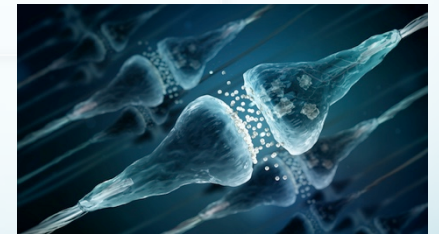


INTERACTION

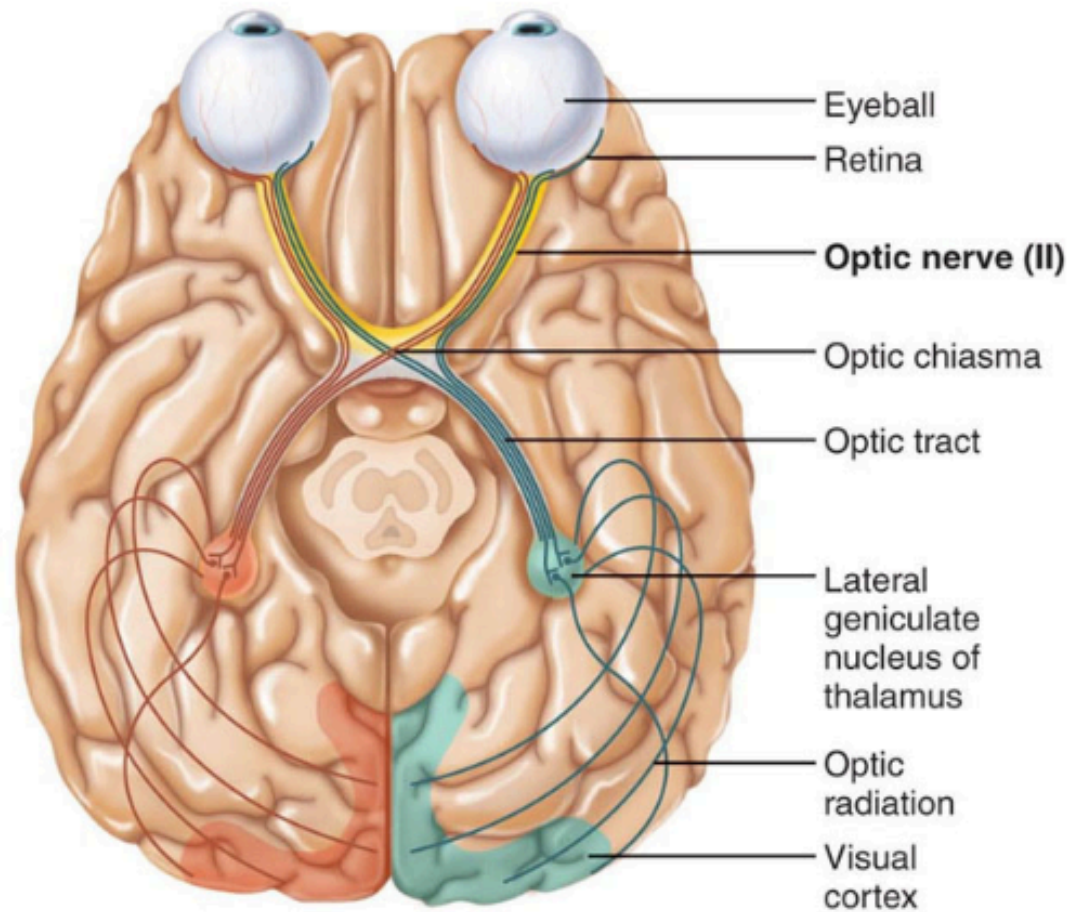
THE 5 SENSES & NERVOUS SYSTEM



THE 5 SENSES

SIGHT

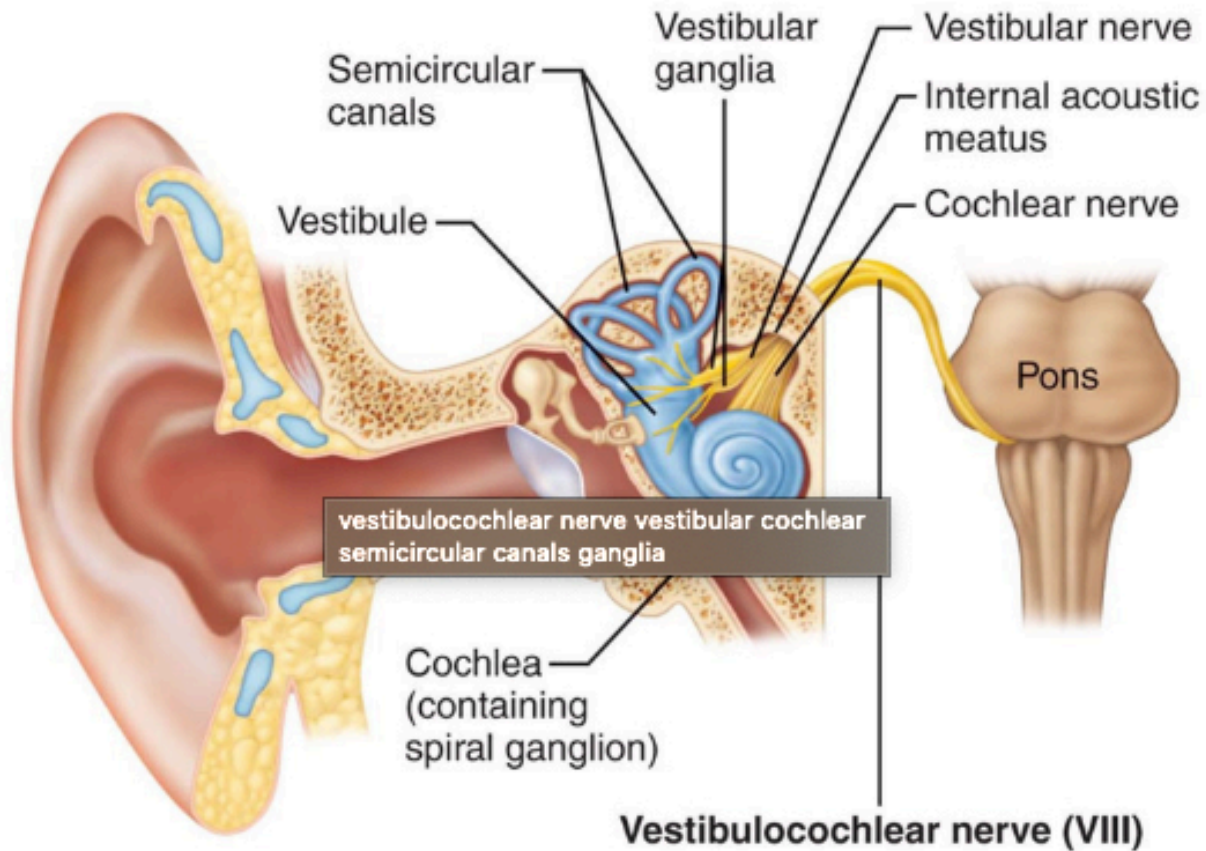
The Optic Nerves -II



THE 5 SENSES

