

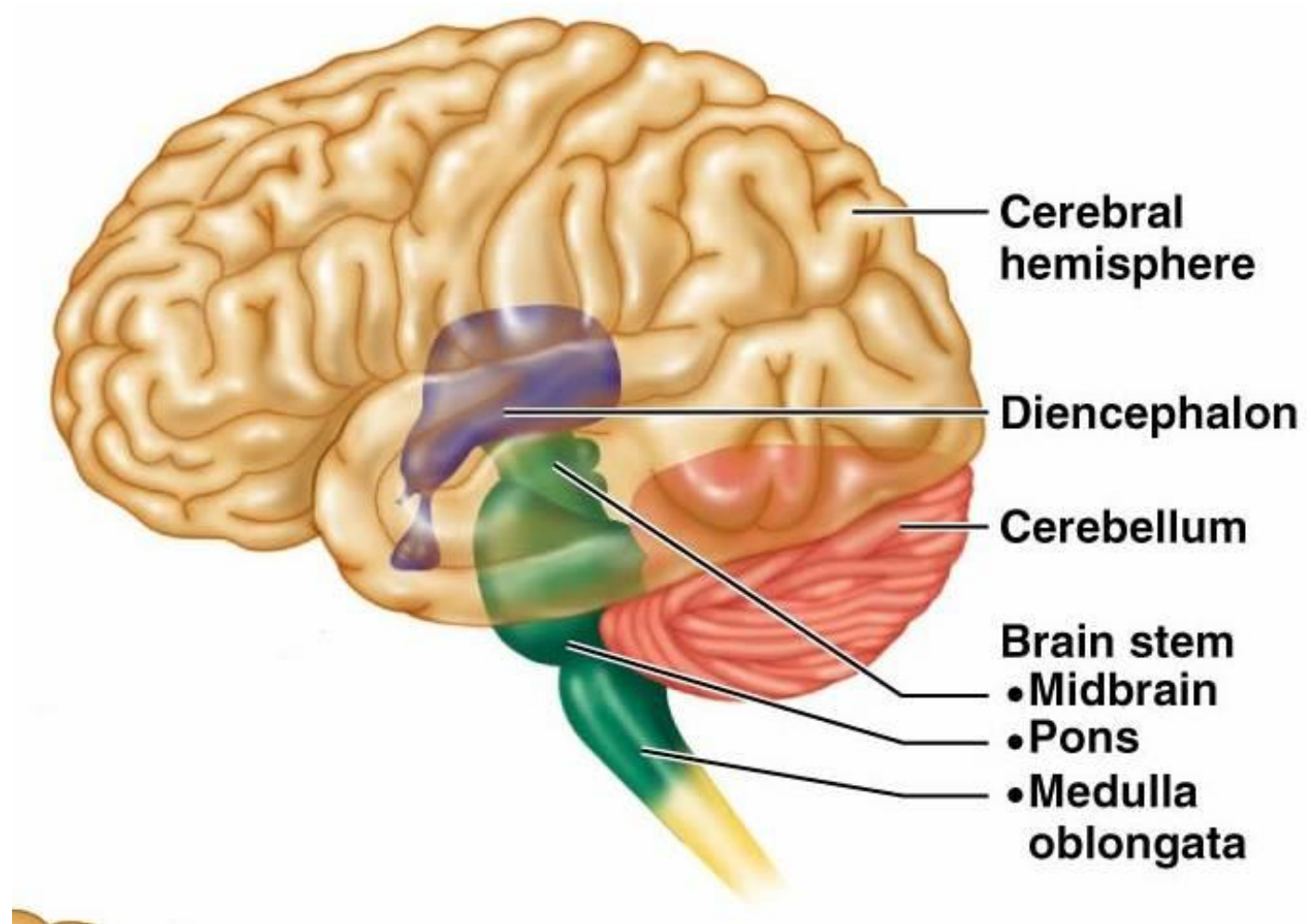
# Human Brain

Junior Civitan “All In Summit”

