



# How does the brain work?

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# The World Out There

Sight, smells, taste, sounds, touch



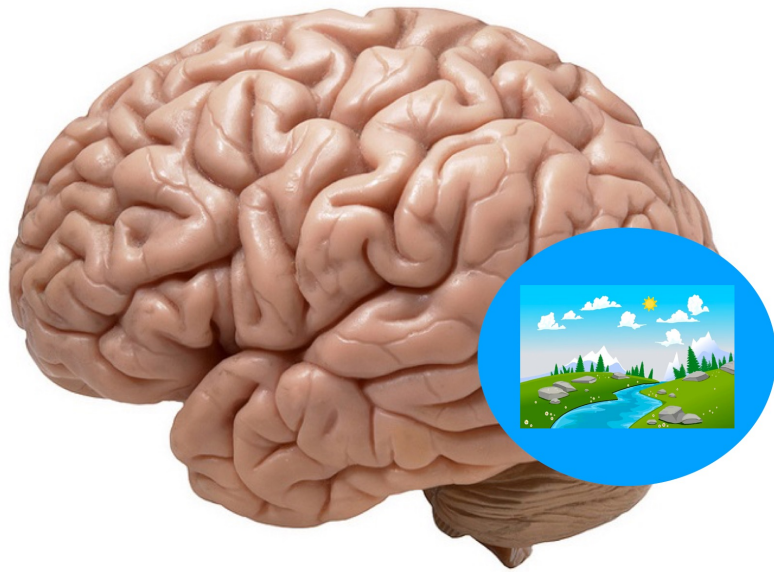
...is inside your head!



