



1- Activity 1 : what is the nervous system for ?

Watch the video and write the vocabulary you need to learn.

(This video is very clear and you can work on it at this address : <https://www.youtube.com/watch?v=kr7dGPOwzsA>)

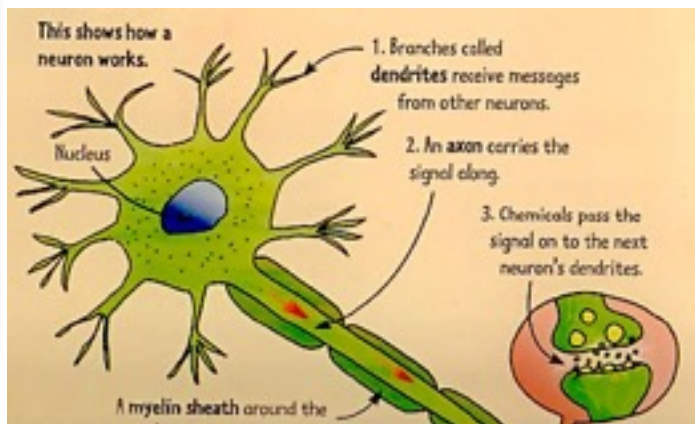
2- Activity 2 : What is the nervous system made up ?

« Doctor, doctor, I understand what is the nervous system for... But what is it made up ? »

As you are the doctor, try to explain to a child what are the different parts of the nervous system. First, prepare your answer by your own, and then tell it to your neighbor. Help yourself with the texts and the diagrams that follow :

A- from the brain to the body

Nerves also stretch down your spine and around your body, and whizz electrical signals to and from your brain. When a signal reaches the end of one neuron, a tiny amount of a chemical *passes* the signal to the next one, until the message reaches its target. Along with your brain, *these nerves* make up the nervous system.

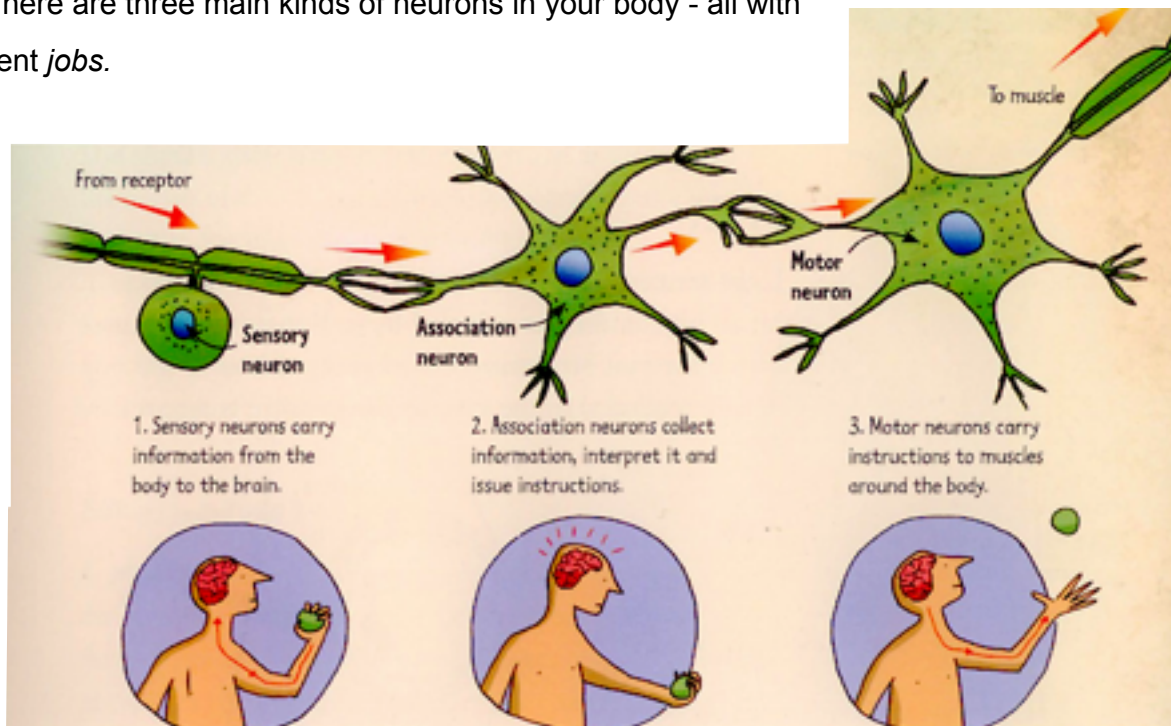


Mysterious brain

One of the biggest mysteries about the human brain is how it's aware of what it's thinking. This is called consciousness. It's what lets us be aware of ourselves, and our actions and decisions. We don't know if any other animals have this ability,

B- Are all the neurons the same ?

