    - o Conscious perception of Vision
  - Temporal
    - o Conscious perception of Olfactory and smell