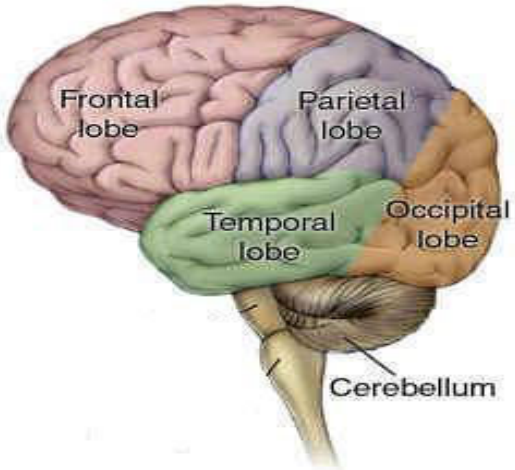

Brain Anatomy and Function

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Dept. Of Biomedical Science
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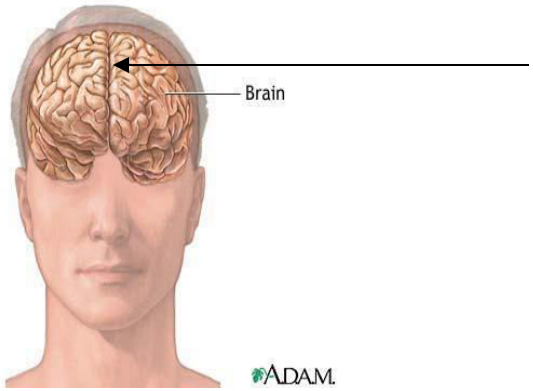
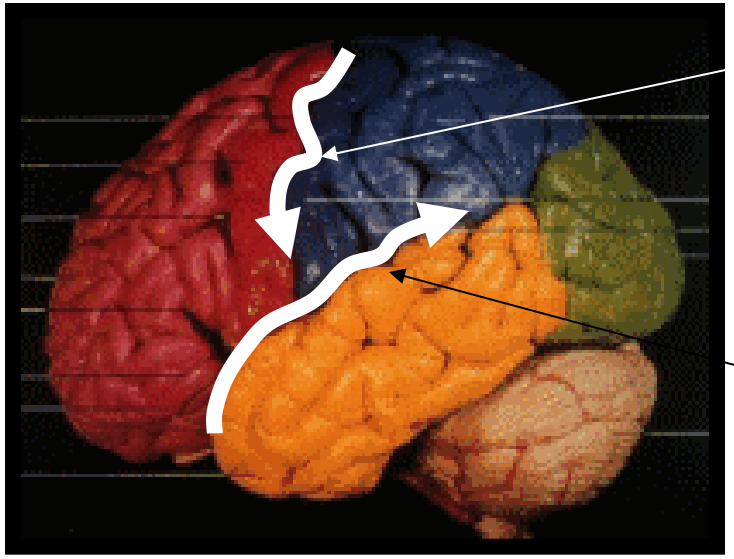
Anatomy of the Brain



- Separated into right and left halves by the *Interhemispheric Fissure*

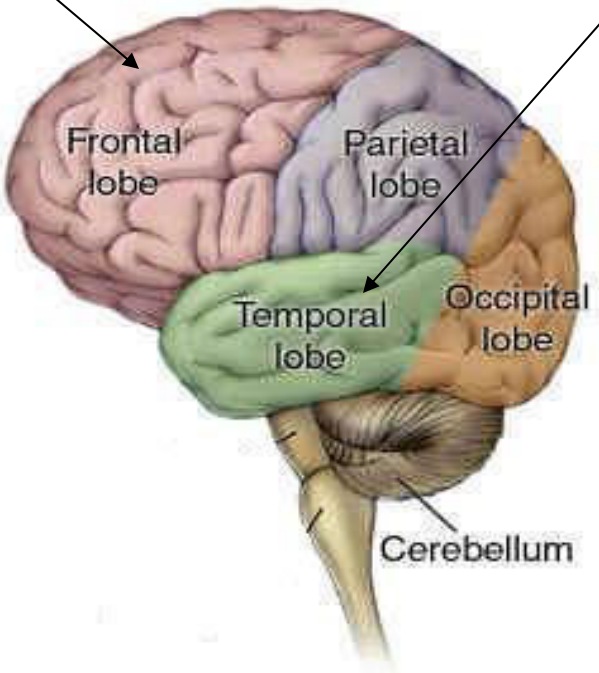


- The *Central Sulcus* runs down & forward
- The *Lateral Fissure* runs backward & up