No. There are three main kinds of neurons in your body - all with different *jobs*.



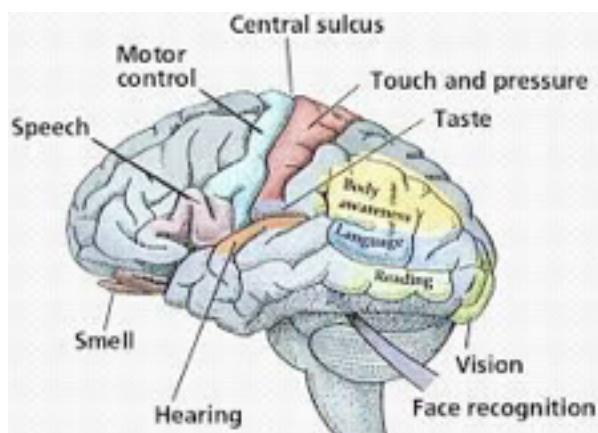
C- How quickly does it work ?

Messages flash along your nervous *system* at very high speeds. It only takes a fraction of a second for a signal to travel to your brain and be interpreted, and for an *instruction* to be issued. There's such a tiny time lag that we don't even notice it.

But in an emergency, even *this* split second could be crucial. So, to speed things up even more, neurons running down the spine can *issue* a command for instant action, called a reflex.

This is why you react to some things before you've even realized they're happening. Examples include dropping hot objects, or blinking if something gets in your eye...

D- Inside the brain



Your **brain** *issues* commands for all the actions you choose to take, and for many you don't think about, such as controlling your body temperature. A brain is really a gigantic network of thousands of *millions* of nerve cells, or neurone. Each neuron is joined to many others, and new connections are always being made.

These connections *store* your *memories*, and enable you to think.

But it's all so complex that scientists are still finding out how it works.

3- Activity 3 : Let's sing !!

The telegraph line...

It's an old song, but some things are still right and some other are now wrong. Can you notice them.

Telegraph Line (Nervous System) -
Schoolhouse Rock

There's a telegram for you ma'am,
And the message is clear:
It says there's something buggin' you
And buzzin' in your ear.
The results can be quite itchy,
So what is your reply?
Tell your arm to swat that fly!

Hey, there's a telegraph line
You got yours and I got mine.
It's called the "nervous system".
And every body understands
Those telegram commands,
And you know that everybody better listen.
The central nervous system is the brain and
the spine:
The brain controls the system,
And the spine is the line.
Telegrams come in to tell what's happening to
you,
And telegrams go out to tell your body what to
do.

There's a telegram for you sir,
Better read it on the spot:
It says your hand is near a stove
That's very, very hot.
The results can be quite painful,
And there's no time to think...
Quick! Pull that hand away and get it to the
sink!

There's a telegraph line
You got yours and I got mine.
It's called the "nervous system".
And every body understands
Those telegram commands,
And you know that everybody better listen.

Your peripheral nerves, they go all out,
Delivering those messages
Your senses send out.
From your hearing and touch
To your sight and taste and smell,
It lets your brain react to all the messages
they tell.

There's a telegram for you kid,
And it's at an awful time:
It says you've got to go on stage
And you've forgot your lines.
You're gonna be embarassed,
'Cause this telegram's a rush,
Your heart starts beatin' faster... And you
blush!

Hey, there's a telegraph line
You got yours and I got mine.
It's called the "nervous system".
And every body understands
Those telegram commands,
And you know that everybody better listen.
The autonomic system has a hold of you,
Controlling automatically,
Some things that you do.
Your breathing and your heartbeat
Just go on, naturally
And when you're scared, you're nerves rev up
the speed!

Hey, there's a telegraph line
You got yours and I got mine.
It's called the "nervous system".
Those telegram commands,
And you know that everybody better listen.