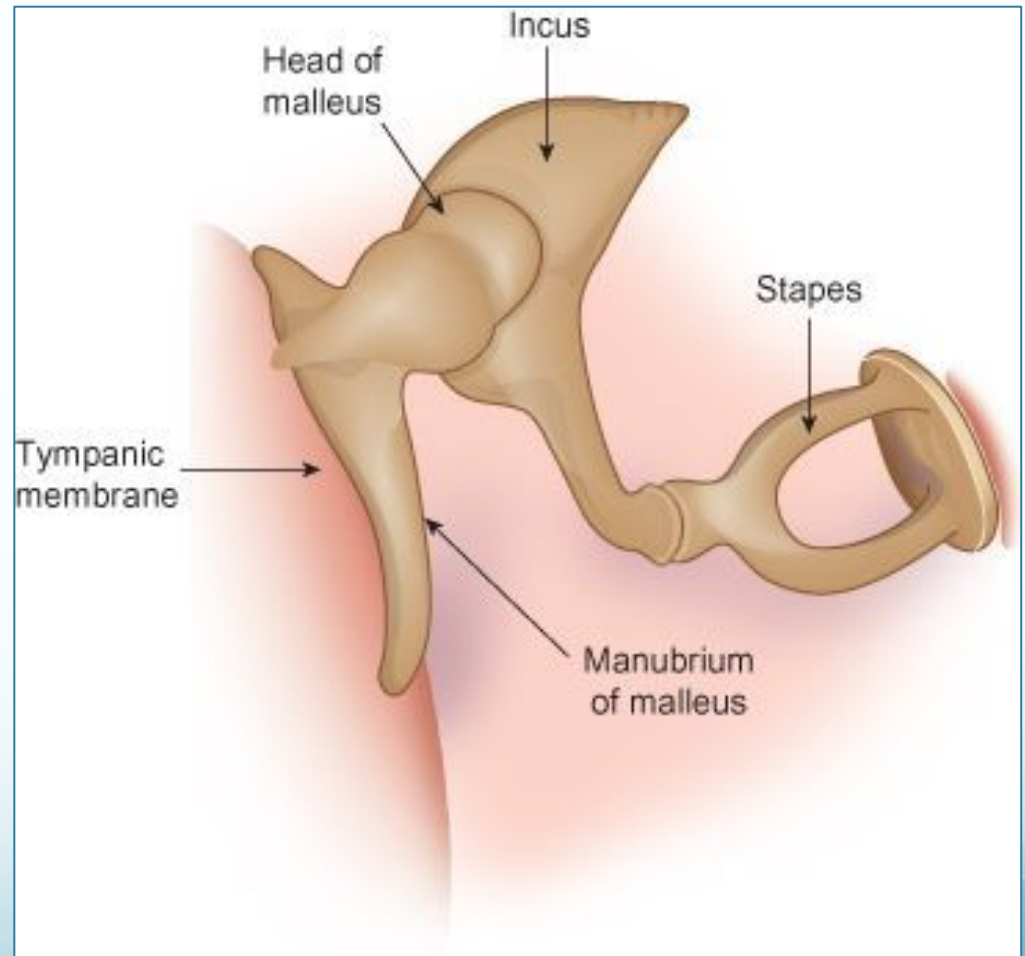
HEARING

The Vestibulocochlear Nerves - VIII



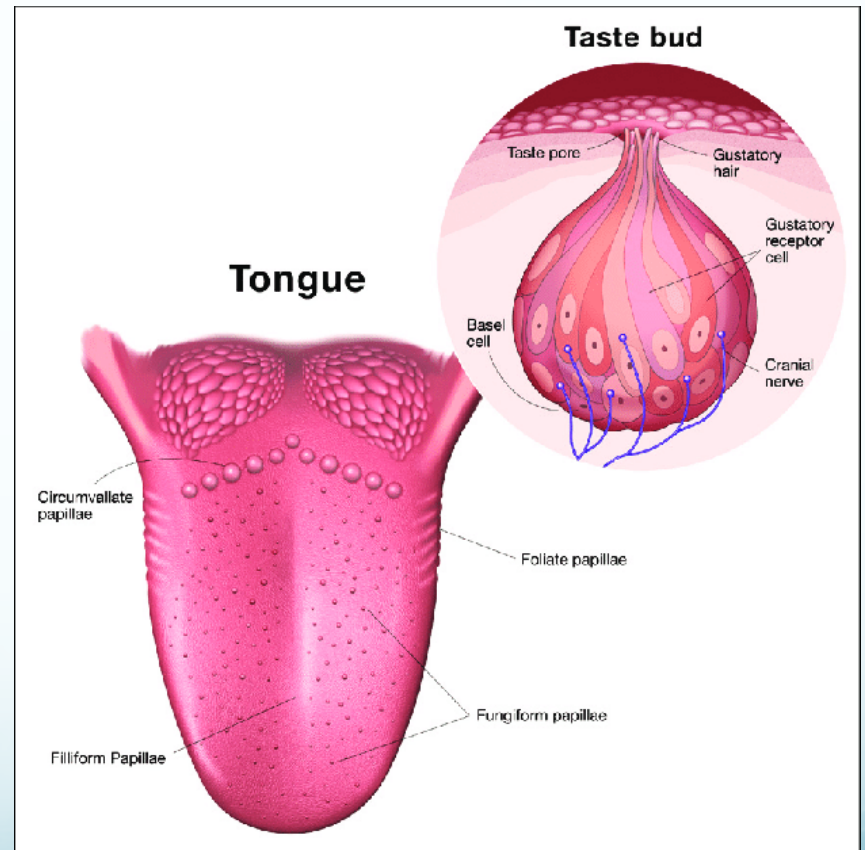
THE 5 SENSES

THE EAR - HEARING



THE 5 SENSES

TASTE

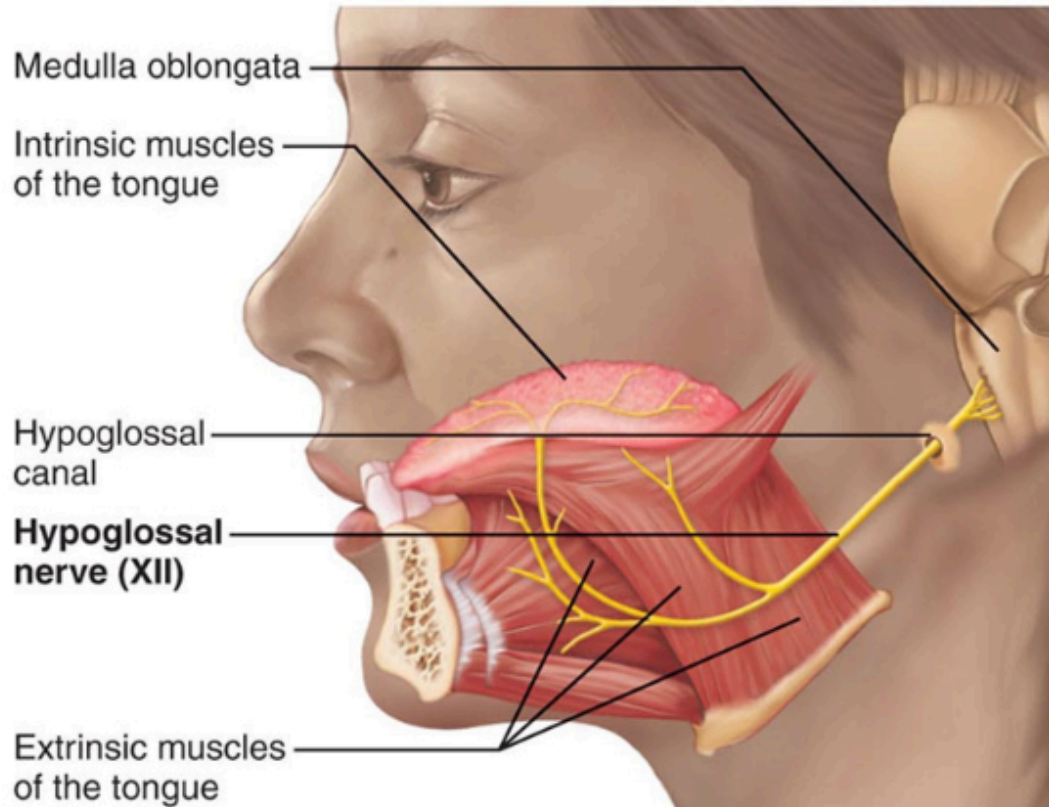


THE 5 SENSES

TASTE

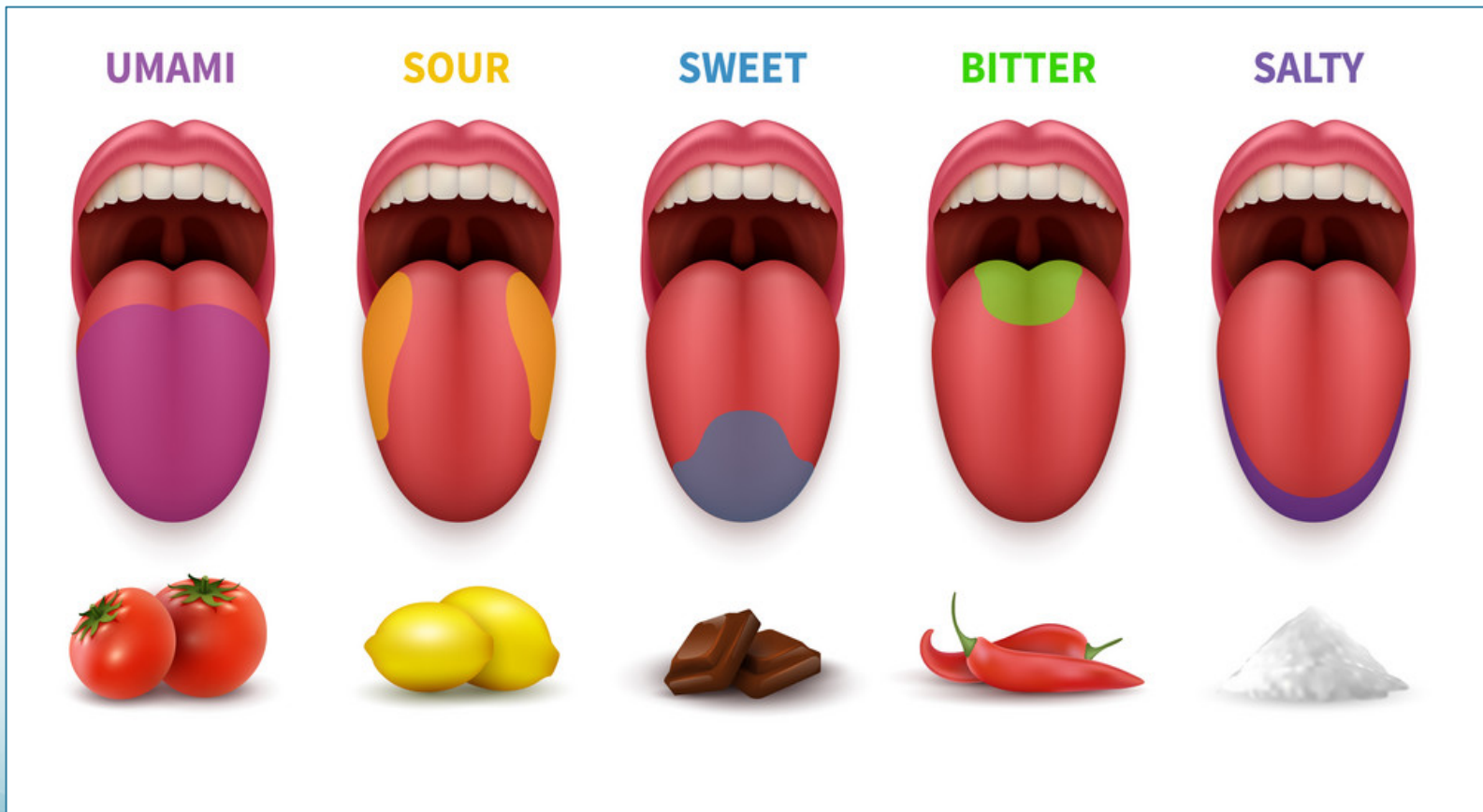
