



Behavior and the Br

Renee Black & Kathy
Growney

@kcrpdc



Outcomes

- ✘ Learn how trauma affects the brain and development
- ✘ Understand how to utilize classroom practices to respond to behavior

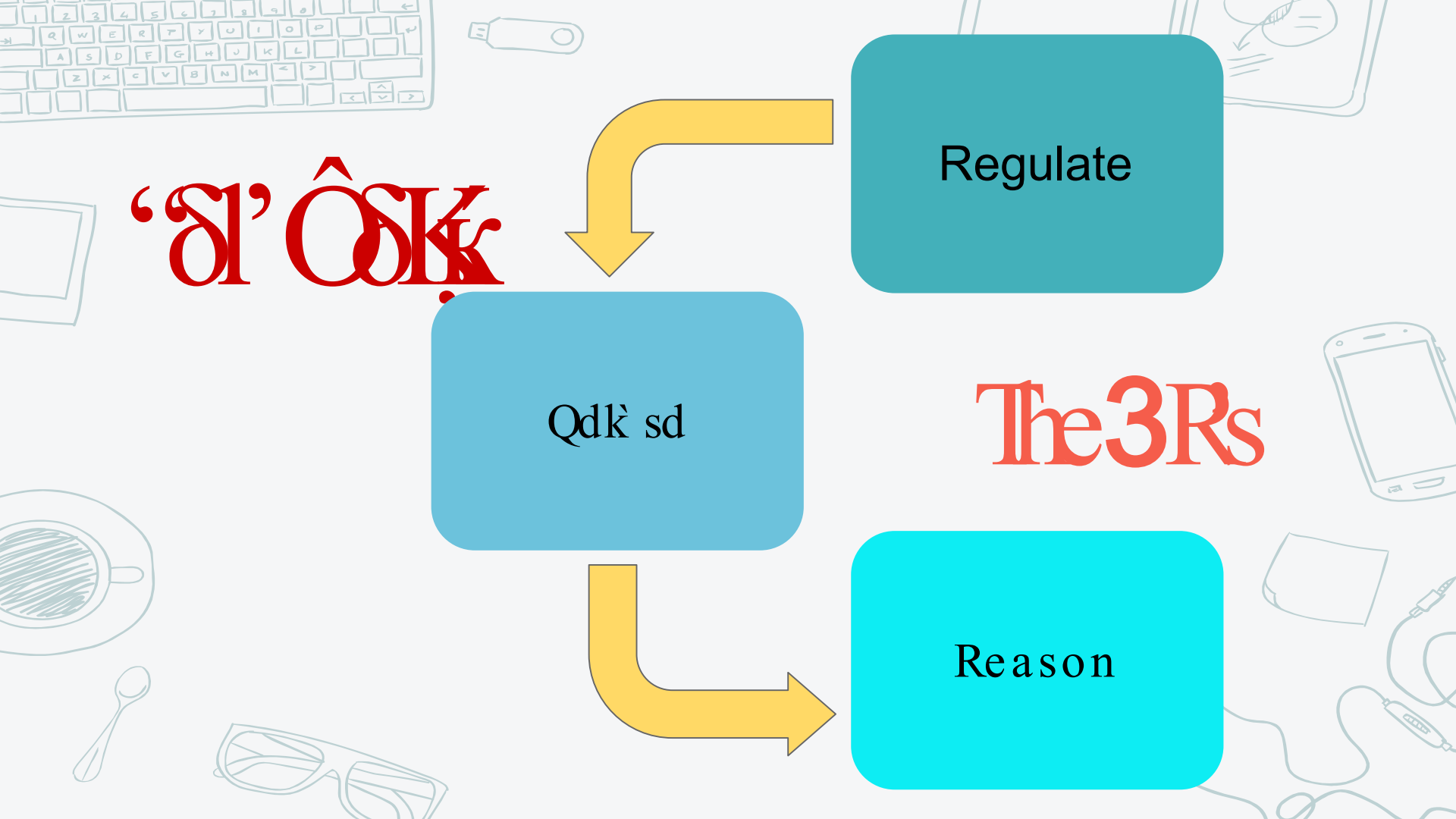
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Regulate

