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ACEs & Trauma: The Effects on Student Learning

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TODAY'S AM AGENDA:

1. The Adverse Childhood Experience Study
2. The Significance of the ACEs Study
3. The Science Behind ACEs
4. Trauma and the Brain
5. Our Piece of the Puzzle
6. Action Planning and Closing

The Adverse Childhood Experience Study

March 24, 2026

ACEs STUDY

NEWS

Early Adversity Increases Physical, Mental, Behavioral Problems, Scientists Report





Dr. Robert Anda & Dr. Vincent Felitti
Investigators

Centers for Disease Control & Prevention, Kaiser Permanente Study

Over 17,000 study participants

The ACE Study confirms, with scientific evidence, that adversity early in life increases physical, mental and behavioral problems later in life.

1 The ACES Study: Origins and Purpose



Identified a Pattern (Mid-1980s): Dr. Vincent Felitti, at Kaiser Permanente San Diego, noticed a high dropout rate among obesity program participants—many had successfully lost weight.



Followed Up with Interviews: Felitti interviewed these dropouts and found that many had experienced childhood abuse or neglect, suggesting a link between these experiences and obesity.



Collaborated for Deeper Understanding: He partnered with epidemiologist Dr. Robert Anda (CDC) to investigate the broader impact of Adverse Childhood Experiences (ACEs) on health and well-being.

Purpose of the ACES Study

To understand how early, adverse experiences affect lifelong health, behavior, opportunity, and well-being.

2 Key Findings of the ACES Study



The study found a strong, dose–response relationship:

As the number and severity of ACEs increase, so does the risk for negative health and life outcomes.

Higher ACEs are linked to:

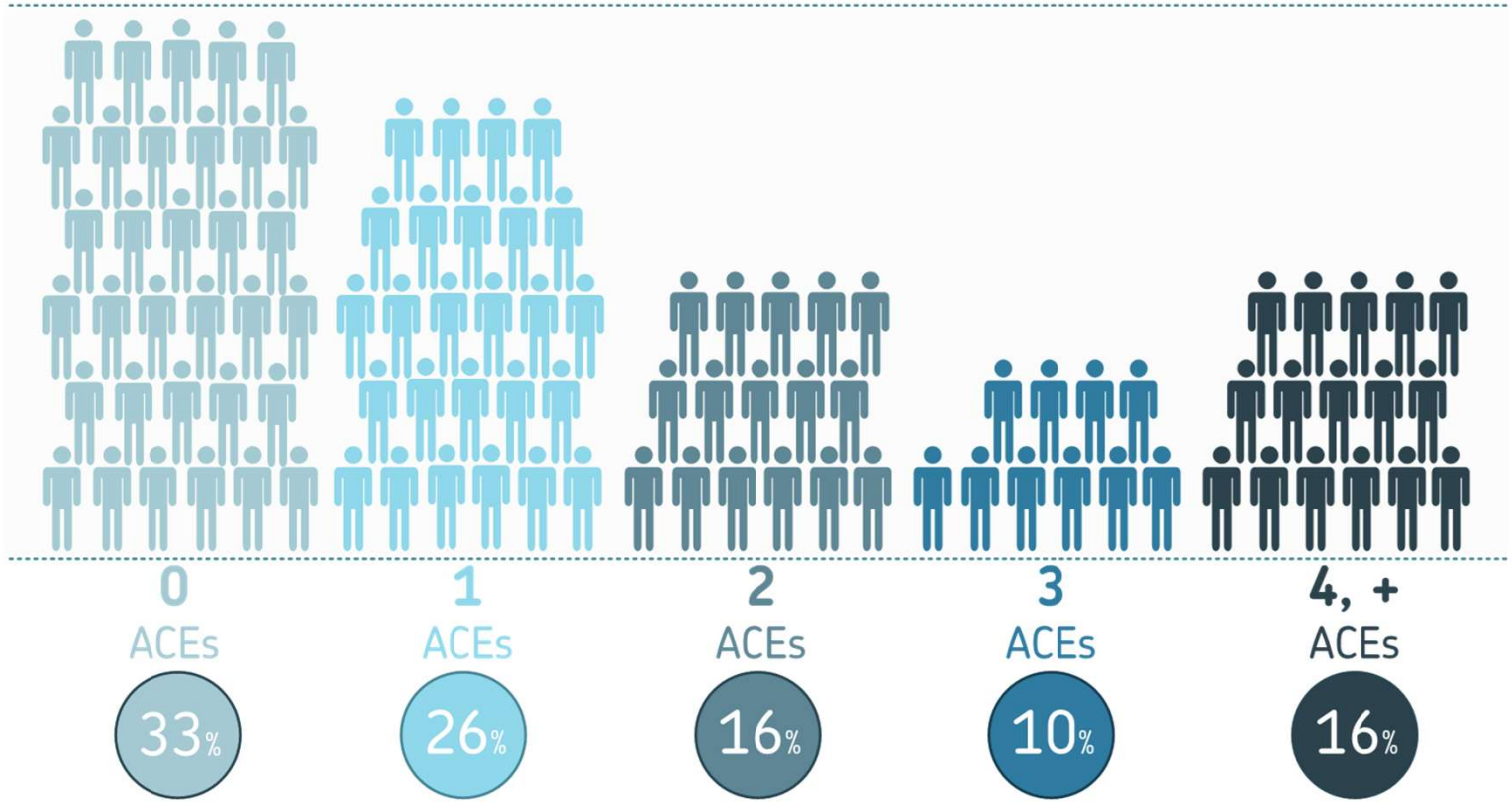
- Chronic diseases
- Substance abuse
- Mental health problems
- Premature death
- Increased risk for obesity
- Poor academic and social outcomes
- Intergenerational cycles of trauma