February 27<sup>th</sup>, 2021

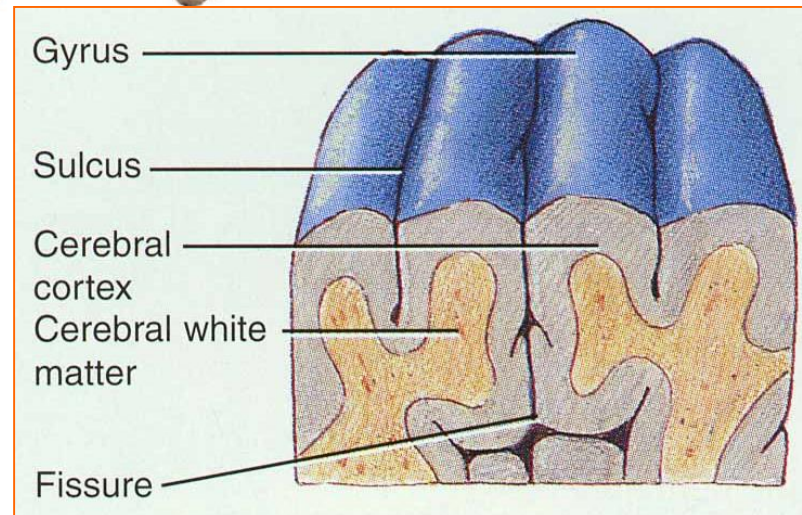
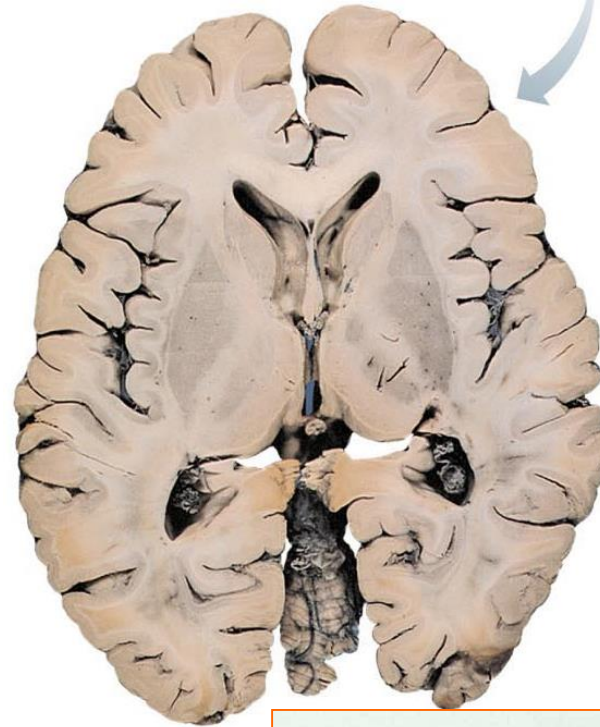
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# Divisions of CNS



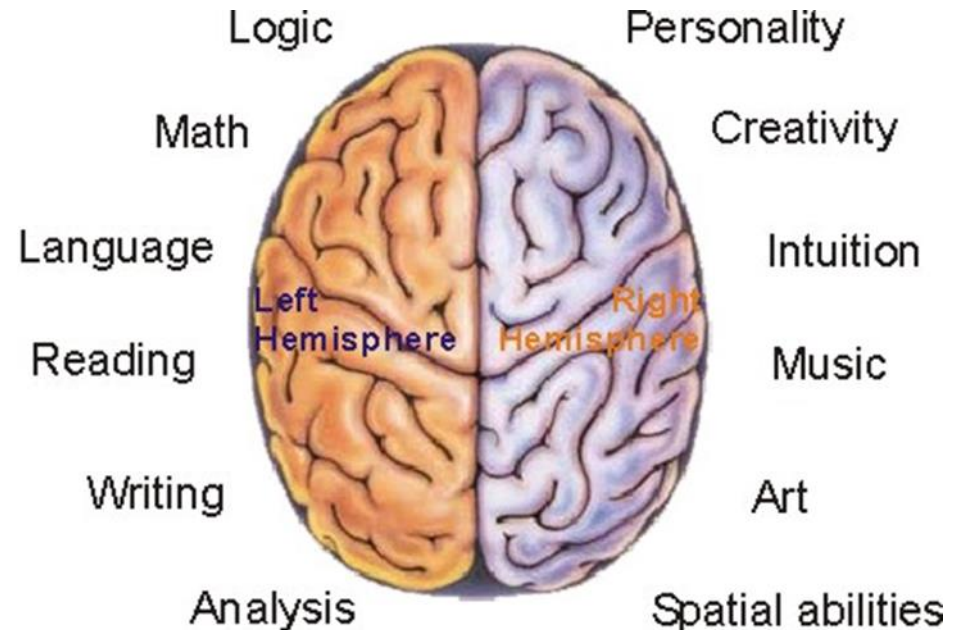
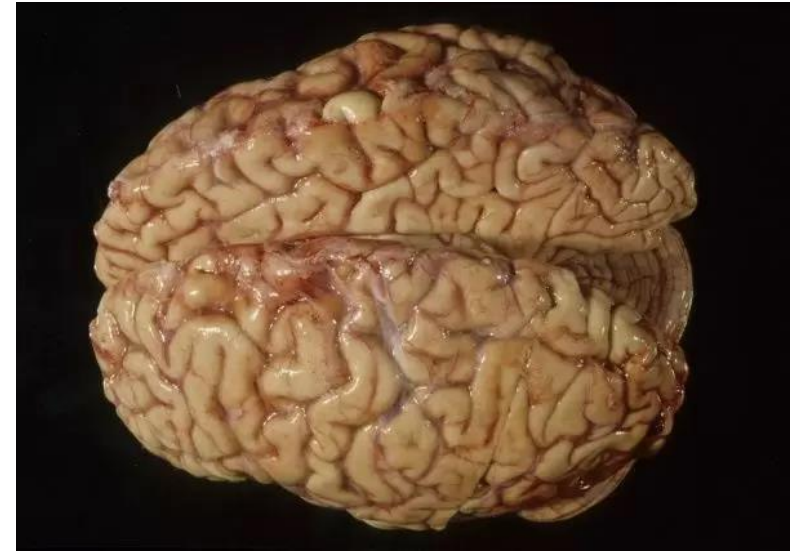
# Cerebral Grey and White Matter

