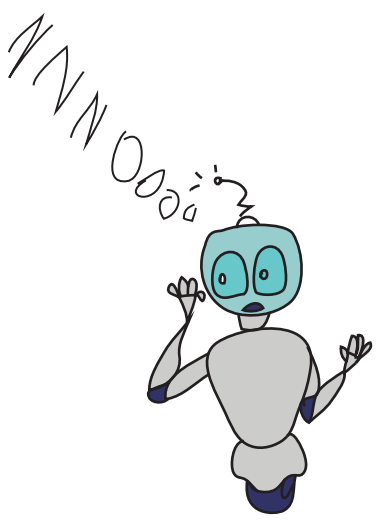
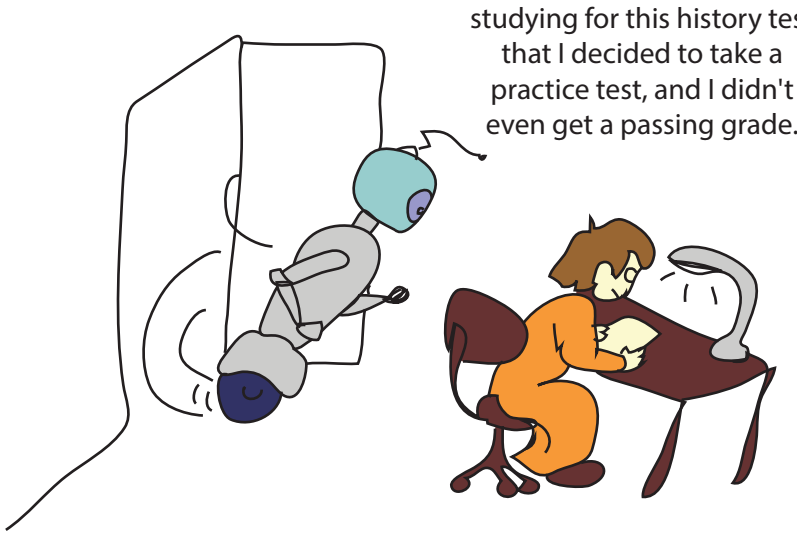
# Memory systems and learning

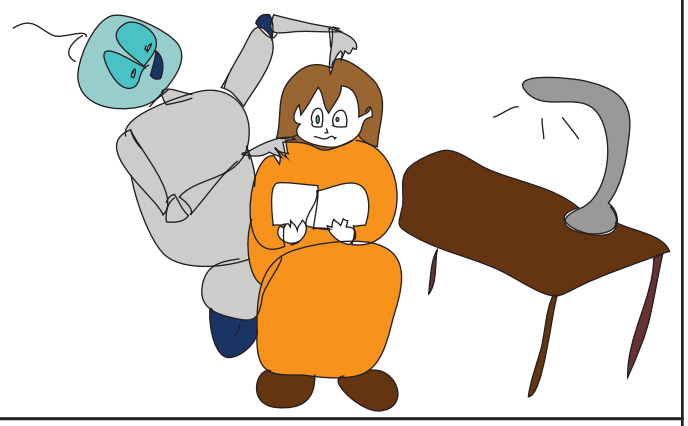





What am I doing wrong? Or does my brain just not want to learn history?

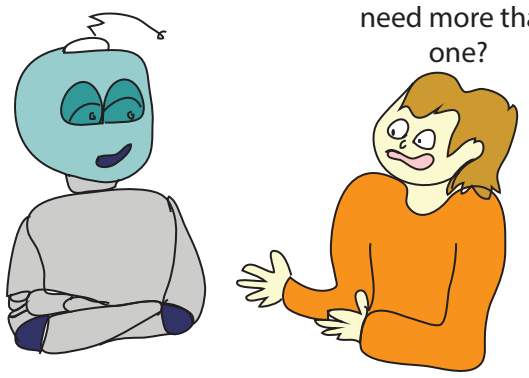
It is neither your fault nor your brain's fault. It's probably due to your learning strategy .

So, not my brain?



No, listen. You are using the memory in your brain to memorize information, but you don't only have one memory system. Therefore, if you don't use the right one, the information isn't stored for very long.

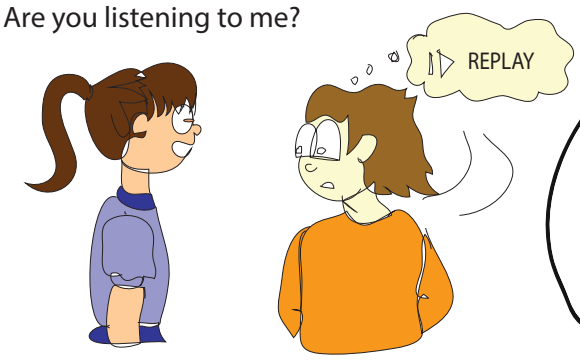
But why do we need more than one?

