

Unit 2 – Biology and Learning

Day 3 -



# The Brain

**Zombies aren't the only ones obsessed with brains...**

# Objectives

- **Identify the SIX major regions of the Human Brain (including four lobes)**
- **Compare “Left Brain” and “Right Brain” functions**
- **Understand the importance of the brain in Psychology**

## Terms:

- **Cerebral Cortex**
- **Frontal Lobe**
- **Temporal Lobe**
- **Parietal Lobe**
- **Occipital Lobe**
- **Cerebellum**
- **Brain Stem**
- **“Left Brain”**
- **“Right Brain”**

# Remind Me...

- **What are the two important systems in Psychology (Biologically)?**
- **Which one controls motor functions, senses, etc.?**
  - **How?**
- **Where are most of those neurons located?**
- **Also, where is the gland that controls the Endocrine located?**
- **HENCE, today we focus on the very important zombie-food... the BRAIN!**

# BRAINS

- **The Central Nervous System is composed of the spinal cord AND the Brain**
- **When we say “brain” however, it can mean different things. Do we include everything under it, inside it, the endocrine glands, etc.?**
- *Generally in Psychology we are referring to the...*

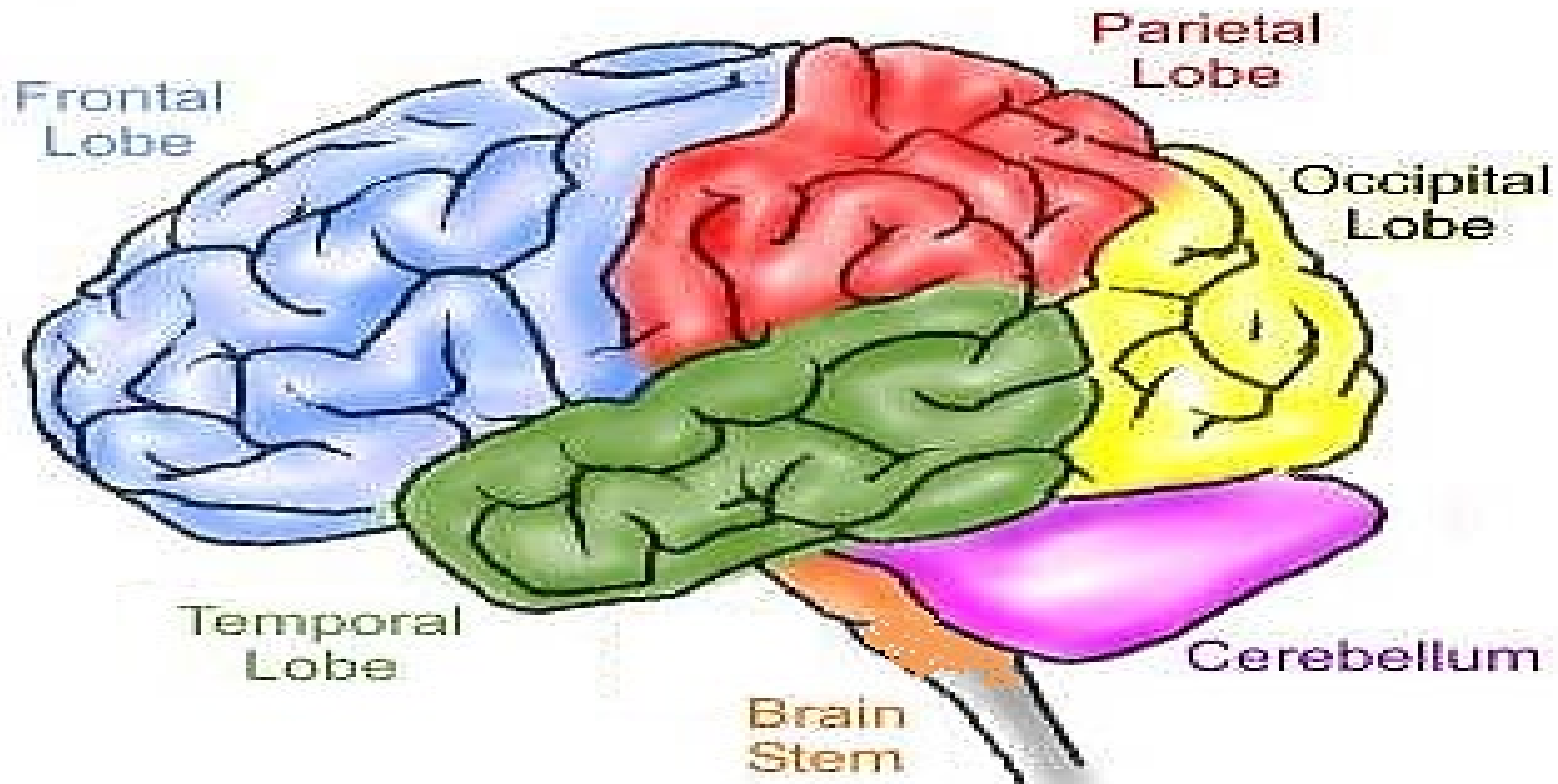
## Cerebral Cortex

- What we see when we picture the brain
  - The “outside”
  - Grey matter, folds, covering a cerebrum

