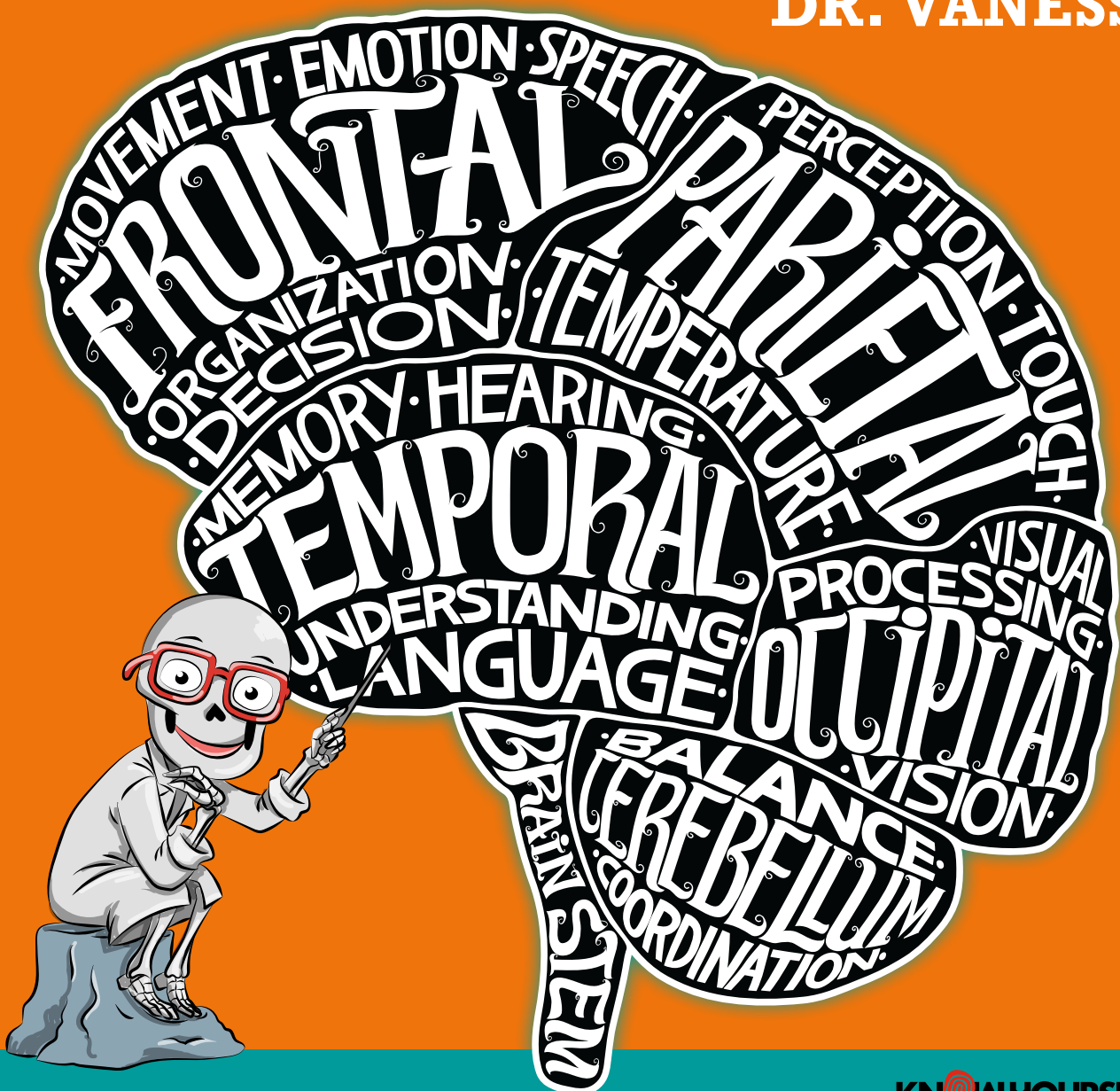


KNOW YOUR NERVOUS SYSTEM

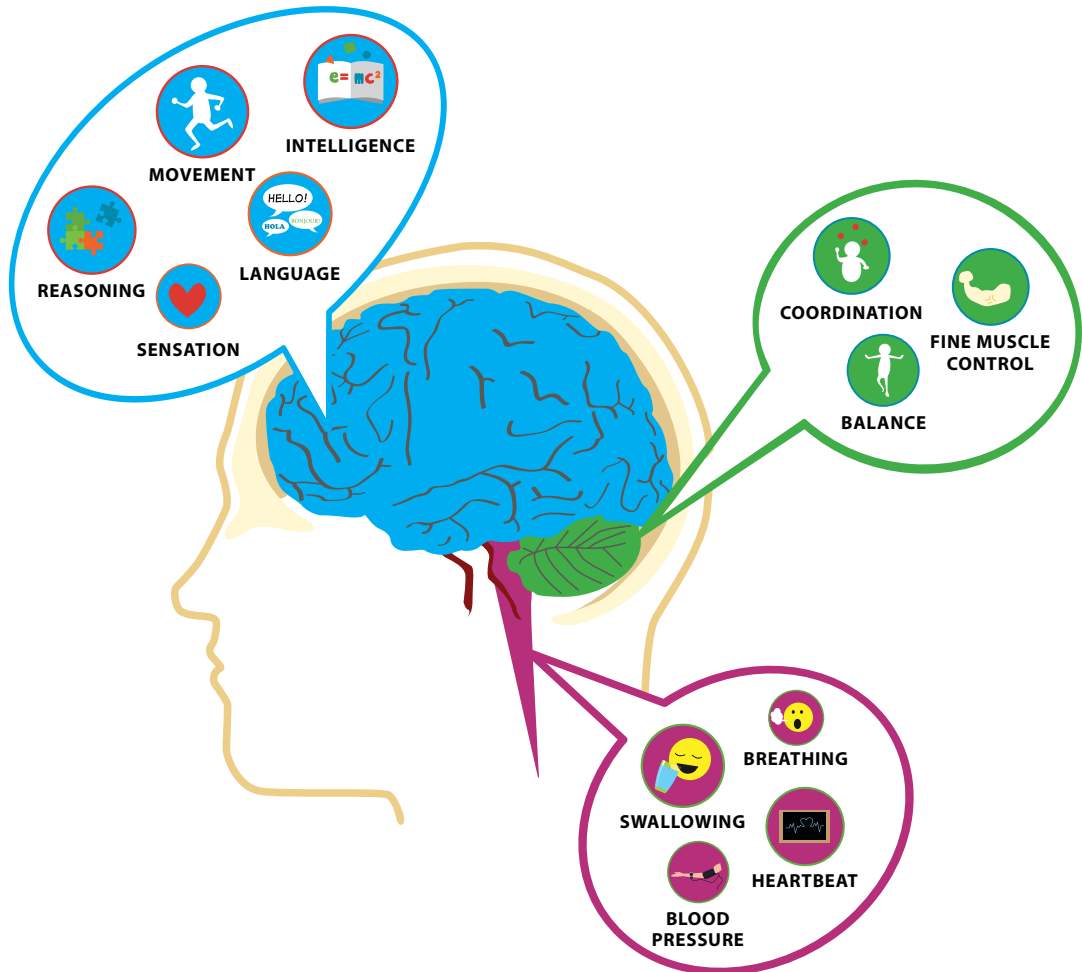
WITH
DR. VANESSA



Parts of the Brain

The **cerebrum*** is the largest part of your brain and controls your thoughts and voluntary motor functions. Your thoughts include everything you think about: what you want for dinner, the lyrics to your favorite song, or how to solve a tricky math problem. Your voluntary motor functions are the movements your body has to think about: jumping rope, playing the harmonica, or flicking a mosquito off your arm.