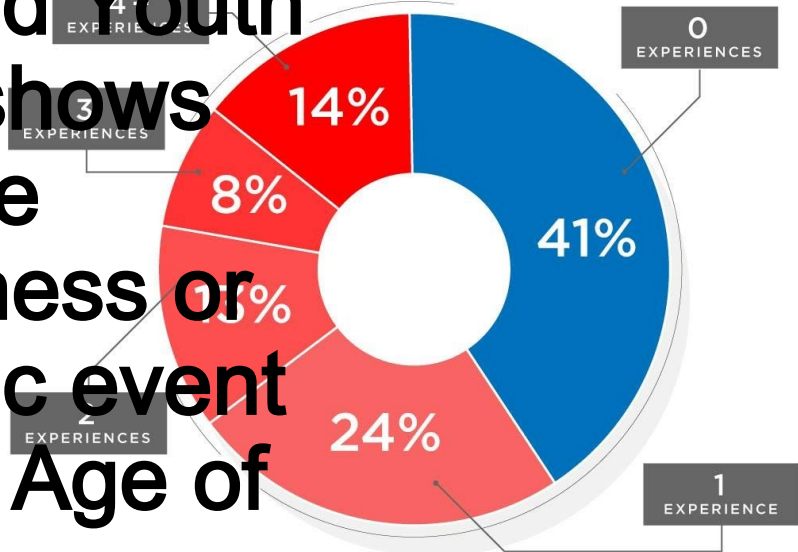
The 3Rs

Reason



Research conducted by the National Center for Mental Health Promotions and Youth Violence Prevention shows that **26%** of children in the United States will witness or experience a traumatic event before they reach the Age of **four**

