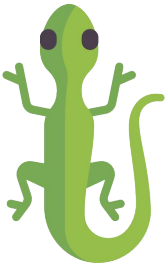
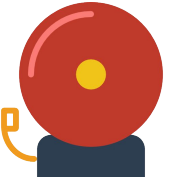
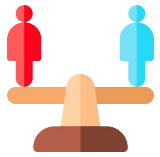
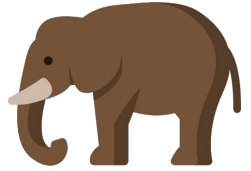
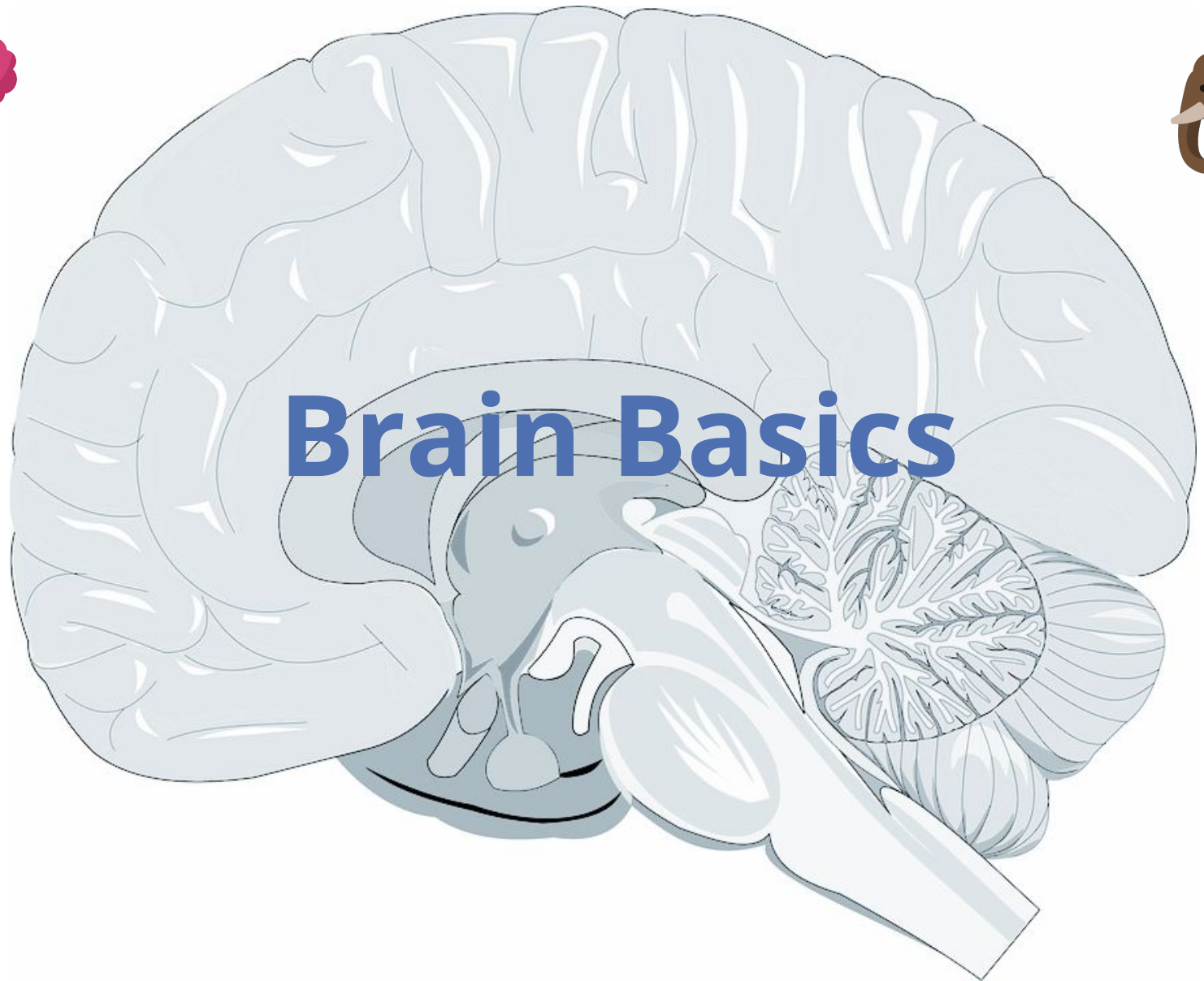


