NERVOUS SYSTEM

NERVOUS SYSTEM

- 1. Relation function
- 2. Nervous system organization
- 3. Neurons
- 4. Glíal cells
- 5. Nerve ímpulse
- 6. Central nervous system
- 7. Perípheral nervous system
- 8. Reflex arc



1st SESSION

1. Relation function

2. Nervous System Organization

ORGANS, SYSTEMS AND VITAL FUNCTIONS

NUTRITION

- Digestive System
- Respiratory System
- Circulatory System
- Excretory System

REPRODUCTION

• Reproductive System



Sense Organs

1. RELATION FUNCTION



1. RELATION FUNCTION



2. NERVOUS SYSTEM ORGANZATION



VOCABULARY SESSION 1

CASTELLANO

- Estímulo
- Receptor
- Sistema Nervioso
- Efector
- Homeostasis
- Conducta

ENGLISH

- Stimulus
- Receptor
- Nervous System
- Effector
- Homeostasis
- Behaviour





Transverse section of the axon The lines souronding the axón correspond to the myeline sheath, in this case produce by a Schwann cell







NEURONS FUNCTIONAL CLASSIFICATION

SENSORY NEURONS: nerve cells within the nervous system responsible for converting external stimuli from the organism's environment into internal electrical impulses.

MOTOR NEURONS: are efferent neurons that originate in the spinal cord and synapse with muscle fibers to facilitate muscle contraction.

INTERNEURONS: create neural circuits, enabling communication between sensory or motor neurons and the central nervous system.

NEURONS FUNCTIONAL CLASSIFICATION





Motor neurons innervating a muscular skeletal fiber



4. GLIAL CELLS

- Glial cells include any of the cells that hold nerve cells in place and help them work the way they should.
- They are not neuron-cell type, so they do not have dendrites nor axon
- There are several types but here we will refer only to three types.



VOCABULARIOY SESSION 2

CASTELLANO

- Neurona
- Dendrita
- Axón
- Vaina de Mielina
- Terminales del axón
- Botones terminales
- Nodos de Ranvier
- Neurona motora
- Neurona sensitiva
- Interneurona
- Células de la glía
- Célula de Schwann
- Oligodendrocitos
- Astrocitos

ENGLISH

- Neuron
- Motor neuron
- Sensory neuron
- Interneuron
- Glial cells
- Dendrite
- Axon
- Myelin sheath
- Terminal branches of the axon
- Axon tips
- Nodes of Ranvier
- Schwann cell
- Oligodendrocyte
- Astrocyte



The messages carried by neurons are called nerve impulses. Nerve impulses can travel very quickly because they are transmitted mostly as an electrical wave through the neuron membrane.





Unidirectional: dendrites \rightarrow axon \rightarrow dendrites Electrical signal: through the axon Chemical signal: Terminal branches of the axon-dendrites





SYNAPSIS



VOCABULARY 3rd SESSION

CASTELLANO

- Impulso nervioso
- Unidireccional
- Sinapsis
- Neurona presináptica
- Neurona postsináptica
- Espacio intersináptico
- Neurotransmisores
- Canales con receptores

ENGLISH

- Nervous impulse
- Unidirectional
- Synapsis
- Pre-synaptic neuron
- Post-synaptic neuron
- Synaptic cleft
- Neurotransmitters
- Channels with receptors