NUMBER OF ADVERSE CHILDHOOD EXPERIENCES

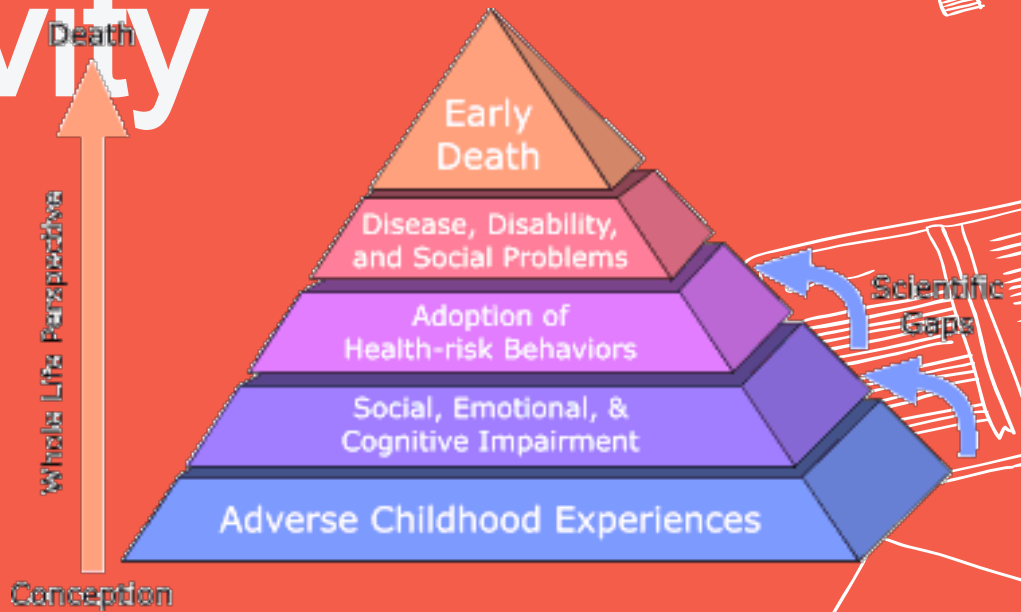


Source: Centers for Disease Control and Prevention

Aces Activity

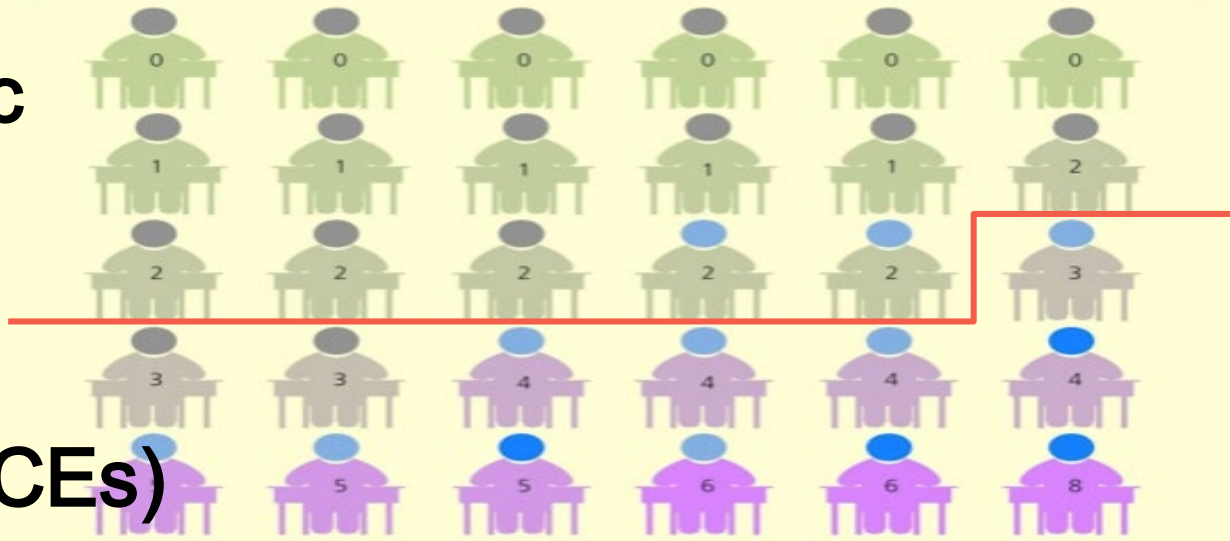
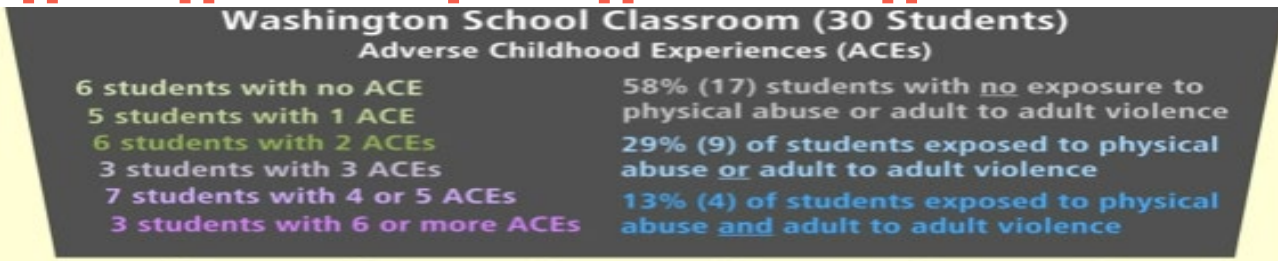