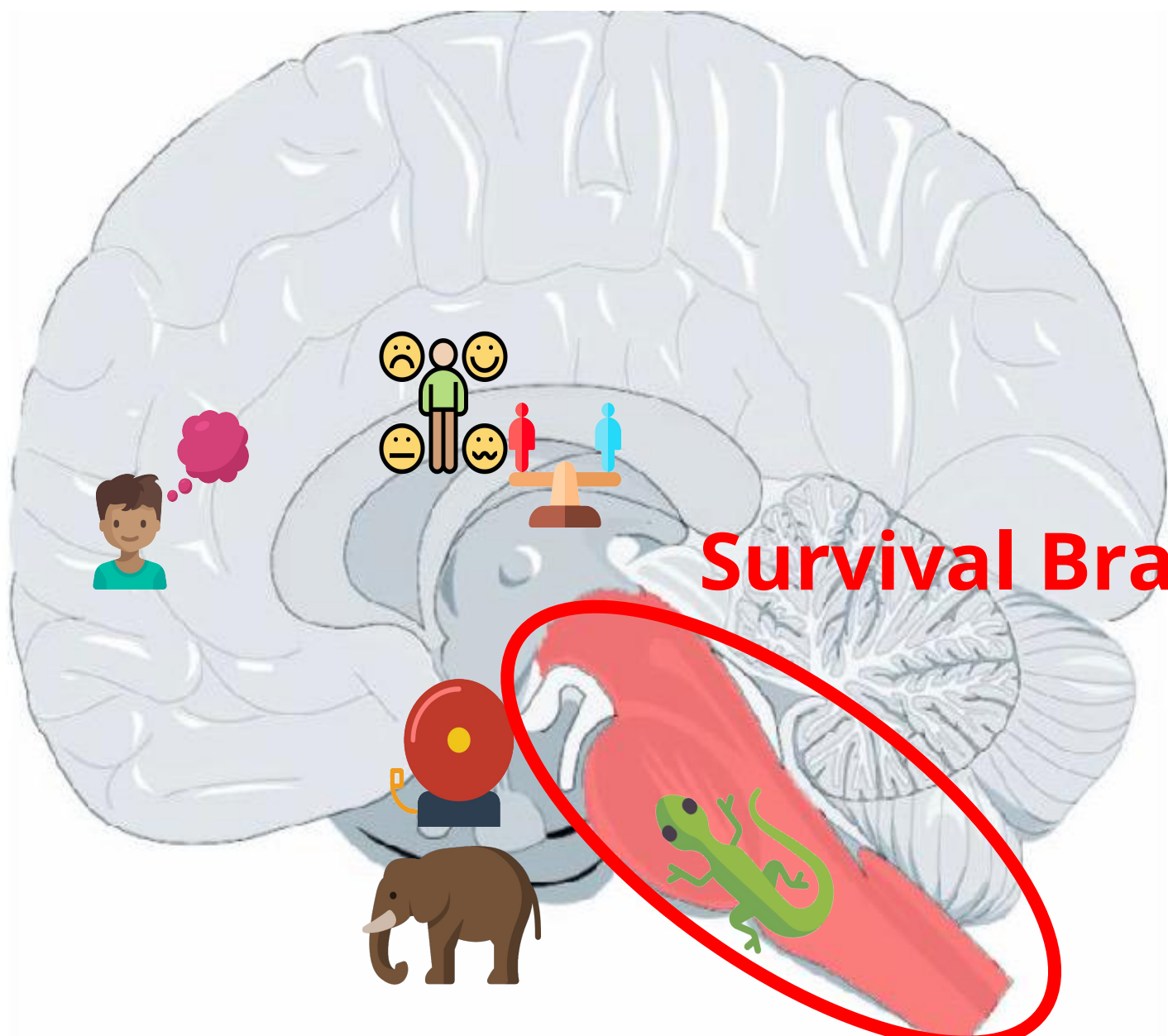
Brain Basics



Katie Perez

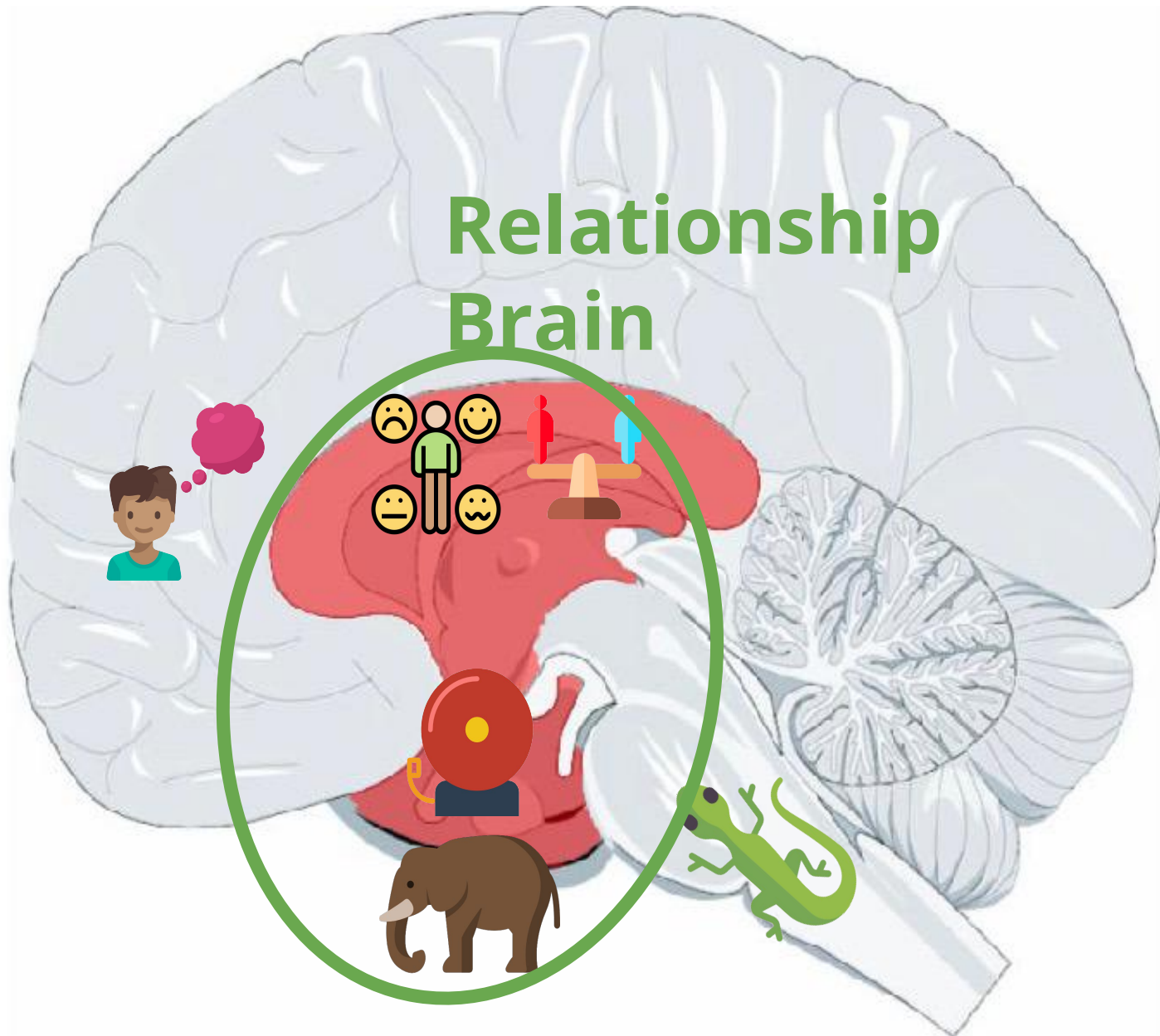
katieperez@essdack.org
@perezhasclass



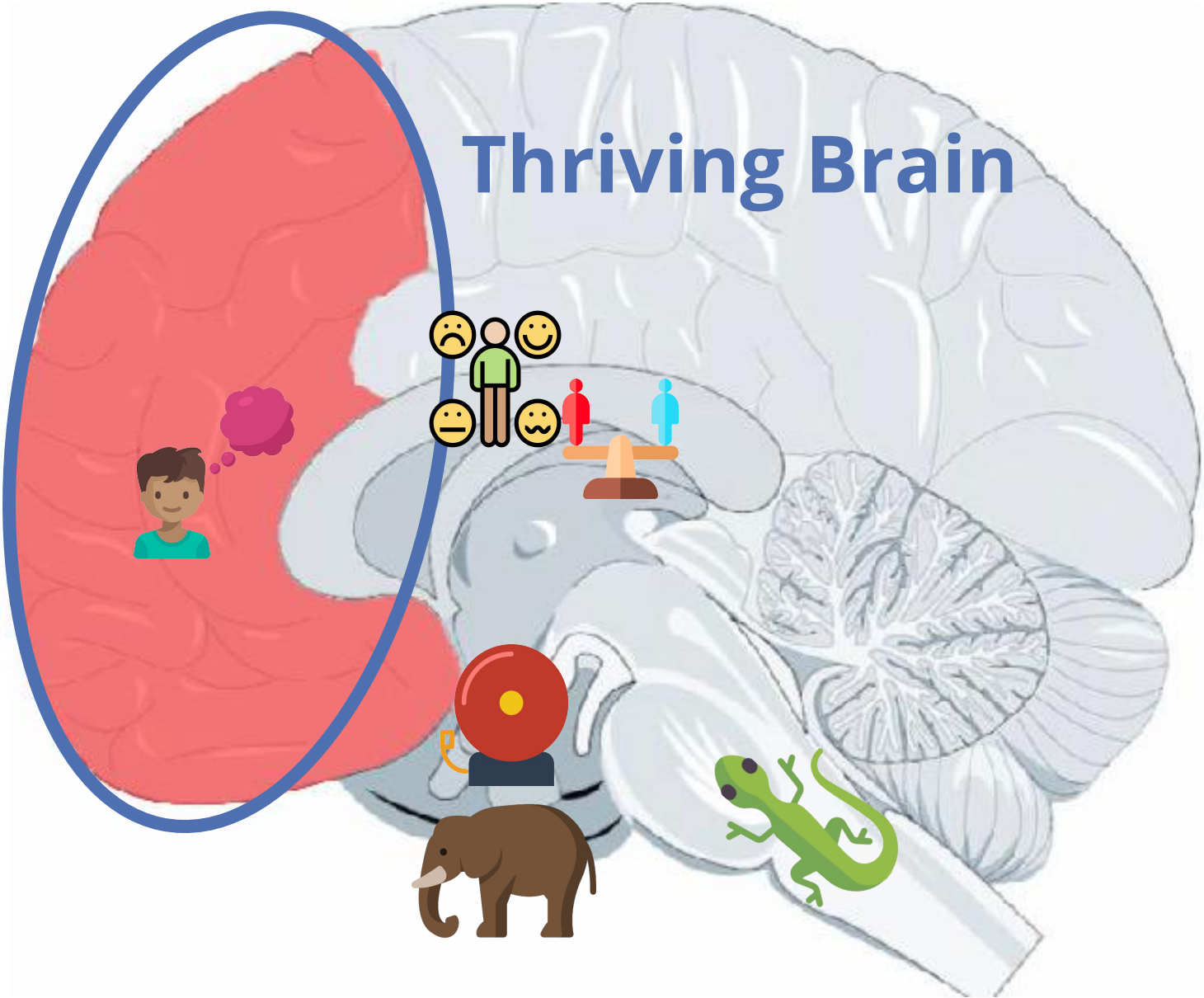


Survival Brain

Relationship Brain



Thriving Brain

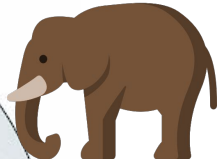


Six Parts of the Brain

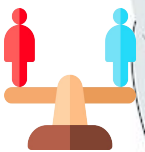