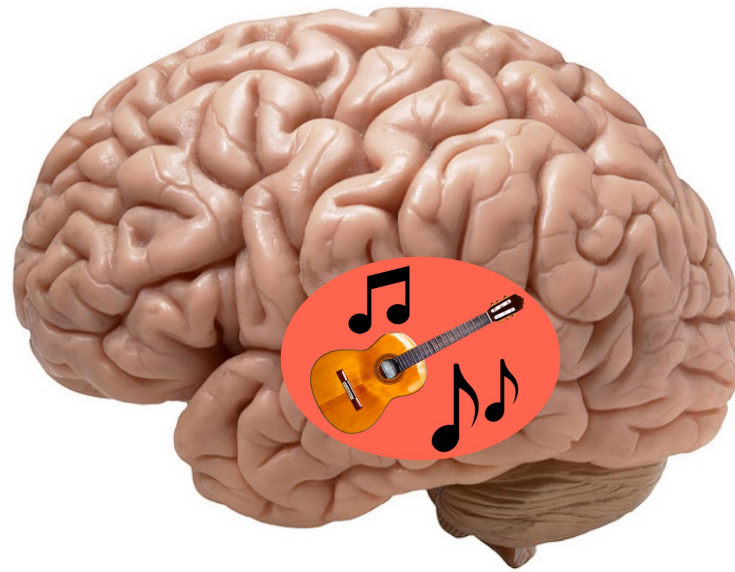
# The Brain



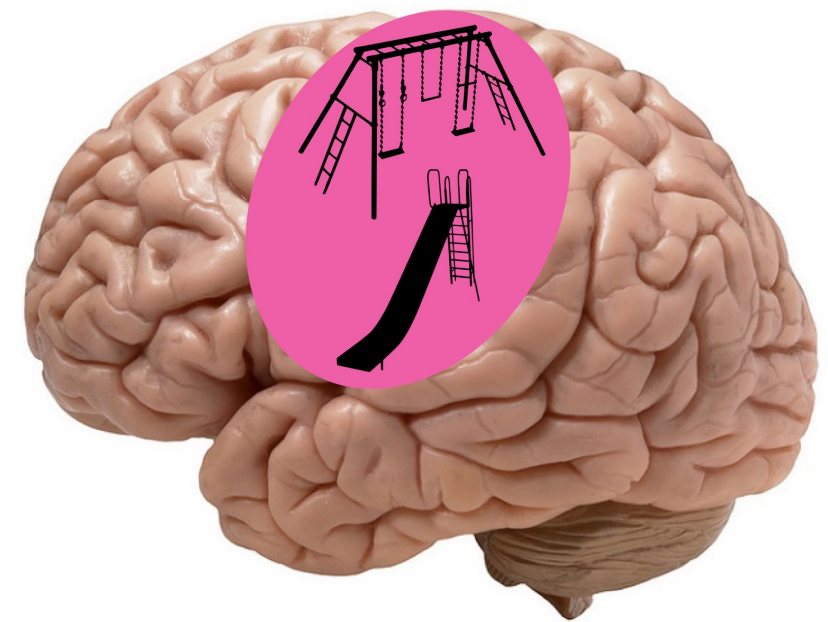
# Each part of the brain has a job



Seeing



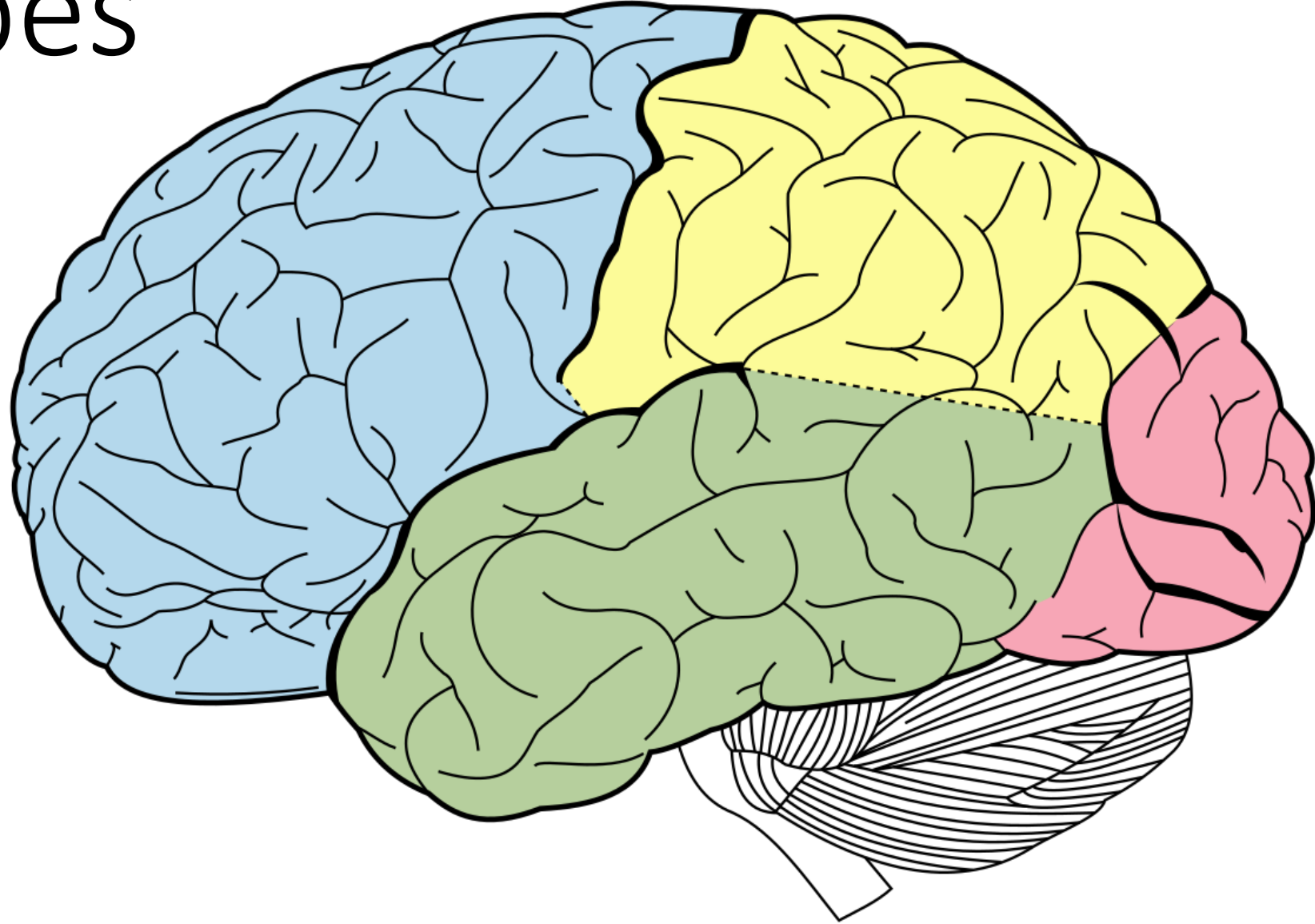