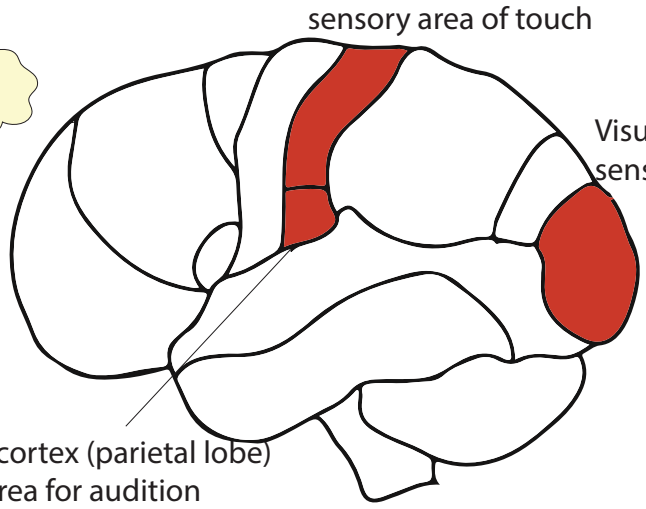


They are used for different things.

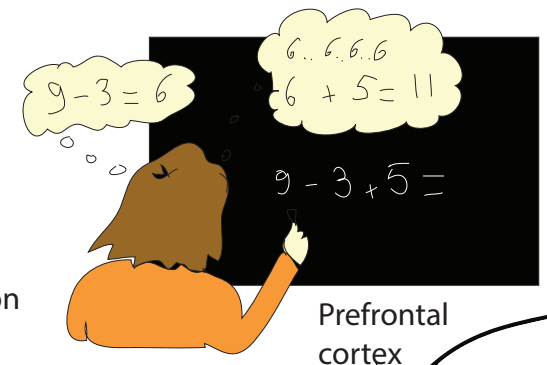
The short term memory, it's the one of the senses, simply the fact that the information had been stored in the sensory regions (you just hear or see something) until you replace it by something else.

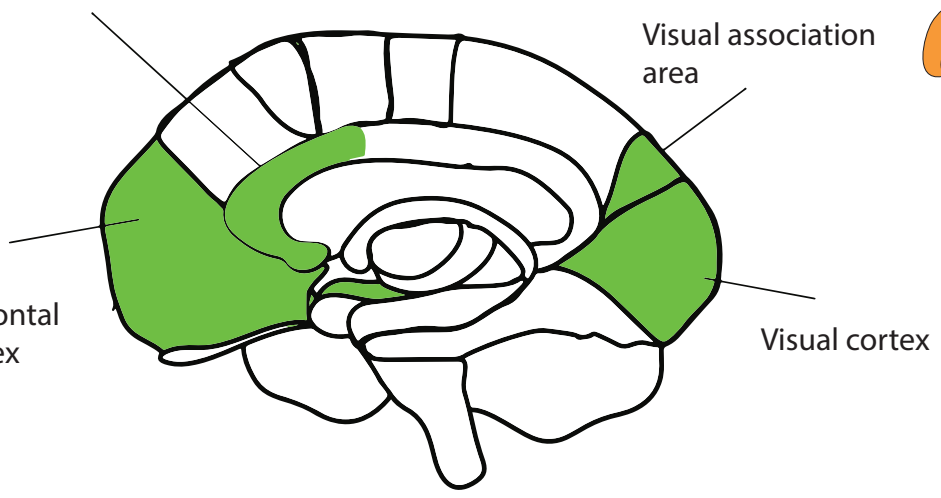
Are you listening to me?

