

# TEACHING WITH THE BRAIN IN MIND

Presented by Holly Varnum, EdD

## OBJECTIVES:

### Understanding the brain—A little better

1. Brain research over the last 40+ years and what we've learned
  2. How boys and girls learn differently
  3. Principles of Brain-based learning
  4. Learning retention according to God's Word
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### Brain research and intricacies 101 (AKA Neuro-science Light)

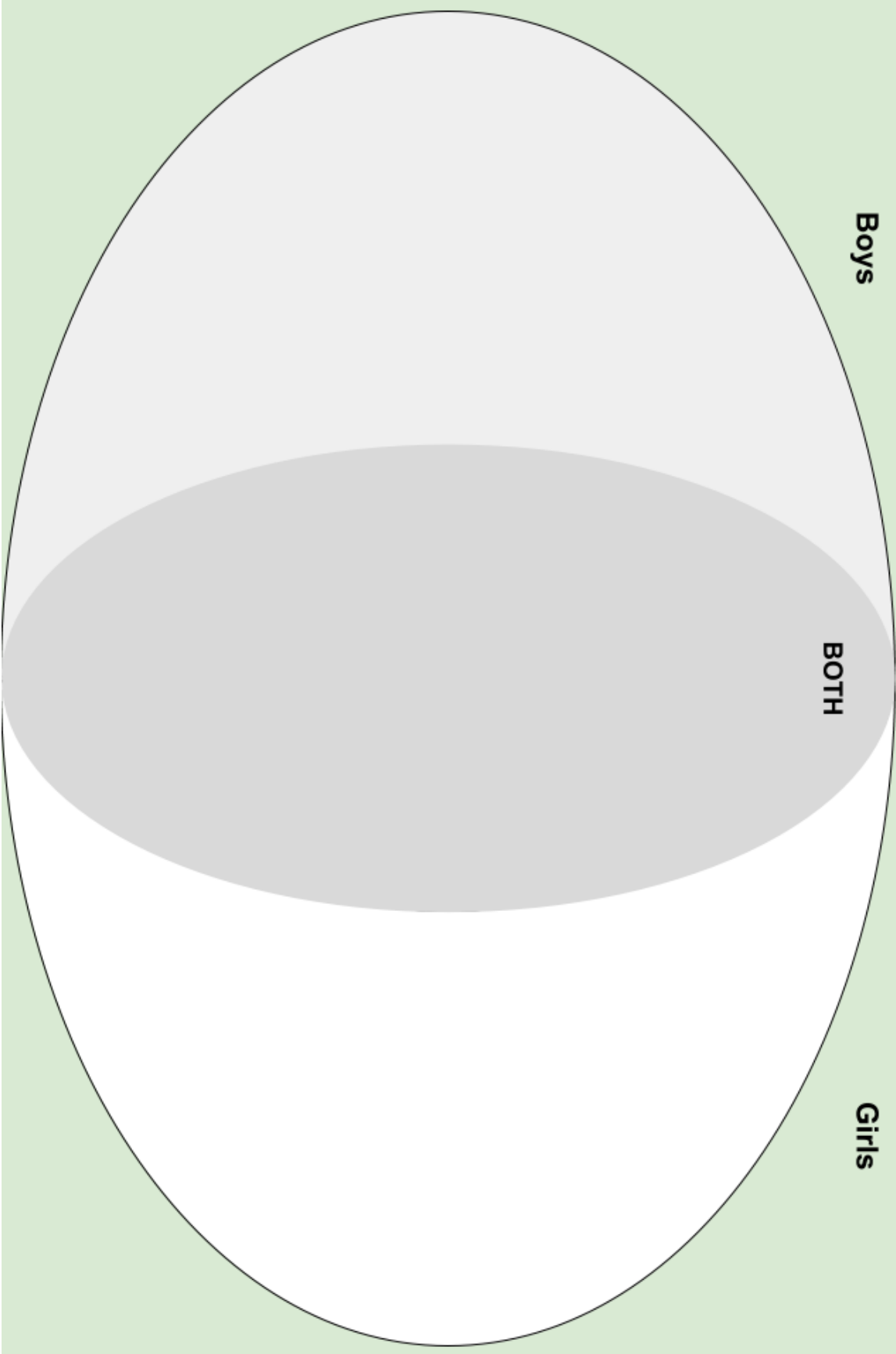
#### How to Approach this information

- Like a neuro-psychologist – \_\_\_\_\_ and \_\_\_\_\_
- Like an \_\_\_\_\_
  - Understanding what the \_\_\_\_\_ research and \_\_\_\_\_ studies show us about boys and girls
  - Taking that information to structure what happens in our homes to support their \_\_\_\_\_, socialization, and leadership

