

Discover How Your Brain Builds Muscle Memory

Investigate the brain's ability to coordinate movement, develop motor skills, and create muscle memories.

<https://bit.ly/HYBactivity1>

Jumping Rope

- Have you ever jumped rope? Challenge yourself to try it.
- No jump rope? Try a hand-clapping game, or try another jumping game, like switch or scissor jumps.
- *How many jumps or claps can you get in a row?*



Jumping Rope



Switch Jumps



Clapping Games



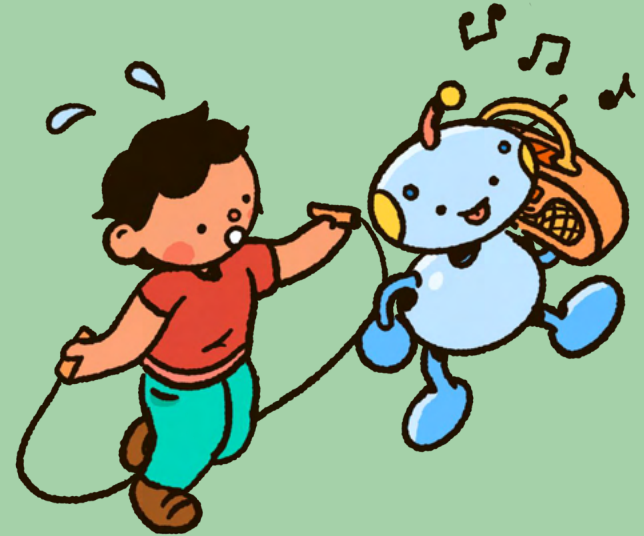
Understanding Muscle Memory

Muscle memory is a form of memory where your brain remembers movements—sometimes called motor tasks—and is able to perform them in a sequence without you having to think about them.



Understanding Muscle Memory

- When you first learn a new motor task, you will need to dedicate your full attention to it to ensure you get the details right.
- Over time, with lots of practice, the motor task becomes easier and can be performed without thinking about it.



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Your Brain Has Many Parts

- Movement involves the **cerebral cortex** or the outer “shell” of your brain.
- In the part called the **frontal lobe**, a region called the **motor cortex** plays an important role in **voluntary movements**.



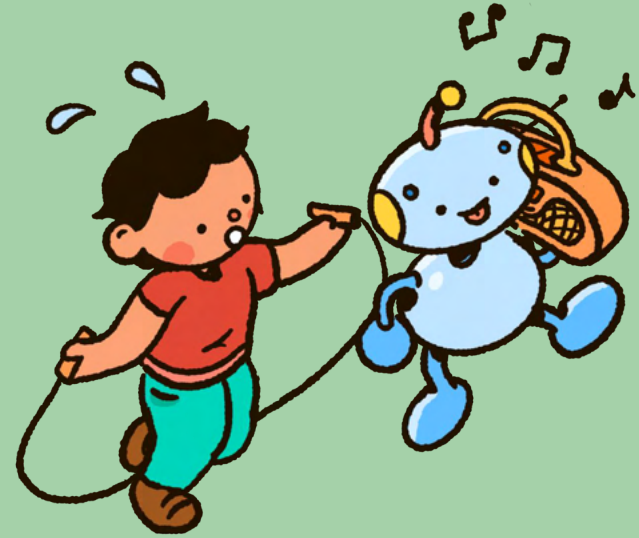
Your Brain Has Many Parts

- The **cerebellum**, also known as the “mini-brain,” helps your muscles and body coordinate movements.
- Brain cells nestled deep in the brain, called the **basal ganglia**, decides which movements to allow and which to block.



Putting Motor Memory To Use

- **Neuroplasticity** is the brain's ability to change and grow as you navigate the world around you.
- The brain is growing and reshaping as you learn new things.



Putting Motor Memory To Use

- When you learn something, **neurons** become active and send messages to other parts of your brain forming connections.
- As you practice new movements, connections become stronger in the brain.

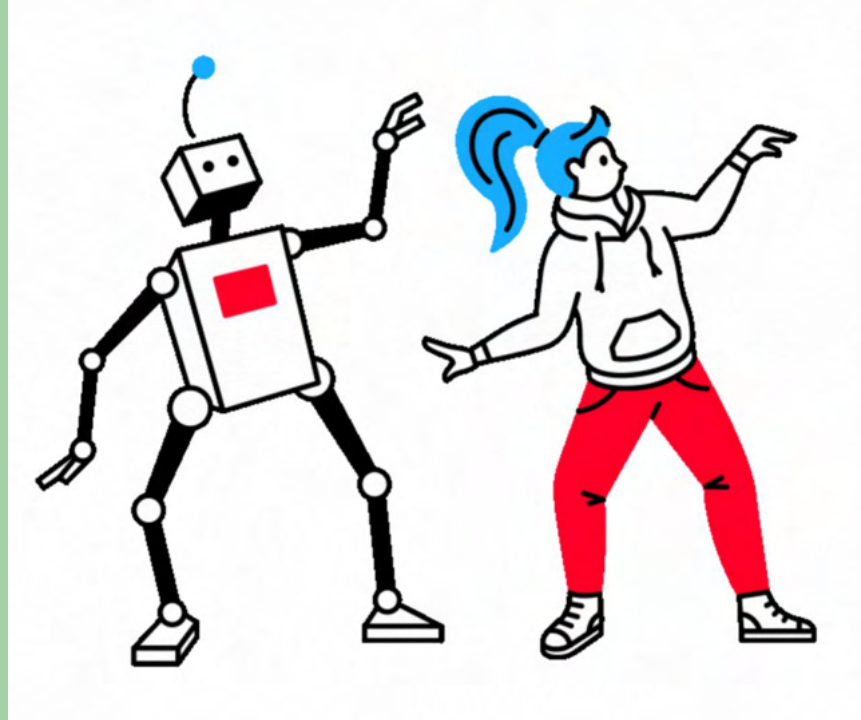


Challenge Time!

- Time for a quick challenge!
- Can you recreate the movements shown on the next slides?
- If you're seated, just try to replicate the arm movements.



Try This: Dance



Try This: Dance



Share out!

- How quickly are you able to master these motions?
- What strategies did you use?
- Could you share those moves with someone else?



Brain Builder

- Let's put your new understanding of the brain to work!
- For this puzzle, you need to use the visual cues provided to figure out the steps to a dance.



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