The Hypoglossal Nerves - XII

- Runs inferior to the tongue
 - Innervates the tongue muscles



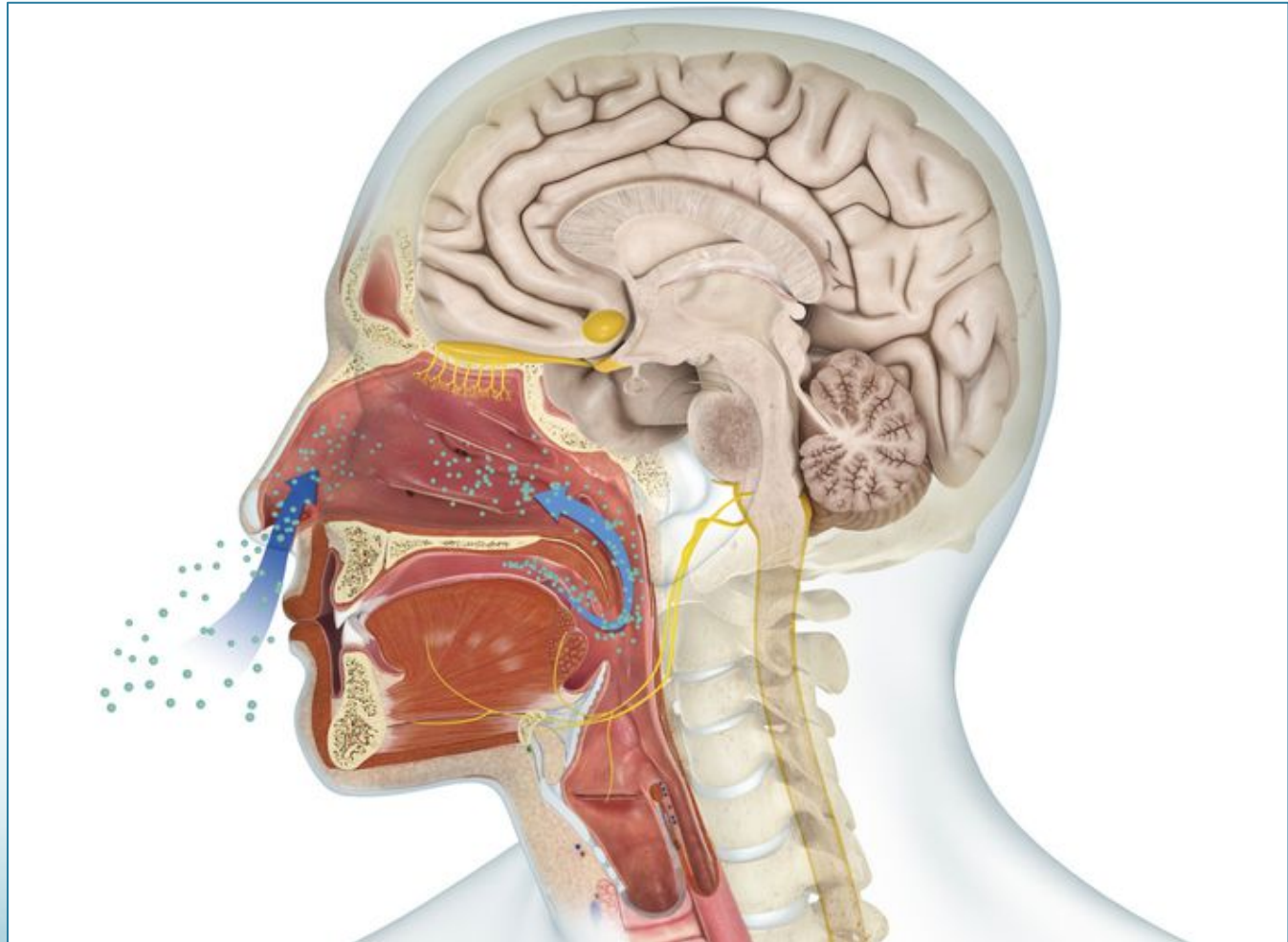
THE 5 SENSES

TASTE



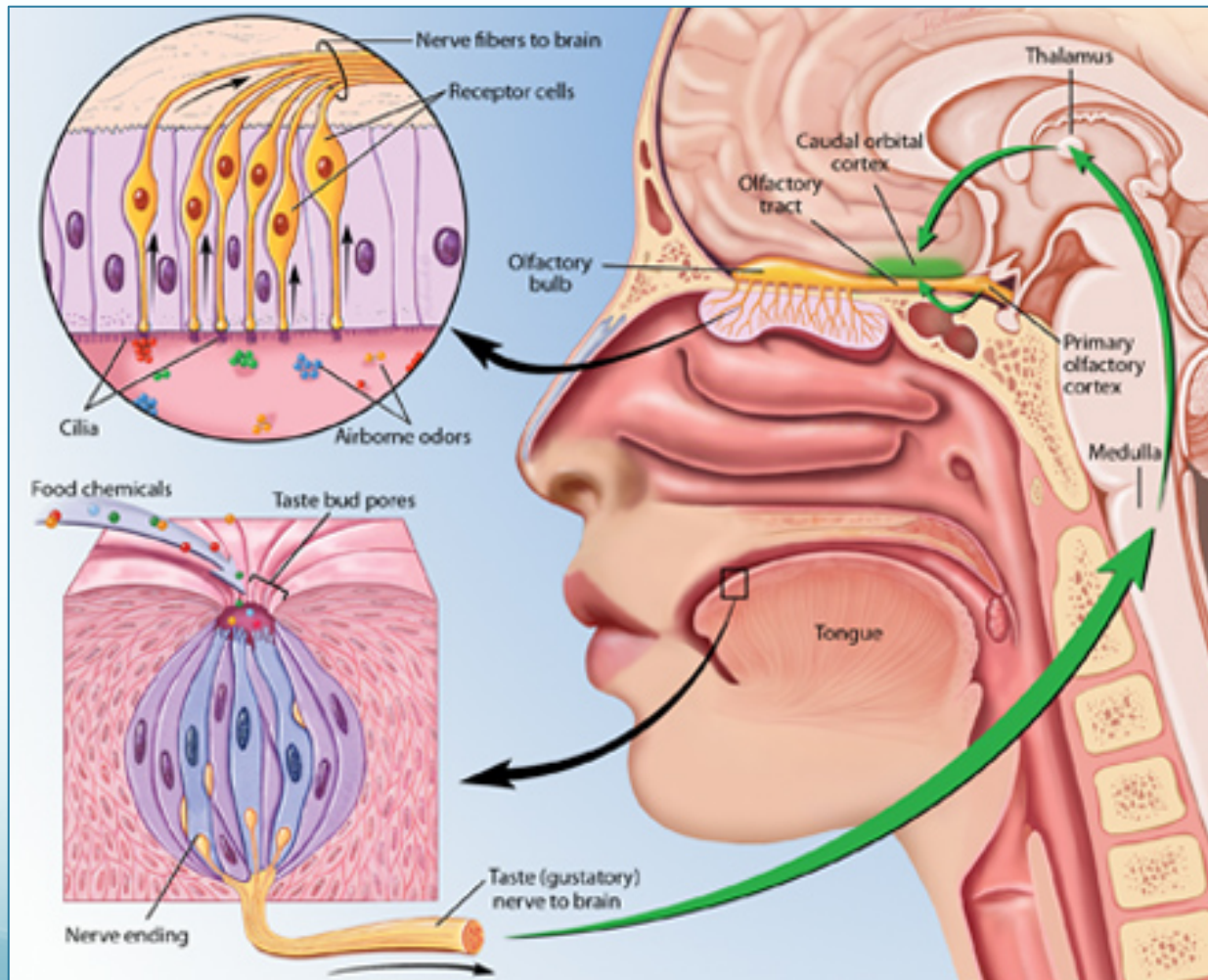
THE 5 SENSES

TASTE AND SMELL