- Gray matter – cerebral cortex and nuclei
  - Rich in neuron soma and dendrites, glial cells
  - Gray color in dissection specimen
- White matter – dense areas of axons
  - Contain glial cells but few neuron soma
  - Myelinated axons account for white coloration
- Prominent group of neuronal cell bodies collectively called basal nuclei



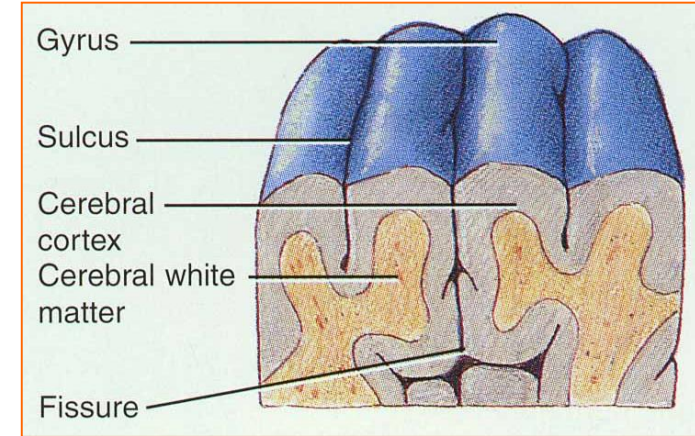
# Cerebral Hemispheres

- Are similar but not mirror images
- Either can be dominant for a specific task
- Dominant (usually left)
  - is dominant for language in over 95% of right-handers and in 60-70% of left handers
- Non-dominant (usually right)
  - is more important for attention mechanisms in most individuals