Cingulate
Self-Regulation Center



Hippocampus
Memory Center



Insula
Awareness Center



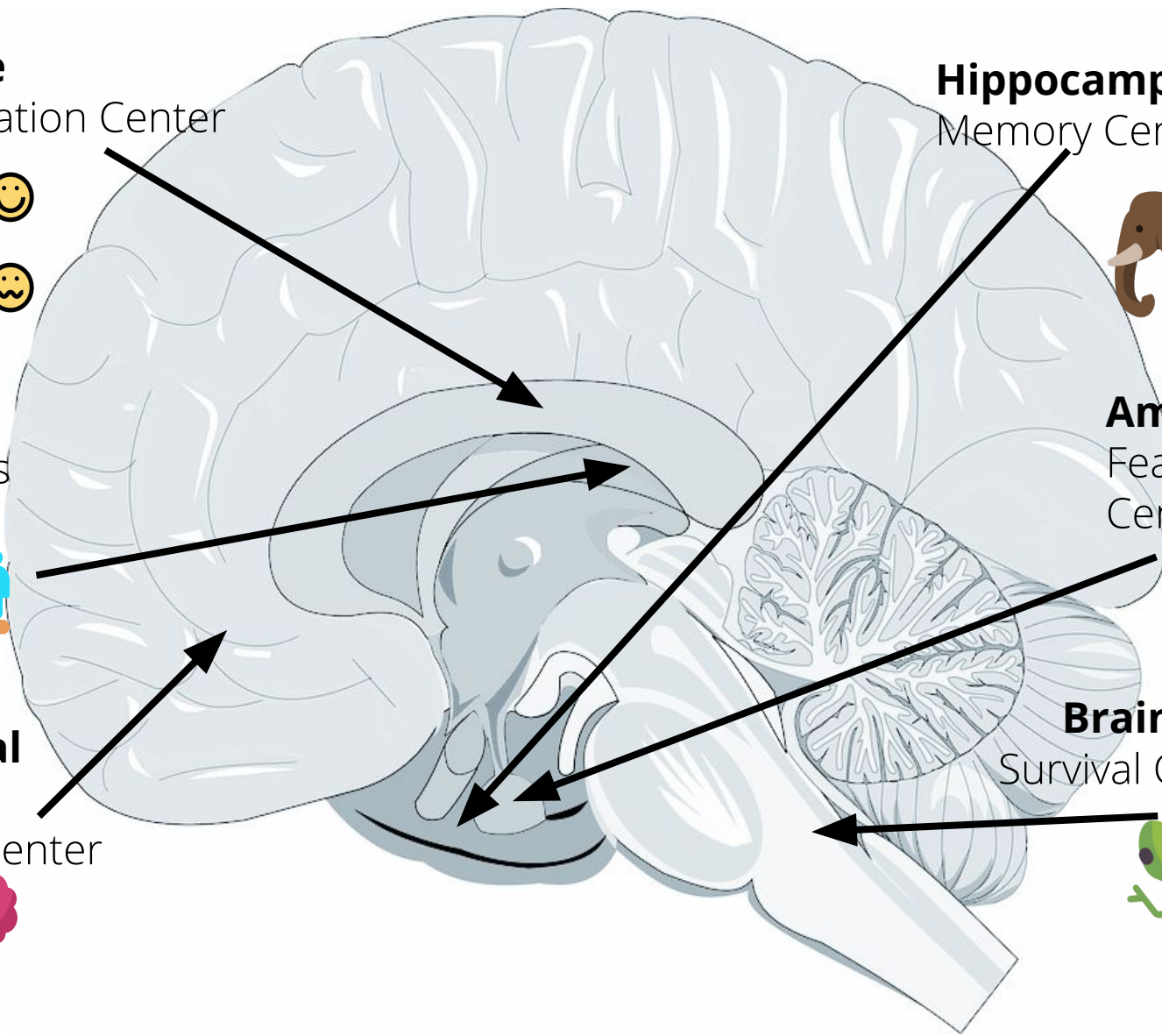
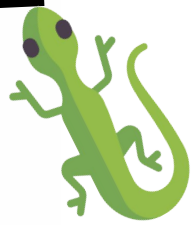
Amygdala
Fear Center



Prefrontal Cortex
Thinking Center



Brainstem
Survival Center



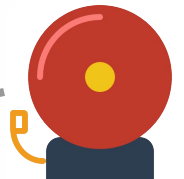
The amygdala is the brain's smoke detector.