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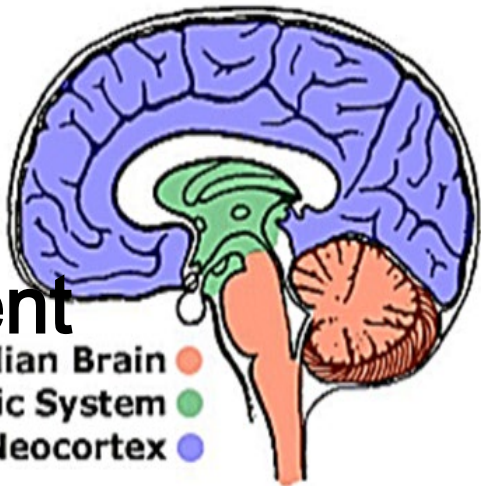


13 of every 30 students in a classroom experience toxic stress from more Adverse Childhood Experiences (ACEs)

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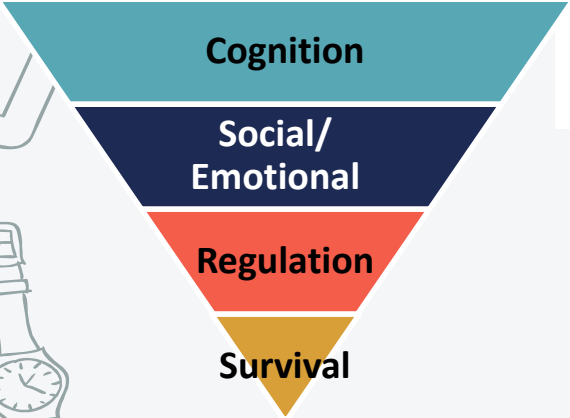