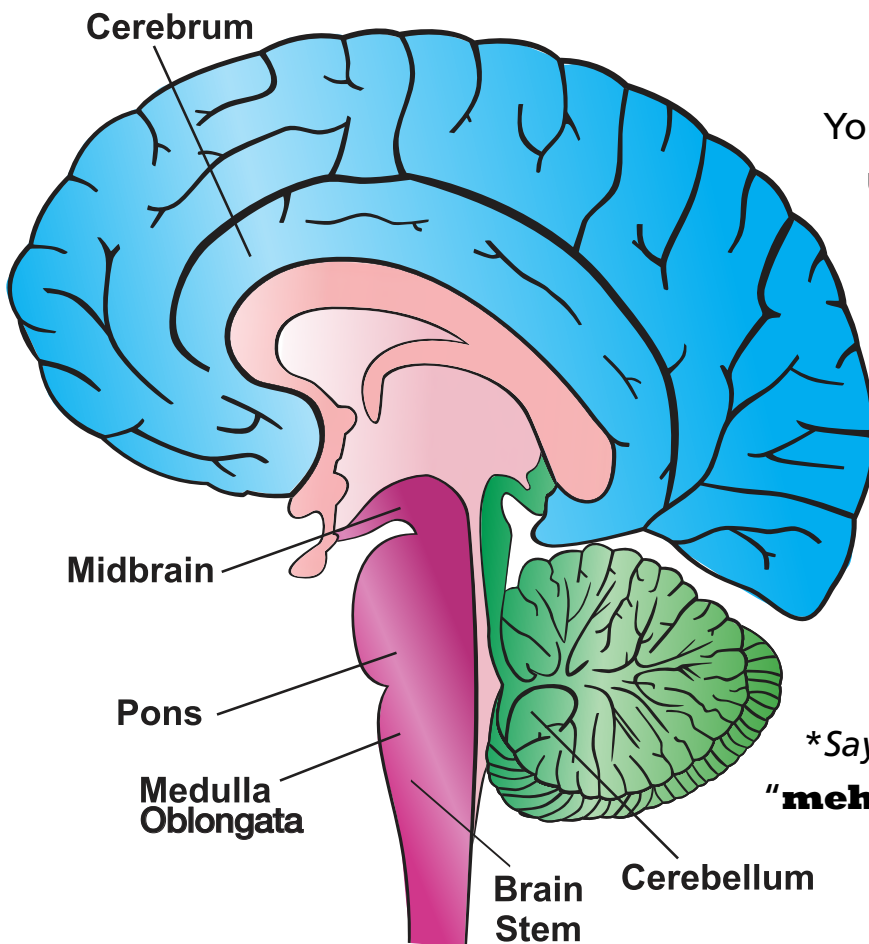
Say it like this: "suh-REE**-brum"*



Brain Teaser: The more you take, the more you leave behind. What are they?

Your **cerebellum***, which means “little brain”, is found at the back of your brain. It controls your balance and posture, so you can sit, stand, and walk without falling over. While your cerebrum tells your body to move, your cerebellum tells your body how to move by instructing different muscle groups to work together.

Say it like this: “ser-uh-BELL-um**”*



Your **brain stem** is made up of the **midbrain**, **pons***, and **medulla oblongata***. The brain stem is home to ten of your twelve cranial nerves, which help control functions such as breathing, swallowing, digesting food, blood circulation and heartbeat.

Say it like this: “ponz**”,
“**meh-DOO-lah ob-long-GOT-uh**”*

Brain Flash: Have you noticed it’s hard to think when you’re tired or hungry? When under stress or low on fuel, the brain feeds the back lobes first to keep you functioning and alive. Your brain’s #1 job is survival!



Try This at Home

Need for Neurons

Materials

3 colors of playdough

(see "Making Your Own Dough" to make your own dough on pages 48 & 49)

Flat, clean space for rolling

Ruler or measuring tape



Unipolar

Bipolar

Pseudounipolar

Multipolar



Directions

- 1 Take one of your playdough colors. Roll one piece that is as thin as you can get it, almost like a strand of spaghetti. It will need to be about 4 inches long. This will be the center of your axon.
- 2 Roll 3 smaller pieces, each one half inch long, and attach them at the bottom of your axon. These represent your axon terminals.
- 3 At the top of the axon, make a variety of short lengths to be your nerve endings. It should look like the branches of a tree spreading out.
- 4 Taking your second color, make an oval about an inch long. This is your cell body or 'soma'. Place it aside for now.
- 5 Take your third color of dough and use it to form 4 flat pieces about a half inch wide. Take these pieces and wrap them around the long section of your axon that you made first, leaving a bit of space between each covering. This is your myelin sheath. Using a bit of the third color, attach the cell body to the side of the center of your axon.
- 6 Compare your neuron to the multipolar neuron on page 46.

Can you figure out how to make the other neurons?

Know Your Appetite

Food, Glorious Fuel

Your body needs nourishment to live. Your brain (working even while you sleep) is no exception. The brain uses about 20% of the calories you eat. It loves good food, and food is the fuel to keep your nervous system running!

Did you know that eating food that is full of specific vitamins and minerals can help you keep your nervous system healthy?