It lets you know if there is a reason to be scared.

For people who have experienced trauma this part of the brain might be overactive.

That means it might signal the alarm to be scared when there isn't really a threat.

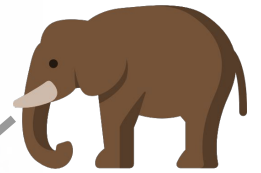
Amygdala
Fear Center



The hippocampus is the brain's memory bank.

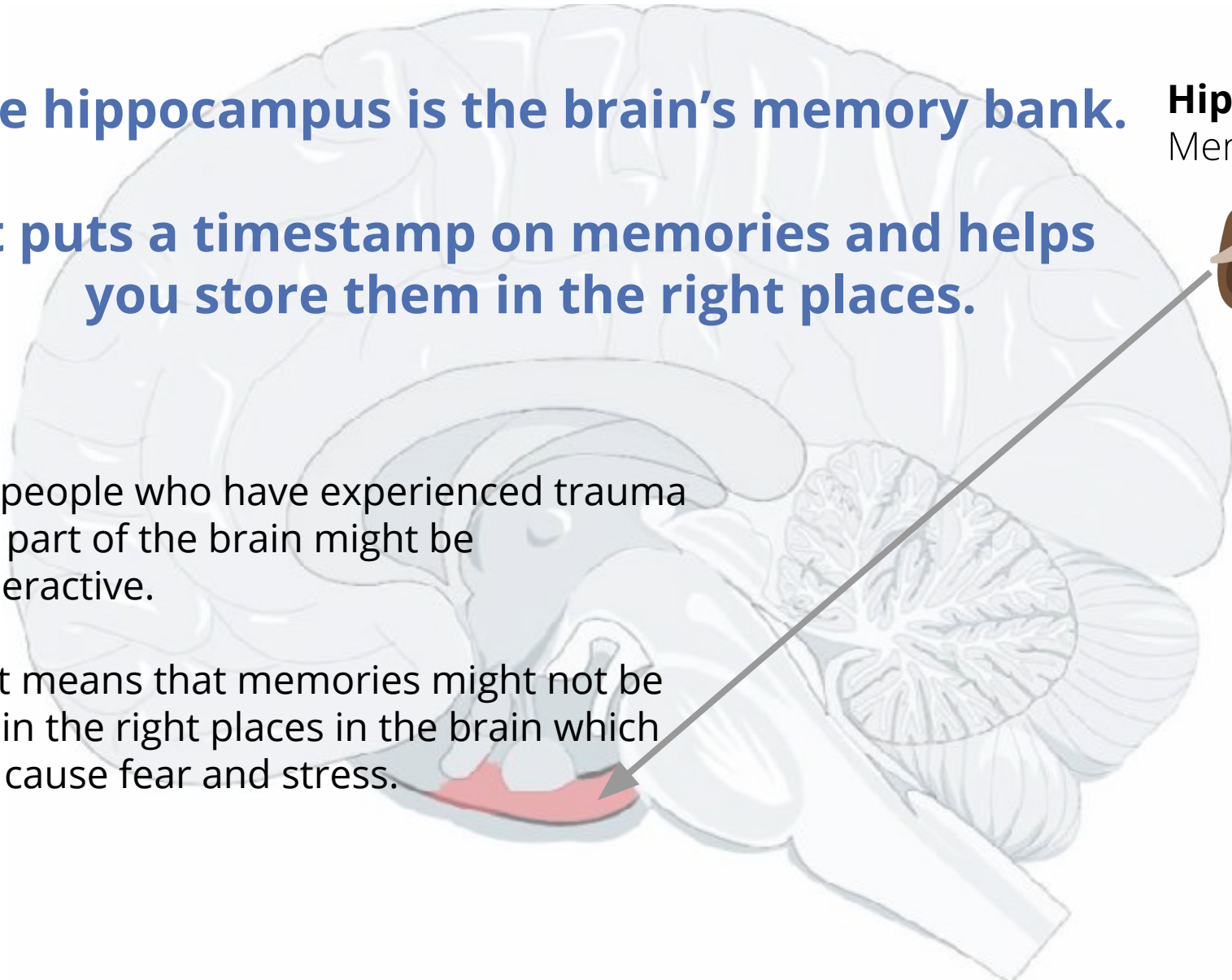
It puts a timestamp on memories and helps you store them in the right places.

Hippocampus
Memory Center



For people who have experienced trauma this part of the brain might be underactive.

That means that memories might not be put in the right places in the brain which can cause fear and stress.

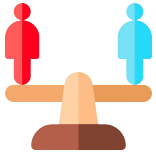


The insula is the brain's awareness center.

It helps you keep your body and feelings balanced.