# BRAINS

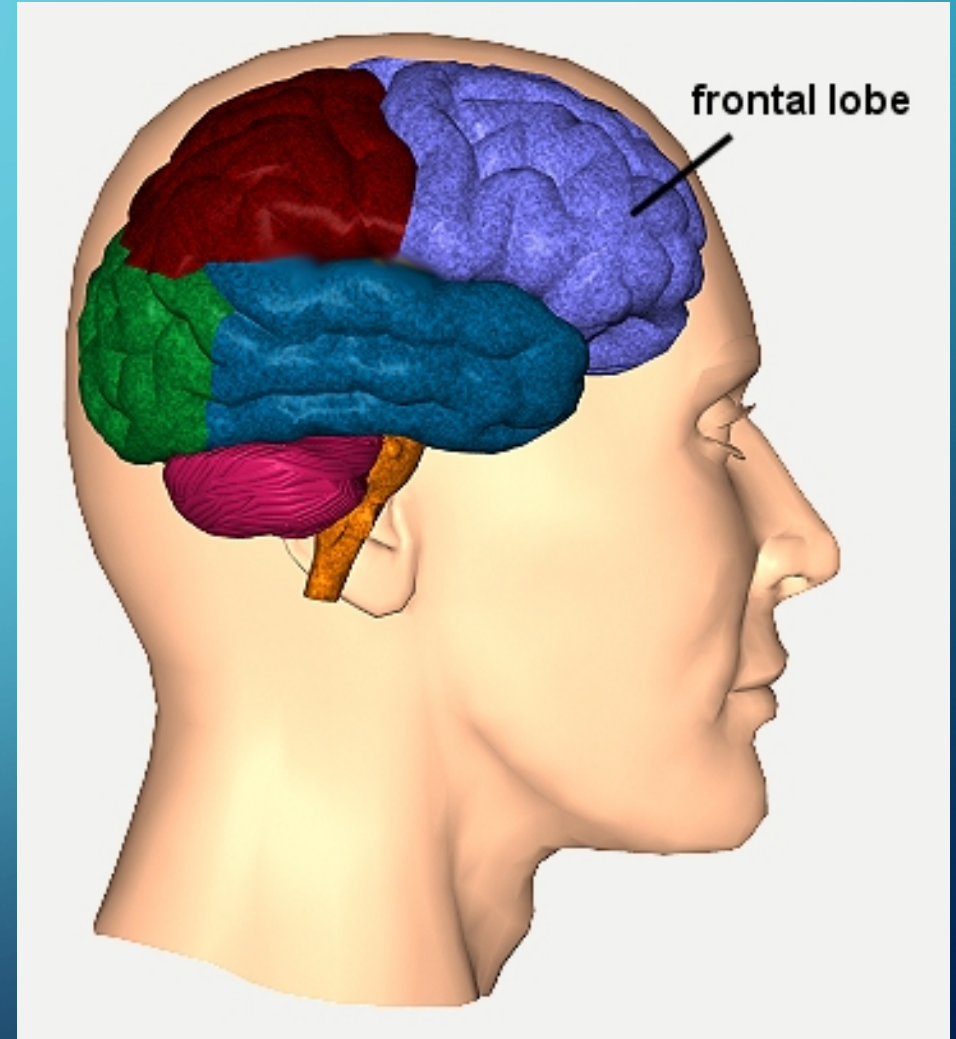
- **The brain is divided into 4 “Lobes”**
  - **Frontal**
  - **Parietal**
  - **Occipital**
  - **Temporal**
- **In addition, there are 2 other Regions**
  - **Cerebellum**
  - **Brain Stem**

# Regions of the Human Brain



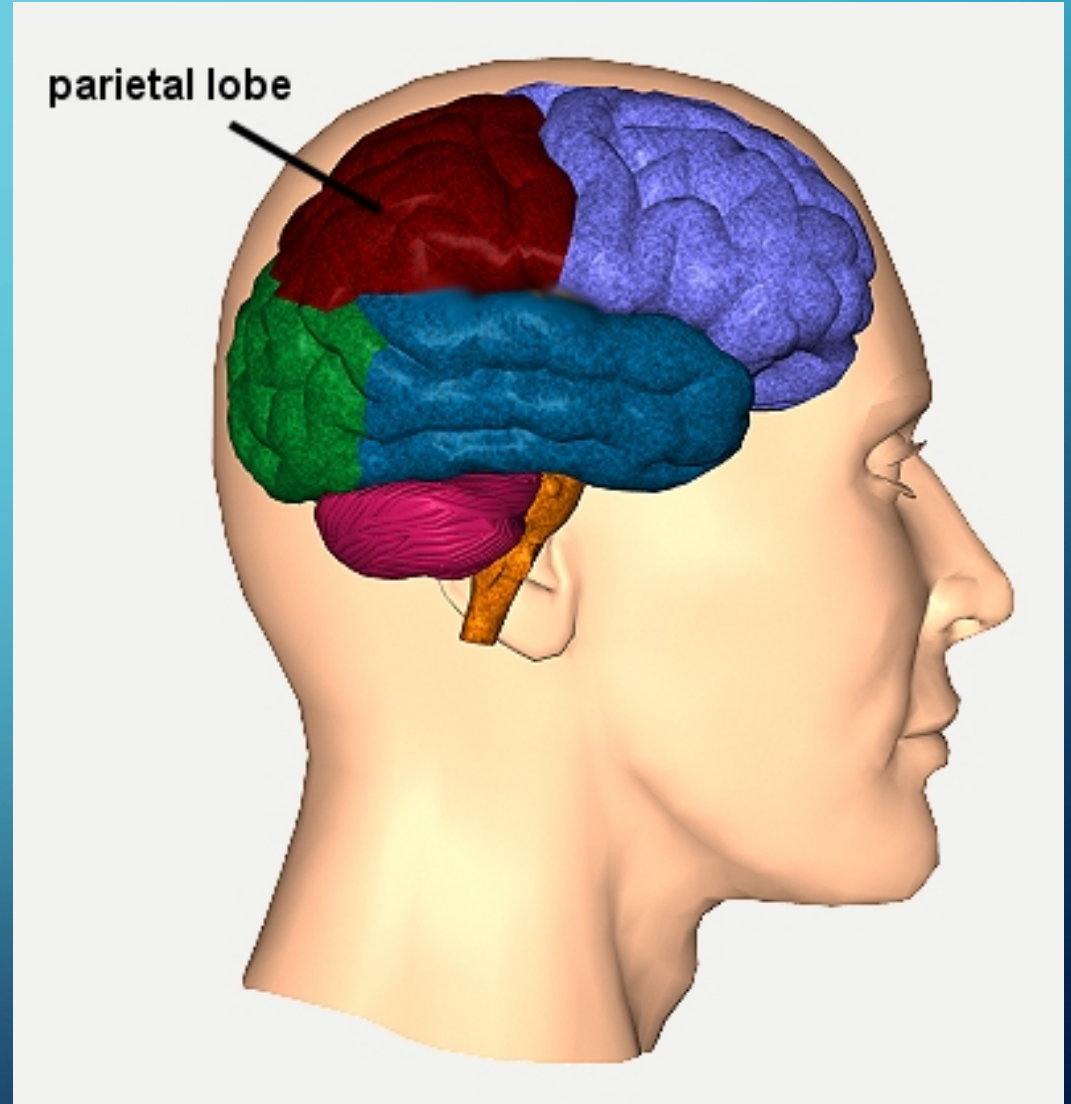
# Frontal Lobe

- **Motor Skills**
- **Using Language**
- **Orientation**
  - *Person, Place, Time, Situation*
- **Higher Thinking**