Examples of food to fuel your nervous system:

oily fish

(such as salmon, tuna, herring)

dark chocolate

fresh berries

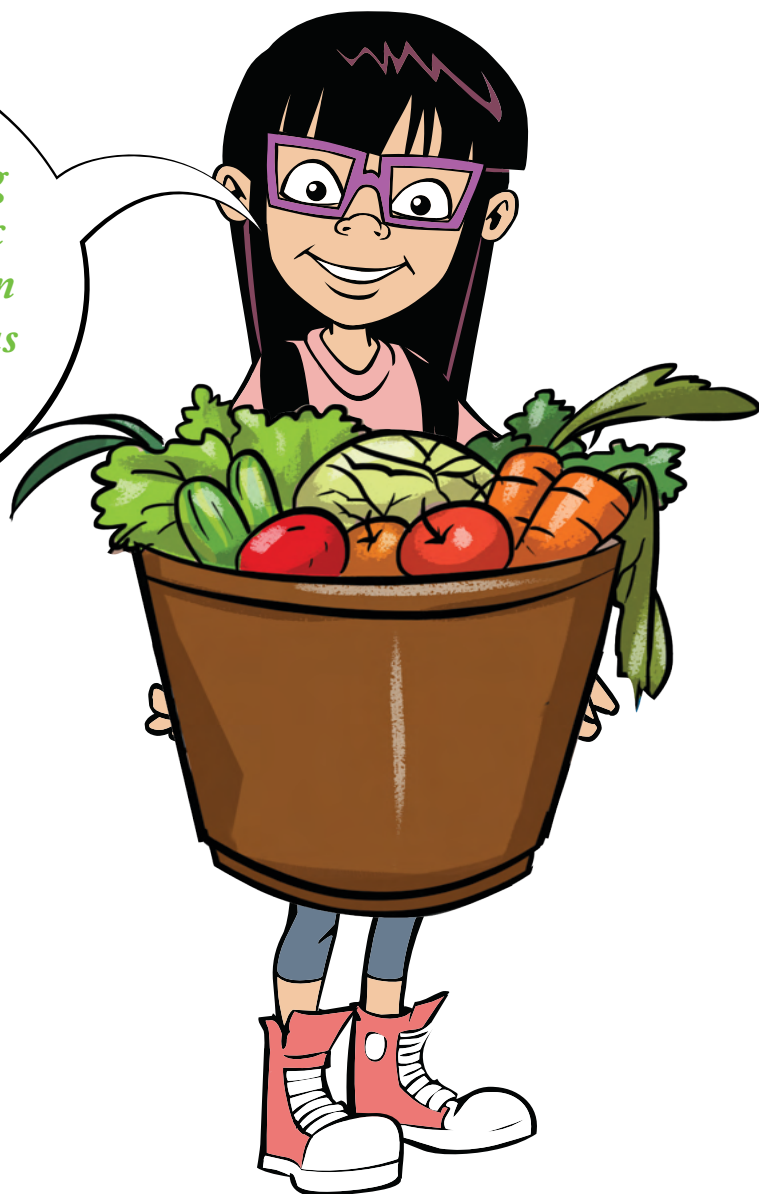
nuts and seeds

whole grains

avocados

leafy greens

soy products



Recipes

Lemon Pepper Salmon

Ingredients:

1 salmon filet
1 lemon
black pepper
olive oil

Directions:

1. Preheat the oven to 375°F.
2. Cut 4 lemon slices.
3. Line a baking sheet with aluminum foil.
4. Put the salmon on the baking sheet and drizzle with olive oil.
5. Add black pepper to the salmon.
6. Put the lemon slices on top.
7. Fold over the aluminum foil to cover the salmon.
8. Cook at 375°F for 20 minutes.
9. Add more lemon or pepper to taste!



Learn all about the systems of your body in the **Know Your Body** series with **Dr. Vanessa!**

Know Your Nervous System takes you through the nervous system while focusing on fun activities to help reinforce the information you are learning.



THIS BOOK INCLUDES:

- Kid-Friendly Learning
- Fun-Filled Anatomy Lessons
- Engaging Activities to Reinforce Learning
- Check for Understanding Pages Incorporated Throughout to Improve and Enhance Learning
- An AHA Moment - Where Anatomy, Physiology and Psychology All Come Together!
- Fun Introduction to a New Vocabulary Word
- Try This at Home Projects
- Recipes that Encourage Healthy Eating
- Plus Much More!

Knowledge Guaranteed to Last a Lifetime

You only get one body, and it needs to last a lifetime. Learning about the body at a young age sets the foundation for honoring one's physical form while developing self-esteem and self-confidence. Equipped with a general knowledge of the human body, young children will have the confidence to participate in their own health and well-being for years to come. Through activity books, workbooks, comics and games, we make education engaging and fun, and spark a lifelong love of learning and health literacy.



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PRINTED IN USA

ISBN 979-8-9851427-6-1



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SKU:KYBNS3