Frontal and Temporal Lobes

Frontal

1. Thought
2. Voluntary movement
3. Speech motor
4. Covers 1/3rd of area of the brain



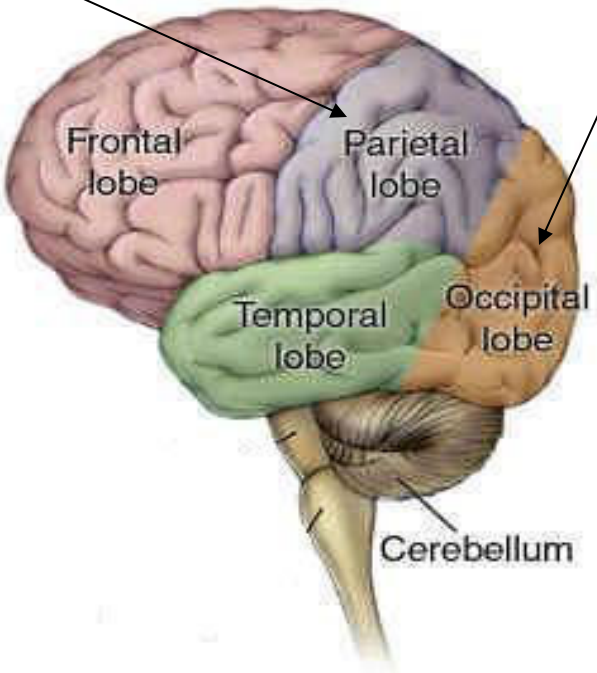
Temporal

1. Memory
2. Auditory function

Parietal and Occipital Lobes

Parietal

- Sensation
  - Touch
  - Pressure
  - Pain
  - Temperature
  - Texture
- Position/spatial orientation



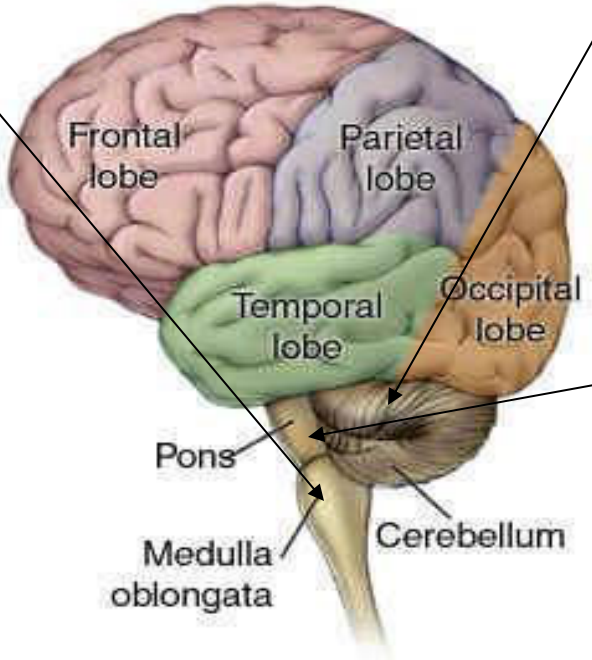
Occipital

1. Vision
2. Visual processes
3. Reading

Medulla Oblongata, Cerebellum, and Pons

Medulla Oblongata

- Respiration
- Heart rate
- Continuous with the spinal cord (2.5 cm)



