TELENCEPHALON
1/7/82, 6 Jan 00, 6 Jan 03, 7 Jan 04, 5 Jan 05, 14Jan09, 26Jan09, 25Jan10, 12Jan11, 01Dec15

TELENCEPHALON: (p 483) Excel’nt 3D brain: http://www.g2conline.org/2022
largest portion of brain, consists of
R and L hemispheres of cerebrum (?dif)
corpus callosum
lateral ventricles within each

Fissures and sulci divide brain into lobes, 
Lobes: 1) connected to opposite side of body 
   (p. 483)  2) hemispheres have different func’ns 
   3) plasticity of function. Diffuse 
Named for overlying cranial bones:
frontal, parietal, temporal occipital
Gyri: rounded ridges on cerebrum, divided by fissures, or sulcus if shallow Unique like fingerprints.
   Increases surface area of brain to 2.5 sq feet, makes room for more neurons.
   longitudinal fissure down middle, two hemispheres connected by corpus callosum 
   central sulcus (fissure of Rolando) precentral gyrus (primary motor) and postcentral gyrus (somatosensory) on either side 
   lateral fissure (fissure of Sylvius) between temporal and frontal lobes
   less distinct, clearer medially

Insula, “fifth lobe,” deep in lateral fissure (gustatory center).

Basal Nuclei (Ganglia) (p. 485): Unconscious motor commands, adjust muscle tone coordination of learned movement patterns (inhibits opposing muscles)
   masses of grey matter deep within cerebral hemisphere, below ventricles
   caudate nucleus head & “tail” arch links amygdala to globus pallidus
   amygdala part of limbic system, links memories to emotions
   claustrum (barrier) just inside grey matter of insula
   lentiform nucleus: a) putamen and communicates to thalamus 
   b) globus pallidus: to cerebrum
   its extrapyramidal system coordinates, refines motor function by inhibition: basal nuclei inhibited by dopamine which is released from substantia nigra

Parkinson PT lack dopamine: difficult to initiate movement because opposing muscles not inhibited, jerky motion. (levodopa treatment)

FUNCTIONS OF REGIONS OF THE CEREBRUM:
PRIMARY MOTOR CORTEX: precentral gyrus. Arrangement: toe deep in longitudinal fissure, mouth most lateral
   Pyramidal tracts cell bodies of motor neurons pyramid shaped, located in precentral gyrus
   Broca's area ability to speak, frontal lobe along lateral fissure, just behind prefrontal cortex.

PRIMARY SENSORY CORTEX:
   postcentral gyrus: termination of somatic sensory pathways (touch, pressure, pain, vibration, taste, temperature)
   Other cortical sensory areas: (page 486) (remember plasticity: regions flexible)
      occipital lobe posterior portion visual area
      temporal lobe upper margin auditory area
      temporal lobe medial surface olfactory
      parietal lobe deep near insula taste 
      insula gustatory .
Each surrounded by association areas which assign meaning to sensory patterns received.