Hearing



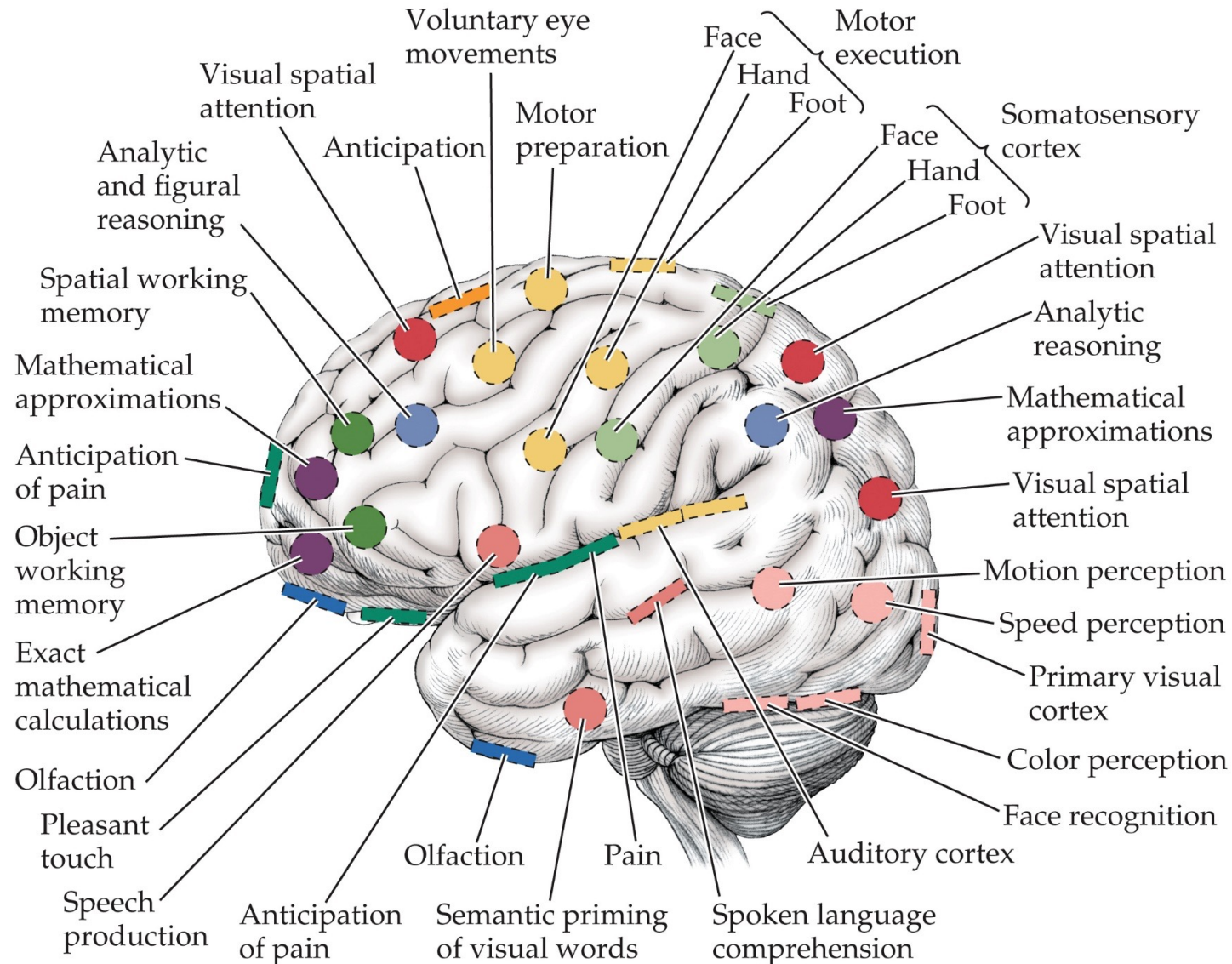
Playing

# Four Lobes

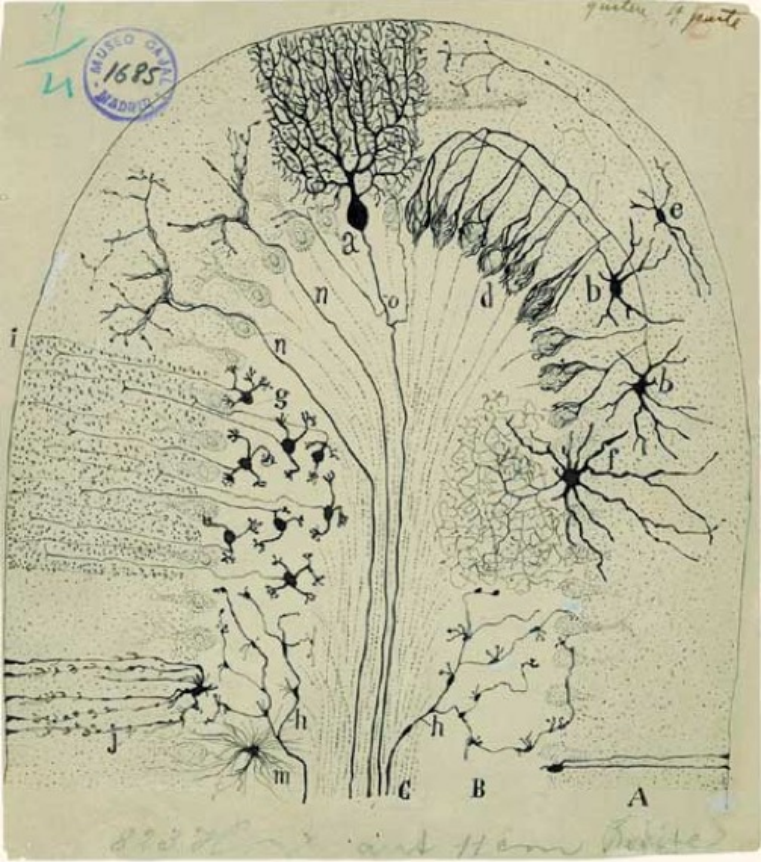
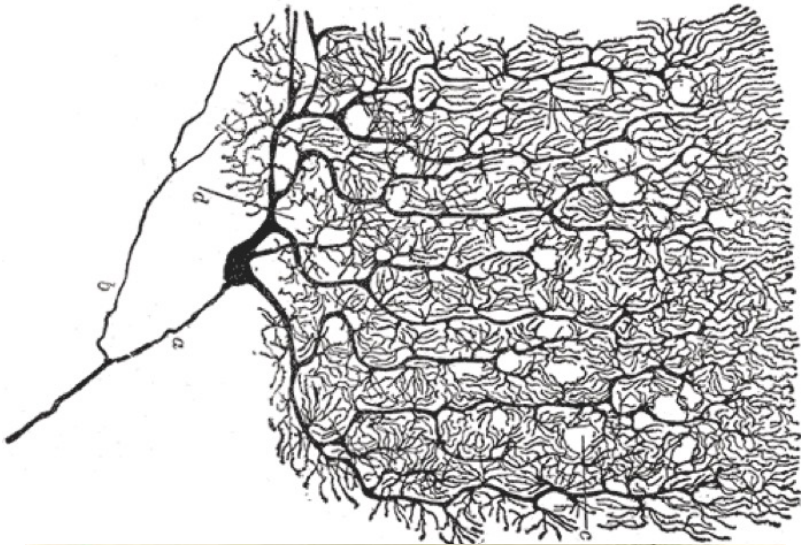
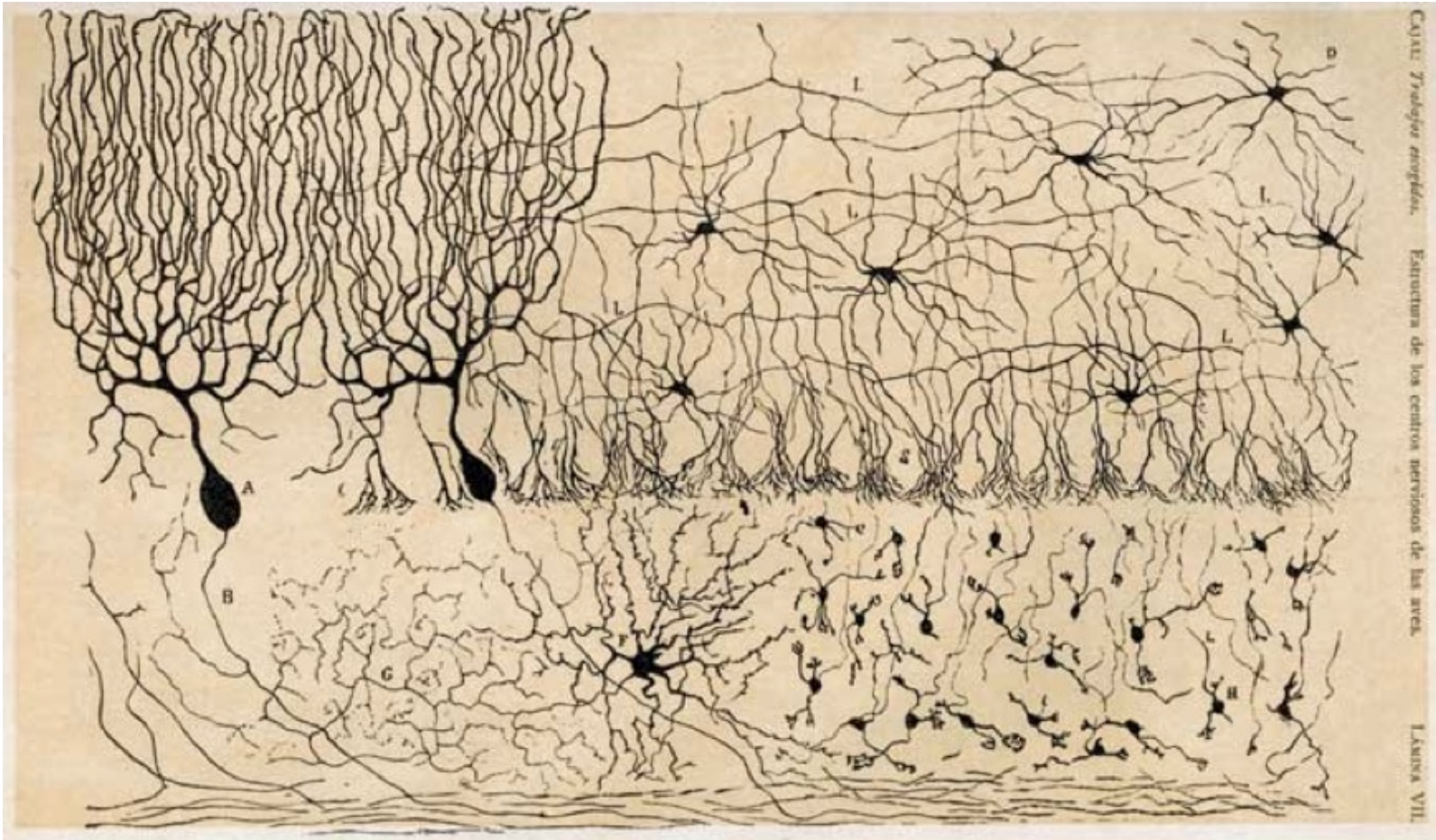