Cerebellum

- Large Muscle Coordination
- Balance
  - Walking, Writing

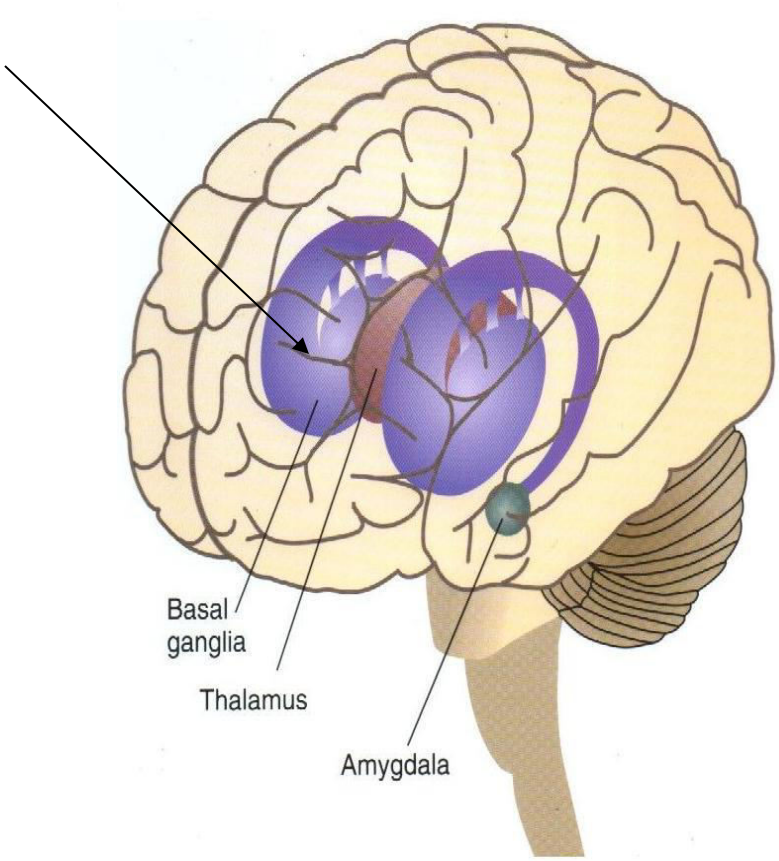
Pons

- Relay between the cerebral hemispheres and the cerebellum

Basal Ganglia and Thalamus

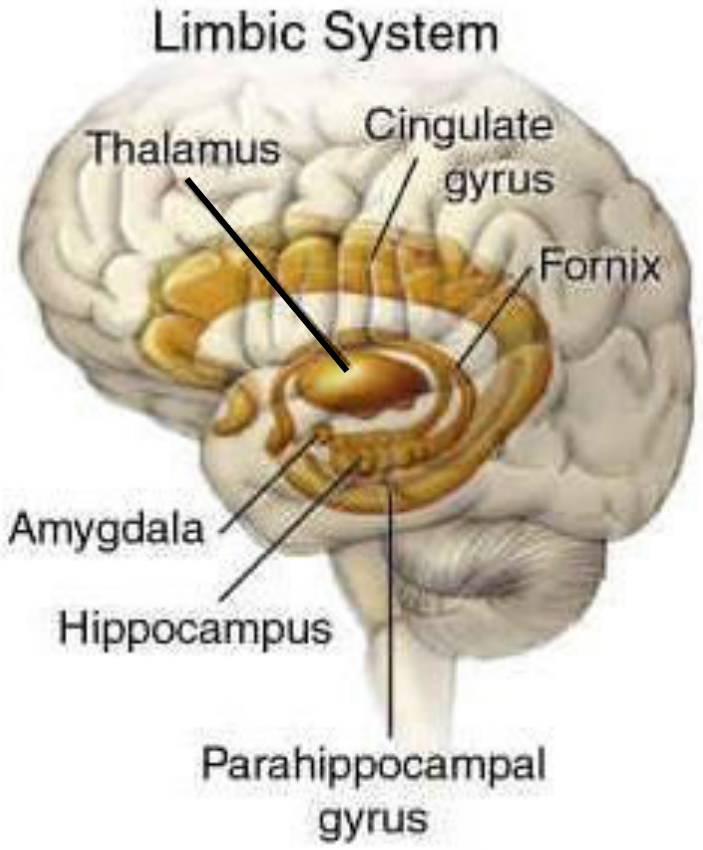
“The Brakes”

- Modifies movement on a minute-to-minute basis
- Inhibits Movement
- Coordination

