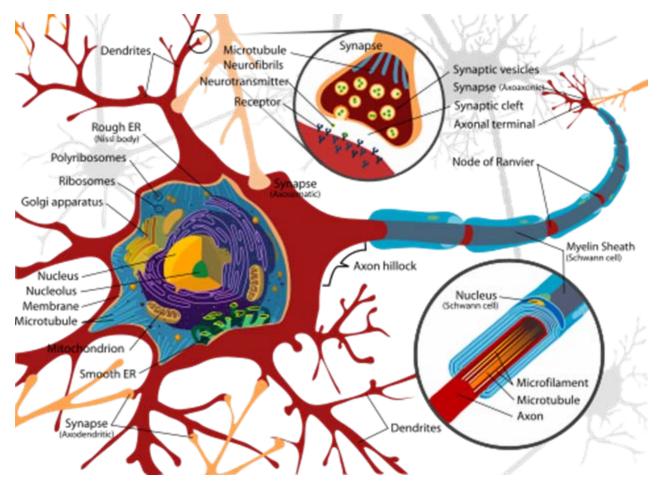
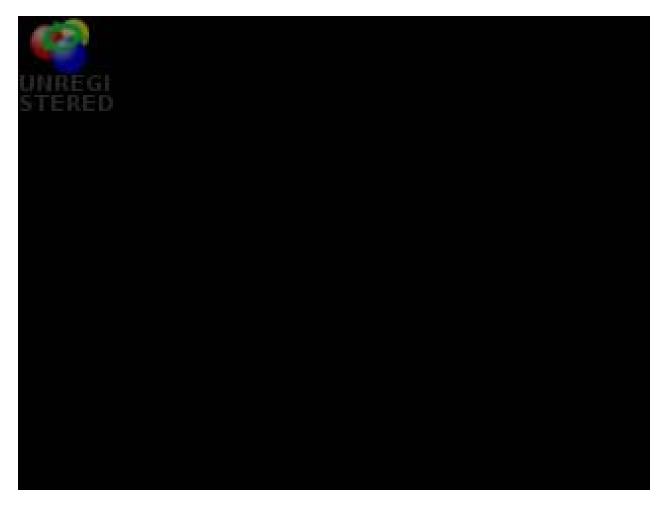
The Nervous System The Neuron



Functions of the Nervous System

- It receives information about what is happening both inside and out side your body
- It directs the way in which your body responds
- Stimulus: any change in the environment that makes an organism react
- **Response:** is a reaction to a stimulus

Example of Stimulus & Response

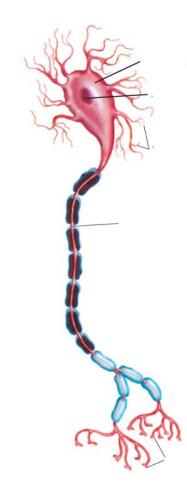


What was the stimulus?

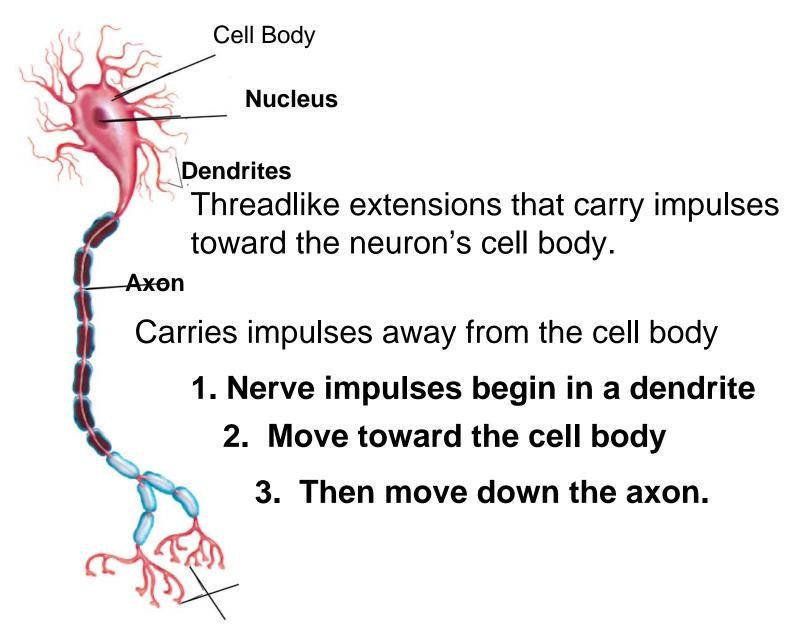
What was the **Response**?

The Neuron

- Cells of the nervous system.
- They carry information through out the nervous system
- The information that is carried is called **nerve impulse**.



Structure of a Neuron



Types of Neurons

- Sensory Neuron
- Interneuron
- Motor neuron
- Assignment:
- On the back of this paper copy the Path of a Nerve Impulse, p.179

FIGURE 3

The Path of a Nerve Impulse

When you hear your phone ring, you pick it up to answer it. Many sensory neurons, interneurons, and motor neurons are involved in this action. Interpreting Diagrams To where does the impulse pass from the sensory neurons?

Muscle in hand

Receptors

in ear

Sensory Neuron

Nerve impulses begin when receptors pick up stimuli from the environment. Receptors in the ear pick up the sound of the phone ringing. The receptors trigger nerve impulses in sensory neurons.