- Frontal lobe
- Parietal lobe
- Temporal lobe
- Occipital lobe



# There are many jobs to do!



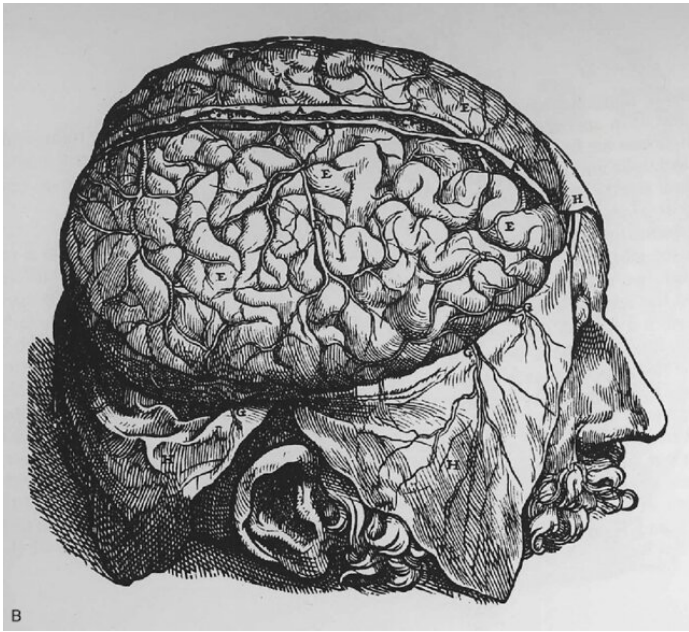
# What is the brain made of?