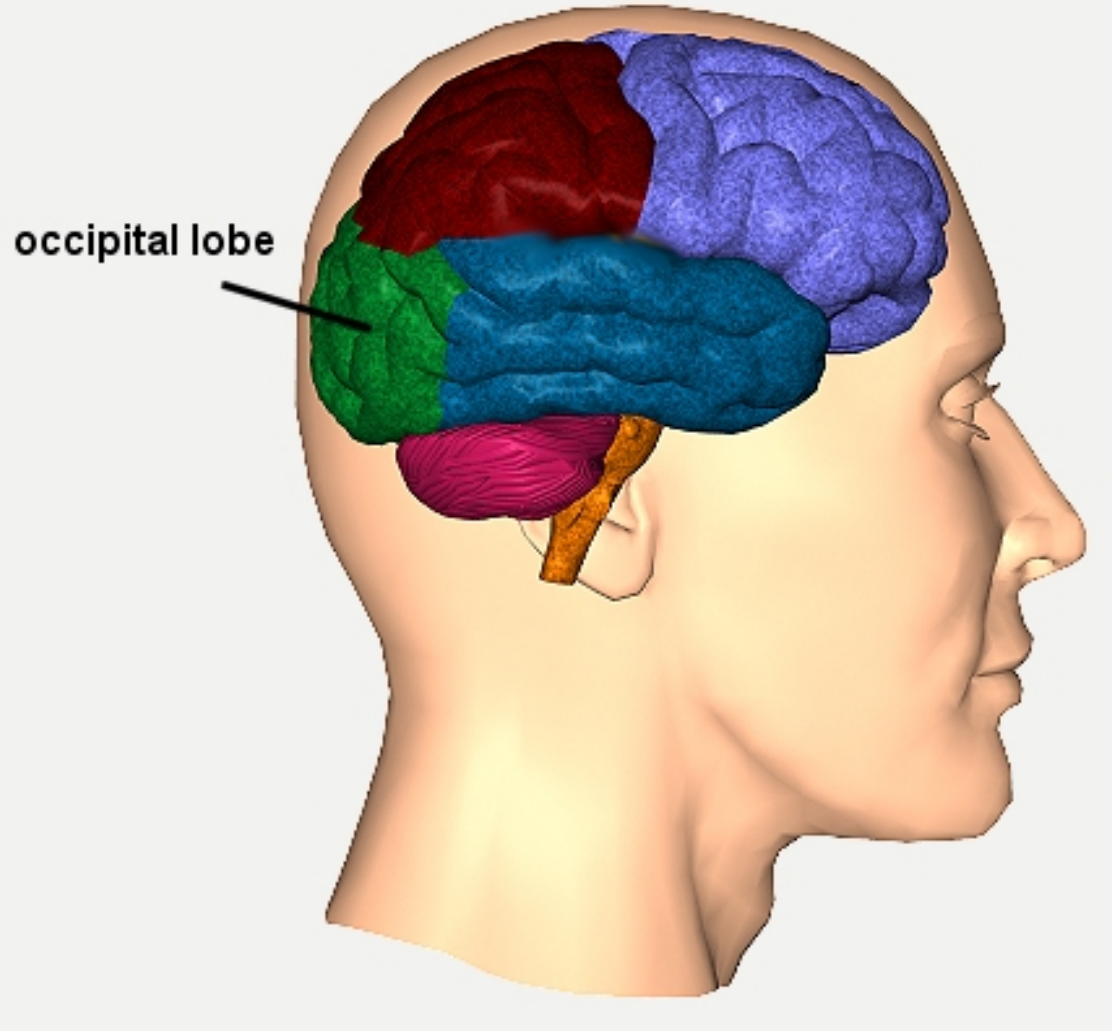
# Parietal Lobe

- **Touch**
- **Pressure**
- **Temperature**
- **Pain**





# Occipital Lobe

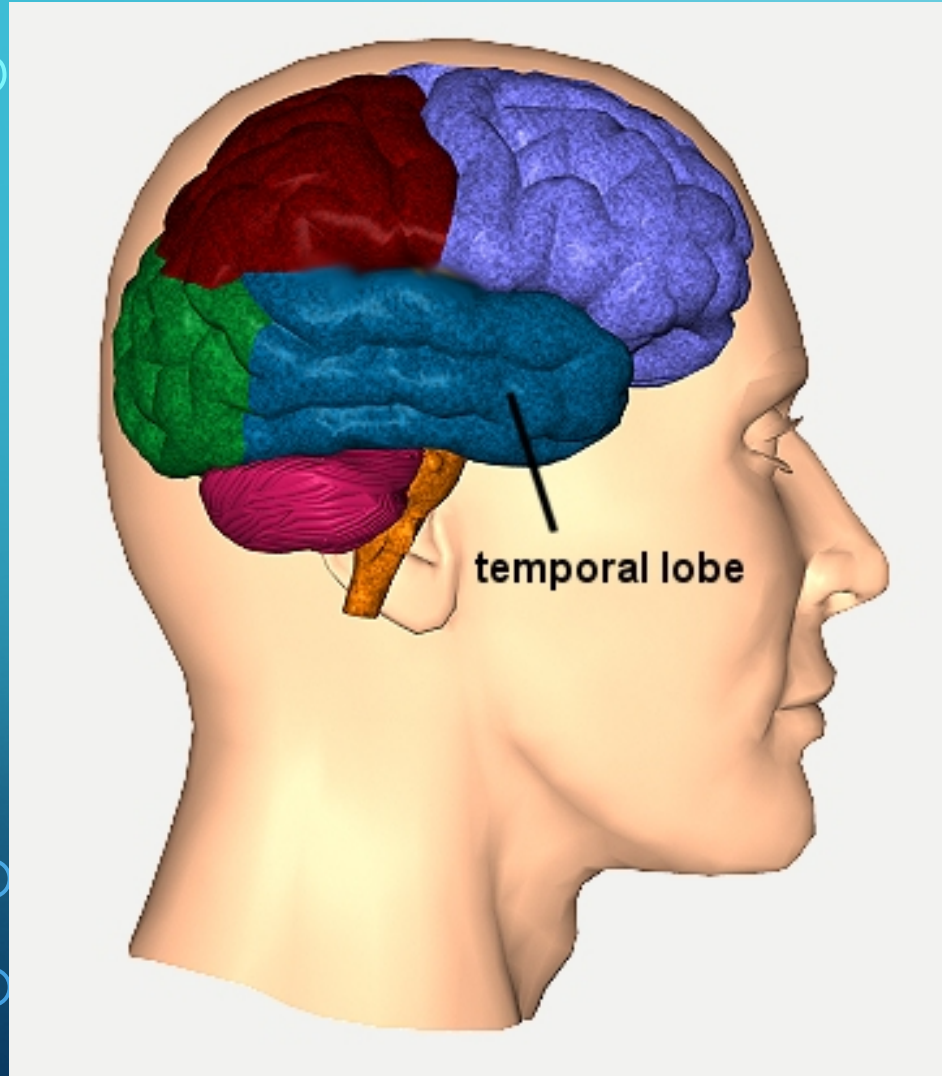


- **Vision**

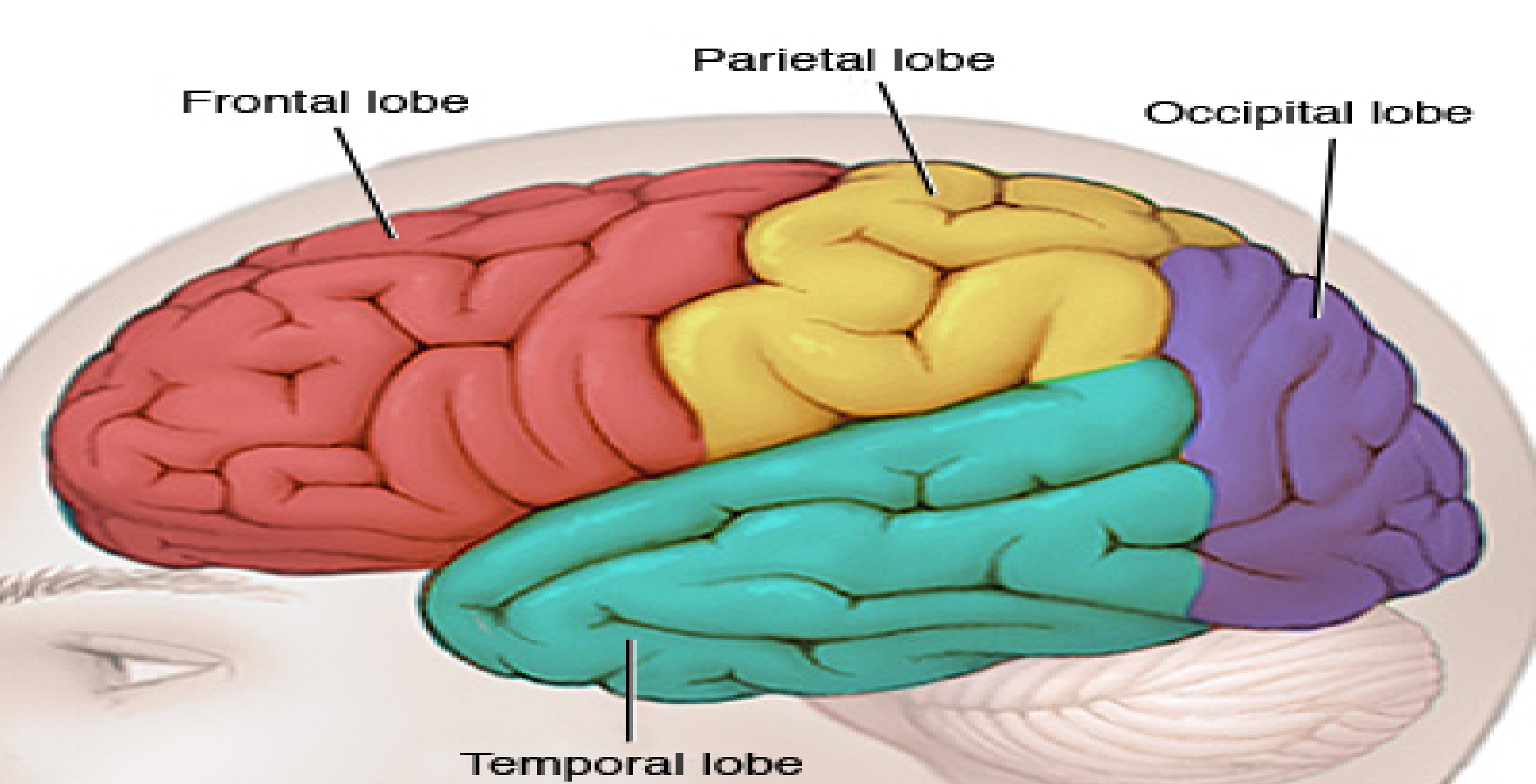
- **Visual**

