**Brain Swim Cap Directions**

WARNING: only one swim cap per student...don't mess up!!  This will be graded for anatomical & functional correctness.  You'll also have an opportunity to earn some extra credit by wearing your swim cap to each of your classes and having your teachers sign a verification form that you wore it for at least 15 minutes of each class.

**Sometimes it is helpful to put it on your lab partner's head and then you can draw the outlines of the needed parts on the left and right sides.  You can take it off to draw in the details.**

 \* YOU WANT LOTS OF COLORS, YOU'LL NEED TO PROVIDE YOUR OWN MARKERS, AS ALL I HAVE IS BLACK.

You will be diagramming the lateral view of the brain on one side of the cap and the midsagittal view of the brain on the other side by adding in the detailed parts and functions from the Brain Parts and Functions List.  CAUTION be sure that BOTH sides are going the same direction (anterior/posterior).

USE A black PERMANENT MARKER. **to Outline** the lateral view of the brain  **one side**of the swim cap and the midsagittal view on the other.  **\*\*\*IMPORTANT you will be labeling and writing a brief function of each part...so make the diagrammed areas as large as possible while still remaining relatively anatomically correct.**

**NOW**:  using as few words as possible, **write the function of these parts** (if given) .  Example: "PRE MOTOR CORTEX - Stereotyped motor movements".

NOTE: If you are unsure what "stereotyped motor movements" means, be sure to look it up and discuss examples with a friend! A quiz/test will follow this activity in which you may be asked what part of the brain is primarily responsible for.... and the clue in the question could very well be an example rather than the definition from the book! It is imperative you use your critical thinking skills to understand what part of your brain works to do what in your daily lives, not just memorize words from a text book. A good study method is to constantly be discussing the areas of the brain in your groups as you work, give examples of what different aress do, compare areas to each other and discuss how their functions are different, etc.

Parts to add to brain cap (remember to write a very brief function on the cap for each of these as well)

**LATERAL VIEW**

* **Note: You do not need to define functions of sulci, fissures, or lobes, but you should be comfortable enough with their locations to be able to identify them using a verbal description of their location or basic lobe function based on a summary of the function regions found within the lobe (exp. The... separates the ...lobe from the ...lobe. Or, the ... lobe is primarily responsible for...)**

**CEREBRUM: CEREBRAL CORTEX (the following are parts of the cerebral cortex.)**

1) central sulcus

2) longitudinal fissure

3) transverse cerebral fissure

4) lateral sulcus

5) parieto-occipital sulcus

6) frontal lobe

7) occipital lobe

8) temporal lobe

9) parietal lobe

10) pre-central gyrus/primary motor cortex

\*map each of these (only these) giving proportional credit by adjusting font size to the amount of cerebrum devoted to this part of the body (see the motor homunculus picture in text book): knee, hip, trunk, shoulder,arm, hand, fingers, thumb, eye, face, lips, tongue

11) post-central gyrus/primary somatosensory cortex

\*map each of these (only these) giving proportional credit by adjusting font size to the amount of cerebrum devoted to this part of the body (see the sensory homunculus picture in text book): leg, hip, trunk, head, arm, hand, fingers, thumb, eye, nose, face, lips, tongue)

12) primary visual cortex

13) primary auditory cortex

14) prefrontal cortex

15) premotor cortex

16) Broca's area

17) Wernicke's area

18) visual association area

19) auditory association area

20) somatosensory association area

21) gustatory cortex (in insula)

22) frontal eye field

23) spatial tasks area

24) task management area

25) object-recall of tasks area

26) solving complex multitask problem area

**27) CEREBELLUM**

**28) OLFACTORY BULB**

**MIDSAGITTAL VIEW:**

**MIDSAGITTAL VIEW OF DIENCEPHALON**

1) corpus callosum (label 2) fornix of corpus callosum, 3) septum pellucidum too)

4) lateral ventricle

5) thalamus

6) hypothalamus

7) epithalamus

8) pineal gland

9) third ventricle

10) mamillary bodies

11) pituitary (hypophysis)

12) optic chiasma (cut cross section of optic nerve)

**MIDSAGITTAL VIEW OF BRAIN STEM**

**MIDBRAIN**

13) cerebral peduncle

14) cerebral aqueduct

15) corpora quadrigemina: 16) inferior collicului and 17) superior colliculi

18) substantia nigra

**19) PONS**

**20) MEDULLA OBLONGATA**

**MIDSAGITTAL VIEW OF CEREBELLUM**

21) arbor vitae

22) 4th ventricle

 You will earn 5 bonus points for wearing your brain cap to school.  Cut off the following VERIFICATION SLIP to take to each of your teachers for a signature verifying you have worn your brain cap on the day designated to do so.

-------------------------------------------cut here -------------------------------------------------------------

Dear Staff Member,

Please take a moment to verify that the following Honors A&P student has worn the BRAIN CAP during class today.  We appreciate your encouragement and support for the effort he/she has put in to create and learn the parts and functions of the human brain.

This **Honors A&P** student  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_has created a Brain Cap to enhance his/her knowledge of the parts and functions of the brain.  Please **sign below to verify** that he/she wore his/her Brain Cap for a **minimum of 15 minutes during  your class** today DATE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

0 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_        4 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_        5 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_        6 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3 period \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_