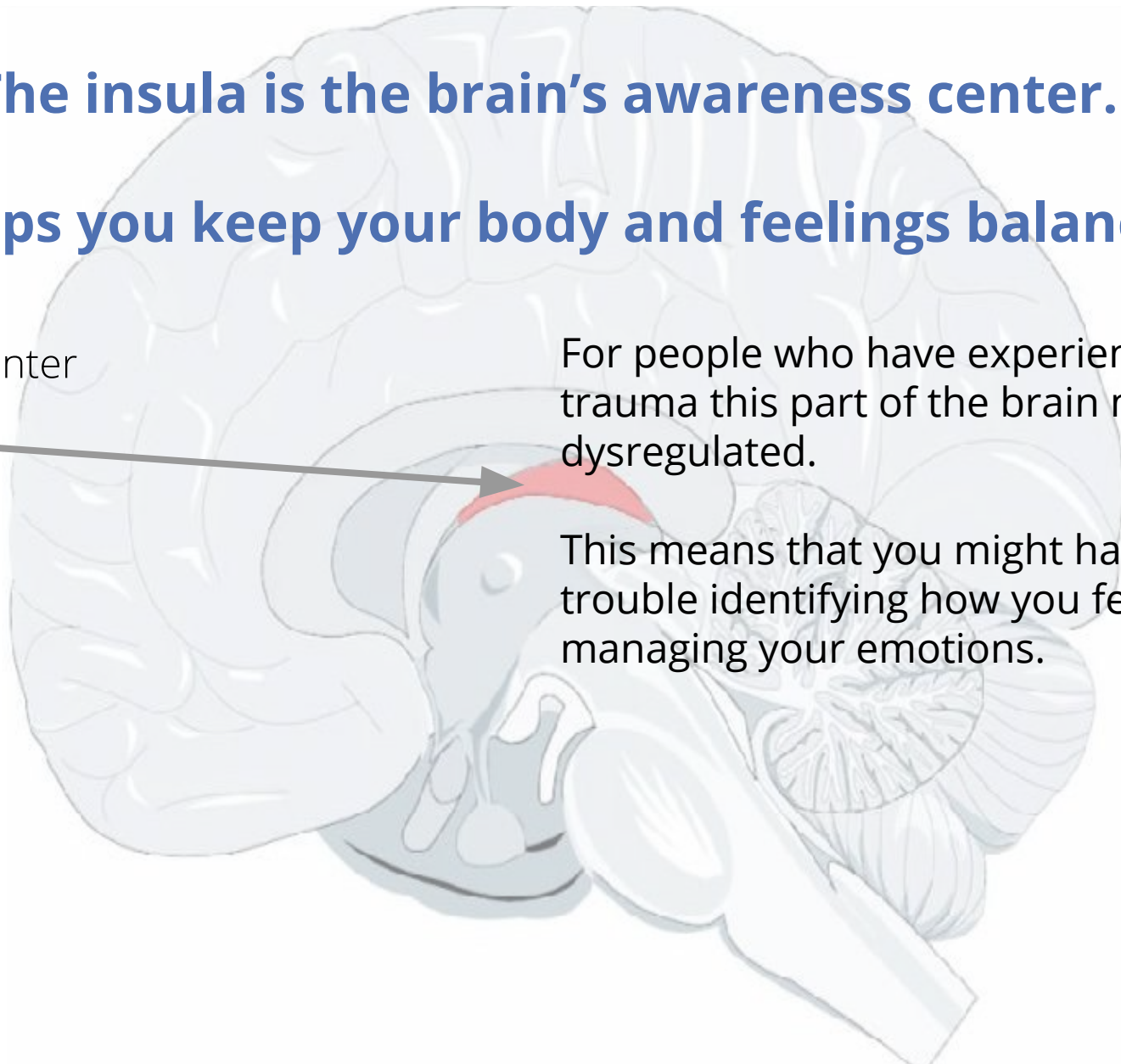
Insula

Awareness Center



For people who have experienced trauma this part of the brain might be dysregulated.

This means that you might have trouble identifying how you feel and managing your emotions.



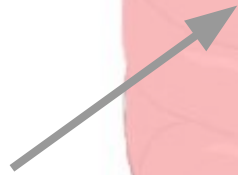
The prefrontal cortex is the brain's thinking center.

It helps you concentrate and make decisions.

For people who have experienced trauma this part of the brain might be underactive.

That means it might be hard to concentrate, make decisions, or be aware of yourself and others .

This is the last part of the brain to fully develop. It reaches maturity at the age of 25!



Prefrontal Cortex
Thinking Center

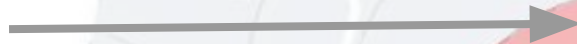


The cingulate is the brain's regulator.

It helps you to manage your emotions and thoughts.

Cingulate

Self-Regulation Center



For people who have experienced trauma this part of the brain might be underactive.

That means that you might have trouble handling conflicts, noticing mistakes, and regulating your emotions.

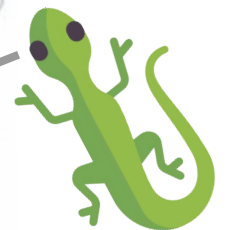
The brainstem is the brain's messenger.

It controls basic body functions such as breathing, swallowing, heart rate, blood pressure, consciousness, and whether one is awake or sleepy..

For people who have experienced trauma this part of the brain might be overactive.

That means that your brain is spending all of its time trying to keep you alive and it does not have the ability to think logically, process memories, or know the difference between safety and danger.

Brainstem
Survival Center

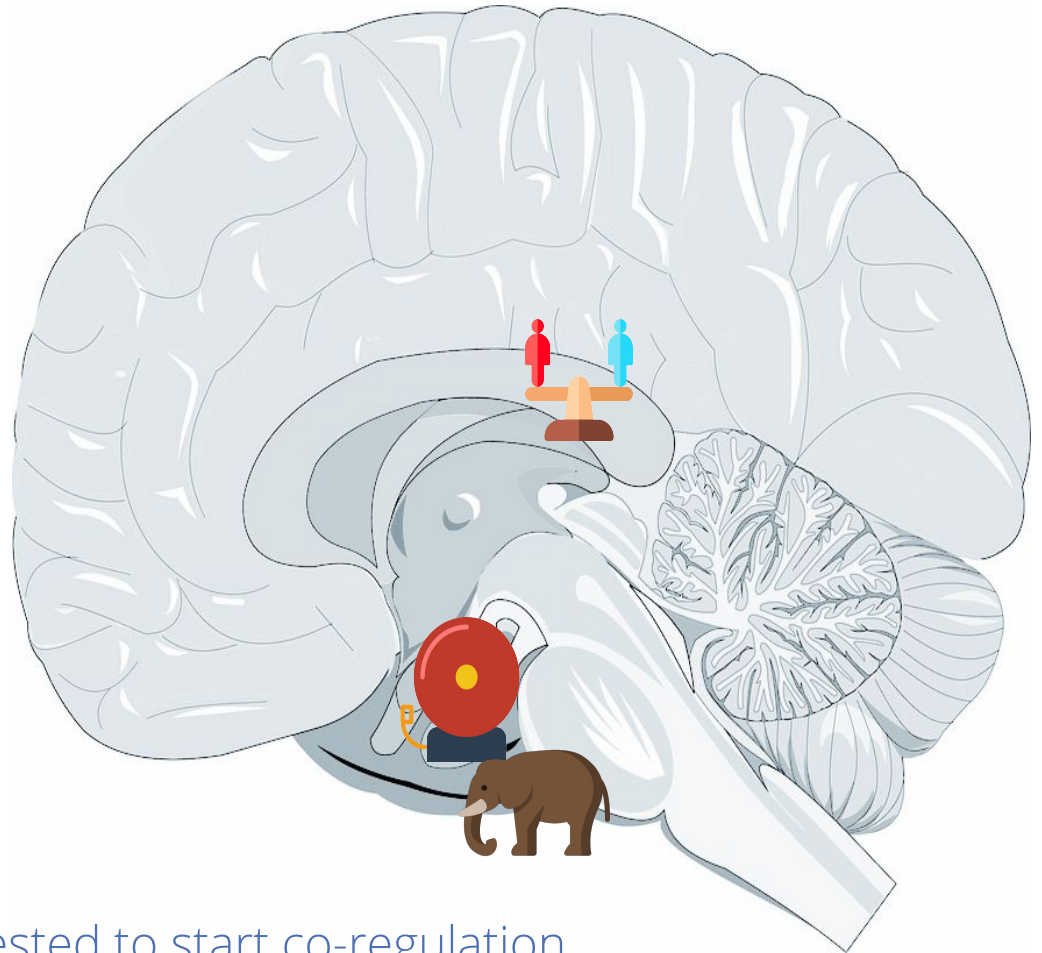


Now What...