- Processing**

# Temporal Lobe



- **Understanding**
- **Language**
- **Memory**
- **Emotion**



Frontal lobe

Parietal lobe

Occipital lobe

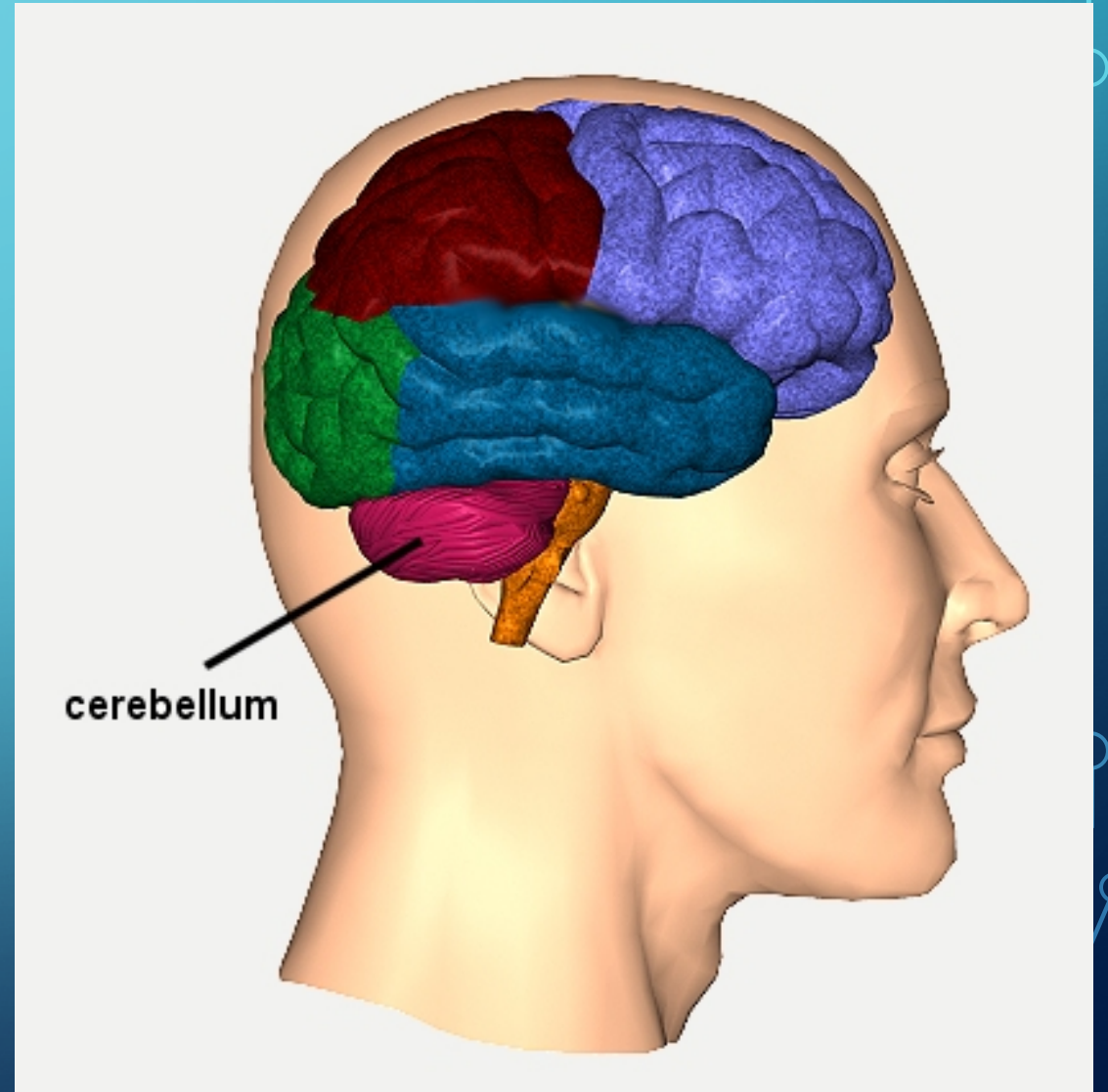
Temporal lobe

Remember Their Order! (*Freak Peterson Out Tonight*)

