Exercise 02 ▪ Neuroanatomy

Name:_____

Goals

1. To use core neuroanatomical terms in multiple contexts.
2. To practice locating and identifying neuroanatomical structures.
3. To understand what structures are located near other structures.
4. To understand what structures can or cannot be seen from the surface.

Activity

There will be three stations, one with the brain models, one with brain specimens, and the third with paper atlases. At each station, do the following:

1. Work through the list below.
2. If you can identify the structure or term, put a check mark.
3. If you are unsure, put a question mark.
4. Structures or terms you *cannot* identify should be left blank.

> **Note**
>
> If you have time, you might pick one or two of the anatomical structures that you highlighted in Exercise 01 and try to locate them.
> If you cannot identify a structure or term in *any* of the stations or atlases, try to find an image on the internet that depicts the structure. If you If this fails, ask Dr. Gilmore for help.

Once you have completed the three stations, you may make a fourth pass through the outline using one (or more) of the electronic atlases:

- Harvard Brain Atlas http://www.med.harvard.edu/aanlib/cases/caseNA/pb9.htm

- Allen Brain Atlas
  - Human female adult (modified Brodmann): http://atlas.brain-map.org/atlas?atlas=265297126#atlas=265297126&plate=112360888&structure=10390&x=40320&y=46976&zoom=-7&resolution=124.49&z=3
  - Human female adult (gyral): http://atlas.brain-map.org/atlas?atlas=138322605#atlas=138322605&plate=112360888&structure=10390&x=40320&y=46976&zoom=-7&resolution=124.49&z=3
- 3D Brain from Brainfacts.org: https://www.brainfacts.org/3d-brain#intro=false&focus=Brain

Follow the same procedure as before, adding checkmarks, or question marks where appropriate.

Submission details

- Submit a photocopy or image of your outline by **Wednesday, January 24, 2024 at 11:59 pm**.
- If you found any additional resources that were especially useful to you, please share them.

Directional terms

Direction	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Rostral/caudal				
Anterior/posterior				
Medial/lateral				
Dorsal/ventral				
Superior/inferior				

Planes of Section

Plane	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Sagittal				
Coronal/frontal				

Plane	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Axial/horizontal/transverse				

Brain Structure

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Forebrain				
Midbrain				
Hindbrain				

Surface of Cerebral Cortex

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Central sulcus				
Lateral sulcus/fissure				
Longitudinal fissure				
Cerebral hemispheres				
Parietal lobe				
Frontal lobe				
Insular cortex				
Temporal lobe				
Occipital lobe				
Precentral gyrus				
Postcentral gyrus				
Superior temporal gyrus				

Fiber tracts

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Corpus callosum				
Anterior commissure				
Posterior commissure				
Olfactory nerve, Ist				

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Optic nerve/tract, IInd				
Optic chiasm				
Fornix				

Subcortical structures

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Caudate nucleus				
Putamen				
Globus Pallidus				
Thalamus				
Hypothalamus				
Pituitary gland				
Hippocampus				
Amygdala				

Midbrain

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Tectum				
Superior colliculus				
Inferior colliculus				
Tegmentum				
Substantia nigra				
Ventral tegmental area				
Locus coeruleus				

Hindbrain

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Cerebellum				
Pons				
Medulla Oblongata				
Spinal cord				

Ventricles

Structure	Brain Model	Specimen	Paper Atlas	Electronic Atlas
Lateral ventricles				
3rd ventricle				
Cerebral aqueduct				
4th ventricle				