#### Research now and then

- Over the last 4 decades, the ability to do brain scans and neurological studies on the male and female brains have provided hard, \_\_\_\_\_ of fundamental \_\_\_\_\_ in how boys and girls learn.
- Prior to this, information gathered was done via \_\_\_\_\_ of social interactions and personal motivations. Their pedagogical, sociological, and psychological studies simply documented how our various Western cultures “nurture” boys and girls differently. Basically communicating that the differences were the result of \_\_\_\_\_ and \_\_\_\_\_.
- The social thinkers of the 1950s, 1960s, and 1970s did not have PET scans, MRIs, SOECT scans available to them. They had to make \_\_\_\_\_ about how children learn without any real \_\_\_\_\_ evidence.
- One very \_\_\_\_\_ assumption made was that boys and girls learned the same way.

# Boys vs. Girls Comparison Chart

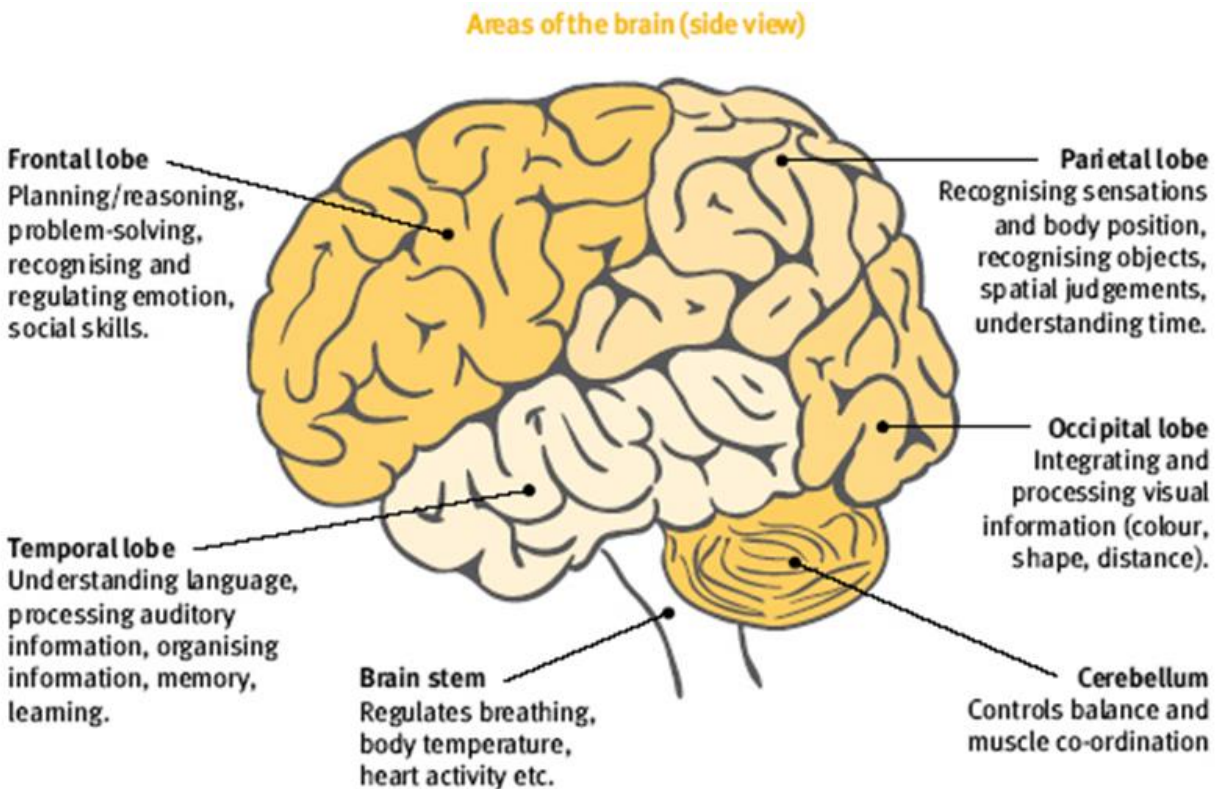


## \_\_\_\_\_ Brains

Definition:

Individuals in the center of the \_\_\_\_\_ - \_\_\_\_\_ brain continuum.