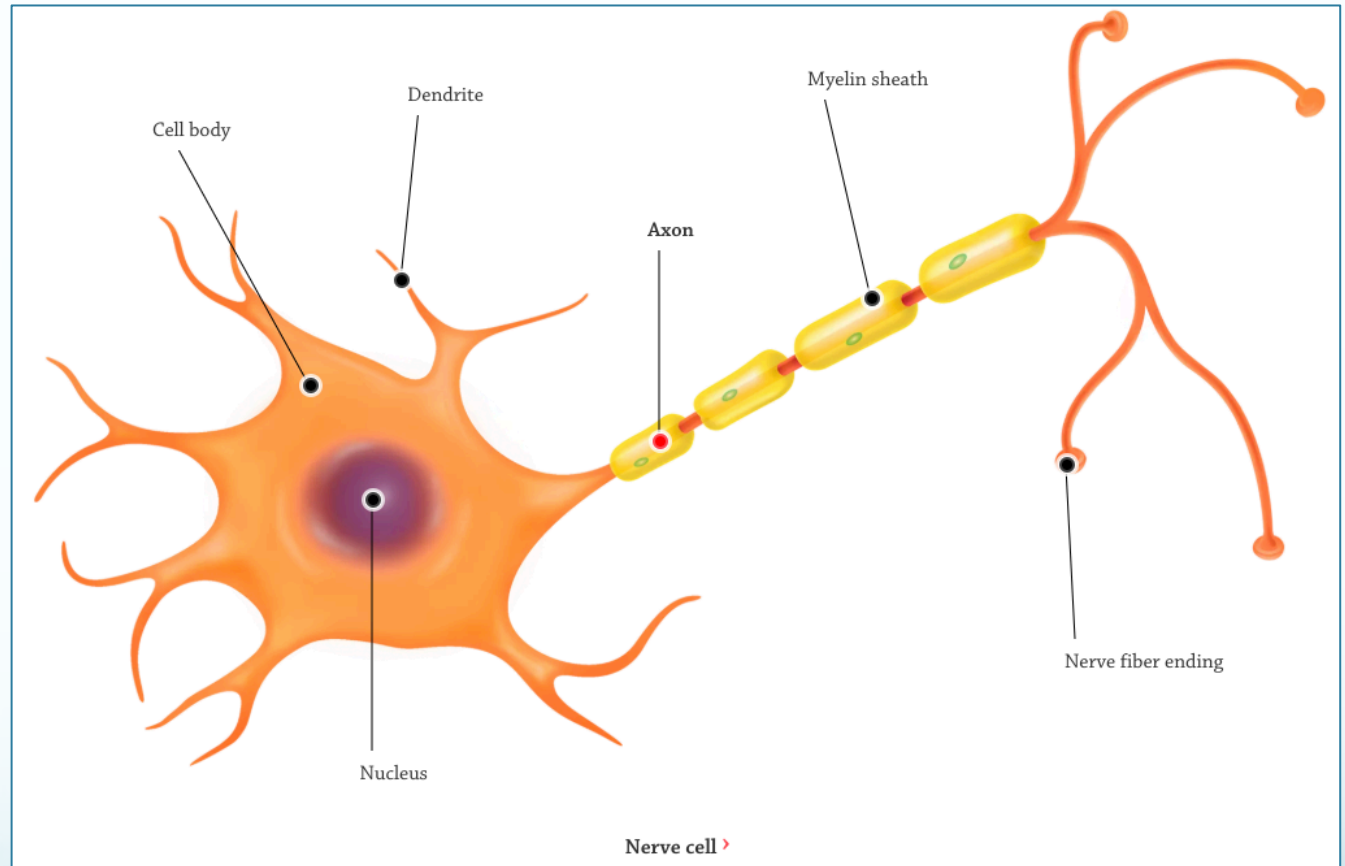
THE 5 SENSES

TASTE AND SMELL



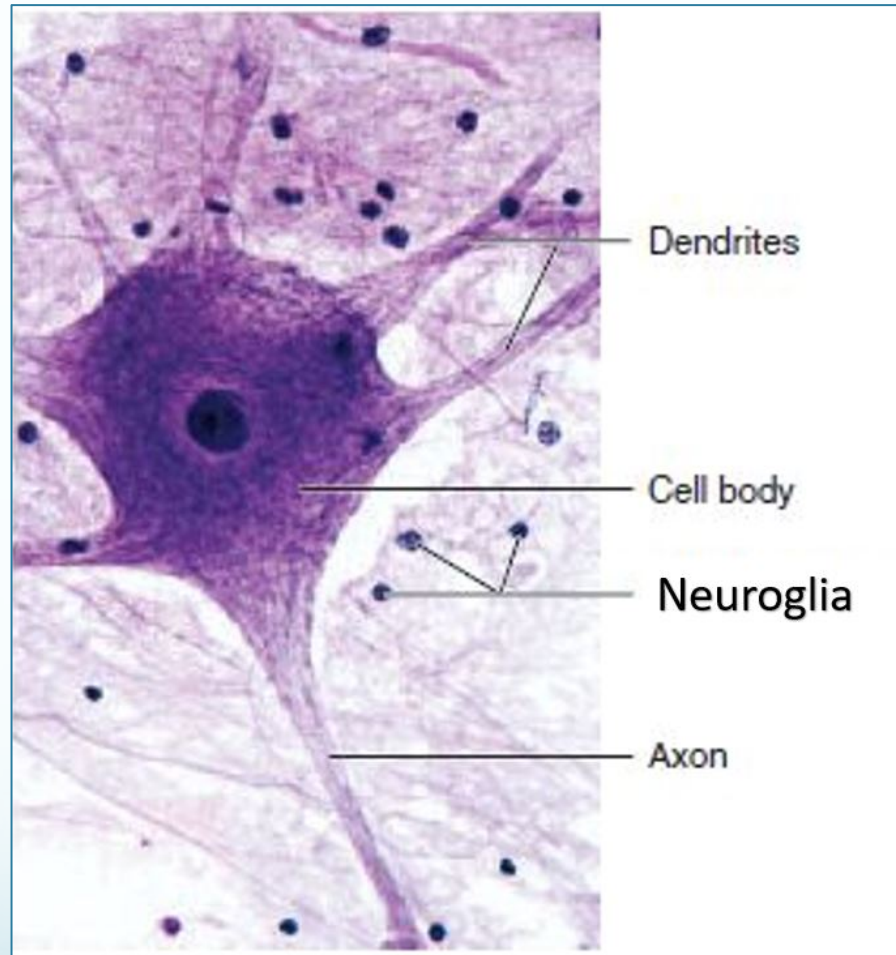
THE NERVOUS SYSTEM

NEURON



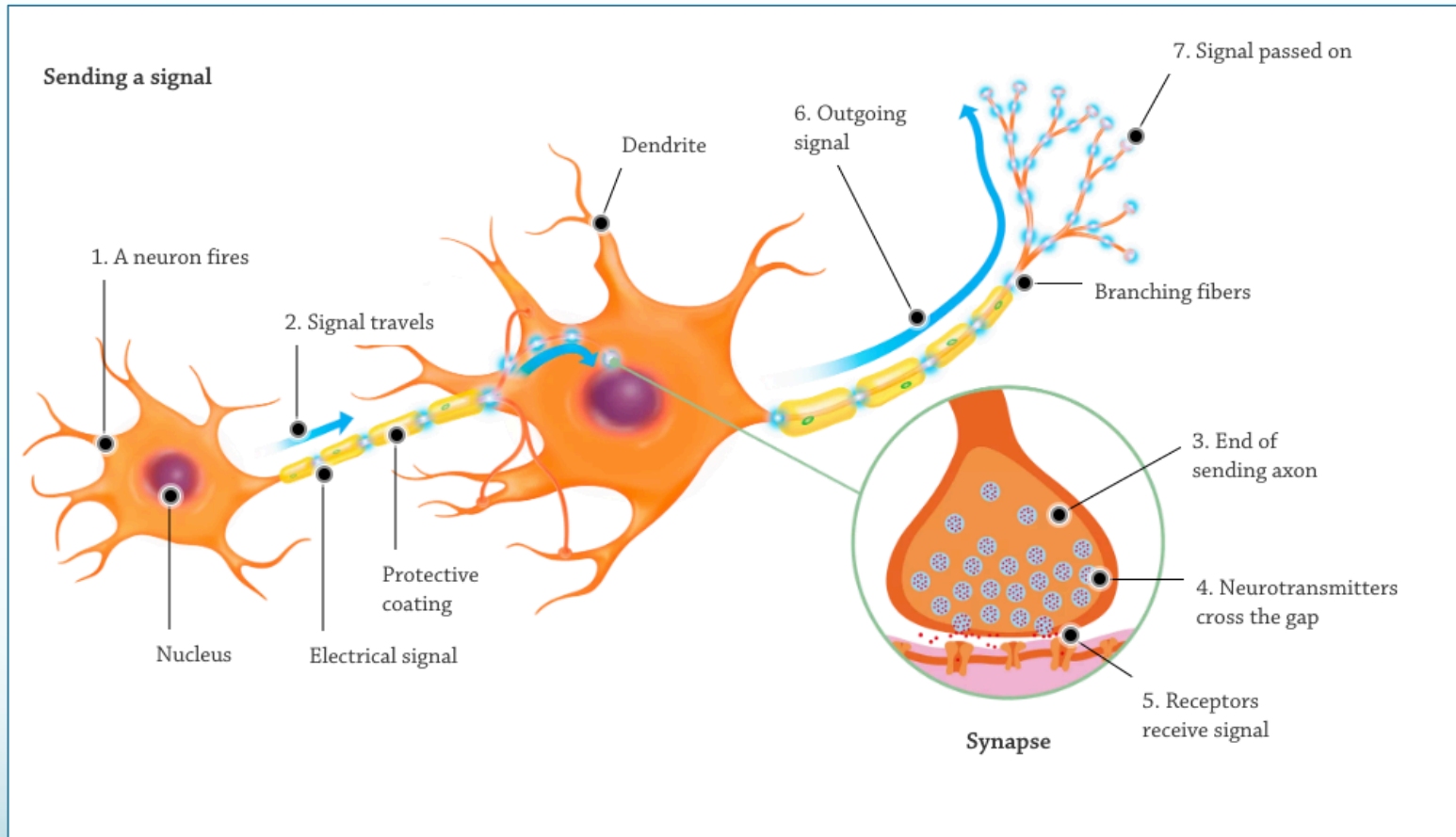
THE NERVOUS SYSTEM

NEURON



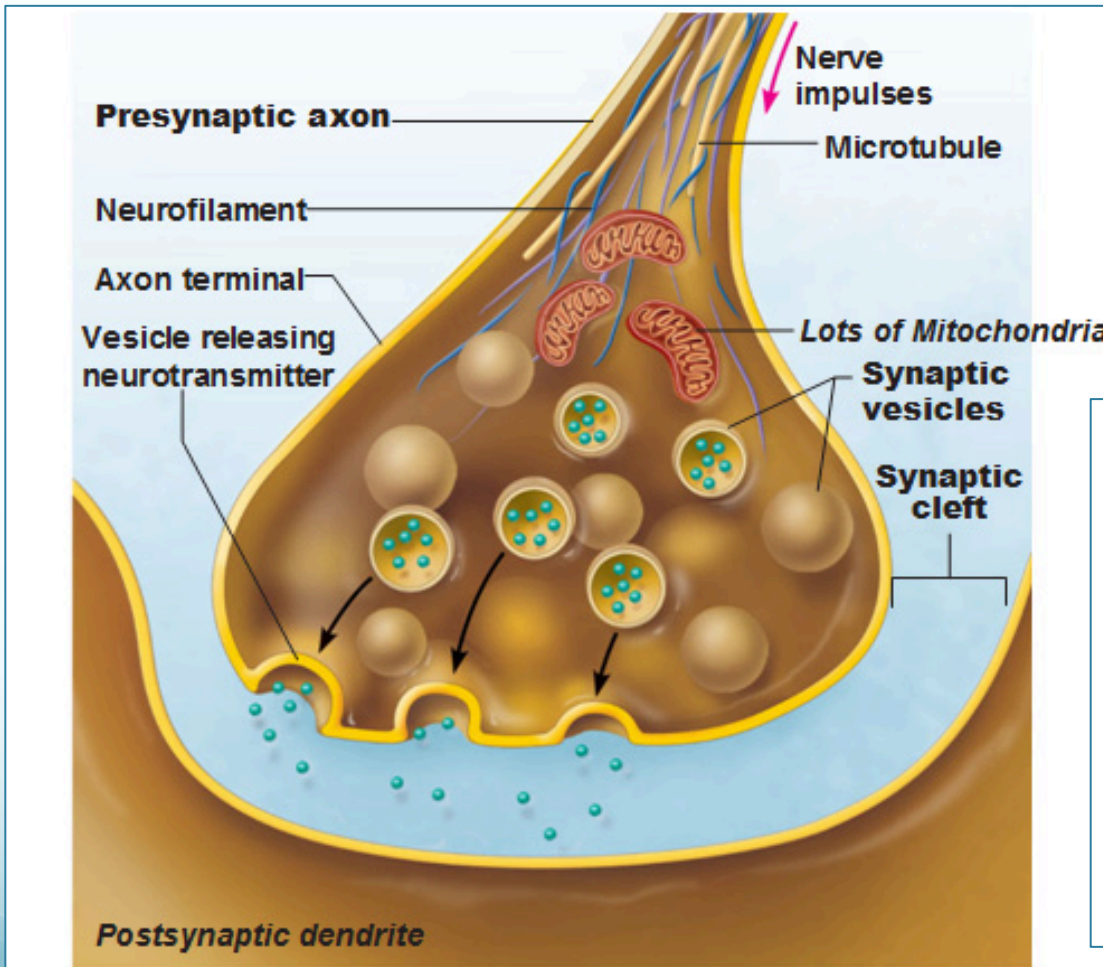