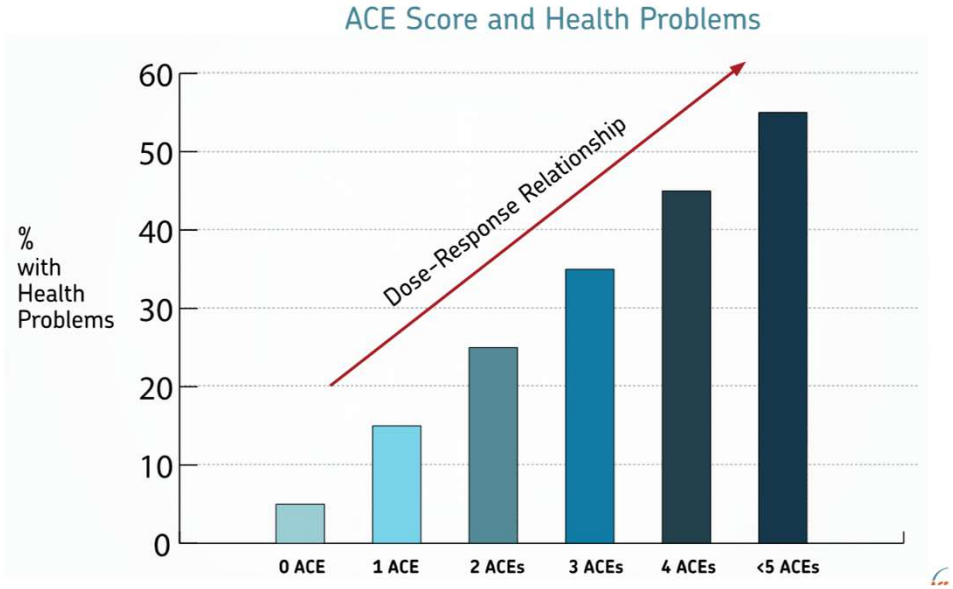
ACEs are common, powerful, and preventable.