Approaches for Brain Change

Bottom-Up Approaches to Brain Change

- Work through the body/senses to change the brain through the limbic system.
- Goals:
 - Deactivate amygdala
 - Strengthen/regulate insula
- Strategies:
 - Breathing exercises
 - Body scan
 - Muscle relaxation
 - Grounding exercises
 - Mindfulness
 - Yoga

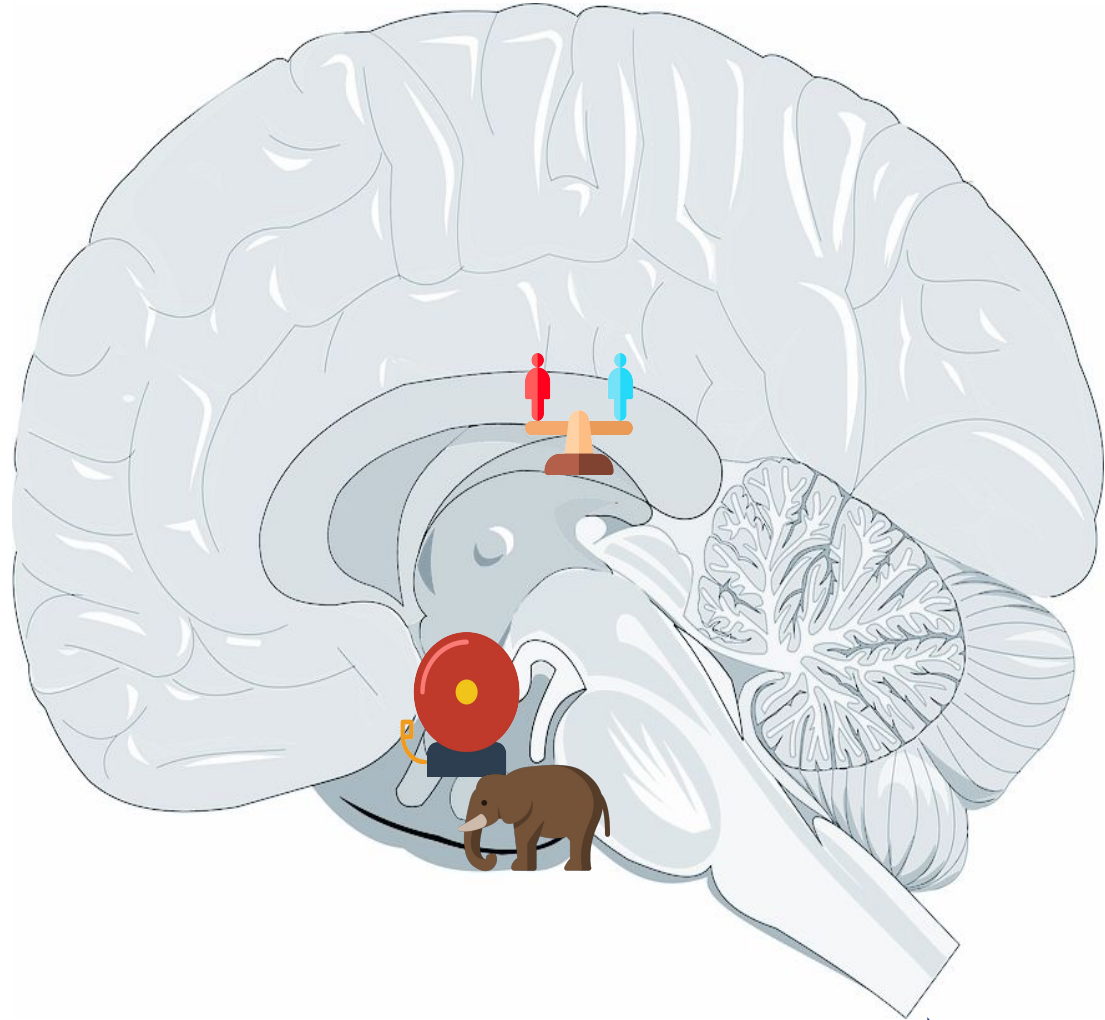


It is always suggested to start co-regulation processes with bottom-up strategies.

Bottom-Up Approaches to Brain Change

Deactivation of the amygdala:

- Reduces reactivity when trauma triggers arise.
- Reduces the stress response (sympathetic nervous system arousal)
- Results in decrease in hypervigilance



Bottom-Up Approaches to Brain Change

Overactive insula:

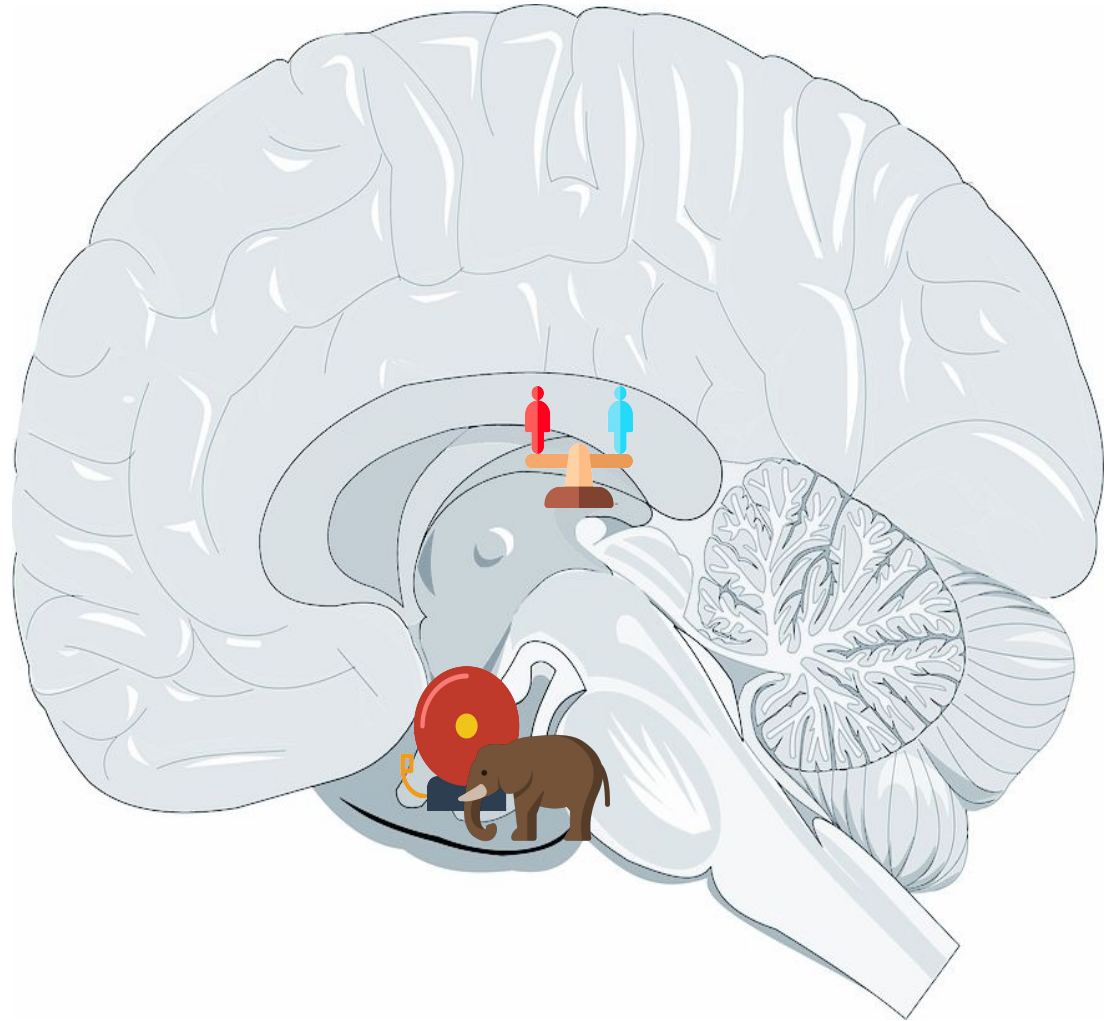
- Increased reactivity and outbursts

Underactive insula:

- Dissociation and numbing

Regulated insula:

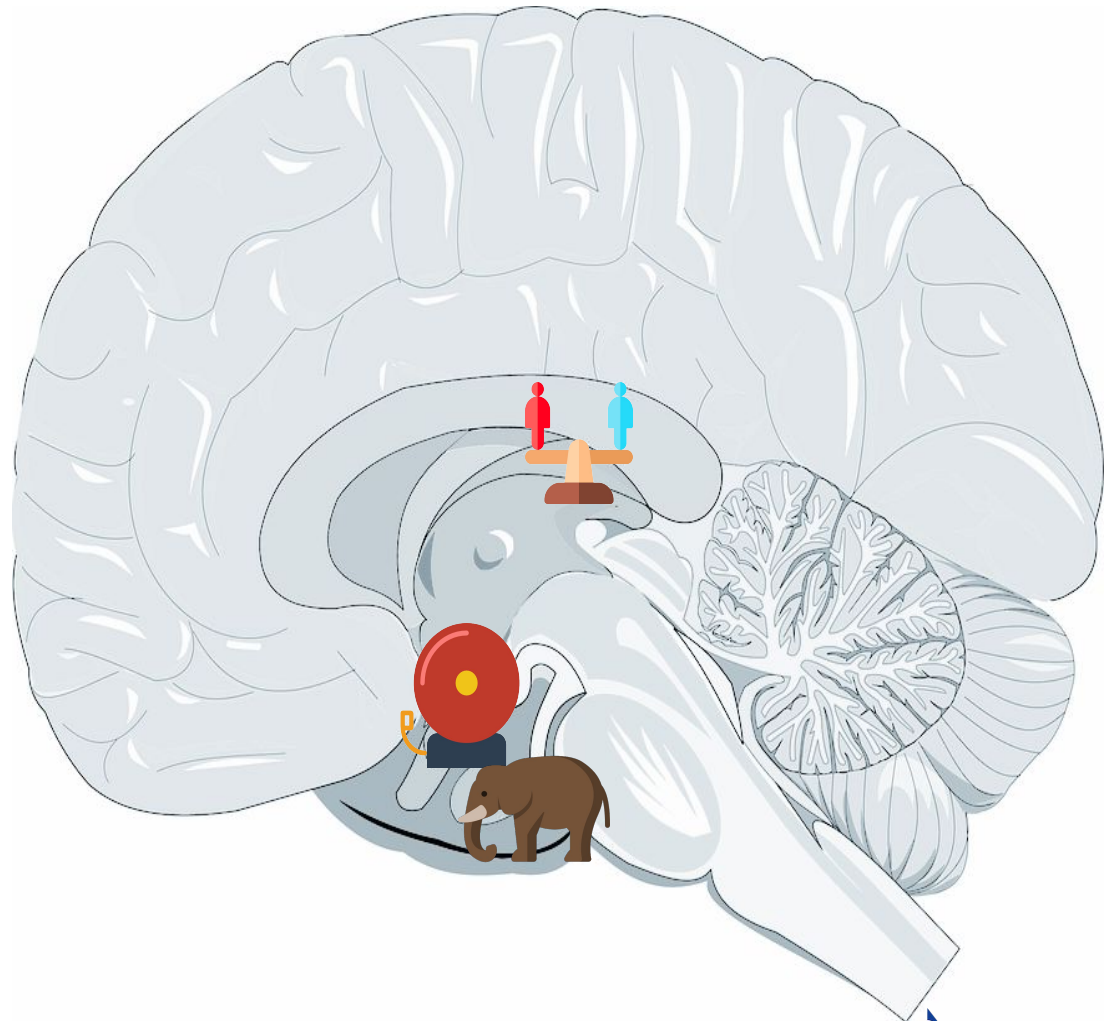
- Improved interoception (awareness of self and others)
- Fewer emotional outbursts
- Fewer dissociative symptoms



