

HOW YOUR BRAIN WORKS

KEY CONCEPTS



Learning

- ✓ The process by which the brain senses, processes, stores and retrieves information through a complex neural and glial cell communication.

Reticular Activating System (RAS)

- ✓ Part of the brain that prevents sensory information overloading your brain. It selects what information you notice and what information to screen out.

Neuroplasticity

- ✓ The term given to describe the brain's incredible adaptability in the way your brain cells 'wire together' to enable you to learn.

NOTES

Learning and Memory: The process by which our brain-cells communicate and form connections enables us to learn. Information will only pass from short-term (insecure connections) to long-term memory (secure connections) if we review the information often. Some brain researchers suggest reviewing information within 24 hours and again within a week would be helpful.

Reticular Activating System: Your RAS has the job of preventing sensory information overloading the brain. Therefore, only what is important right now gets through. Negative attitudes towards your learning and academic life tell your RAS this is not important so it reduces your brain's ability to learn. Find ways to move towards more positive attitudes by setting academic goals.

Neuroplasticity: Your brain's 100-billion neural and glial (astrocyte) cells communicate in ways that enable you to learn quickly. Brain research suggests that this is an incredibly adaptable process so academic intelligence is not fixed. It is possible for you to get better at subjects you have previously found difficult. Know that the past does not have to equal the future.

Neural System Fatigue: The brain requires a lot of energy when learning. It can get tired very quickly, causing you to lose concentration. You can keep it working well by making sure you are eating well, drinking lots of water, and getting oxygen through exercise and breathing techniques.

QUESTIONS

1. Discuss with others, any points above that apply to you. How do these relate to your own experiences at school?
2. If you could draw a picture that a primary school kid could understand about how their brain works when learning, what would you draw? Do it here in the space provided.

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1. Discuss with others, any points above that apply to you. How do these relate to your own experiences at school?

2. Write down any attitudes you have towards school subjects or teachers that could be limiting your RAS and preventing you from learning. For example: 'Learning French is boring'.

3. What could be a better way of thinking that would switch on your RAS?

4. In what class(es) do you find neural system fatigue occurring? What do you do to reduce it?

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QUESTIONS

1. Using all the ideas mentioned in this topic, explain to someone next to you, your understanding of how the brain works when learning?

2. What is the most relevant point in this topic for you? How are you going to apply it to improve your current academic life at school?

3. Think about those subjects you find the most challenging. Have you set any academic goals to switch on your RAS? Make a note of any new intentions or goals you think might be useful.