Understanding ACEs helps us build healthier, more resilient communities.

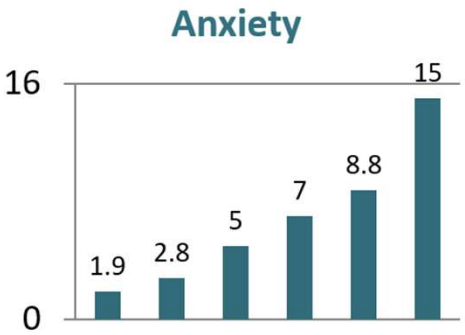
The Significance of the ACE Study

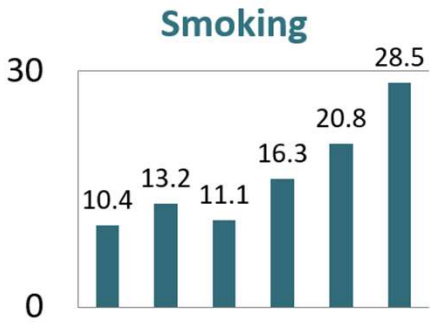
ACE Score = Number of ACE Categories

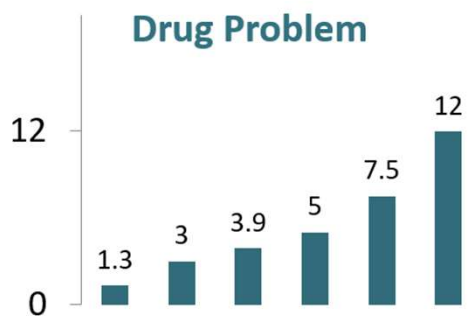


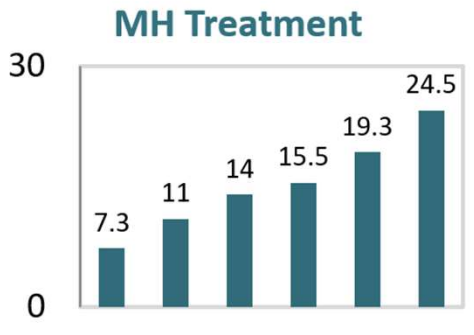


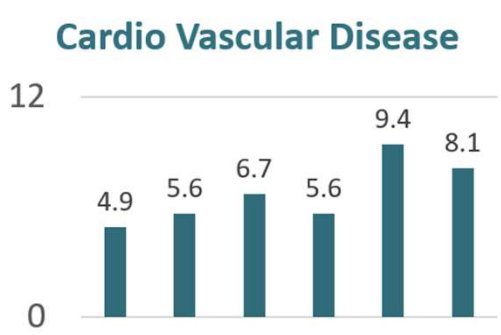
People who report higher ACE scores are more likely to have HEALTH and SOCIAL problems – in fact, as the ACE Score goes up, the percentage of people with health and social problems also goes up.