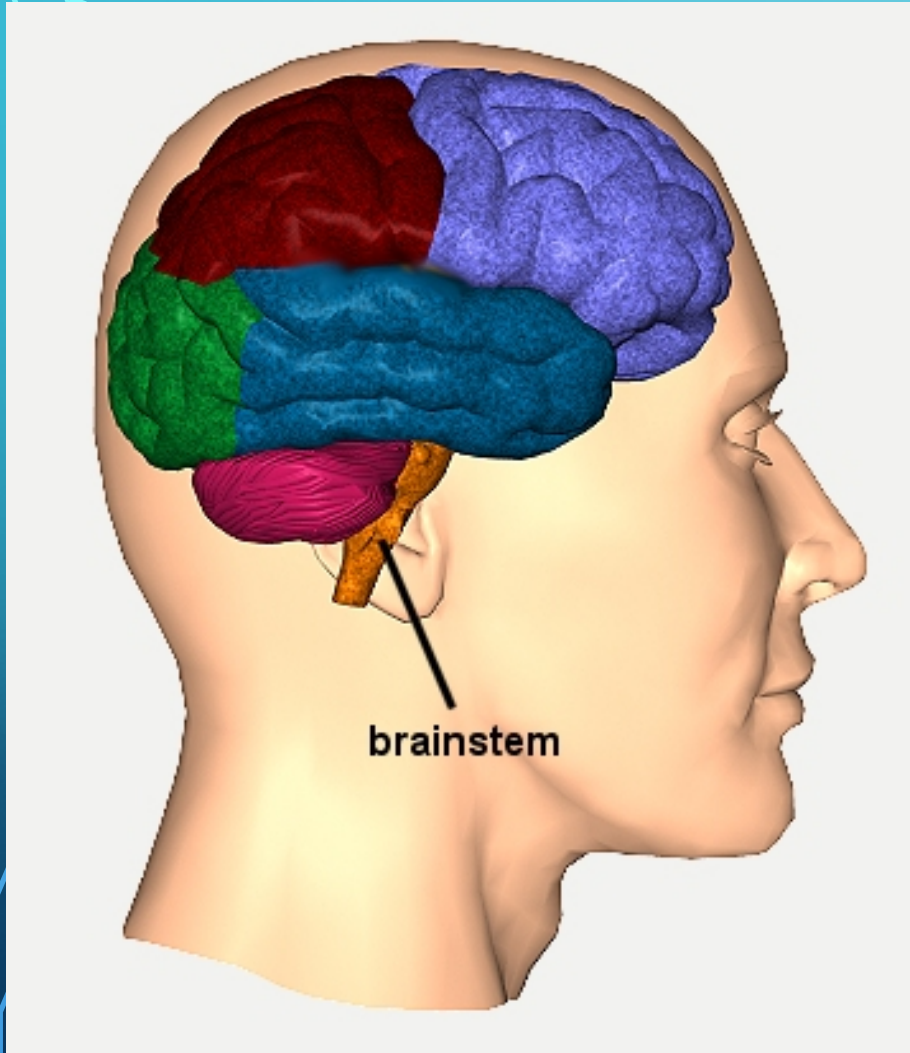


# Cerebellum

- **Balance / Posture**
- **Coordination**
- **Timing**



# Brain Stem

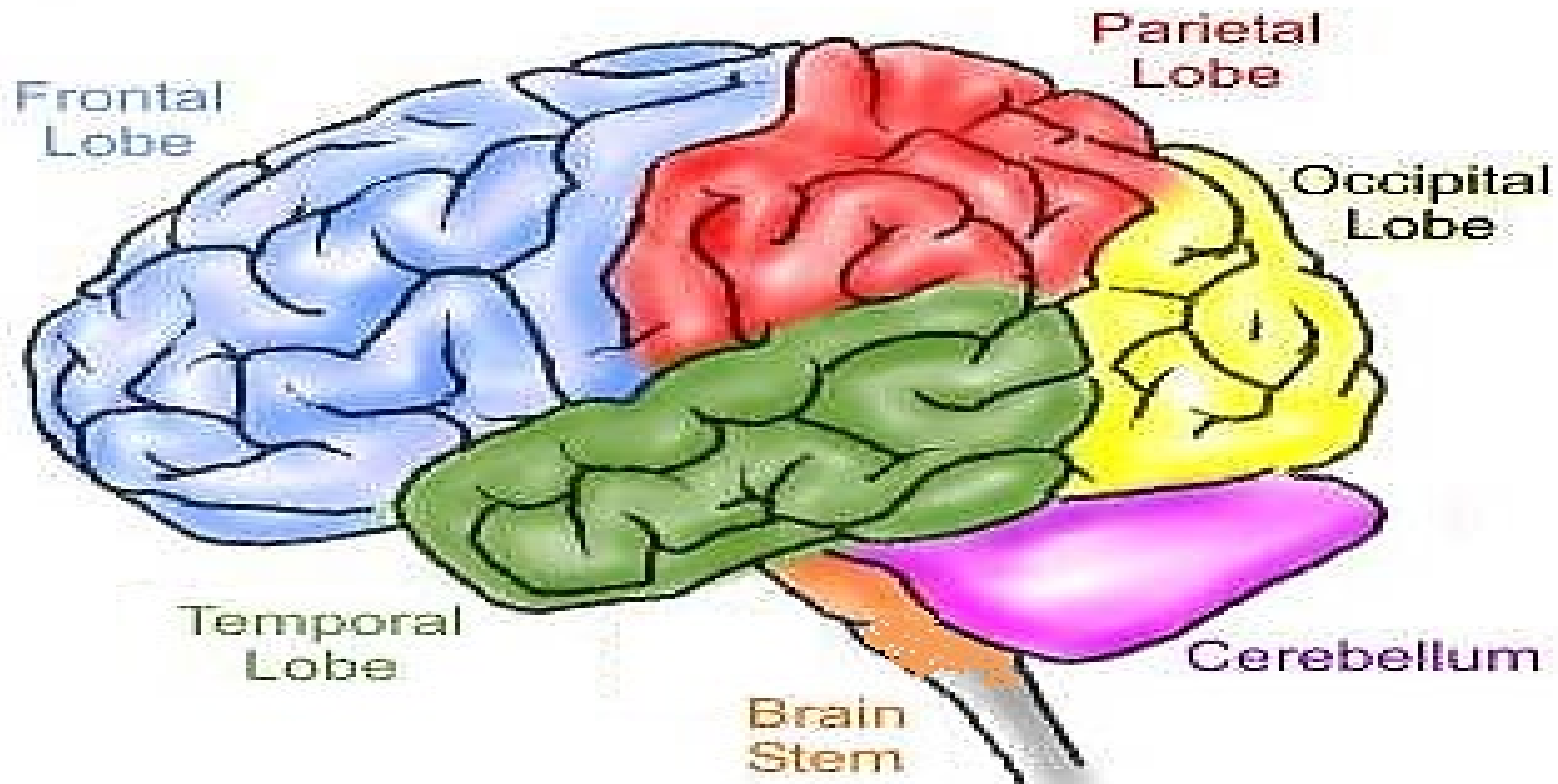


- **Life-Sustaining Functions**

- *Heartbeat, breathing, etc.*

- **Also Arousal and Pleasure**

# Regions of the Human Brain



*Now that we have the “parts...”*

- **There are also two hemispheres in the brain, left and right...**
- **First, The Left and Right sides control the OPPOSITE side of the body's motor functions**
- **Second, there are specific “roles” to each side**
- ***There is much debate in Psychology to how true or concrete these are, but they are still largely accepted as follows...***