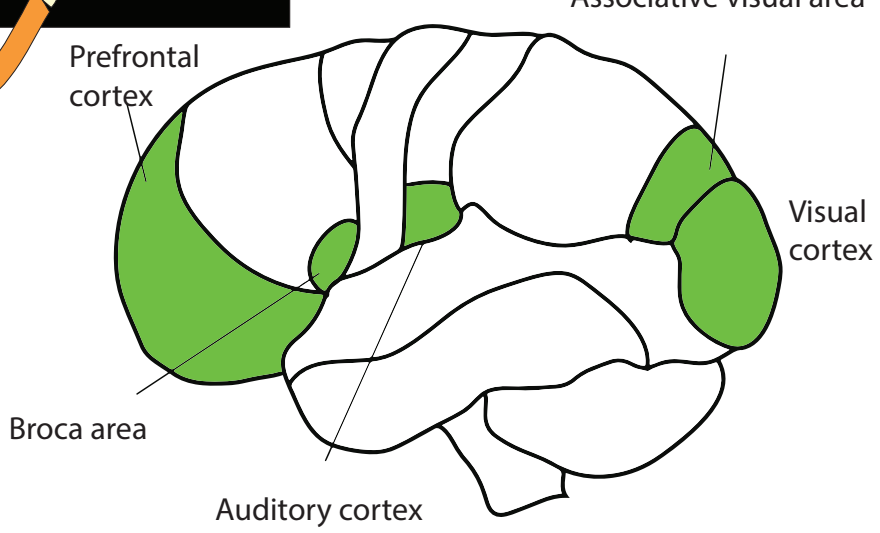



The working memory keeps information that we're currently using. For example, when you do additions, you keep the number in mind to have time to sum them .

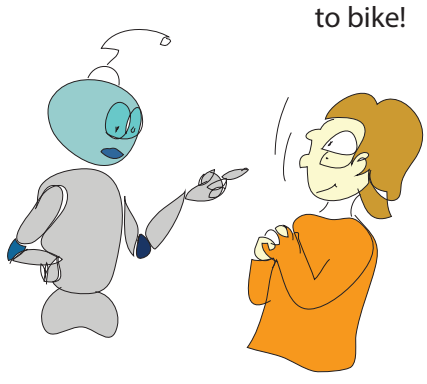



You want to use the long term memory in order to reuse information later on.

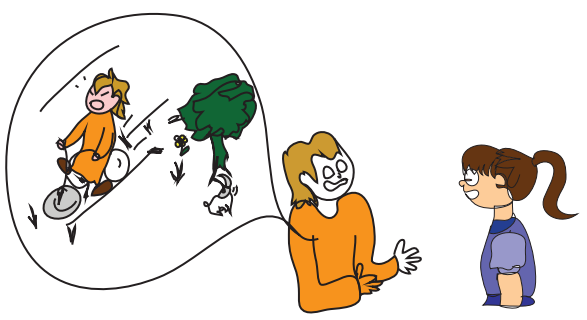
Well, yeah, as when I learned to bike. I never forget how to bike!