Brain Development

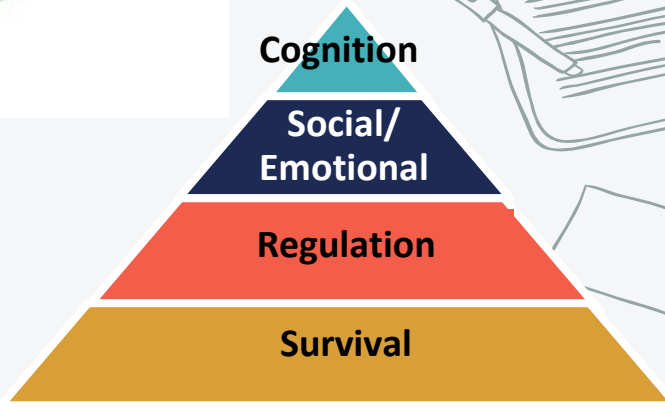


Reptilian Brain ●
Limbic System ●
Neocortex ●

Typical Development



Adverse Experience



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Researchers believe that the frontal lobes and amygdala are among the most important brain structures affecting emotions.

Feelings of happiness and pleasure are linked to the prefrontal cortex.

Anger, fear, sadness, and other negative emotions are linked to the amygdala.





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Typical Development

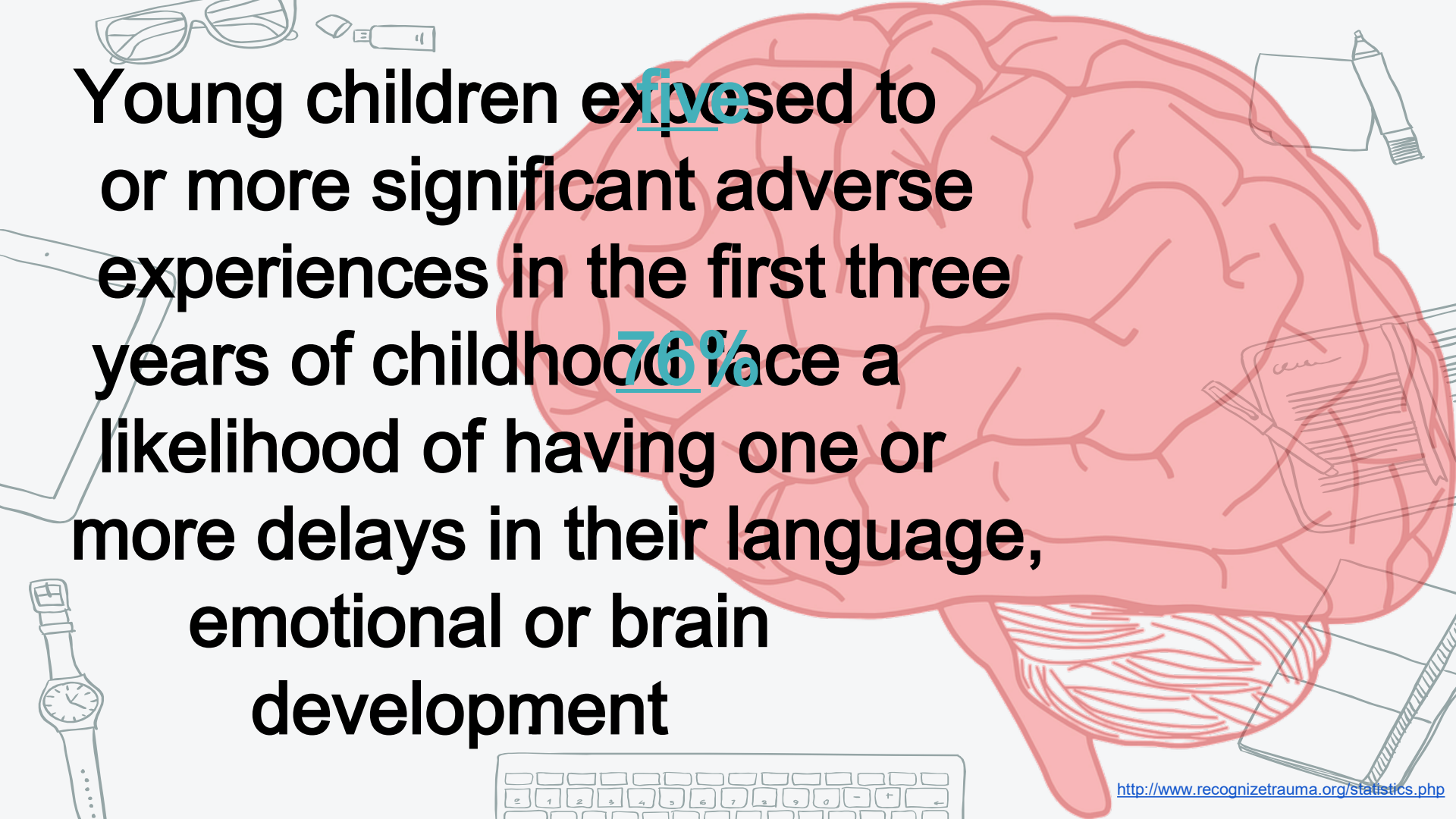
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Development Impacted by Trauma