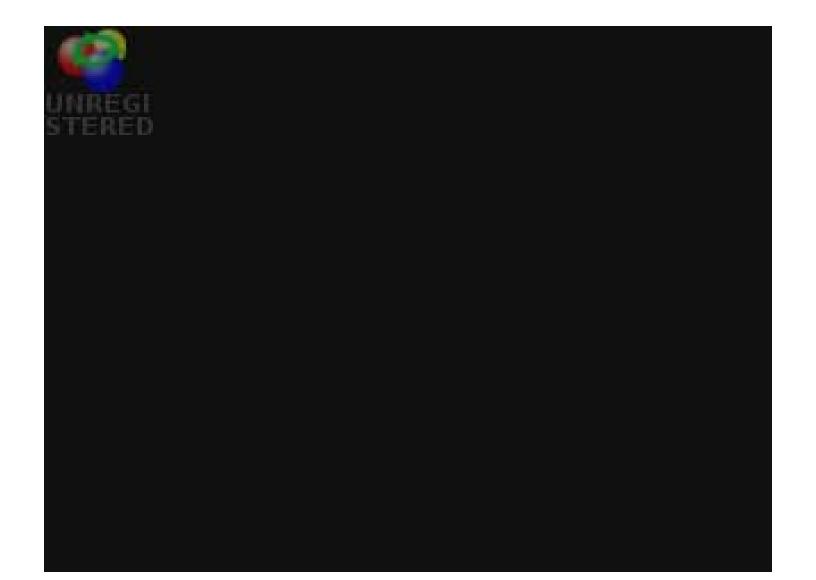
2 Interneuron

From the sensory neurons, the nerve impulse passes to interneurons in the brain. Your brain interprets the impulses from many interneurons and makes you realize that the phone is ringing. Your brain also decides that you should answer the phone.



B Motor neuron Impulses then travel along thousands of motor neurons. The motor neurons send the impulses to muscles. The muscles carry out the response, and you reach for the phone.

The Brain

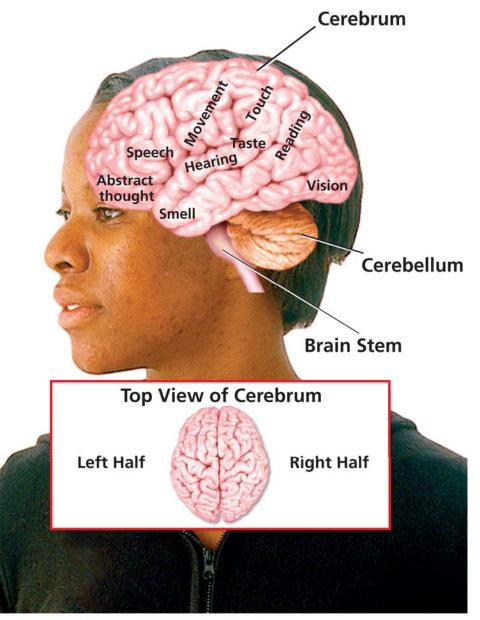


The Brain is made up of three Parts

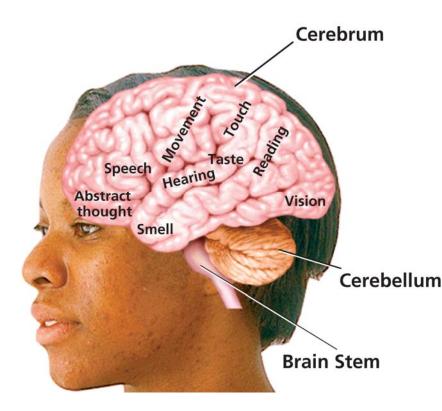
1. The Cerebrum

2. The Cerebellum

3. The Brain Stem



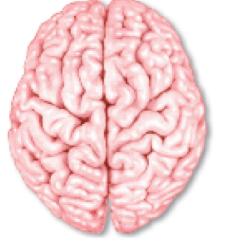
Cerebrum



- The largest part of the brain.
- Interprets input from the senses
- Controls movement
- Carries out complex mental processes (learning and memory)

Top View of Cerebrum

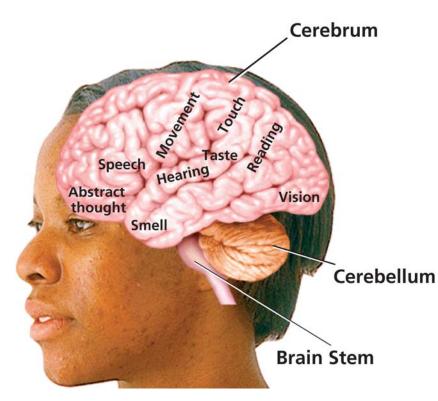




Right Half

- Divided into two halves (Right & Left)
- Right controls muscles on the left of the body
- Left controls muscles on right side of the body
- Right: creativity & artistic ablity
- Left: Mathematical Skills & Logical Thinking

Cerebellum



- Second largest part of the brain
- Coordinates the actions of your muscles and helps you keep your balance

Brain Stem

- Below the cerebellum
- Controls your body's involuntary actions (automatic actions)
- Examples: breathing, heart beating