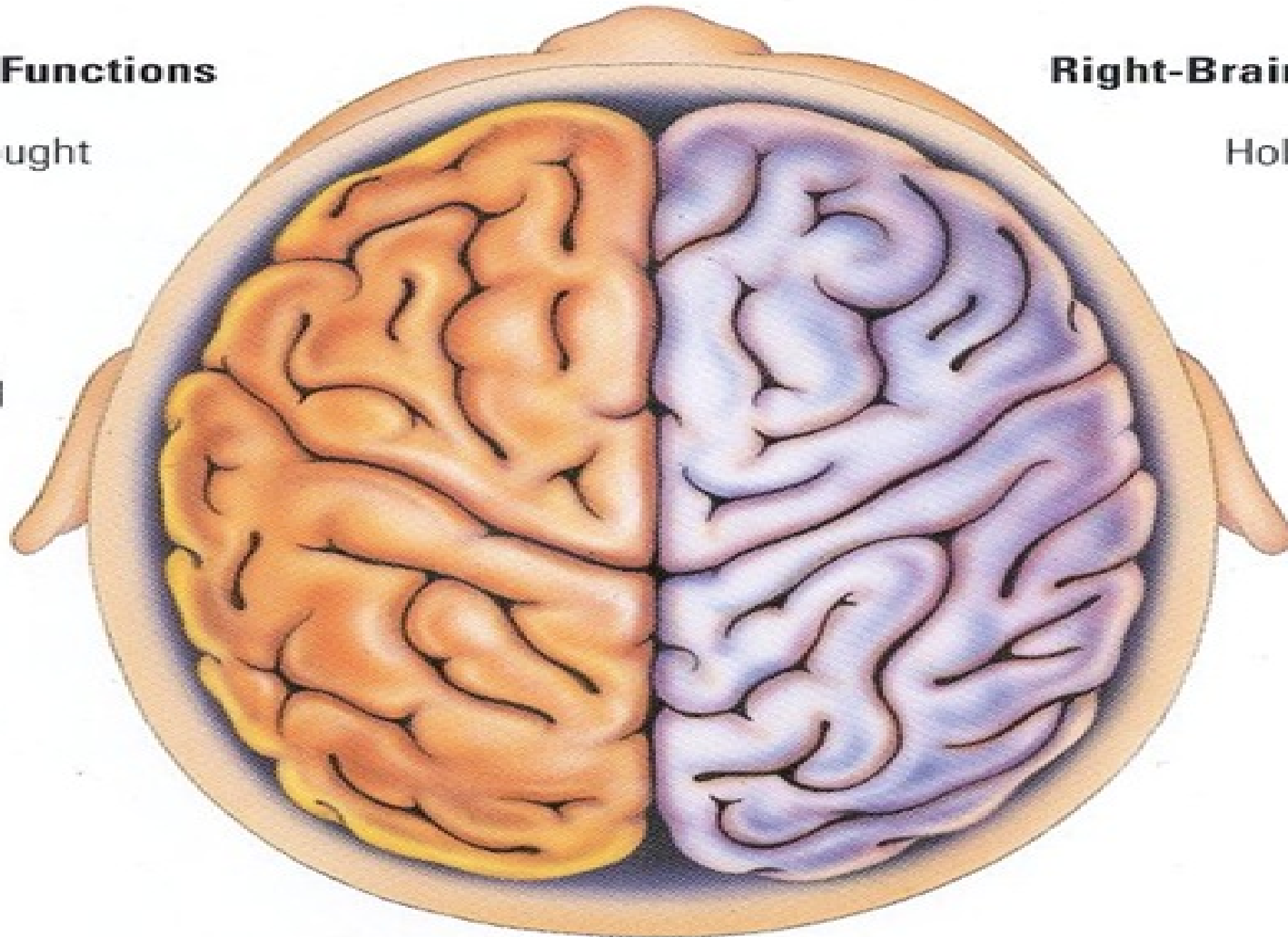
“MURICA



# Left and Right Brain Functions

## Left-Brain Functions

Analytic thought  
Logic  
Language  
Science and math

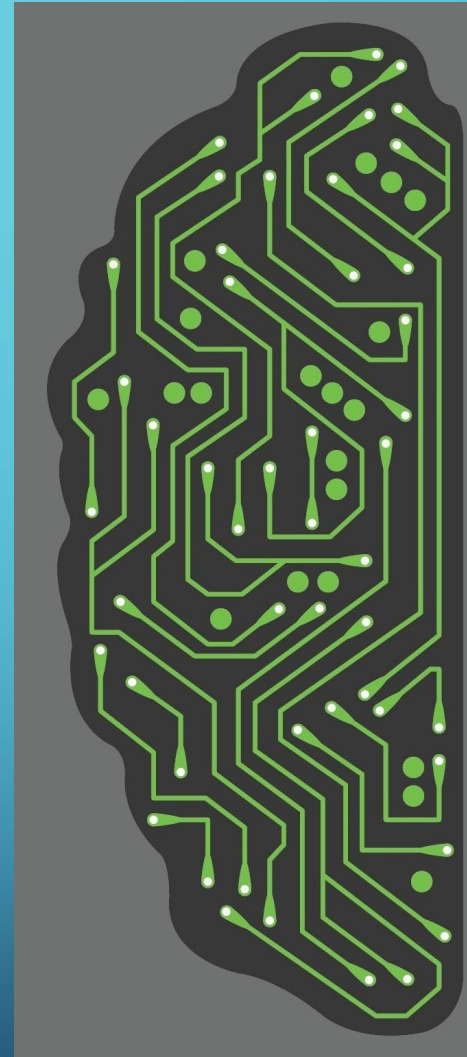


## Right-Brain Functions

Holistic thought  
Intuition  
Creativity  
Art and music

# Left Brain

- ***The “Rational”  
Brain***
- **Analytical  
Thinking**
- **Logic**
- **Language**





# Right Brain

• ***The “Creative”  
Brain***

• **Creativity**

• **Artistic Expression**

• **Music**

• **Intuition**

# Left Brain

VS.

# Right Brain

- *The “Rational” Brain*

- *The “Creative” Brain*

- Analytical

- Creativity

- Thinking

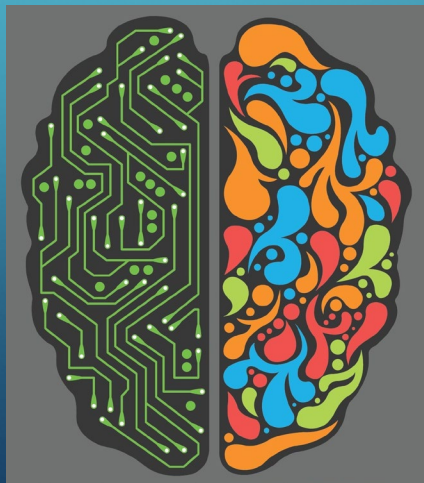
- Artistic Expression

- Logic

- Music

- Language

- Intuition

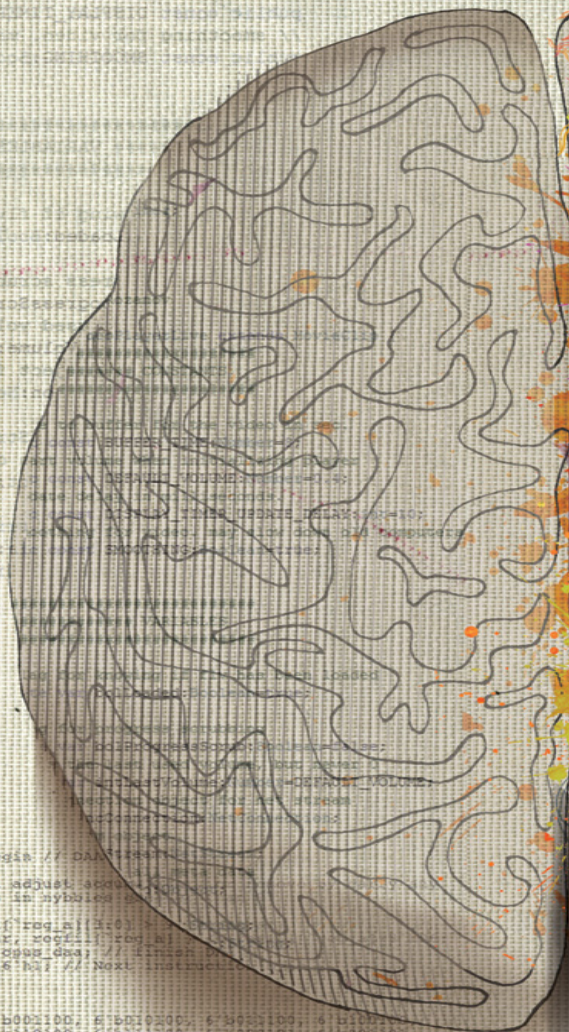


```
sh.geom.*;
sh.net.*;
sh.media.*
sh.utils.fine
scrub: Boolean = false;
vol: Volume, but never 0
volume: Number = DEFAULT_VOLUME
* not for net stream
* not for net connection;
File: File;
stream: NetStream;
* all meta data
objInfo: Object;
* file
strSource: String;
videoFileName: String;
bg_pic: MovieClip;
```

```
sh.geom.*;
sh.net.*;
sh.media.*
sh.utils.fine
scrub: Boolean = false;
vol: Volume, but never 0
volume: Number = DEFAULT_VOLUME
* not for net stream
* not for net connection;
File: File;
stream: NetStream;
* all meta data
objInfo: Object;
* file
strSource: String;
videoFileName: String;
bg_pic: MovieClip;
```

# Left brain

I am the left brain.  
I am a scientist. A mathematician.  
I love the familiar. I categorize. I am accurate. Linear.  
Analytical. Strategic. I am practical.  
Always in control. A master of words and language.  
Realistic. I calculate equations and play with numbers.  
I am order. I am logic.  
I know exactly who I am.