- I live in a predictable & benevolent world
- I am worthwhile
- I am hopeful & optimistic about my future
- I have the ability to impact my life

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- The world is not safe
- People want to hurt me
- I am afraid
- No one will help me
- I am not good/smart/worthy enough for people to care about me
- It will never get better
- I need to establish personal power/control



Young children exposed to
or more significant adverse
experiences in the first three
years of childhood 76% face a
likelihood of having one or
more delays in their language,
emotional or brain
development

Adversely affects students' ab

- Acquire language & communication skills
- Understand cause & effect
- Take another person's perspective
- Attend to classroom instruction
- Regulate emotions
- Engage the curriculum
- Utilize executive functions
 - Make plans
 - Organize work
 - Follow classroom rules

Affects School Perform

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HOW IS THE
TRAUMA
AND GRIEF
AFFECTING
THIS STUDENT'S
CAPACITY
TO LEARN?



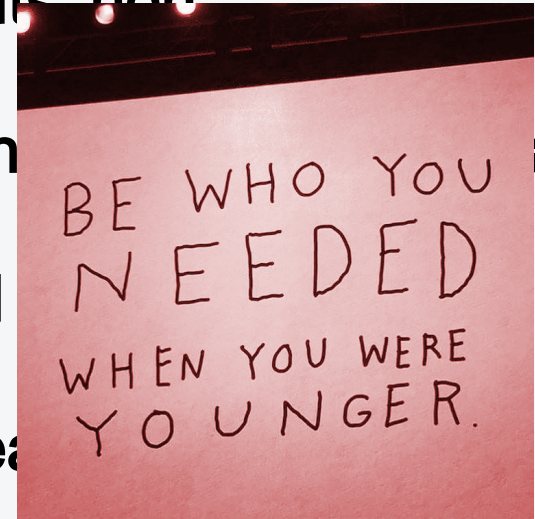
Adverse Experiences

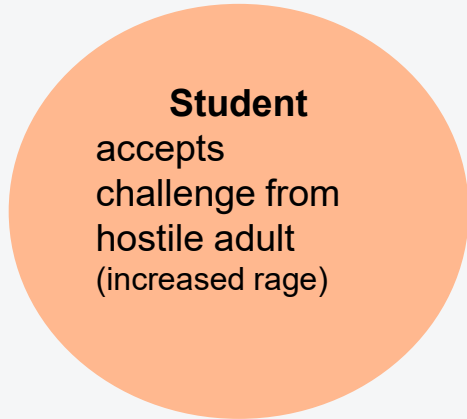
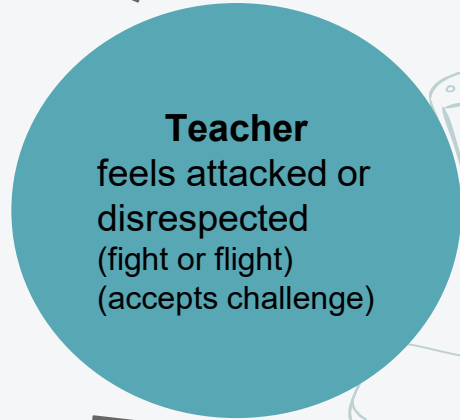
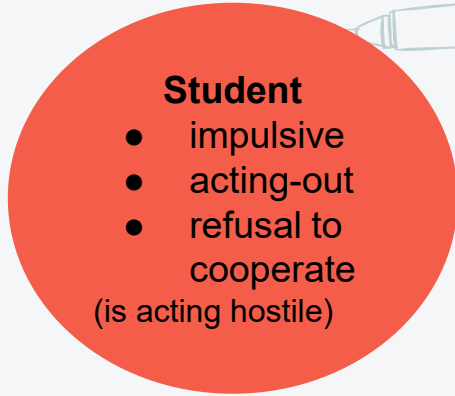
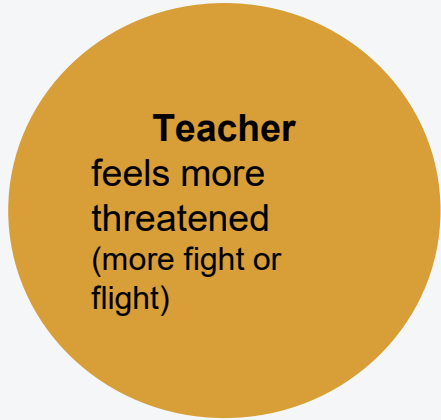
Young children impacted by adverse experiences spend much time in a low level state of fear learning to read adults' nonverbal cues to keep themselves safe

- Their safety depends upon knowing when a person is a "dangerous bear"

Student may not interpret innocent or neutral touches from others at school as benign

- Difficult for students to learn these cues as meaning different things in different environments





CLASSROOM

What Flight, Fight, or Freeze Looks Like

Flight	Fight	Freeze
<ul style="list-style-type: none">• Withdrawing	<ul style="list-style-type: none">• Acting out	<ul style="list-style-type: none">• Exhibiting numbness
<ul style="list-style-type: none">• Fleeing the classroom	<ul style="list-style-type: none">• Behaving aggressively	<ul style="list-style-type: none">• Refusing to answer
<ul style="list-style-type: none">• Skipping class	<ul style="list-style-type: none">• Acting silly	<ul style="list-style-type: none">• Refusing to get needs met
<ul style="list-style-type: none">• Daydreaming	<ul style="list-style-type: none">• Exhibiting defiance	<ul style="list-style-type: none">• Giving a blank look
<ul style="list-style-type: none">• Seeming to sleep	<ul style="list-style-type: none">• Being hyperactive	<ul style="list-style-type: none">• Feeling unable to move/act
<ul style="list-style-type: none">• Avoiding others	<ul style="list-style-type: none">• Arguing	
<ul style="list-style-type: none">• Hiding or wandering	<ul style="list-style-type: none">• Screaming/yelling	
<ul style="list-style-type: none">• Becoming disengaged		



The Brain Architecture

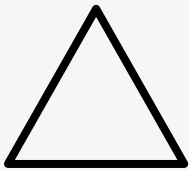
<http://www.thebrainarchitecturegame.com/>

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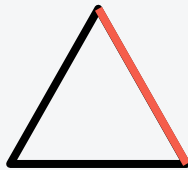
Your Genetic Lottery

Roll dice to find out your base:

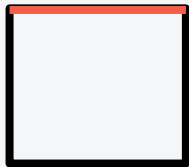
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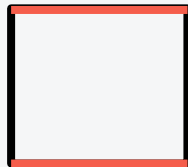
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3.



5.



6.