Neurons!

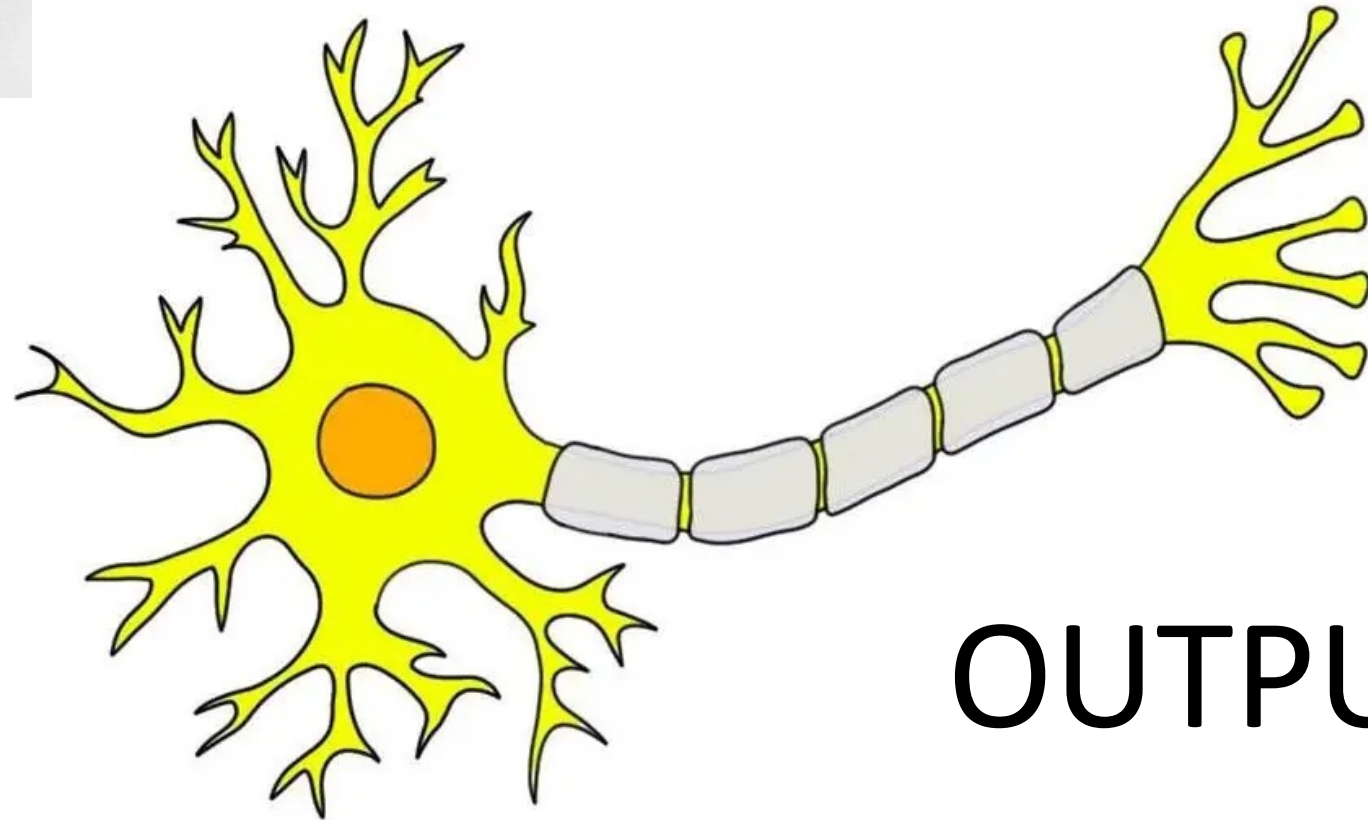
Santiago Ramon y Cajal





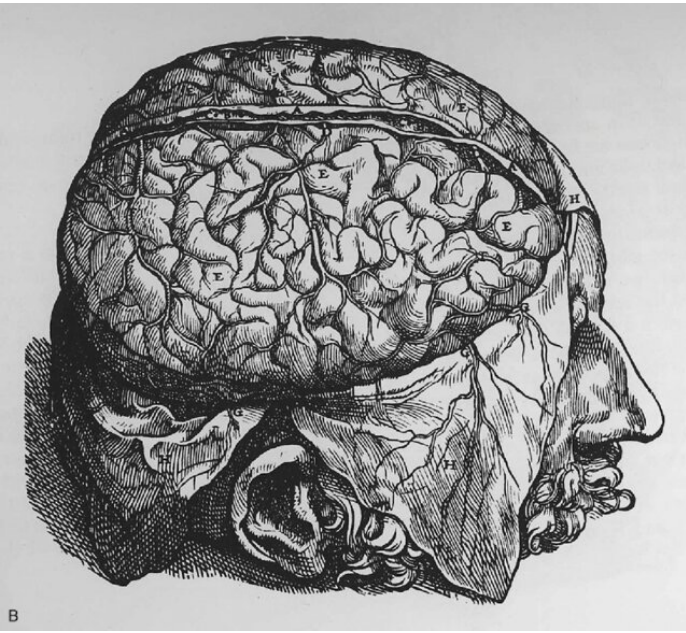
A neuron is a brain cell

INPUT

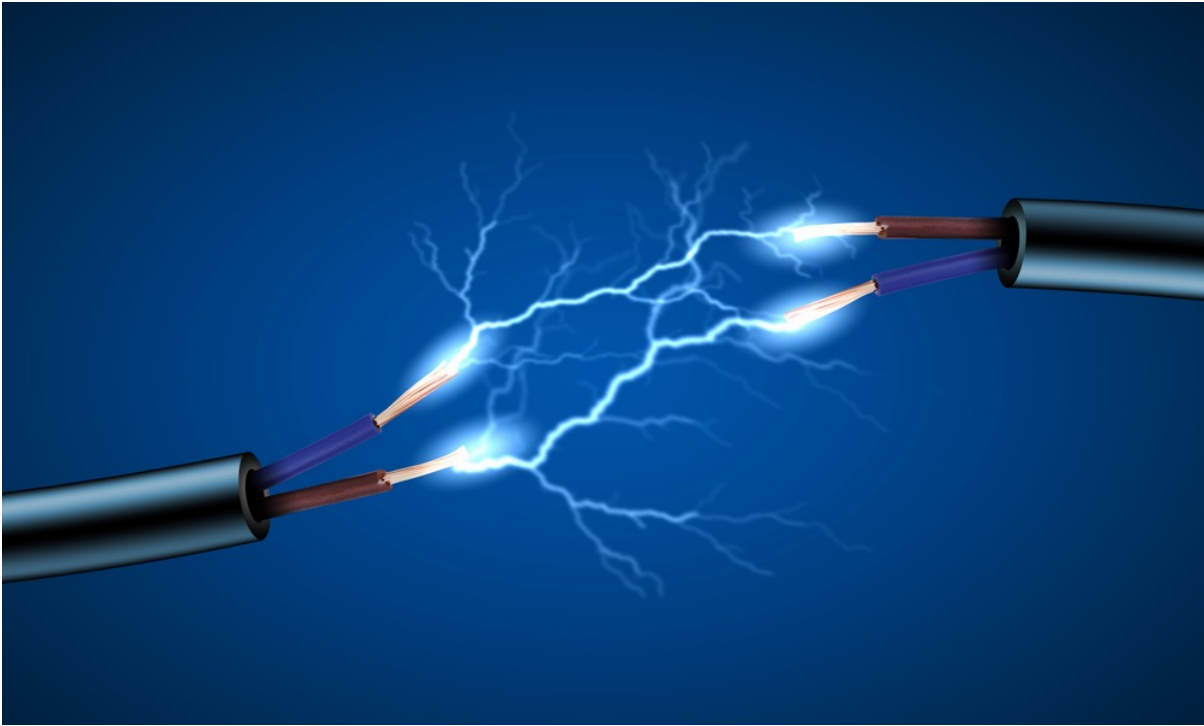


OUTPUT

Neurons are  
tiny computers!