THE NERVOUS SYSTEM

SYNAPSES



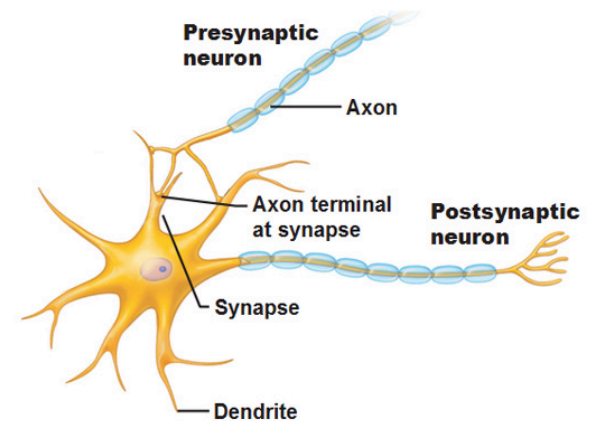
THE NERVOUS SYSTEM

SYNAPSIS



(b) Enlarged view of the synapse

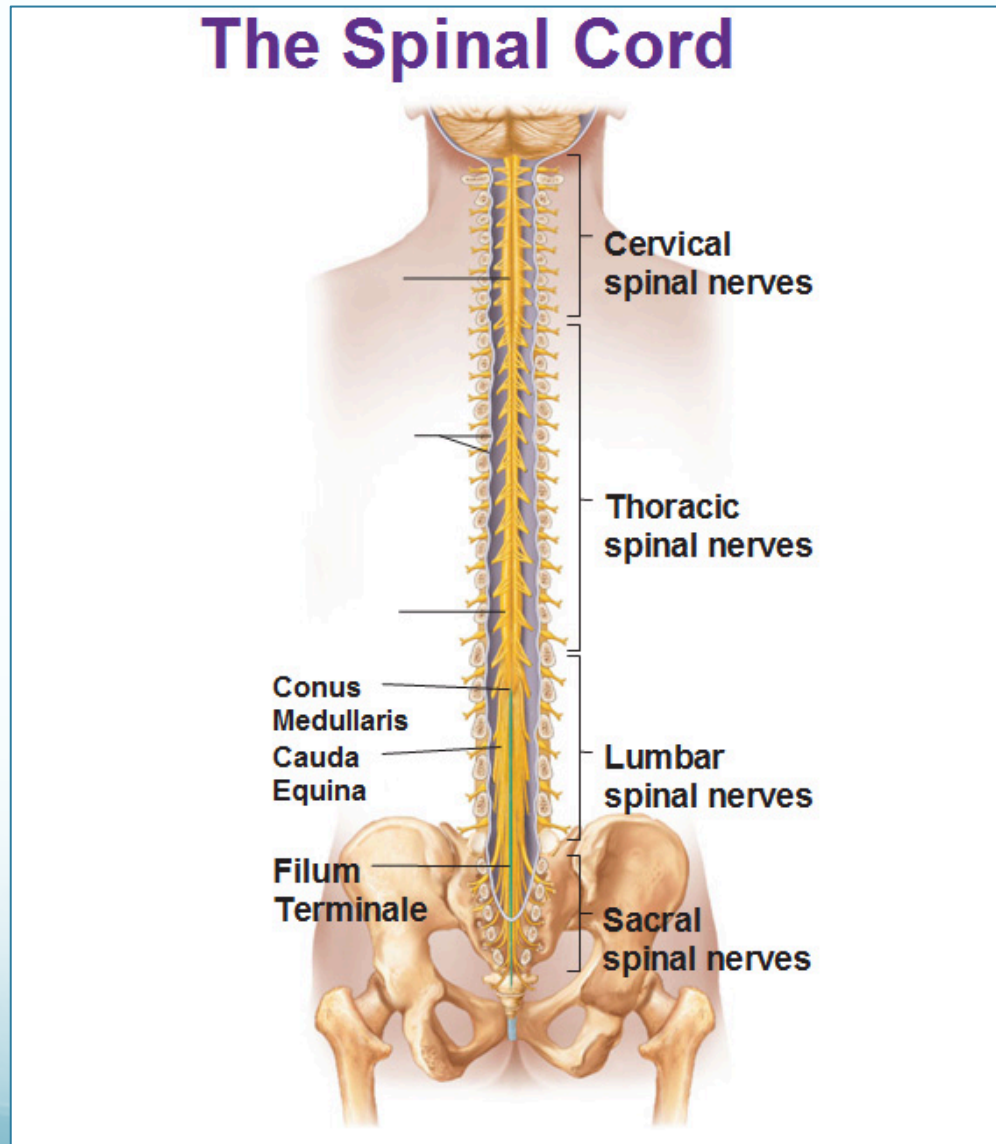
Synapse – Where Two Neurons Communicate in One Direction