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Life Experiences Shape Brain D

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Build Neural Connections

$$N^{\wedge} \llbracket \text{Pts} \hat{D} \cdot \square \cdot \text{Pts} \llcorner \cdot \triangle \blacksquare \leq \acute{s} \wedge \text{||} \acute{s}$$

$$f^{\wedge} \llbracket \cdot^2 \blacksquare \text{Pts} \hat{t} \triangle \acute{O} \llcorner \wedge \blacksquare \llbracket \text{Pts}^2 \wedge \text{||} \acute{s} \llcorner \triangle \blacksquare \acute{s} \cdot \acute{N} \text{Pts} \cdot \hat{t} \triangle \acute{O}$$
$$\llbracket \blacksquare \text{Pts} \text{||} \acute{s}$$

$$\text{☺} \llbracket \llbracket \text{||} \acute{s} \blacksquare \hat{t} \square \cdot \text{||} \blacksquare \text{||} \text{||} \square \text{?} \llbracket \hat{t} \llcorner \cdot \frac{1}{4} \text{Pts} \wedge \triangle \cdot \llbracket \square \text{?} \text{||} \blacksquare \llcorner \cdot$$

$$\text{☹} \blacksquare \llbracket \text{Pts} \llbracket \cdot^2 \text{Pts} \text{||} \blacksquare \text{||} \text{||} \square \llcorner \wedge \sigma \llbracket \text{||} \blacksquare \hat{C} \llcorner \acute{N} \llbracket \wedge \text{||} \blacksquare \cdot \square \cdot \triangle \blacksquare \llbracket \blacksquare \text{Pts} \wedge$$
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$$\cdot \hat{a} \blacksquare \triangle \hat{t} \triangle \acute{O}^2 \blacksquare \text{Pts} \hat{t} \triangle \acute{O}$$
$$^2 \text{Pts} \frac{1}{4} \text{||} \acute{s}$$

The Pruning Phase

o $\hat{C} \cdot \wedge$ $\frac{1}{2}$ Pts \cdot $\hat{\Delta} \cdot \square$ \wedge \blacksquare $\frac{1}{2}$ Pts \blacksquare Pts $\frac{1}{2}$

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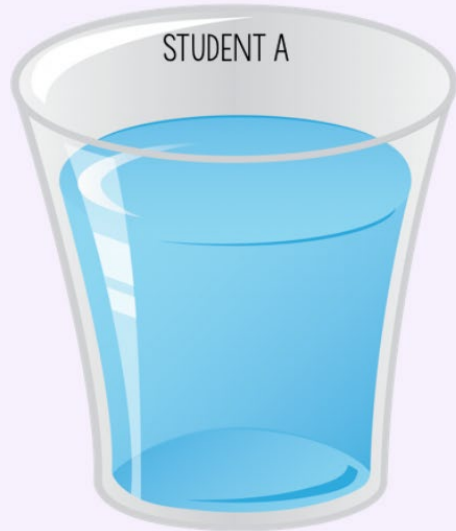
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Goal is to have the tallest, sturdiest brain possible, that does not collapse under the weight of stresses.

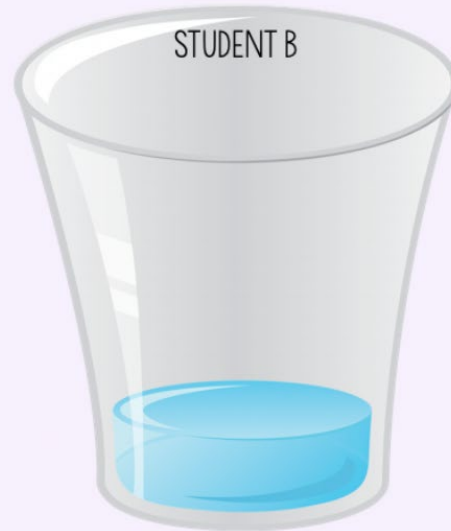
Discussion

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- Pts ʌ 2 Pts ◻ ā t' ¼ ʌ ʌ ʃ t' ◻ ◻ ξ
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- ʃ ʃ ʃ ʃ Pts ◻ ʌ t' ◻ Pts Ć ^ Ć ◻ ʌ . ā ʌ t' ◻ ¼ ◻ Ō
- ā t' ¼ ʃ ʃ ʃ ʃ . ^ ʌ Pts t' ◻ Pts ξ ! ◻ ś ^ ◻ ʌ t' ¼ ξ

THESE CUPS REPRESENT A STUDENT'S CAPACITY FOR STRESS OR DIFFICULTIES THEY EXPERIENCE AT SCHOOL.



Student A comes to school with her cup already full. At home, she may experience hunger, violence, or abuse. Small difficulties or challenges at school may send her over the edge.



Student B comes to school with her cup almost empty. At home, she experiences support, a loving family, and security. She can handle difficulties and challenges at school without being sent over the edge.