Cranial Layered Palpation

Setup:
You will have your hands in a relaxed position.
It can be helpful to have your person a little bit further away from you and you might think to have your shoulders and your hands relaxed but's your choice.
We are light with our hands and setting our receptors on "receive".

1. **The first sensory input that you feel is the hair:**
    a. What does it feel like to be on your person's hair?
    b. Thin fibers of hair. Is it soft or course, thick or thin?
2. **You will then feel the vascularity at the skin level:**
    a. The fluid flow of the arteries at the skin level. Appreciate what the skin feels like… the scalp
3. **Beyond the skin you come to the Galea Aponeurotica:**
    a. This is a fascial layer that covers the entire cranium.
    b. **The quality of perception for the Galea Aponeurotica is "smooth".**
4. **Beyond the Galea Aponeurotica we feel the bony mass:**
    a. Bony matrix of the skull. The skull has a "sponge-like" sensation.
5. **As you leave the bone you come into the epidural space:**
    a. The space superficial to the dura but deep to the bone.
    b. This space is evolved to allow for motion.
6. **Next, we come to the dura:**
    a. **The quality of perception is "protective".**
    b. It is a membrane system that anchors and holds the brain.
    c. It is slippery and membranous.
7. **Can you feel the superior sagittal sinus where the two layers of dura come together?**
    a. This sinus receives blood.
8. **Trace the dura as it becomes the falx:**
    a. Following the venous system in between the two folds of dura.
9. **Then you come to the sub-dural space:**
    a. This would be the site of a subdural hematoma.
    b. There is a little less space here between these layers compared to the epidural space.
10. **The next layer is the arachnoid membrane:**
    a. The arachnoid is a little thinner than the dura.
    b. **The quality of perception here is an increase in "tensile strength".**
11. **Deep to the arachnoid membrane is the subarachnoid space:**
    a. In the subarachnoid space we have the location where granulations occur.
    b. There is fluid flow in this space. The cerebral spinal fluid is circulating here. This is the space just before the pia-mater.
    c. **The quality of perception to identify this layer is the flexion and extension of the craniosacral rhythm.**
12. **Sink one layer deeper to the pia-mater:**

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a. It's a thin layer of connective tissue directly adhered to the brain material itself.

13. **From the pia-mater we pass to the brain itself, the cerebrum:**
    a. This is the part of the brain we use for thinking, sensations, willed-movements.
14. **The cerebrum is made up the sulci and gyri:**
    a. **The quality of perception is electrical and consistency.**
    b. A lot of energy and activity.
    c. You are at 10% depth from the skull, the depth we begin to feel the gyri (the numerous loops that make up the cortex of the brain. We have numerous loops presenting potential for lots of different directions. The "valleys" in between the gyri are called "sulci" and the deepest sulci are called fissures.
15. **The large gyrus we meet when we approach 50% depth is the cingulate gyrus:**
    a. Smooth, round and follows the contour of the skull from anterior to posterior.
16. **Deep to the cingulate gyrus we come to the corpus collosum:**
    a. It is at 50% depth.
    b. This is the bridge between the left and right hemispheres.
    c. **The quality of perception of the corpus collosum is very smooth.**
    d. Get a sense of the bridge between the right and the left sides of the brain and the information crossing over this bridge.
17. **The lateral ventricles are just below the corpus collosum and they extend from the frontal lobe to the occipital lobe:**
18. **You can get from the lateral ventricles to the 3rd ventricle through the aquaduct to the 4th ventricle following the fluid.**
    a. **The 3rd ventricle is toward the midline** of the lateral ventricles and it's 50% of the depth behind the eyes.
    b. **The 4th ventricle is behind the nose**.
    c. **The quality of perception of the ventricles is fluid.**
19. **We then come to the thalamus:**
    a. It surrounds the 3rd ventricle.
    b. The thalamus is always active. It never stops.
    c. It relays sensory information such as auditory, somatic, visceral, taste and visual information.
    d. It also relays motor signals to the cerebral cortex, along with the regulation of consciousness, sleep, and alertness.
    e. **Very active, this is the quality of perception of the thalamus.**
20. **As we come closer to the center of the brain we come to the limbic system:**
    a. The limbic system houses our experiences and memories of emotions.
    b. This is the location that slants our interpretation of reality because of our memories. Instinct, memory, perception of memory, motivation, the contextualizing of feeling in the limbic system.
    c. Also, short-term memory is in this part of the brain.
21. **The next structure is the hypothalamus:**
    a. From the Greek "hypo" for under and "thalamus" for "inner chamber". Literally, under the thalamus.
    b. This is the location of the neural-hormonal integration.
    c. Directly processes the sense of smell.

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   d. The hypothalamus controls body temperature, hunger and thirst, fatigue, sleep and circadian cycles.

22. The amygdala, which comes from the Greek for "almond".

23. Then we have the fornix, which comes from the word for "archway" in Greek.

   a. The Romans got their word for "fornication" from this word because the prostitutes would stand under the archway as they were soliciting their customers. Fornix, fornication… you'll never forget it.

24. **The hippocampus is a sea-horse shaped structure:**

   a. Part of the limbic system of the brain.
   b. It's interesting to see how the ancients named these structures after their shapes and reflections in the natural world. The term comes from the Greek for a "sea monster" with a horses forequarters and a fishes tail.
   c. One of the first regions of the brain to suffer damage during Alzheimer's disease.
   d. Consolidates short-term memory to long-term memory.

25. **We are now coming more inferior to the brain stem:**

   a. Very neurologically active area.
   b. It is a longitudinal structure.
   c. **The Pons of the brain stem is anterior and it is round.**
      i. It is just anterior to the 4th ventricle.
      ii. Between the brain stem and the pons is the vagus nerve.

26. From the brain stem travel posterior to the cerebellum:

   a. The job of the cerebellum is to regulate movement and balance.
   b. It has to do with sequencing of movement and ideas.
   c. **The word for the quality of perception is "consistency".**
   d. There should be space beneath the tentorium for the cerebellum to have room. The cerebellum needs space around it.
   e. Can you feel that there is maybe less space on one side or the other around the cerebellum?
   f. The tentorium should support the cerebrum so there is space for the cerebellum below the tentorium.