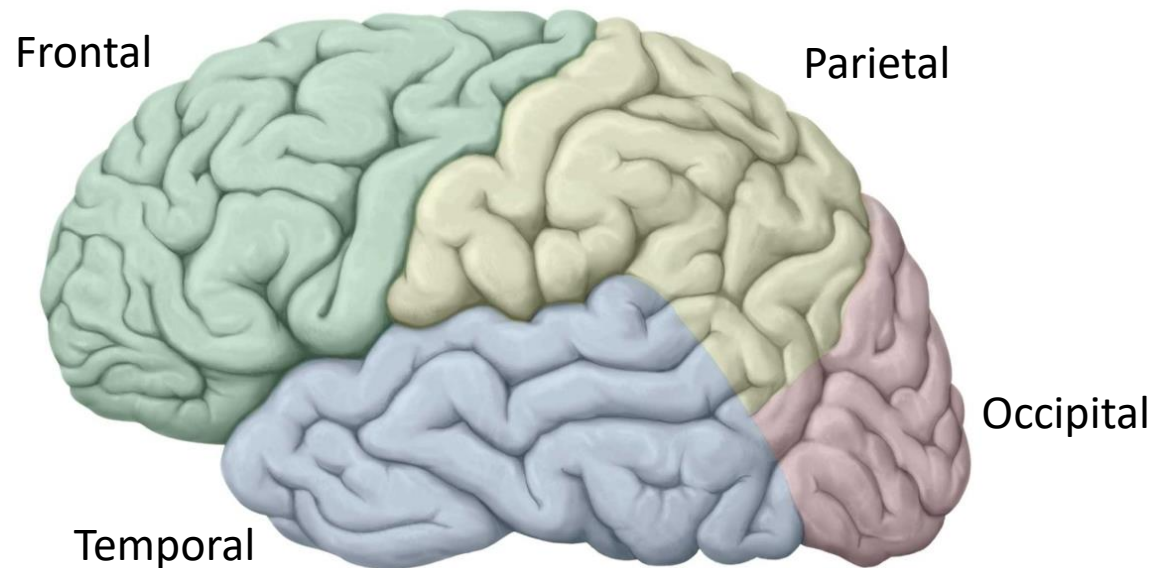


# Cerebrum (Telencephalon)

- Surface is highly folded to increase cortical surface area
  - Gyrus – ridge or elevation of cortex
  - Sulcus – groove of cortex
  - Fissure – very prominent and deep sulcus (usually divide lobes)