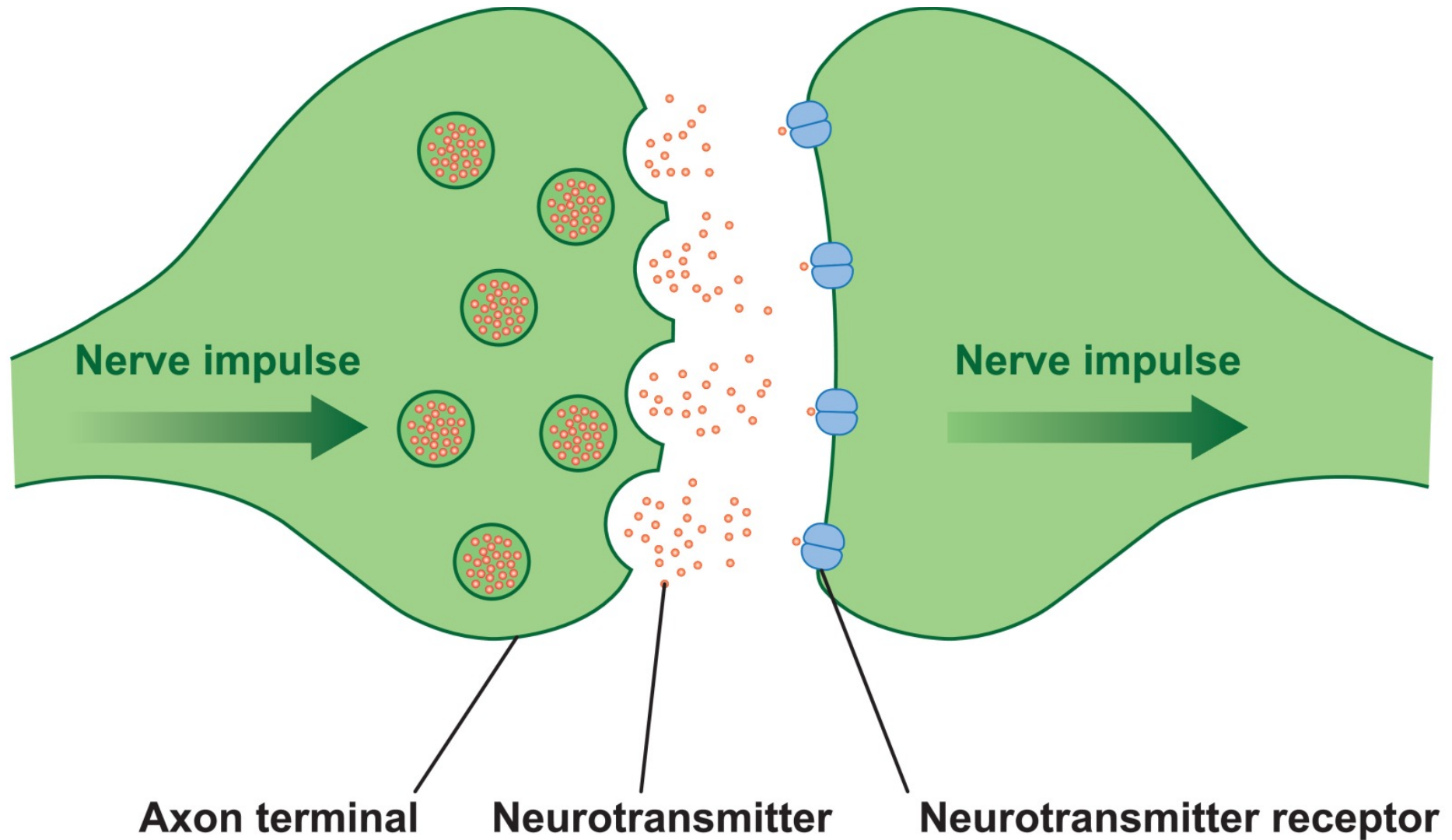


# Electricity!

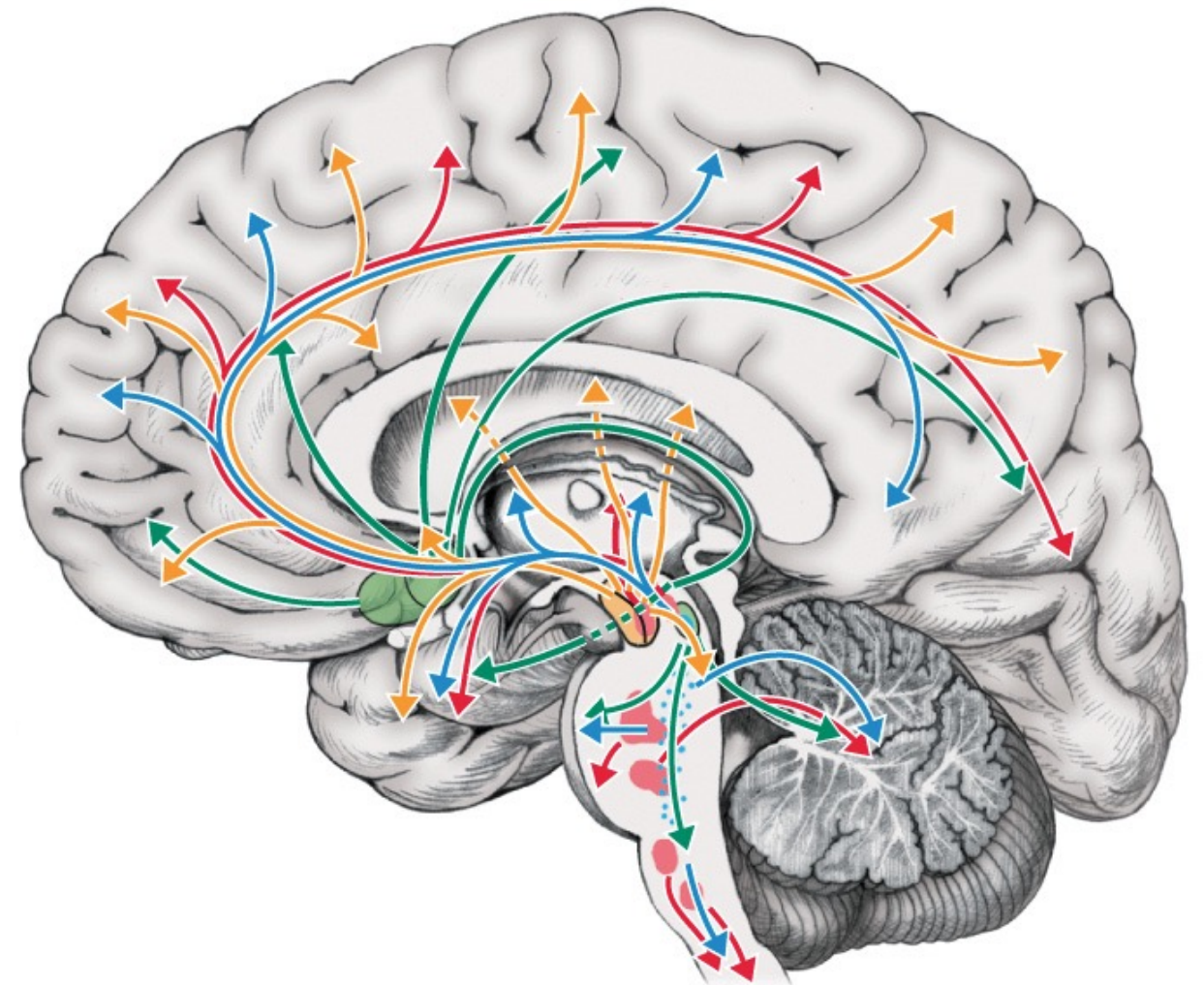
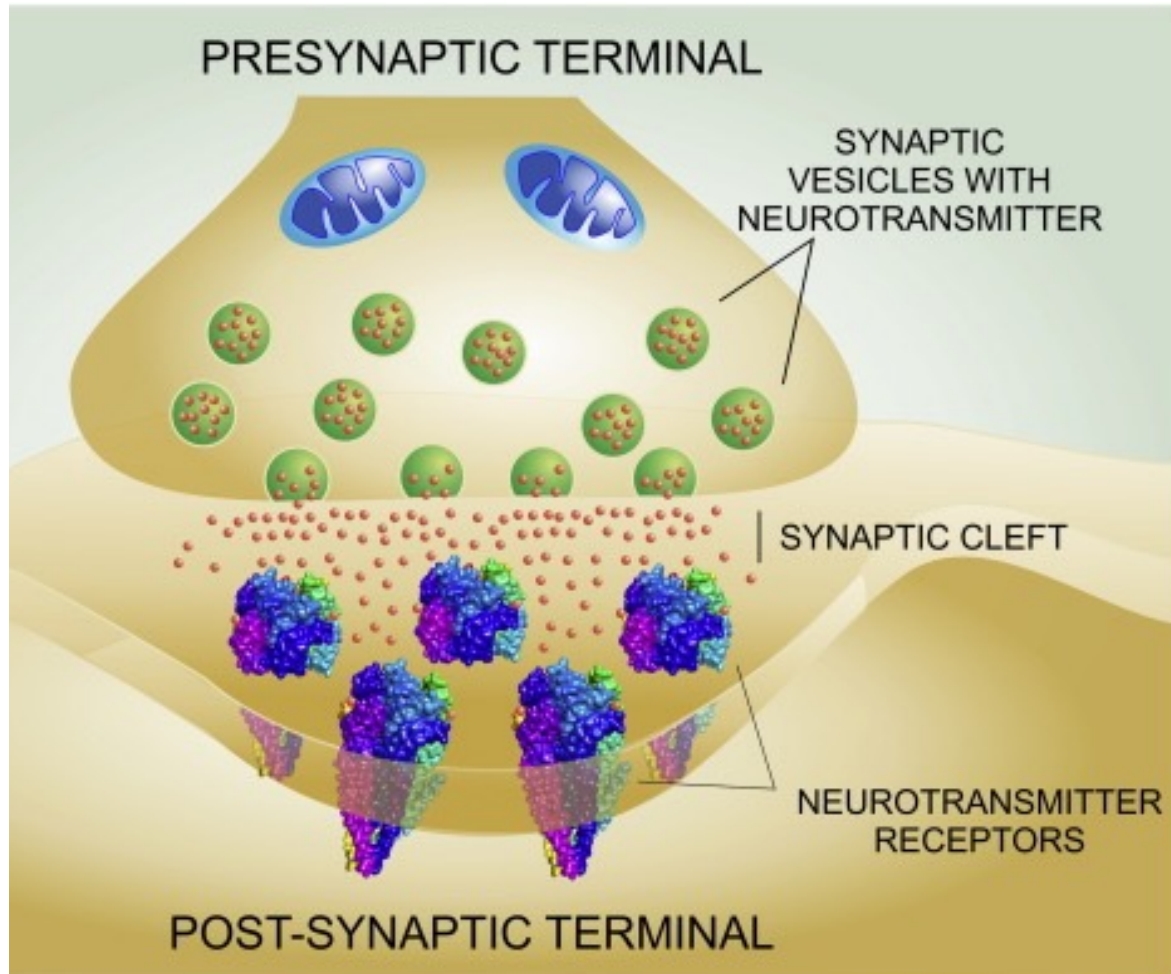


Neurons are electrical.

