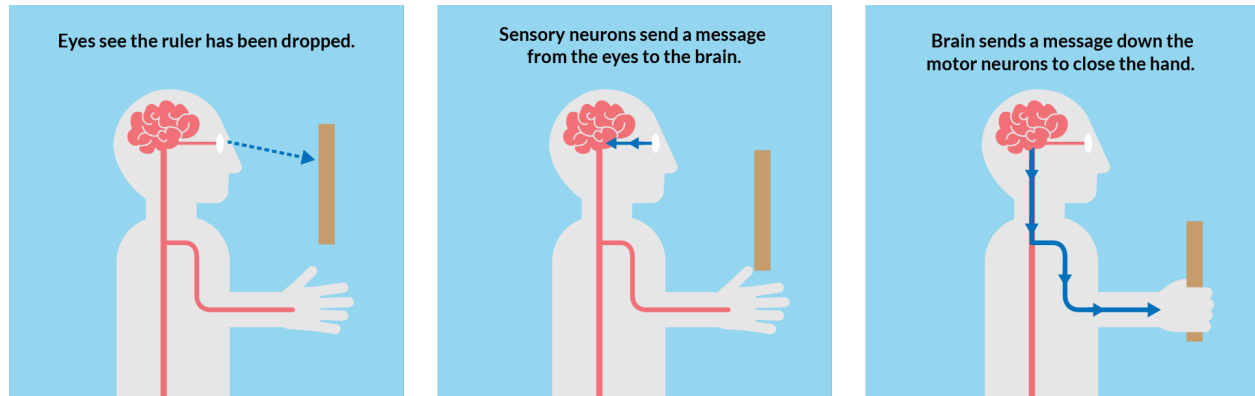


Reaction Time: How it works

<https://science-u.org/experiments/reaction-time.html>

Reaction time is the time between any kind of event and the response it elicits in a system. The brain is an essential part of developing a quick reaction time.

In this experiment, the eye sees that the ruler has been dropped. This information travels from sensory neurons along the optic nerve from the eye to the brain. The brain processes this information, then sends a signal through motor neurons down the arm to tell the muscles in the hand to close and catch the ruler.



The amount of time this all takes is what makes up our reaction time. Your reaction time depends on your eyesight and the speed that the signals take to travel from your brain to your muscles.

It is possible to improve your reaction time via practice. When we begin to acquire a new physical skill through repetition, our nervous system creates new neural pathways. The more we practice something, the more the members of that neural pathway (eye, brain, muscles) become more well-connected and efficient. This is often referred to as muscle memory.

Key Words

Sensory Neuron

Sends information from sensory receptors (e.g., in skin, eyes, nose, tongue, ears) TOWARD the central nervous system and ultimately the brain.

Interneuron

Sends information between sensory neurons and motor neurons. Most <https://science-u.org/experiments/reaction-time.html> interneurons are located in the central nervous system.

Motor Neuron

Send information AWAY from the central nervous system to muscles or glands.

Optic Nerve

The cranial nerve that serves the retina - what connects your brain to your eye.

Central Nervous System

The nervous system is the highway along which your brain sends and receives information about what is happening in the body and around it.