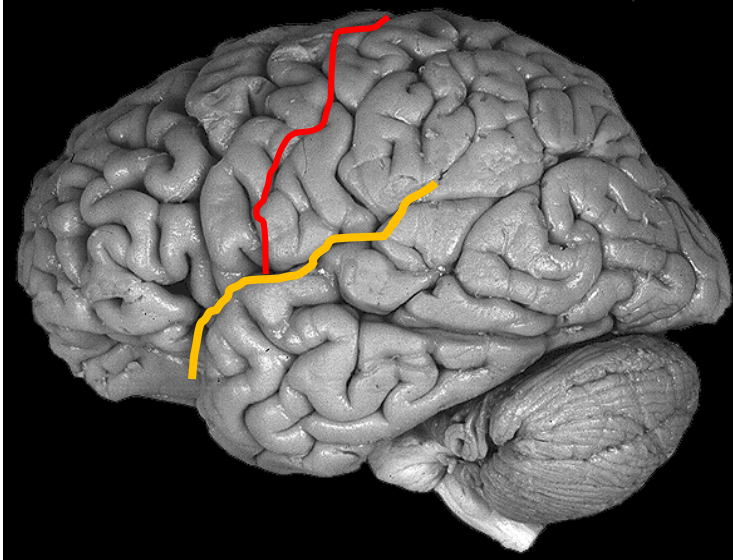


- Cerebral lobes – well defined regions of cortex, named for overlying bones



# Fissures and Major Sulci

Central (Rolandic) sulcus



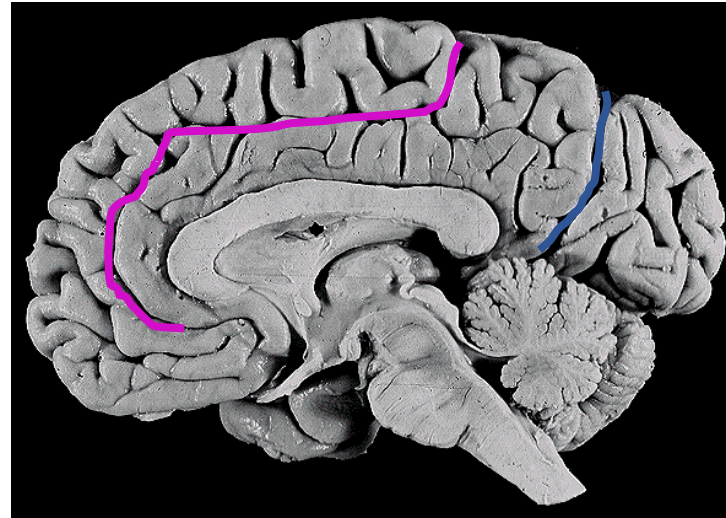
Lateral (Sylvian) fissure

Longitudinal Fissure

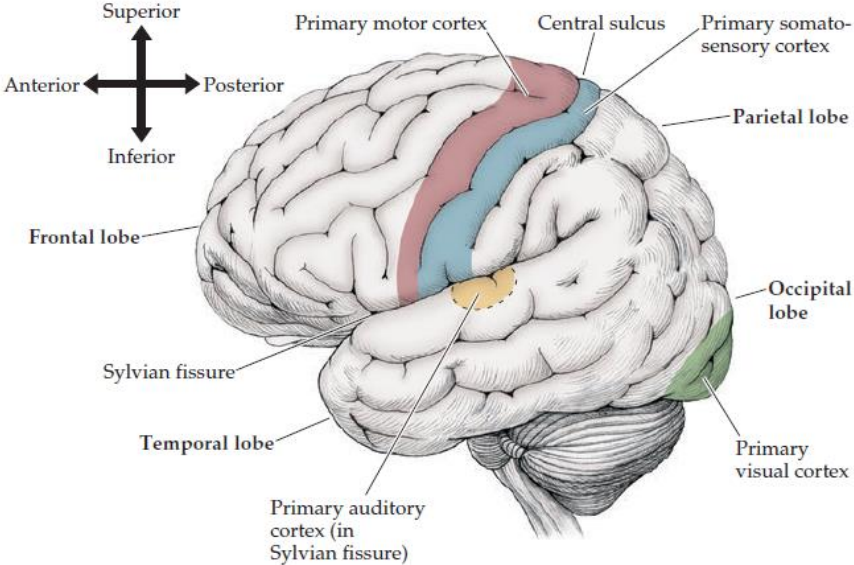
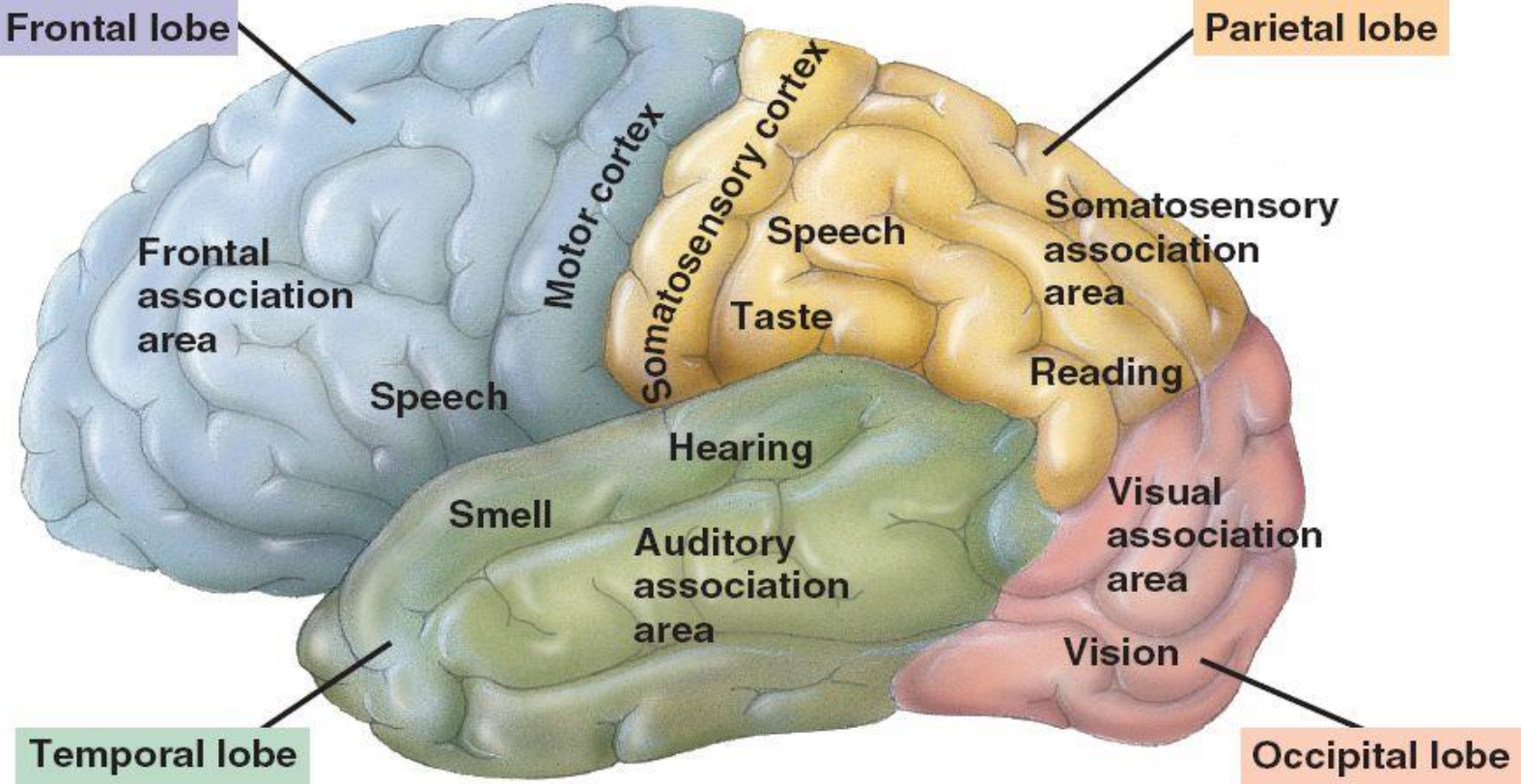


Parieto-occipital sulcus

Cingulate sulcus



# Cerebral Lobes, functions



Primary motor, somatosensory, auditory, and visual cortices