(a) Two neurons connected by synapses

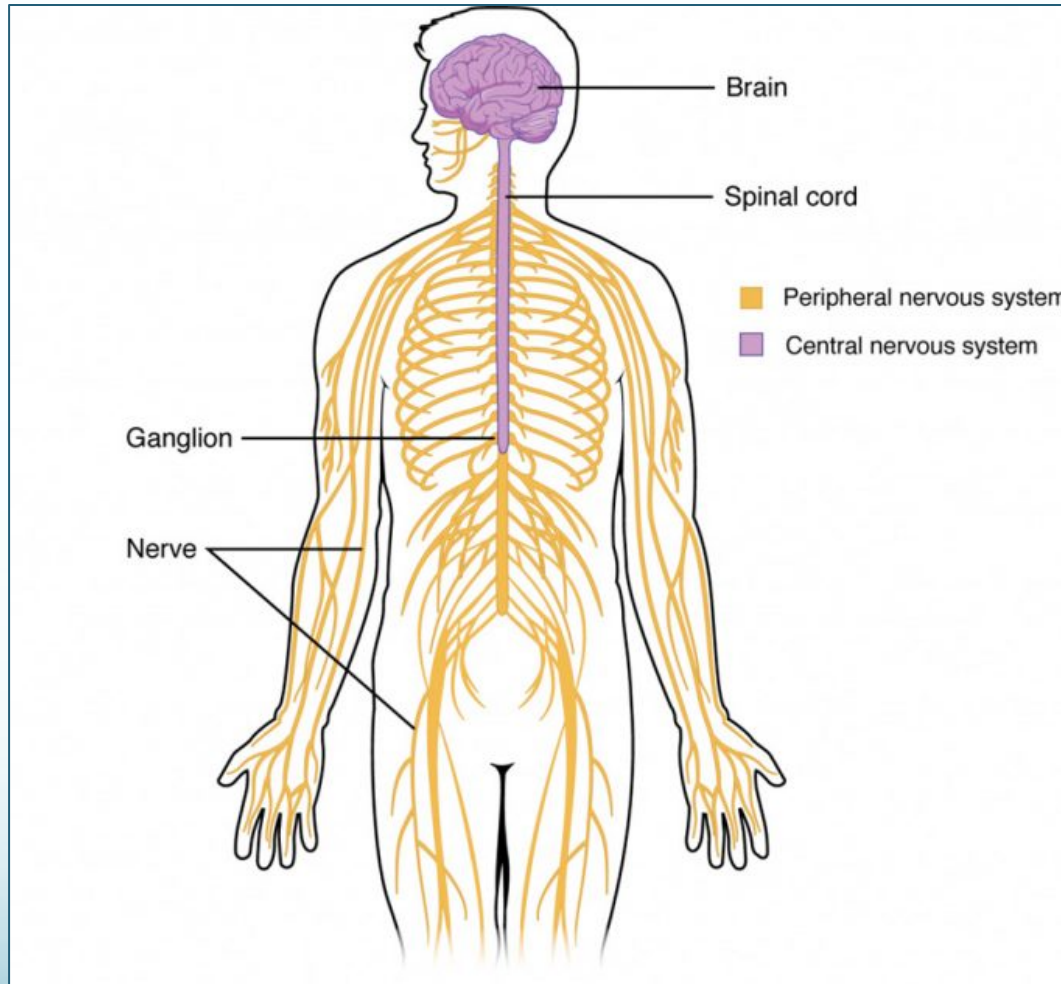
THE NERVOUS SYSTEM

NERVES



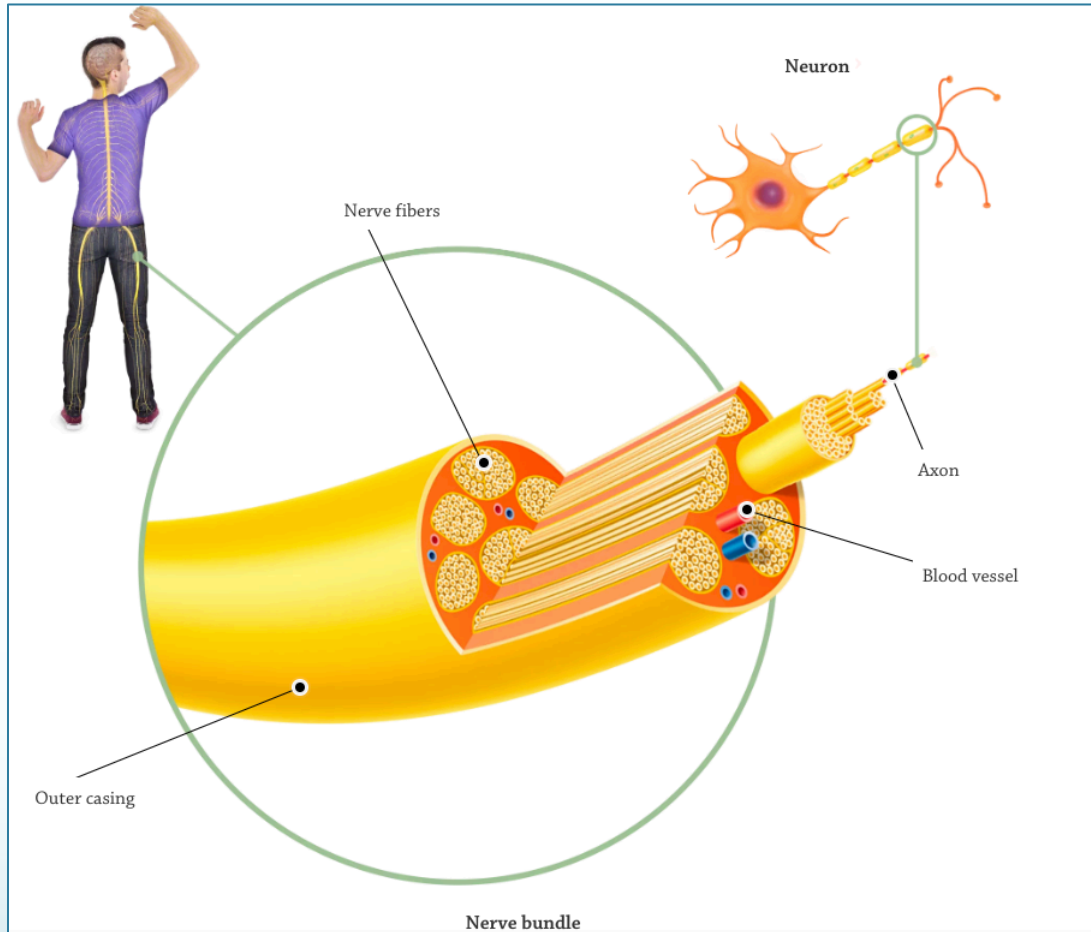
THE NERVOUS SYSTEM

CENTRAL & PERIPHERAL NERVOUS SYSTEM



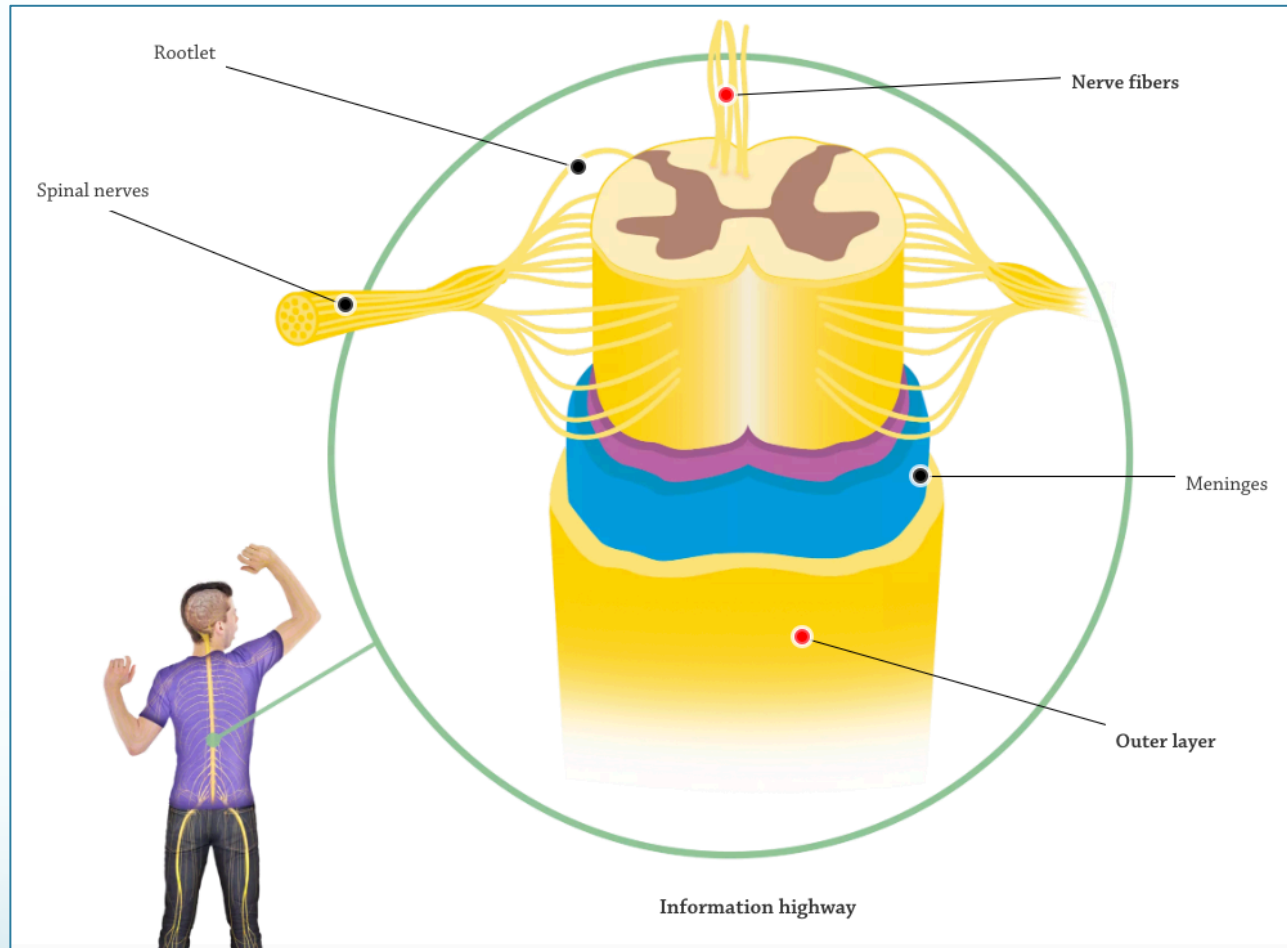
THE NERVOUS SYSTEM

NERVES