Bottom-Up Approaches to Brain Change

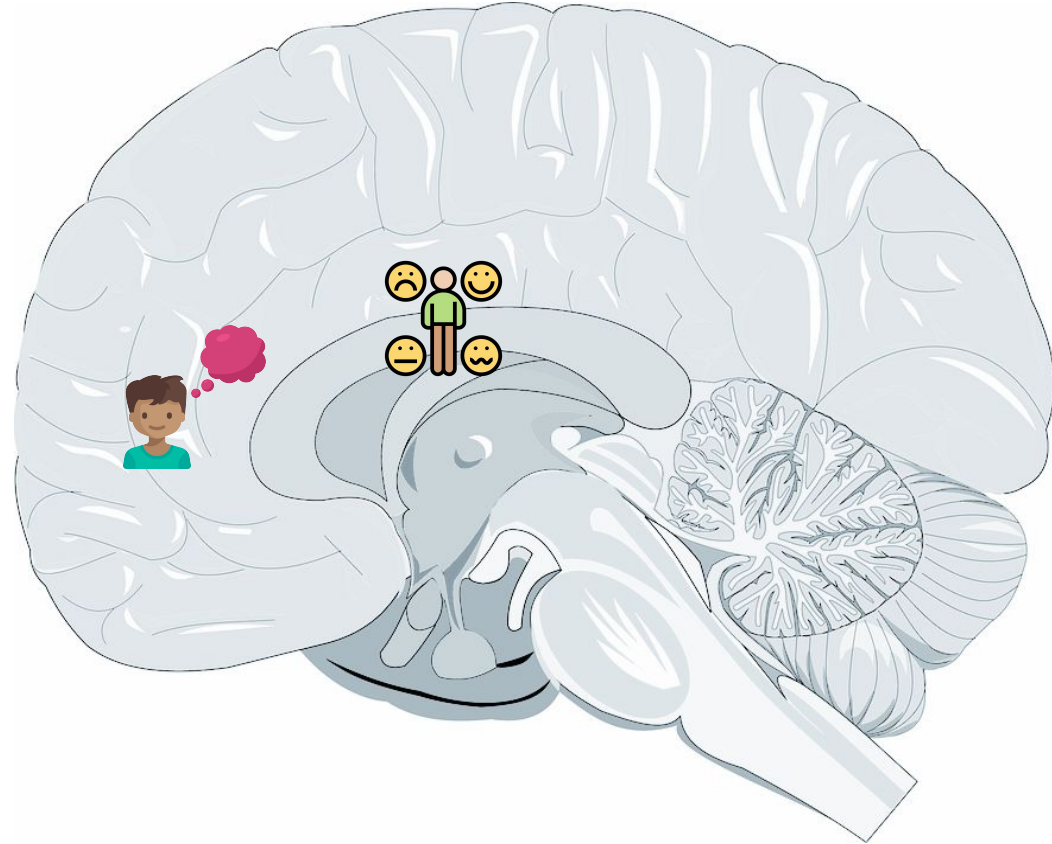
Activation of the hippocampus:

- Increases feelings of safety
- Reduces fear
- Increases ability to manage negative memories
- Reduces symptoms of PTSD



Top-Down Approaches to Brain Change

- Engages the prefrontal cortex and cingulate to change the brain
- Goals:
 - Strengthen prefrontal cortex and cingulate
- Strategies:
 - Talk therapy
 - Cognitive Behavioral Therapy
 - Mindfulness



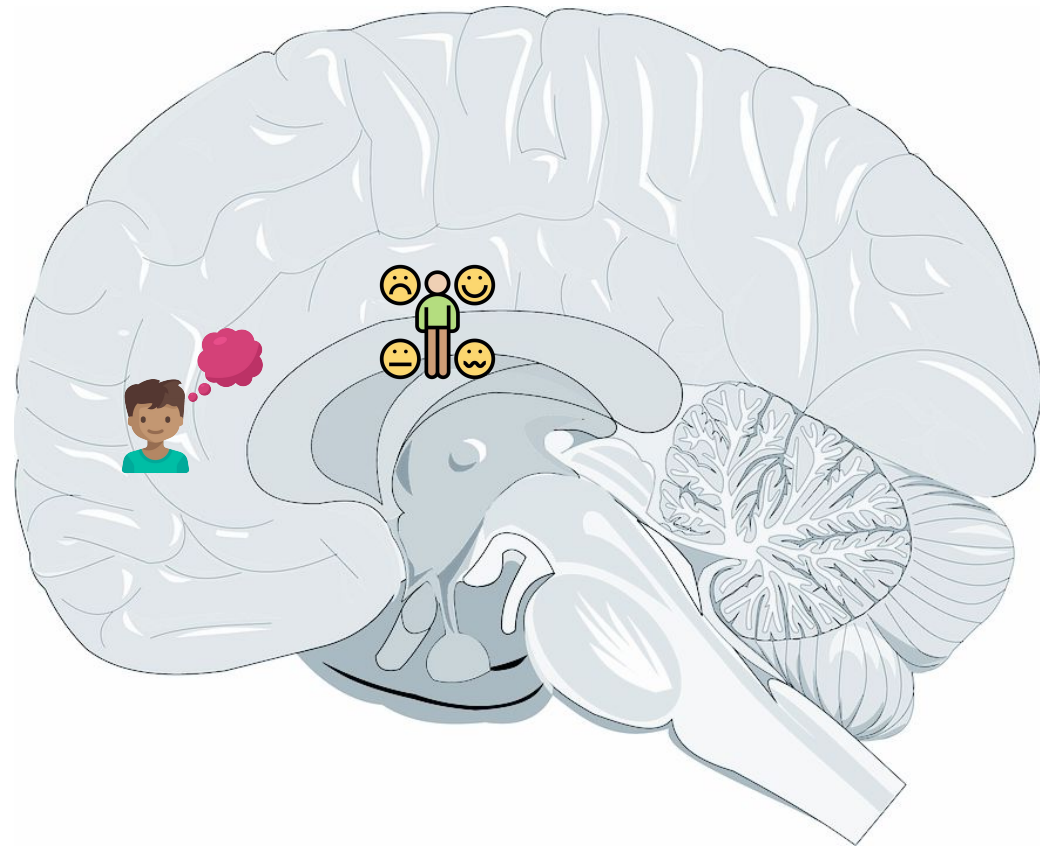
Top-Down Approaches to Brain Change

Activation of the prefrontal cortex increases:

- Ability to think clearly when stressed
- Self-awareness
- Attunement
- Problem-solving
- Concentration

Activation of the cingulate increases:

- Ability to regulation emotions
- Regulate or change distressing thoughts
- Ability to process and solve competing thoughts



Identifying Freezing and Boiling Points



The point where your relaxation become so uncomfortably high that it actually stresses you out.



The point at which you begin to feel out of control and overwhelmed by stress, unable to manage your stress response.



If you'd like more information, please reach out to the ***ESSDACK Resilience Team***:

resilience-coaching.essdack.org

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