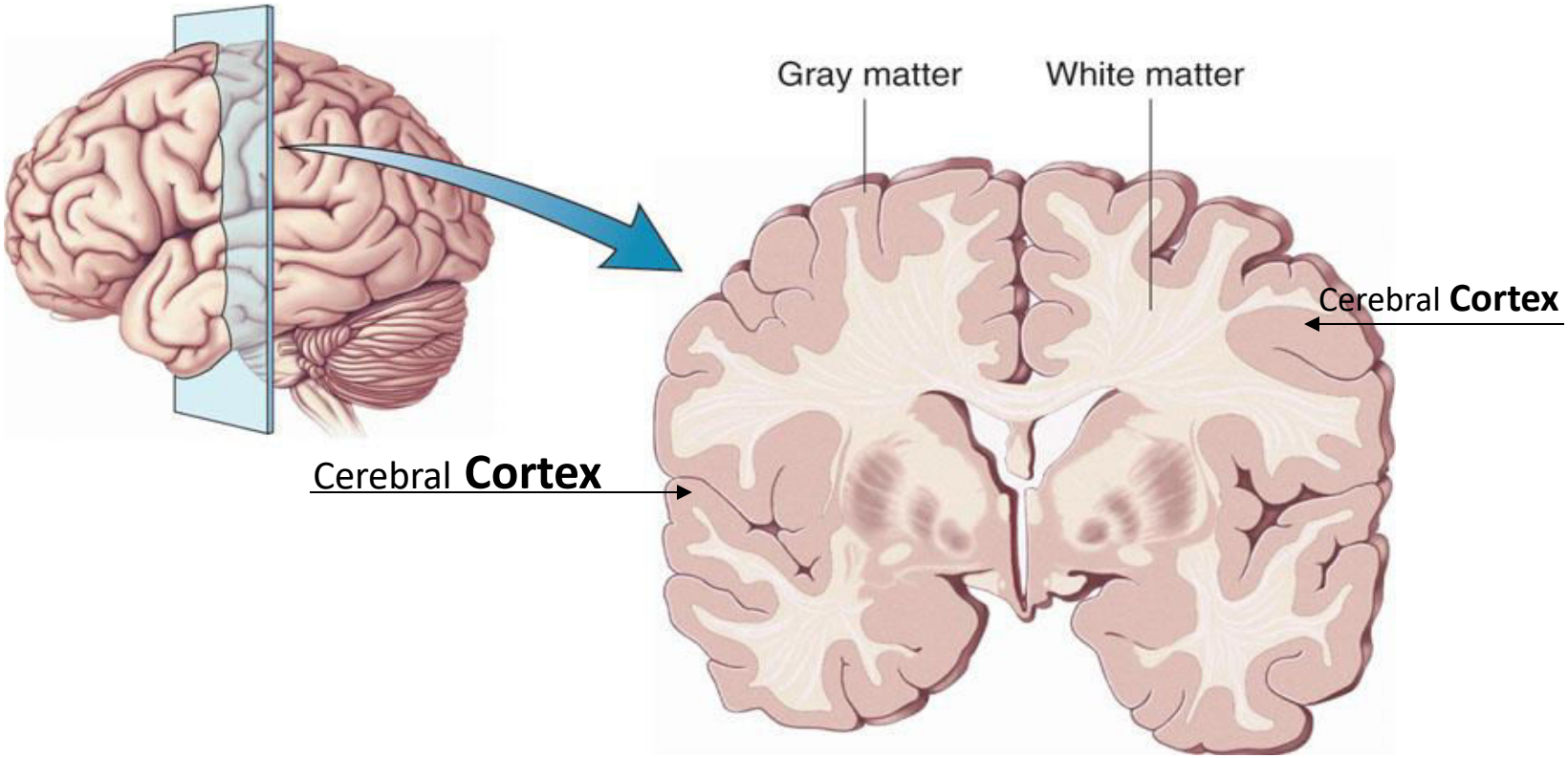


Limbic System

- Attention
- Sensory gateway
- Memory processing
- Rage
- Aggression
- Sexuality
- Appetite/Thirst



Cerebral Cortex - The outermost layer of gray matter making up the superficial aspect of the cerebrum.



http://www.bioon.com/book/biology/whole/image/1/1-6.tif.jpg

Cerebral Features:

- **Gyri** – Elevated ridges "winding" around the brain.