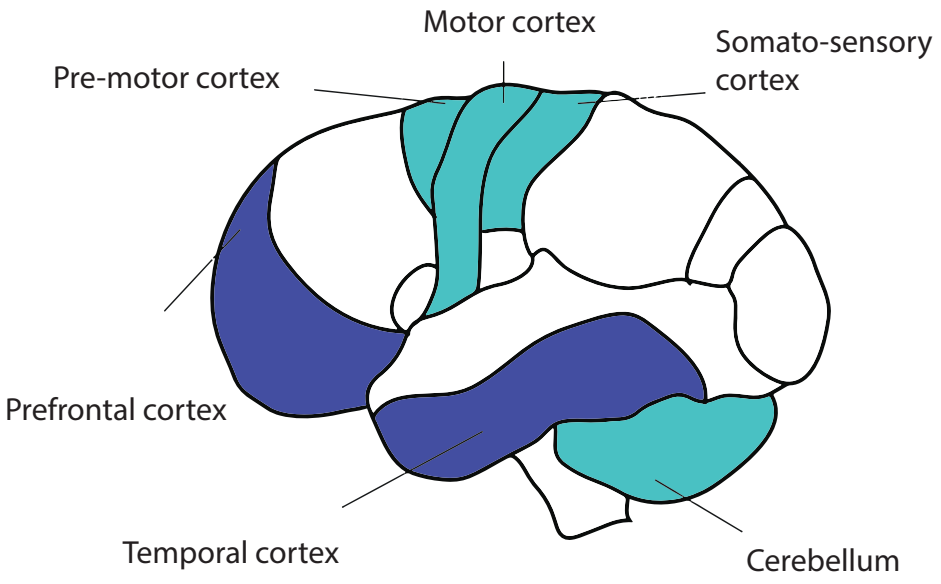


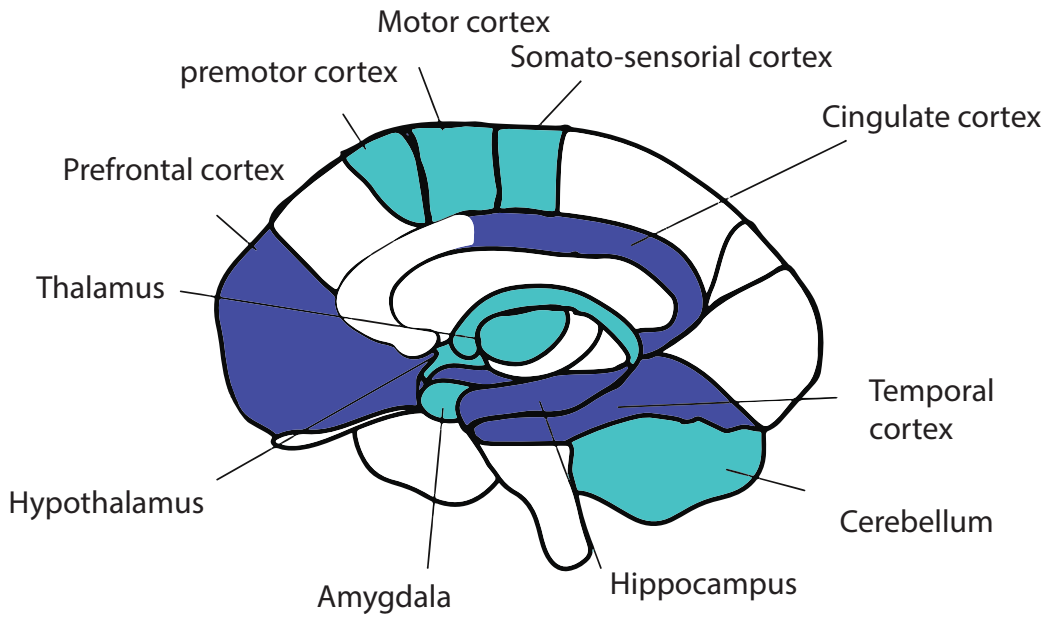
In fact, you have different long term memory systems. They have different uses. Also in the brain, you don't need the same region in the brain to bike and to remember your history lesson.

You have a long term memory for things that you can't explain with words, like biking, it includes the « know how », the procedures or also emotional experiences. All these memories belong to the non-declarative long term memory.

On the other hand, you have **the declarative long term memory,** the memory that you can explain with words, like concepts, all the things that you learn in class (the semantic one) and the memories (the episodic one).

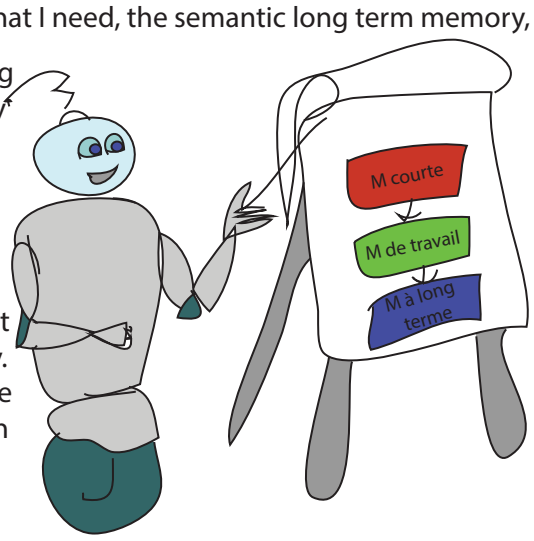




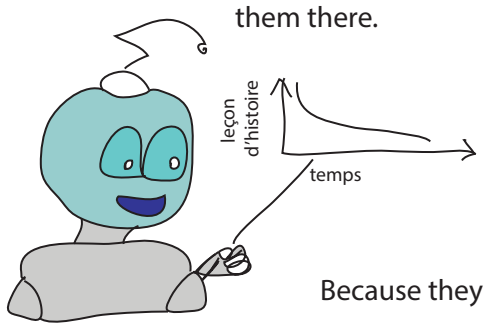




It's this one that I need, the semantic long term memory, right ?

Yes, it is. What you learn is first going through the short term memory by seeing and listening to the information. Then it goes through the working memory because you use the knowledge by trying to understand it and by trying to associate it to older knowledge that you already stored in your memory. At last, memories are stored into the long term memory , so that you can use them later.