# The Chemical Synapse



# Medicine changes Synapses

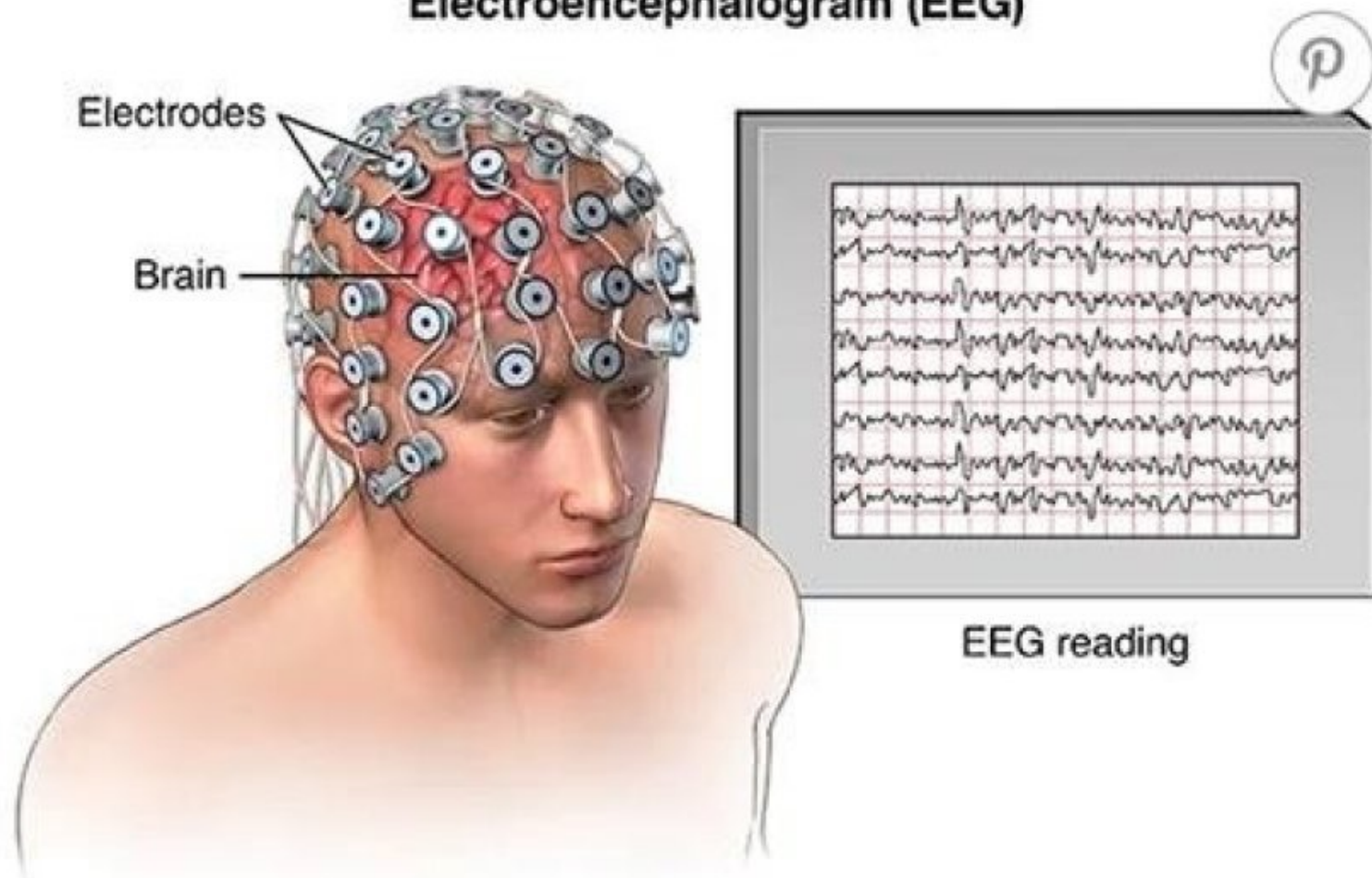


# Measuring electrical activity in the brain

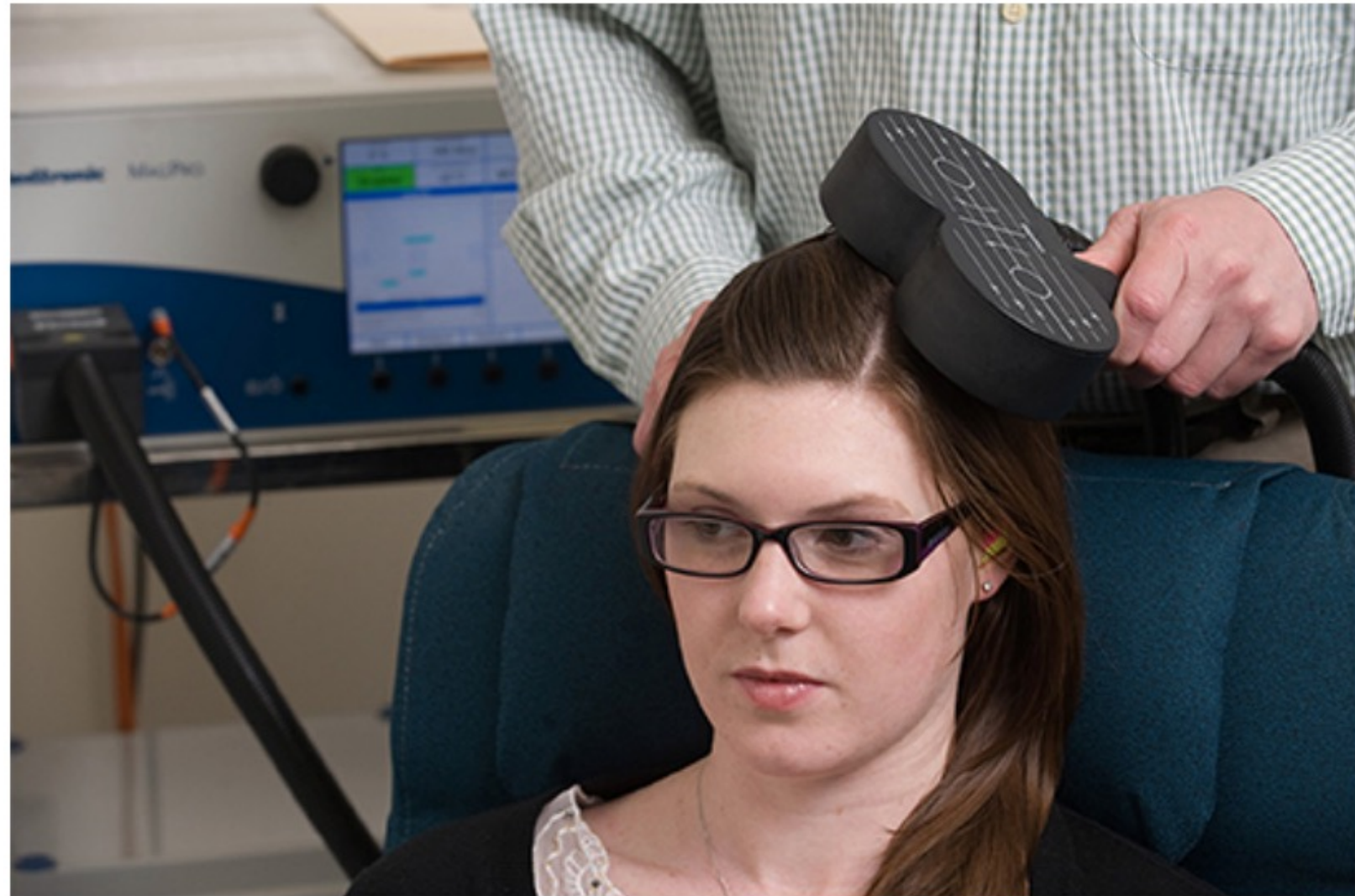


EEG

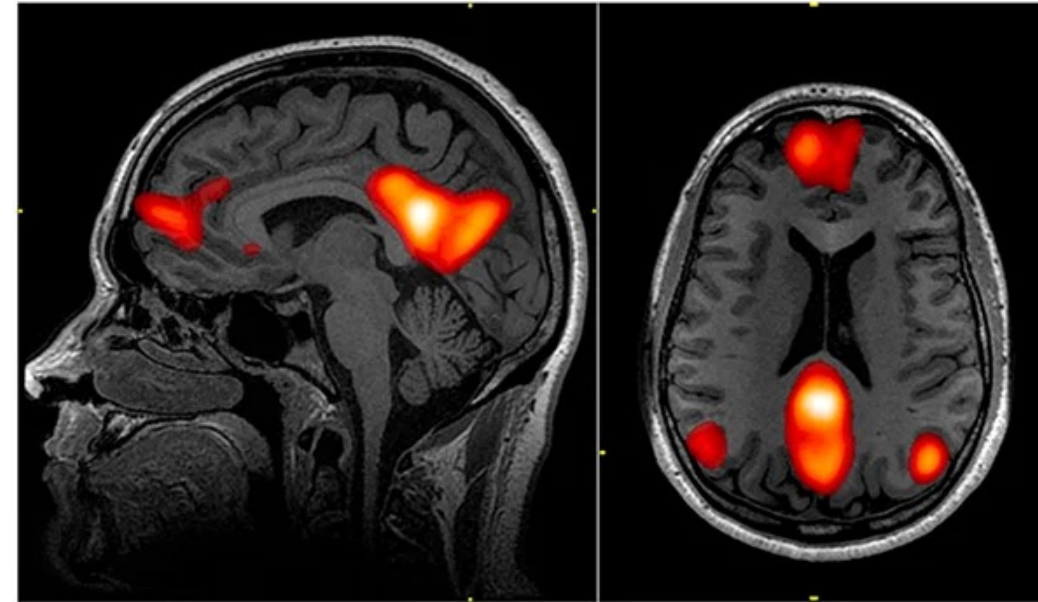
Electroencephalogram (EEG)



# Brain Stimulation



# Magnetic Resonance Imaging (MRI)



Measures blood flowing in the brain. Blood is fuel for the brain to work.



# Psychology

- Psychology is the study of the mind in the brain
