

Intro: Pass out activity cards and ask students to perform their specific activity when called on. Discuss how we are able to do these things so many years later?

Thanks to the "BRAIN" we are able to remember these things....some because it's in our long term memory banks, some because of repetition, some because we still use it daily.

The brain is a fascinating, yet complex organ that is made up of billions of neurons. Each neuron is made up of dendrites, cell bodies, and axons.

Dendrites are like tentacles receiving information and signals which is then passed on to the...

Cell Body which controls and directs the information to the body through the axons...

Axons are long threadlike tentacles that carry signals from the cell body of one neuron to the dendrites of another neuron. These signals allow you to move, feel and remember.

Activity: Sensory Relay...a simulation.

Have students stand in a line to stimulate a nerve impulse traveling from stimuli to the brain and back again to recognize pain.

Stimuli—touch a HOT pan--→squeeze each other's hand till you get to the end of the line (in this case the brain) and then squeeze back down the line until it reaches the stimuli (source of pain---in this case the beginning) and when it hits the "source" yell "OUCH!"

View this YouTube clip to see this in action.

http://www.youtube.com/watch?v=FR4S1BqdFG4&list=PLH6_itaHmAmdbTp_VJKN7ZYtcWRPkoW6d&index=1

Discuss: As the synapses are strengthened through repetitive activities and experiences, the connections or pathways are formed which allow a child to learn. They operate under the "use it or lose it" theory.

To see this as an analogy to the internet, view this clip:

<http://letitriipple.org/brain-power/>

Activity: Since we want to keep making connections in our brains we need to keep challenging it to learn new things or learn them differently.

Have students participate in the following activities to challenge their brains.

- Time students as they participate in the "Stroop's Effect" PPT activity. Students will first read the color the word is written in and get a time. Then

students will read the actual words and get a time. Compare the two. Repeat activity with several students using all the slides.

This activity illustrates that an adult has strong brain connections for reading. A preschooler, who can't read, would easily be able to name the actual colors because the brain connections for reading have not been made yet.

- Challenge students to say their alphabet backwards. It's fun to time them saying it both forward and backwards.
- Participate in the Brain Games PPT activity at this website
<http://www.teacherspayteachers.com/Product/Brain-Games-952856>

Brain Trivia

Intro: Show PPT using a variety of pictures asking what they all have in common with the brain: walnut, bleu cheese, grain of rice, pink/grey jello-jigglers, and pruning shears.

Go over answers and take notes on additional brain trivia information.

Activity: Brain Diagram

Notes/Discuss: Place the diagram on the SMARTBOARD. Identify and discuss basic brain parts and color the brain diagram and take notes on basic brain part functions. Complete worksheet and go over. Parts and Functions are:

- Cerebrum: (Pink): Receives information from the senses and directs motor activities. It also controls speech, memory and problem solving. Most of these occur in the out layer of the cortex.

The hemispheres are divided into several lobes (all that will follow). They constantly interact to help us interpret our environment.

- Activity: Start a Story....an activity to show to how different experiences use different brain parts, higher thinking and environment is influenced.

First Time: One sunny day I wanted to go on a picnic in the park... add on and repeat what the person/people in front of you said.

- Discuss: we used memorization, cues, repetition, consistency, patterns and sequencing to do this, thus using your higher mental thinking.

Second Time: Repeat activity but this time you may not use any words that contain the letter "r" in it.

"It was a cloudy, snowy day and I wanted to go outside and have a snowball fight..."

- Discuss: Compare the two stories.....then discuss the following: Second Time was...
 - Slower, more thought going into it
 - Using a different part of your brain
 - Changed your learning style (used variety)
 - Changed your pattern b/c environment was influenced
- Ex. Walking forward is no problem, but walking backwards causes us to think, use our senses and go slower, change our patterns. Imagine going through your whole day backwards. What would it be like?
- Summary: Give a variety of experiences so children can move up through the levels of thinking.
- Thalamus: (Brown): Connects the spinal cord and cerebrum. Controls expression of emotions.
- Cerebellum: (Blue): Controls muscular coordination and balance.

- Spinal Cord: (Yellow): Transmits information from the body to the brain and from the brain to the body.
- Brain Stem: (Green): Controls involuntary activities such as breathing, heart rate, and blood pressure.
- Pituitary Gland: (Red): Secretes hormones that regulate growth, metabolism and sexual development.

Assignment: Complete the Brain Activities

View: The Baby's Brain

<http://www.youtube.com/watch?v=cfCffnjfo3w>

Conclusion: So the bottom line...as parents we need to do or continue to...

- Bond, love, pay attention and spend quality time with our babies and children.
- Provide sensory experiences and interesting activities (which will also help with the first bullet) and "No TV under Three".
- Talk and Read----CONSTANTLY—they need the language (we'll explore this area soon).

- Feed their bodies and brains in a HEALTHY way (we'll explore later)!

Brain Project: Brain Model and song/RAP