- **Sulci** – Small grooves dividing the gyri

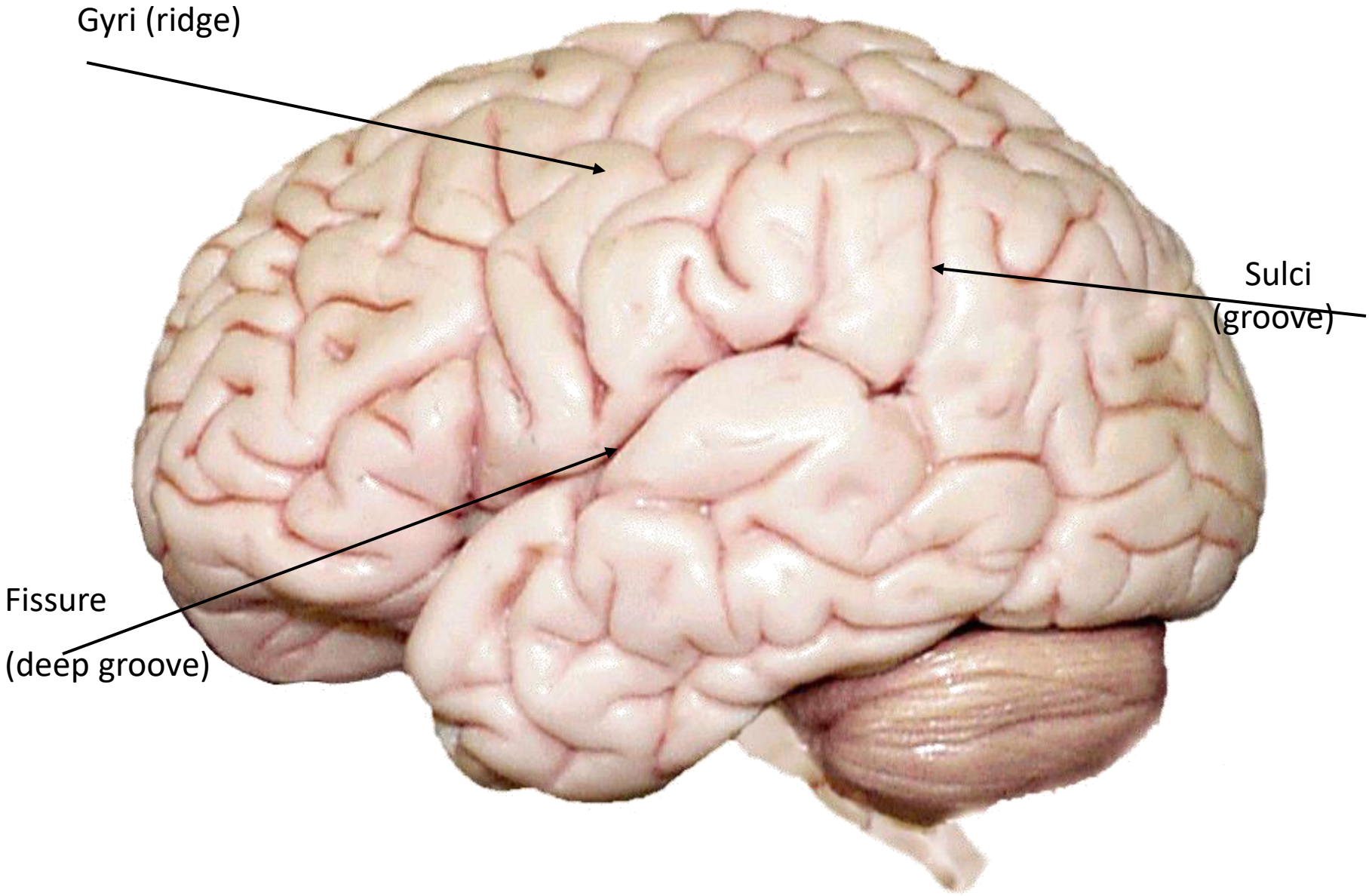
  – **Central Sulcus** – Divides the Frontal Lobe from the Parietal Lobe

- **Fissures** – Deep grooves, generally dividing large regions/lobes of the brain

