



The Cerebral Cortex

Where does complex thought and behavior come from?

How are they different?

- In humans, _____ of the brain's weight
 - compared with just 30 to 40 percent in most other mammals.
- The larger cortex of mammals offers _____

 - Making them more adaptable.

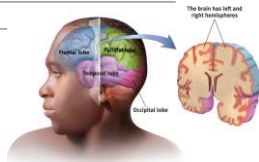
Did you know?...

- The brain of an elephant weighs about 10.5 lbs and an adult human brain weighs about 3 lbs.
- Einstein's brain was similar in size to other humans except in the region that is responsible for math and spatial perception. In that region, his brain was 35% wider than average.
- The total surface area of the cerebral cortex is about 2500 sq. cm (-2.5 sq. ft).
- Your brain consists of about 100 billion neurons.

Cerebral Cortex

- The cerebral cortex is responsible for the most _____
_____ including learning, remembering, thinking, and consciousness.
- This area is made up of four lobes:

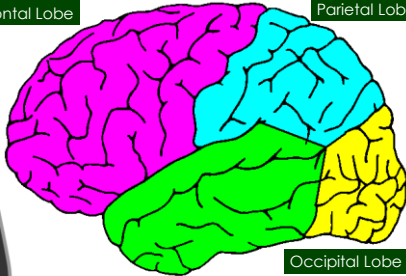
- _____
- _____
- Temporal Lobe
- Frontal Lobe



Four Lobes of the Brain

Frontal Lobe

Parietal Lobe



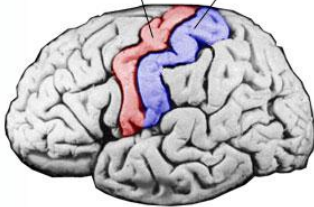
Temporal Lobe

Occipital Lobe

The Sensory and Motor Cortex

Motor cortex

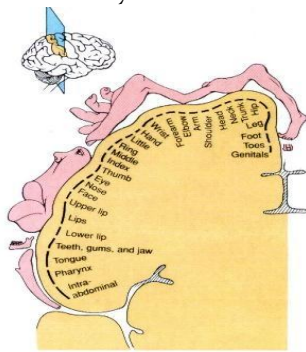
Somatosensory cortex



The Sensory Cortex, is a band of tissue on the front of the

Each area of the *sensory cortex* receives information _____

The more sensitive the body region, the larger the sensory cortex area devoted to it.



• Larger areas are devoted to touch in the most sensitive parts of the body such as

• Smaller areas are devoted to touch in less sensitive parts of the body such as the



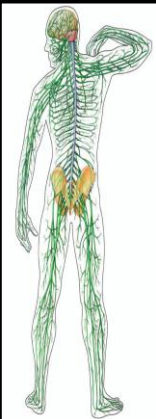
Sensory Cortex

- Visual information is received in the _____
- Sound is processed in the _____ by the *temporal lobe*



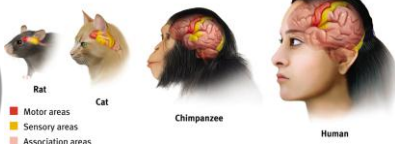
The brain controls the sensation and the movements of the body

Each body part will always have an area of cortex devoted to its movements and sensation



Association Areas

- These areas (found in all four lobes) _____
- They link sensory inputs with stored memories, which is very important for thinking!



Association Areas

- These areas in the *frontal lobes* are involved in higher cognitive functions such as _____
- _____ reasoning skills are associated with the *parietal lobes*
- The right *temporal lobe* enables us to _____

What's Next?

Consciousness
