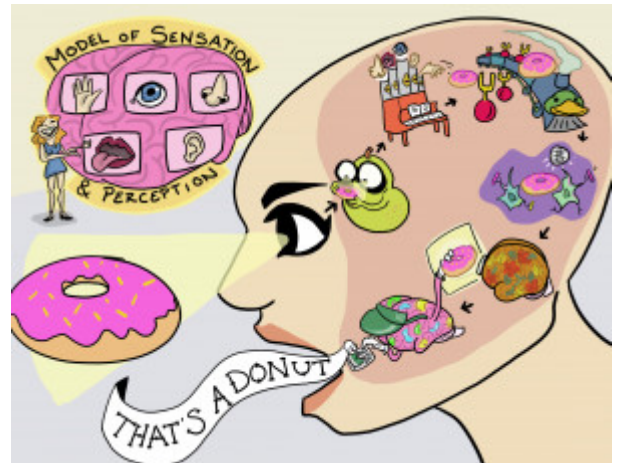


Model of Sensation and Perception

The model of sensation and perception describes how we process physical stimuli in the environment. Vision is different from hearing, which is different from touch, but all of these perceptions have commonalities in how they are processed. First an object exists in the environment, and information from that object reaches the perceiver, who has specialized receptor cells. These special receptor cells engage in transduction, sending neural impulses to sensory nerves of the brain, going to projection areas. These signals are processed further, going to different parts of the brain before we have the perceptual experience of the object in the environment.



PLAY PICMONIC

Object

Donut

Information from the object in the environment will first be processed by the person perceiving it. First, the object has to exist in the environment.

Information reaches the perceiver

Pear-see-er

Information then reaches the perceiver. In the case of vision, light is reflected off of the object and the information goes into the eyes.

Sense organ gets information to the receptor cells

Sense Organ with Receptor Cells

The particular sense organ then relays information to specialized receptor cells. In the case of vision, the eye then gets information to specialized receptor cells that respond to light energy.

Receptor cells engage in process of transduction

Receptor Cells board a Train-duck

The receptor cells take part in a crucial step, called transduction. Transduction is the process by which receptor cells change environmental energy into neural impulses that can be sent through the nervous system.

Neural impulses in sensory nerves transmitted to brain

Nerves pulsing

Once transduction occurs, neural impulses are relayed along sensory nerves to the brain, which then engages in further processing of the signal.

Pattern of activity initiated in brain projection area

Patterned Brain Projector

The projection areas of the brain are areas in the cortex where information is first sent. In the case of vision, the neural impulses are first sent to the primary visual cortex, which is located in the occipital lobes of the brain.

Other brain areas engage in additional processing

Other parts of brain engaging and processing

The signal is then relayed to other parts of the brain for additional processing of the signal. With vision, for example, it is thought that there are more than 30 cortical areas involved in visual processing.

Perceptual experience of the object in the environment

Donut perceived in its environment

All of these different sensory attributes, when linked together, lead to the perceptual experience of the object in the environment. In the case of vision, it is this entire neural process, stemming from light energy hitting receptor cells in the eye, that leads to the perceptual experience of viewing an object.