  – **Longitudinal Fissure** – Divides the two Cerebral Hemispheres

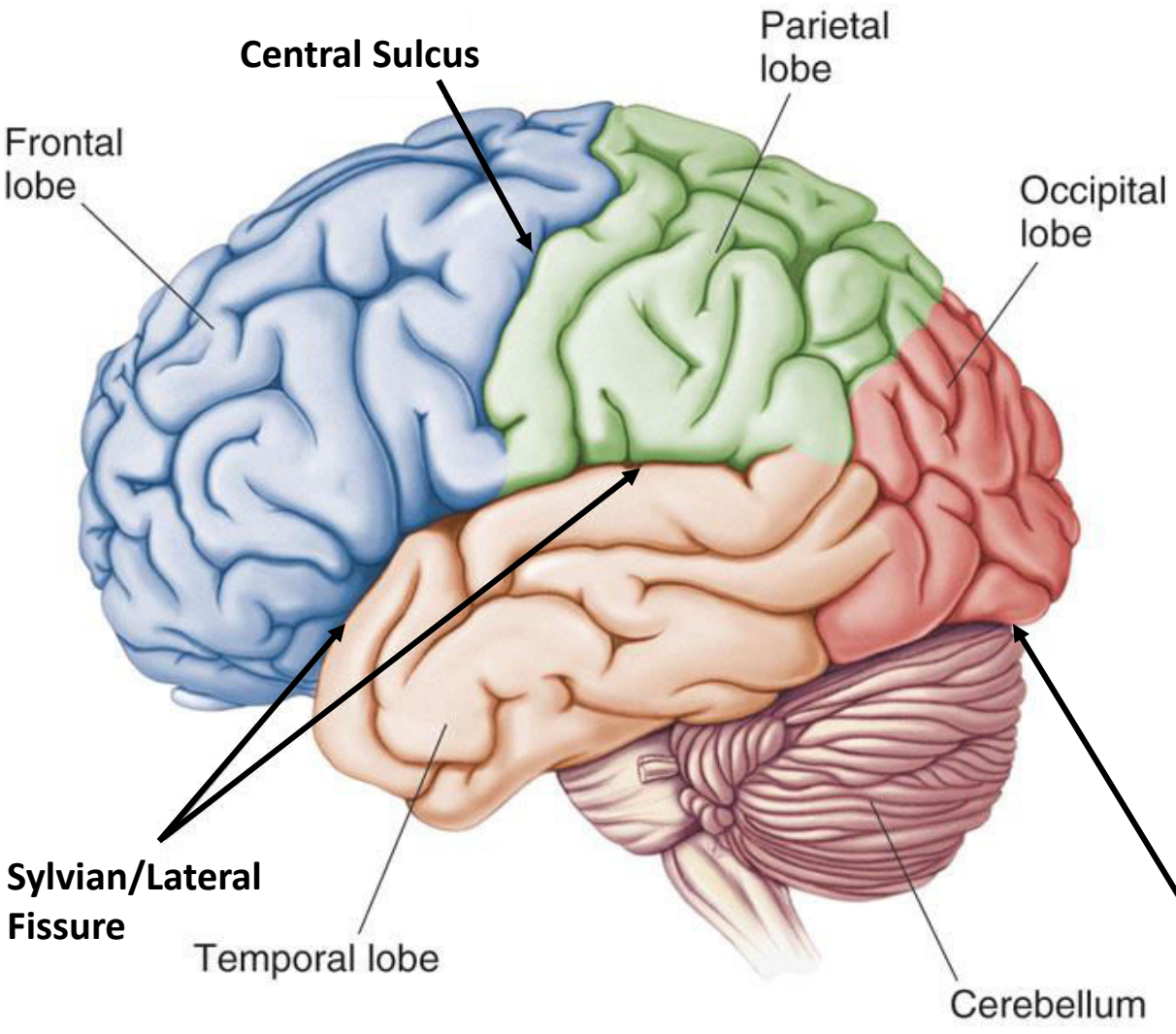
  – **Transverse Fissure** – Separates the Cerebrum from the Cerebellum

  – **Sylvian/Lateral Fissure** – Divides the Temporal Lobe from the Frontal and Parietal Lobes

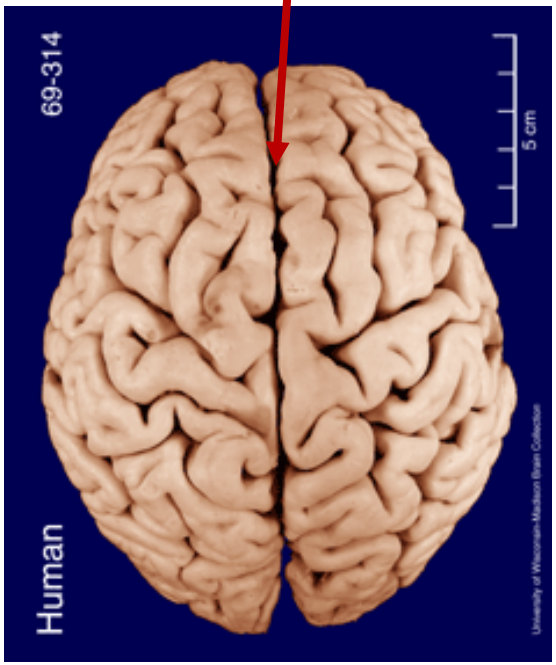


http://williamcalvin.com/BrainForAllSeasons/img/bonoboLH-humanLH-viaTWD.gif

Specific Sulci/Fissures:



Longitudinal Fissure



http://www.bioon.com/book/biology/whole/image/1/1-8.tif.jpg

http://www.dalbsoutss.eq.edu.au/Sheepbrains_Me/human_brain.gi