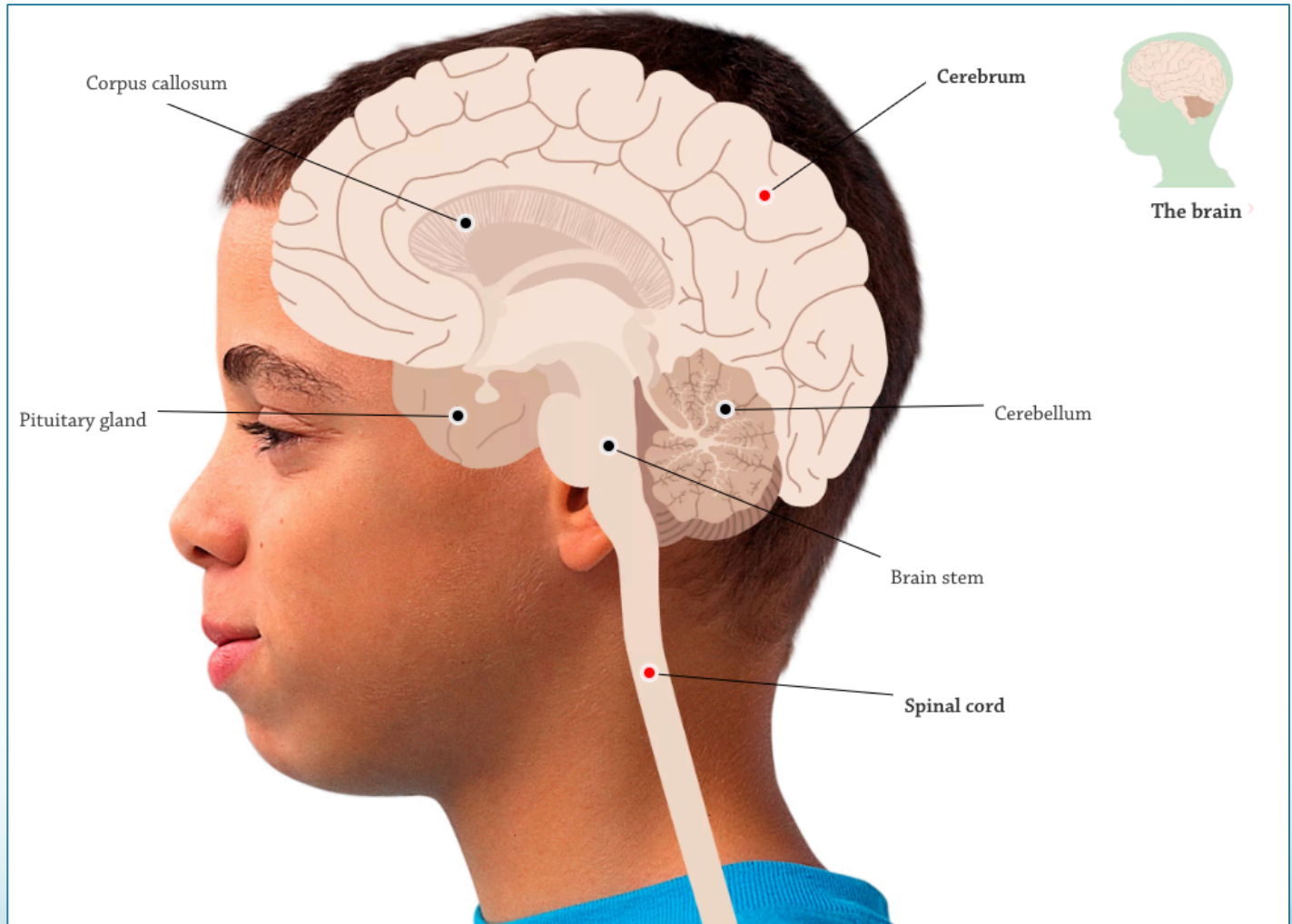
THE NERVOUS SYSTEM

SPINAL CORD



THE NERVOUS SYSTEM

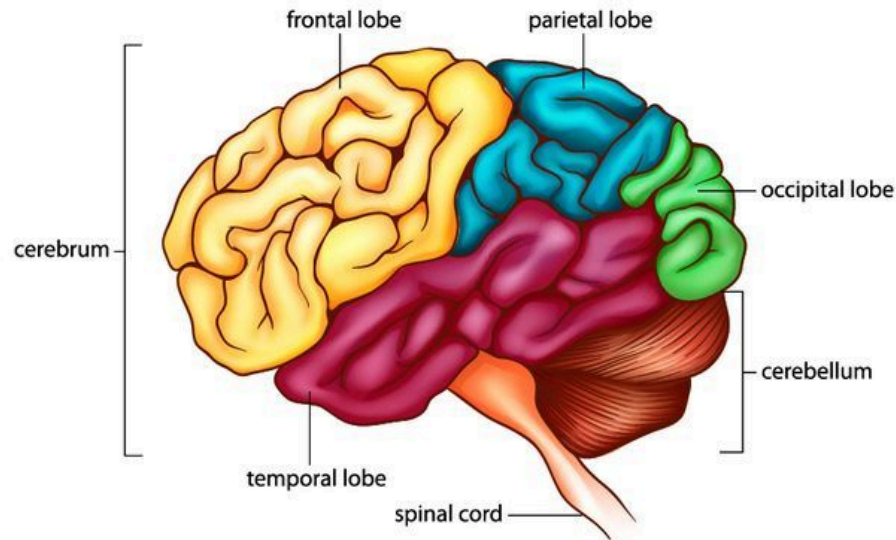
BRAIN



THE NERVOUS SYSTEM

BRAIN

BRAIN STRUCTURES AND THEIR FUNCTIONS



STRUCTURE

FUNCTIONS

FRONTAL:

Behaviour, Intelligence, Memory, Movement.