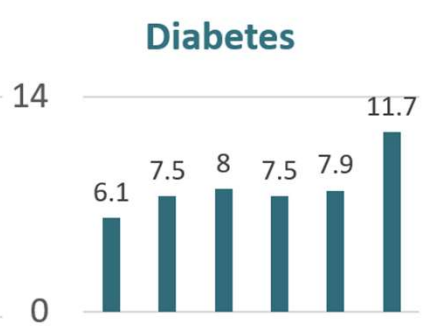

Anxiety
16
0
1.9
2.8
5
7
8.8
15

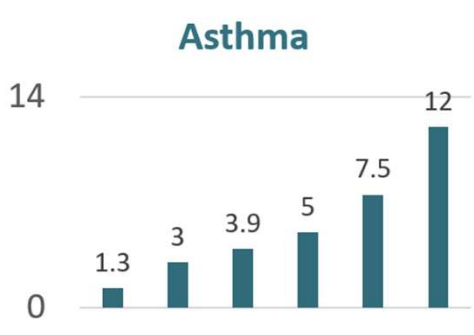

Smoking
30
0
10.4
13.2
11.1
16.3
20.8
28.5

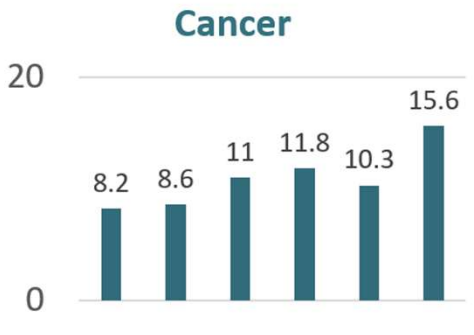

Drug Problem
12
0
1.3
3
3.9
5
7.5
12


MH Treatment
30
0
7.3
11
14
15.5
19.3
24.5


Cardio Vascular Disease
12
0
4.9
5.6
6.7
5.6
9.4
8.1

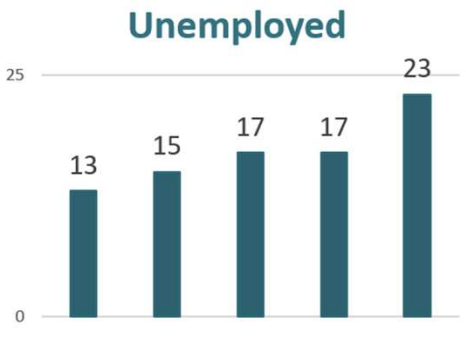

Diabetes
14
0
6.1
7.5
8
7.5
7.9
11.7

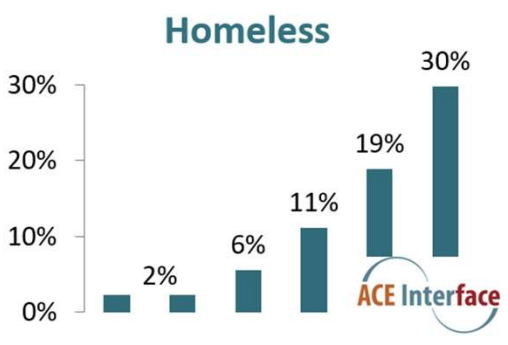

Asthma
14
0
1.3
3
3.9
5
7.5
12


Cancer
20
0
8.2
8.6
11
11.8
10.3
15.6


Work Injury/Illness
20
0
3.6
5
7
6.1
8.9
10.1


Missed 15 of 30
Work Days (MH)
10
5
0


Unemployed
25
0
13
15
17
17
23


Homeless
30%
20%
10%
0%
2%
6%
11%
19%
30%
ACE Interface

EXAMPLES OF ACE-ATTRIBUTABLE PROBLEMS

- Alcoholism & Alcohol Abuse
- Chronic Obstructive Pulmonary Disease
- Coronary Heart Disease
- Depression
- Drug Abuse & Illicit Drug Use
- Fetal Death
- Intimate Partner Violence
- Liver Disease
- Mental Health Problems
- Obesity
- Sexual Behavior Problems
- Smoking
- Unintended Pregnancy
- Violence
- Workplace Problems

ACE Interface © 2015

The ACE Study confirmed that:

- ACEs are Common.
- ACEs are Highly Interrelated.
- ACEs are Intergenerational.

ACEs are Common, Interrelated, Powerful



High ACE Scores
in Population



Increased Risk of Multiple
Health and Social Problems



Intergenerational
Transmission of ACEs

Groups of people with higher ACE Scores are more likely to have multiple health and social problems, some of which increase the odds of their children having high ACE Scores.

The Science Behind ACEs

Early Experiences Shape Development

- *Humans are designed to handle short periods of stress, not chronic stress.*
- *Experiences of **safety** and **danger** shape how the brain develops.*
- *Repeated experiences create predictable patterns in brain architecture, behavior, and traits.*
- *These adaptations help children survive their environment and influence adult functioning.*

Two Developmental Pathways

Children adapt to the world they experience.