- Many types of thoughts: emotions, decision-making, mind-wandering, holding information in your mind, memory

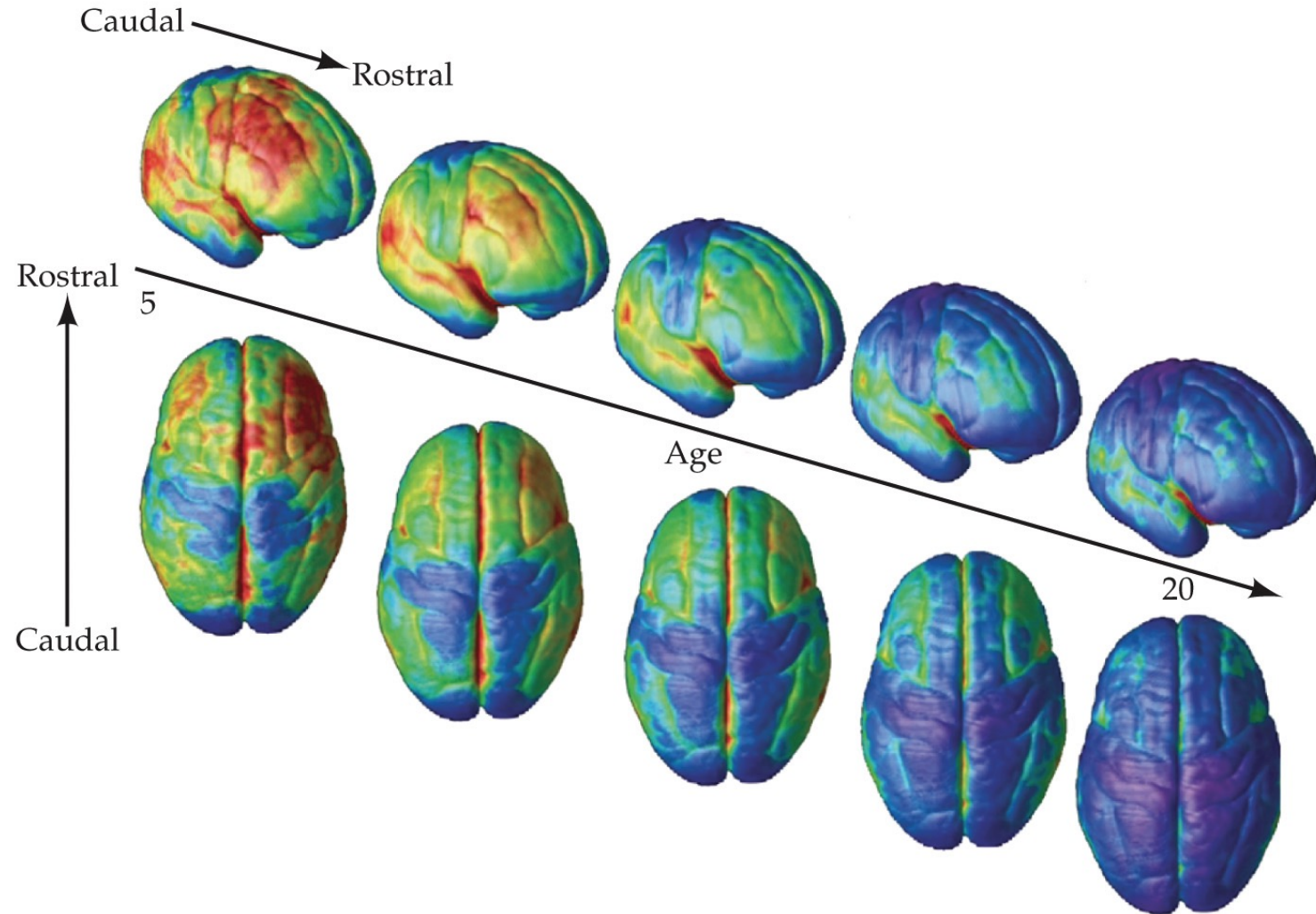


# Why study the brain?



# Take your vitamins!

- Your brain keeps growing even until you are in your 20s!
- Omega-3 helps build up your brain very strong
- Just like you go to the playground to exercise your body, you also need to exercise your brain by learning new things and thinking really hard!



Thank you!!!!