PARIENTAL:

Intelligence, language, Reading, Sensation.

OCCIPITAL:

Visual Processing and Spatial-Orientation.

CEREBELLUM:

Balance, Swallowing, Breathing, Heartbeat.

TEMPORAL:

Speech, Vision, Hearing, Long-Term Memory.

THE NERVOUS SYSTEM

CEREBRUM the largest part of the brain

Frontal Lobe

associated with Reasoning, Planning, Parts of Speech, Movement, Emotions, and problem Solving

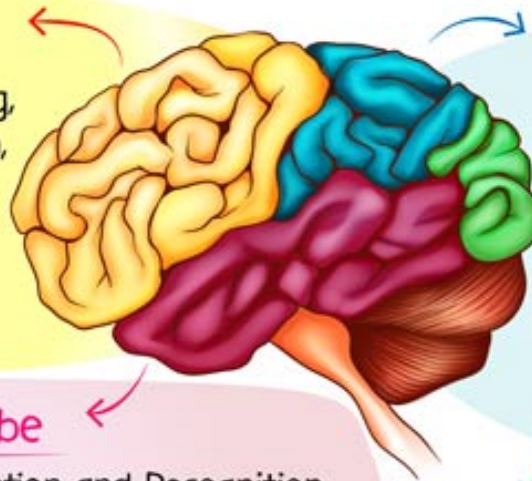
Temporal Lobe

associated with Perception and Recognition of Auditory Stimuli, Memory, and Speech

Parietal Lobe

associated with Sensory Perception and Integration such as Touch, Pressure and Temperature. Important for Understanding Spatial Orientation, Movement Coordination, Information Processing and more

Occipital Lobe
responsible for Vision



SOURCES:

<http://teachmeanatomy.info/neuro/structures/cerebrum/>
<http://serendip.brynmawr.edu/bb/kinser/Structure1.html>
https://en.wikipedia.org/wiki/Lobes_of_the_brain
<https://www.thoughtco.com/parietal-lobes-of-the-brain-3865903>

 DEVELOPINGHUMANBRAIN.ORG

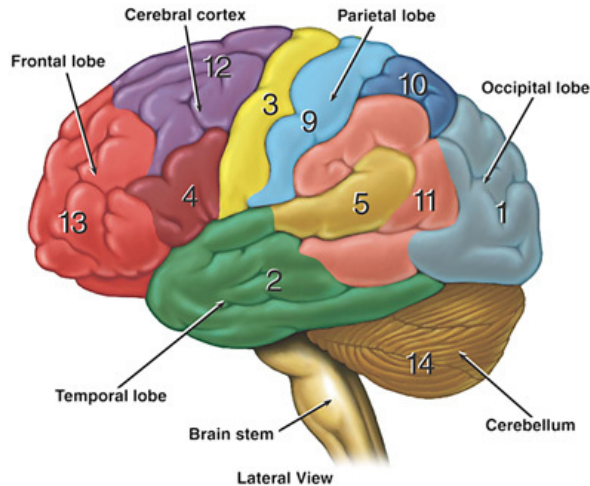
THE NERVOUS SYSTEM

Functional Areas of the Cerebral Cortex

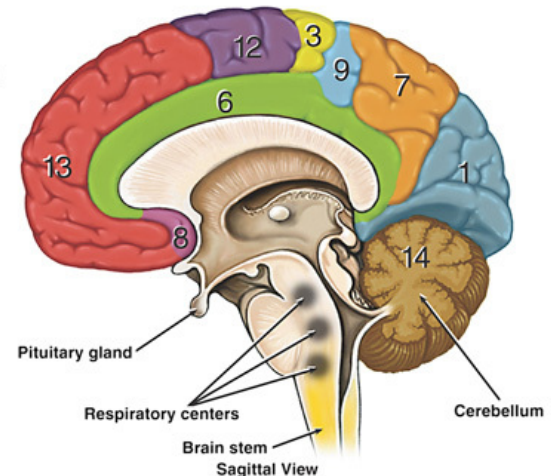
- 1 **Visual Area:**
Sight
Image recognition
Image perception
- 2 **Association Area**
Short-term memory
Equilibrium
Emotion
- 3 **Motor Function Area**
Initiation of voluntary muscles
- 4 **Broca's Area**
Muscles of speech
- 5 **Auditory Area**
Hearing
- 6 **Emotional Area**
Pain
Hunger
"Fight or flight" response
- 7 **Sensory Association Area**
- 8 **Olfactory Area**
Smelling
- 9 **Sensory Area**
Sensation from muscles and skin
- 10 **Somatosensory Association Area**
Evaluation of weight, texture, temperature, etc. for object recognition
- 11 **Wernicke's Area**
Written and spoken language comprehension
- 12 **Motor Function Area**
Eye movement and orientation
- 13 **Higher Mental Functions**
Concentration
Planning
Judgment
Emotional expression
Creativity
Inhibition

Functional Areas of the Cerebellum

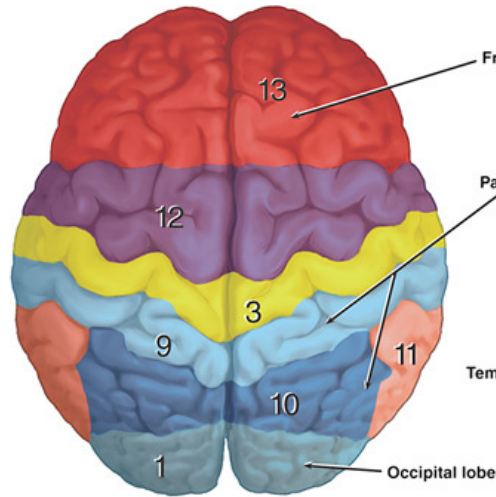
- 14 **Motor Functions**
Coordination of movement
Balance and equilibrium
Posture



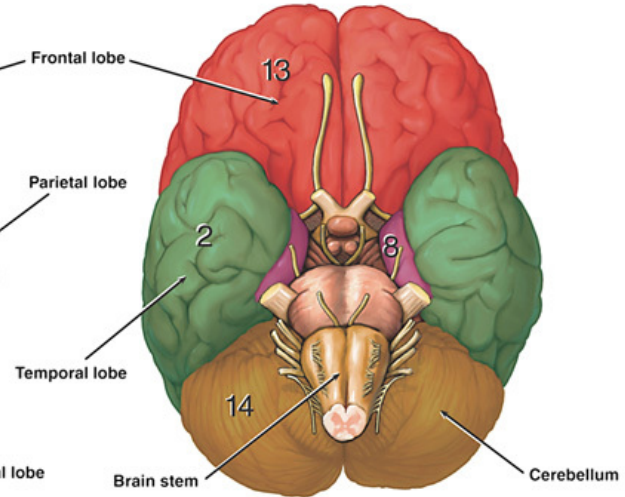
Lateral View



Sagittal View



Superior View

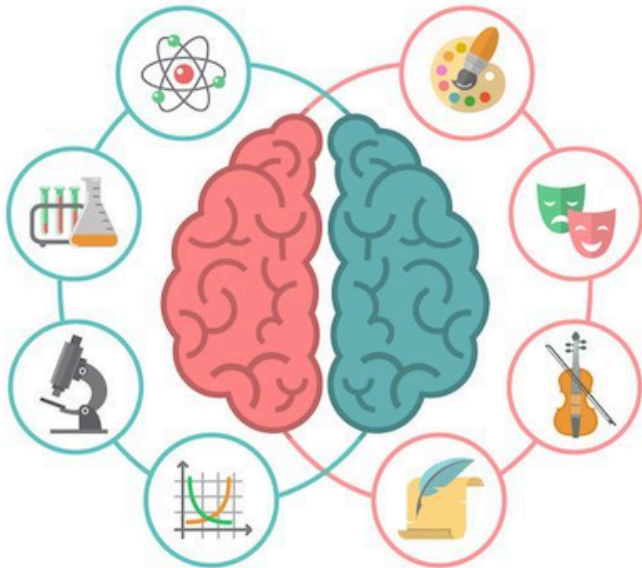


Inferior View

THE NERVOUS SYSTEM

BRAIN

BRAIN HEMISPHERES AND THEIR FUNCTIONS



LEFT HEMISPHERE

CONTROLS RIGHT SIDE OF BODY

- Spoken Language
- Objectivity
- Analytical Skills
- Number Skills
- Scientific Skills
- Written Language
- Logic
- Reasoning

RIGHT HEMISPHERE

CONTROLS LEFT SIDE OF BODY

- Subjectivity
- Synthesizing
- Emotion
- Face Recognition
- Music/Art Awareness
- Intuition
- Creativity
- Imagination

THE NERVOUS SYSTEM

BRAIN