Pathway of Safety	Pathway of Danger
Children build trust, flexibility, and healthy relationships	Children learn vigilance, self-protection, and survival-focused responses
A safe environment supports learning, cooperation, and emotional regulation	Children prioritize detecting threats and responding quickly
Stable environments help children thrive	Helps children survive dangerous environments

- *Neither pathway is "wrong"; both are adaptations to experience.*
- *Problems arise when survival adaptations are used in safe environments where different skills are expected.*

Children adapt to their environment: *In chaotic or threatening situations, children develop behaviors that help them stay safe and survive.*

These adaptations may be misunderstood: *Behaviors that are useful in unsafe environments can conflict with expectations in schools or other structured settings, where skills like sitting still, sharing, cooperating, and waiting patiently are expected.*

Past experiences shape the brain: *The brain uses previous experiences to predict what will happen next, influencing beliefs, emotions, attention, decision-making, and behavior.*

New skills need to be taught: *Instead of simply expecting different behavior, children often need support and opportunities to learn the social and self-regulation skills required in new environments.*

Positive relationships promote growth: *Safe, supportive relationships help children develop healthier expectations and responses, allowing them to build new skills and adapt successfully over time.*

Key takeaway: *Children's behavior is often a reflection of what they have learned from past experiences. Understanding these adaptations and providing supportive relationships and explicit skill-building can help them succeed in new environments.*

Trauma & The Brain

WHAT IS TRAUMA?

*Trauma refers to a student's **emotional and physiological response** to an event or ongoing experience — such as abuse, neglect, violence, loss, displacement, or chronic instability at home or in the community — that overwhelms their ability to cope, disrupts their sense of safety, and can affect their ability to regulate emotions, build relationships, and access learning, even long after the event itself has passed.*

THE FUNDAMENTAL TRUTHS ABOUT TRAUMA

1. Trauma is **real**.
2. Trauma is **prevalent**. In fact, it is likely much more common than we care to admit.
3. Trauma is **toxic to the brain** and can affect development and learning in a multitude of ways.
4. In our school, we need to be prepared to **support students who have experienced trauma**, even if we don't know exactly who they are.
5. Children are **resilient**, and within positive learning environments they can grow, learn, and succeed.

STRESS
and
ANXIETY
and their effects on students and student behavior.

WHAT DOES *FIGHT, FLIGHT,* OR *FREEZE* LOOK LIKE IN THE CLASSROOM?

“FIGHT”

- Acting out
- Behaving aggressively
- Acting silly
- Exhibiting defiance
- Being hyperactive
- Arguing
- Screaming/yelling

“FLIGHT”