- Boys who process information more in the \_\_\_\_\_ spectrum
- Girls who process information more in the \_\_\_\_\_ spectrum.
- Examples: \_\_\_\_\_ boys and \_\_\_\_\_ girls



## Brain-based Learning for Boys

### *The Purpose of Boys* by Michael Gurian

- Boys want to earn a path of \_\_\_\_\_ in the world. They want to be shown the path, and they will take the \_\_\_\_\_, make \_\_\_\_\_, etc. until they \_\_\_\_\_ it.
- They feel \_\_\_\_\_ when they can say: "I have \_\_\_\_\_ in life, and know I am \_\_\_\_\_."

### Overview of Considerations for Boys

- Boys need \_\_\_\_\_. If room allows, spread them out in their seating arrangement.

- Boys need to \_\_\_\_\_.
- If you don't work it in, they will.
- If they start to drift or get off task, incorporate a \_\_\_\_\_.
- Boys need \_\_\_\_\_ light. If room is dimly lit, \_\_\_\_\_ levels rise and "rest state" will set in.
- Boys do not \_\_\_\_\_ as well as girls. Have them \_\_\_\_\_ instructions/information even more frequently than girls.
- Boys use fewer \_\_\_\_\_ and are behind girls in \_\_\_\_\_ development.
  - Focus on \_\_\_\_\_ and use of \_\_\_\_\_ sentences
  - They love to \_\_\_\_\_ or \_\_\_\_\_. Let them use that to \_\_\_\_\_ words.
- Boys relate through aggression nurturance.
  - Be a little more \_\_\_\_\_ with horseplay as long as they are not damaging anything or anyone.
  - Help them think about the \_\_\_\_\_ of their actions.
  - Boys love \_\_\_\_\_.
  - Boys can more easily use their \_\_\_\_\_ brains.
    - Singing with movement; music; bi-lateral movement helps further develop the whole brain.
- Boys do not tend to get rid of \_\_\_\_\_ as easily as girls. Stress prevents \_\_\_\_\_.
- Drink water.
- Brain breaks.
- Side-by-side walk or send on an errand.
- Boys get \_\_\_\_\_ quickly and tend to lose \_\_\_\_\_.
- Rest state
- Brain breaks, movement, \_\_\_\_\_

## Brain-based Learning for Girls

“\_\_\_\_\_ Nurturance”

- The intimacy imperative is very strong in girls and women, due to the interaction of estrogen, progesterone, oxytocin, and serotonin. These hormones create a strong need for intimacy and for the development of self through intimate relationship.