# Right brain

I am the right brain.  
I am creativity. A free spirit. I am passion.  
Yearning. Sensuality. I am the sound of roaring laughter.  
I am taste. The feeling of sand beneath bare feet.  
I am movement. Vivid colors.  
I am the urge to paint on an empty canvas.  
I am boundless imagination. Art. Poetry. I sense. I feel.  
I am everything I wanted to be.



I AM THE  
LEFT BRAIN

Decisive!  
011001011 LOGIC

Accurate  
ANALYTIC

REASON  
1 2 3 4 5 6 7  
2 4 5 8 9

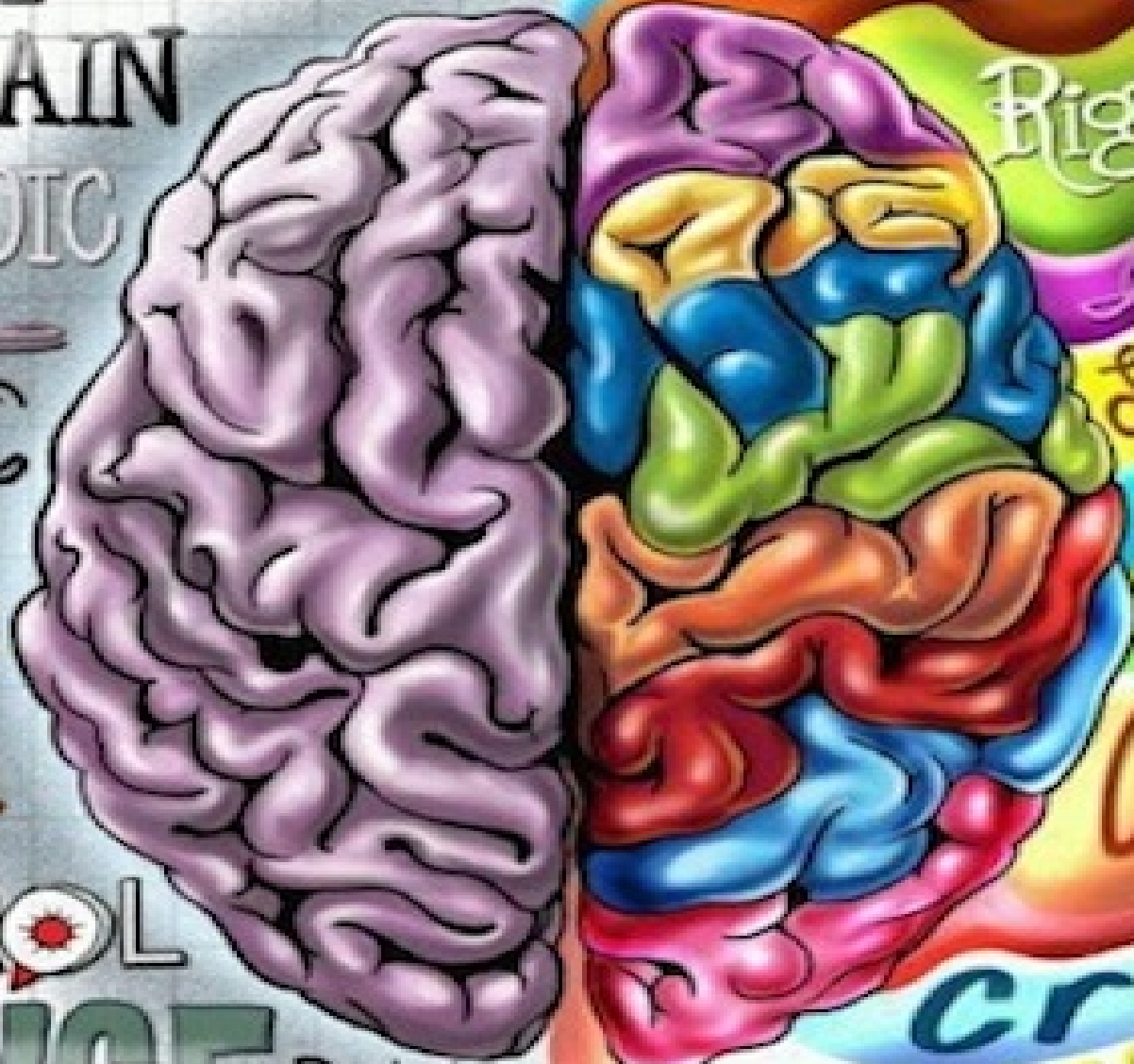
PRACTICAL  
Strategic

CONTROL

SCIENCE

Realistic  
BPD

WWW.CARTOONADAY.COM



I AM the  
Right BRAIN!

Intuition  
Love LOVE Love  
You Art  
Poetry

FREEDOM

Passion  
vivid

creative

YEARNING

PEACE

## And so...

- Within the parts of the brain, combined with the halves, we can “generally” figure out what might be damaged with brain injuries
- Concussions, for example, can affect our balance, our memories, our logic or reasoning... **DEPENDING ON WHERE THAT INJURY IS!**
- **So yeah, understanding the brain for Psychology is important.**

**ARE THERE**



**ANY QUESTIONS?**



# Objectives

- **Identify the SIX major regions of the Human Brain** (including four lobes)
- **Compare “Left Brain” and “Right Brain” functions**
- **Understand the importance of the brain in Psychology**

## Terms:

- **Cerebral Cortex**
- **Frontal Lobe**
- **Temporal Lobe**
- **Parietal Lobe**
- **Occipital Lobe**
- **Cerebellum**
- **Brain Stem**
- **“Left Brain”**
- **“Right Brain”**