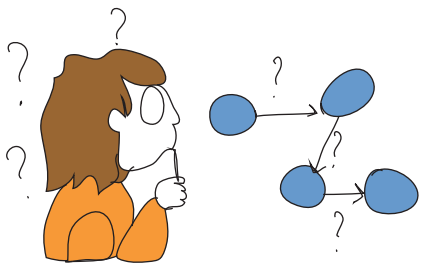


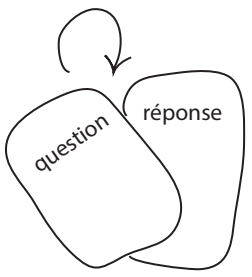

This is the most difficult step and even if you succeed to store the information in the long term memory, it doesn't stick there forever, it fades away. You need to use certain strategies that help your brain to put the information in long term memory and other strategiesthat help keeping them there.




Because they don't stay !?

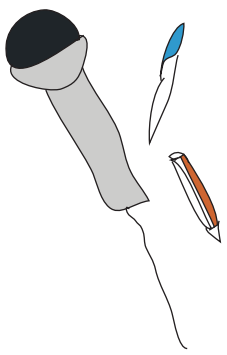
1) Think about what you have learned deeply: the more you answer the« why » questions, the more you make links between what you know, the more you understand it deeply, the more it sticks in your memory.

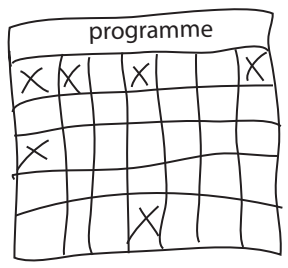





2) Challenge your memory: when you learn, do not read your lesson again and again, try to remember it before going to read the answer that you miss. Try flash cards: one clue on a side and the answer on the other side and play with your friend.

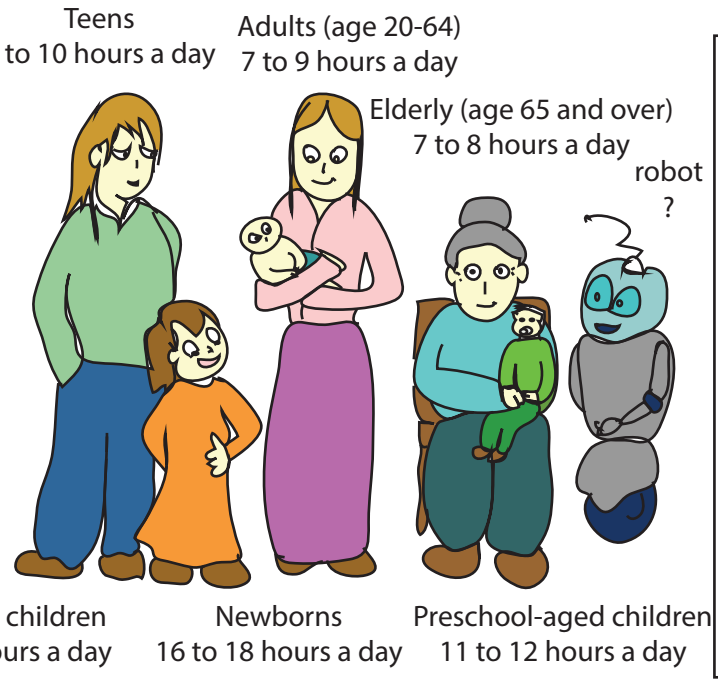
3) Give your brain different copies of the same information, the bigger the number of networks of neurons activated around an information, the easier it is for the brain to remember it. So, your history lesson: dance it, sing it, write it, draw it, … and also explain it to your friend.






4) Study regularly instead of spending hours on one lesson and by reading it again, again and again. It's better to read it tomorrow once again, then in two days, then in one week… , it's called "reactivation of the memory".

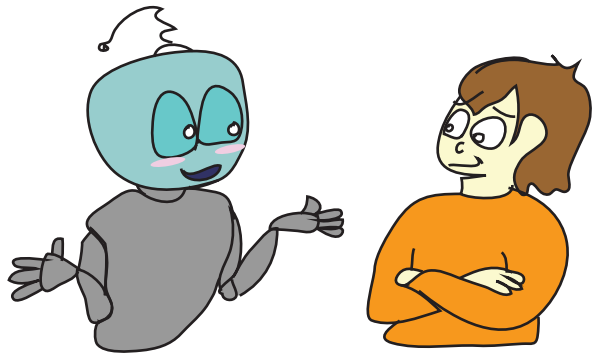
5) Sleep enough to help your brain to be on top of itself. If not, your attention and memory capacity will be reduced. Also during the night, the brain sends information learned during the day to the long term memory, it's replaying the information several times what it wants to fix in long term memory.




How do you know all of that ? You don't even have a human brain.

You know, engineers that conceive me didn't reinvente the wheel, they try to make robot system as human system. And, well, I am curious.

robot ?



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