### Overview of Considerations for Girls

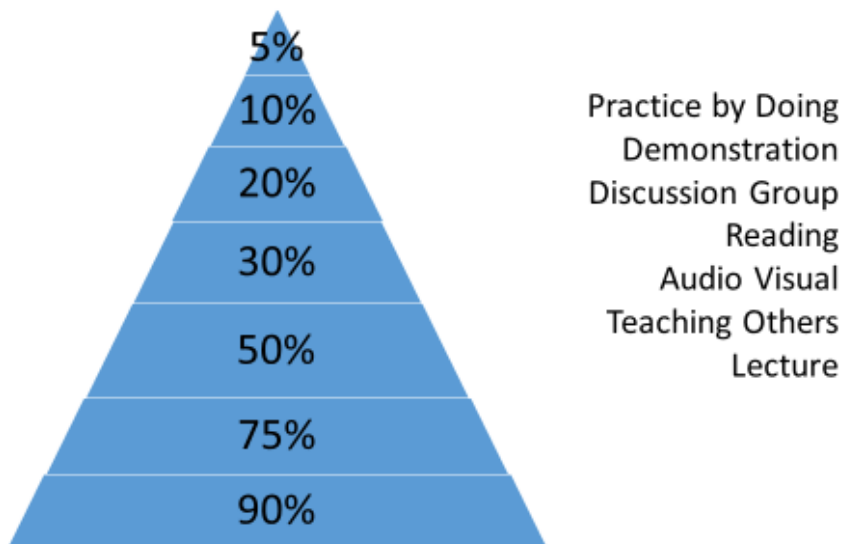
- Girls are \_\_\_\_\_ oriented.
  - Need to know you \_\_\_\_\_.
  - May have to \_\_\_\_\_ them to keep them focused.
  - Watch for relational \_\_\_\_\_.
- Girls need \_\_\_\_\_ to use visual spatial skills.
  - Encourage drawing and use of colors and textures.
  - Air sketching or back drawing help with this.
  - Girls will choose more \_\_\_\_\_ activities and need to be led in activities that use gross motor skills.
  - Girls need to be encouraged to use \_\_\_\_\_ mathematical thinking.
    - Hands on activities in math and science
    - “Think alouds” in content non-fiction information.
- Girls need to have their \_\_\_\_\_ skills developed.
  - Use paired practice to get them started.
  - Give each girl a specific task.
  - Let girls know when their \_\_\_\_\_ comments are hurtful to others and not appropriate. (Also understand that relational aggression is natural for girls and use it as a teachable moment.)
- Girls have sensitive \_\_\_\_\_.
  - When you speak firmly, they interpret it as \_\_\_\_\_.
- Use \_\_\_\_\_ contact and \_\_\_\_\_ frequently with girls.
- \_\_\_\_\_ talk with girls often backfires because they will get angry with you and be less motivated and give up. (Remember they have an innate desire to please you.)
- Girls need to be encouraged to take \_\_\_\_\_ where you know they are likely to be successful.

- Girls are more likely to ask for help (support) because of their need to do things correctly. Be careful not to show \_\_\_\_\_ when they ask frequent questions.

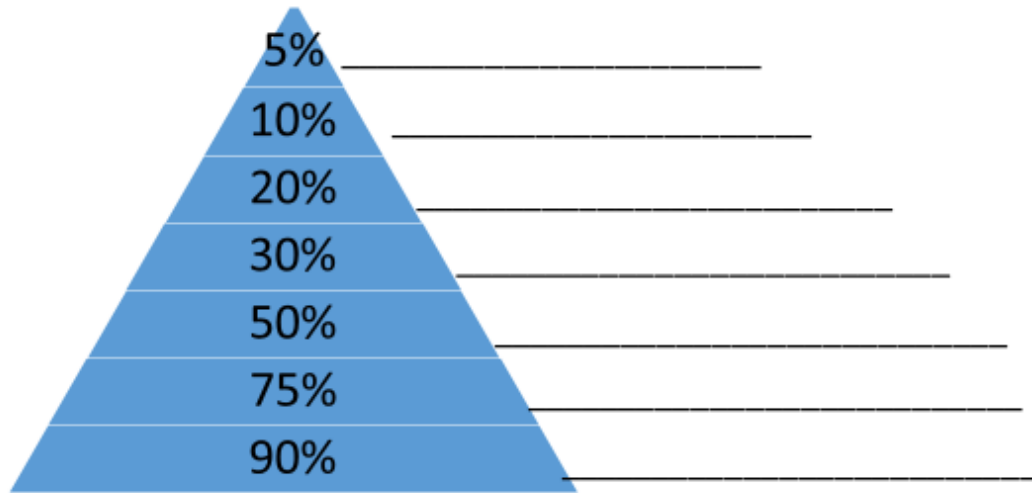
### More Brain-based Learning Principles

- Plenty of \_\_\_\_\_
- Start the day with protein
- M & Ms -- \_\_\_\_\_ & \_\_\_\_\_
- Reflection
- Understand the \_\_\_\_\_ Pyramid to make the most of your learning time.

### Learning Pyramid: Average Retention Rates



## Learning Pyramid: Average Retention Rates



### Learning Retention According to God's Word

- Deuteronomy 6:6-9
- Proverbs 19:20
- Philippians 4:9
- Matthew 5:19
- Colossians 3:16
- 1 Thessalonians 5:11
- Titus 2:1