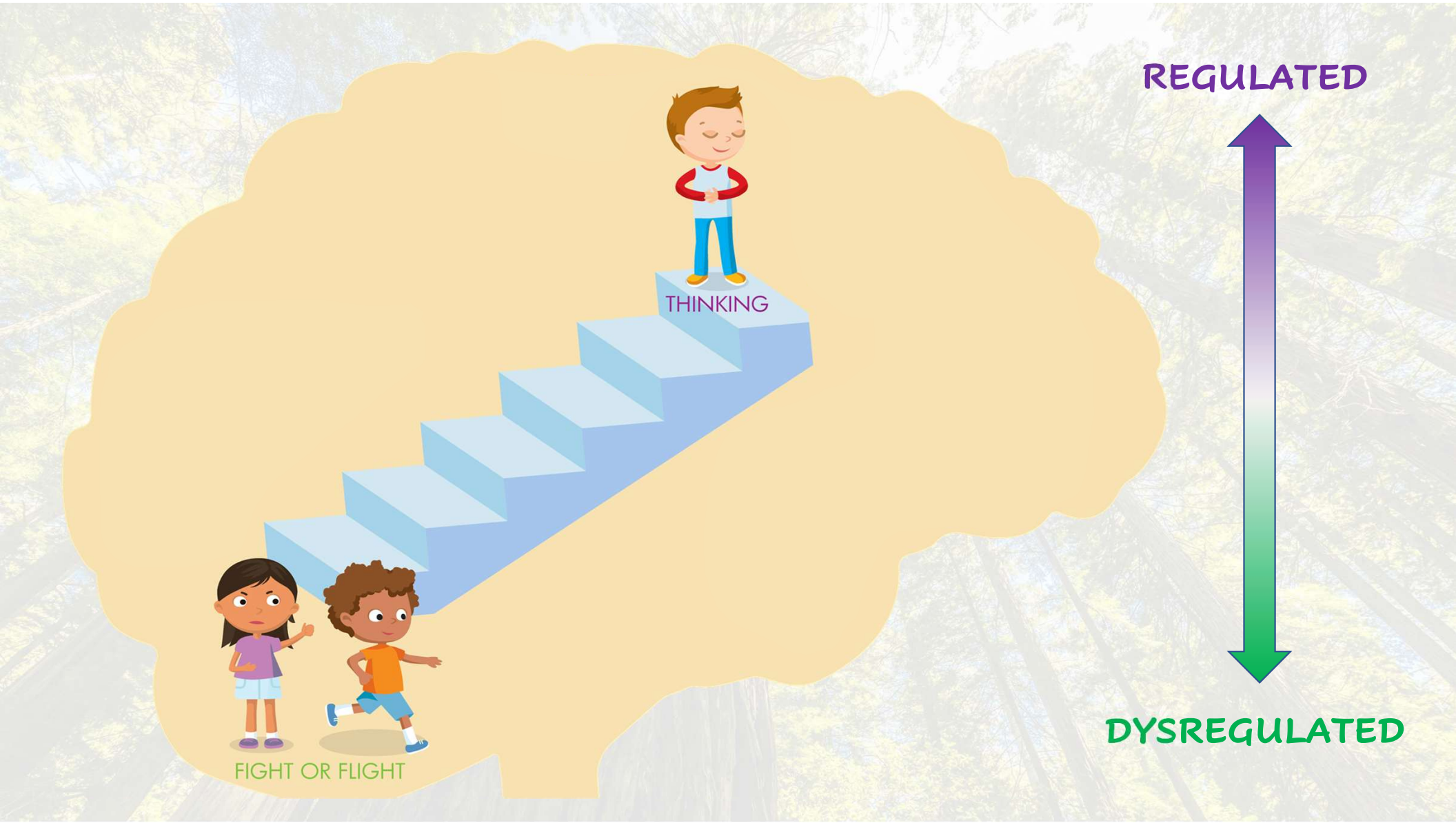
- Withdrawing
- Fleeing the classroom
- Skipping class
- Daydreaming
- Seeming to sleep
- Avoiding others
- Hiding or wandering
- Becoming disengaged

“FREEZE”

- Exhibiting numbness
- Refusing to answer
- Refusing to get needs met
- Giving a blank look
- Feeling unable to move or act

HOW TRAUMA AFFECTS THE BRAIN

- When released in large doses, these chemicals become toxic to the body and can create significant impairment in development.
- Because a child's brain is so sensitive, chronically elevated levels of stress hormones can significantly disrupt the development of the brain in a multitude of ways.
- They affect learning, memory, mood, relationship skills, and parts of executive functioning…. ALL REQUIRED for success in the classroom.


REGULATED
THINKING
FIGHT OR FLIGHT
DYSREGULATED

UPSTAIRS vs. DOWNSTAIRS BRAINS

The better we can teach students to recognize when they are in their downstairs brain versus their upstairs brain and give them a tool set for getting back upstairs, the greater the chance we have at supporting student's pursuit of personal and academic success!



have a collective
CHOICE

We've talked about sensitive developmental periods when toxic stress has profound effects on human development. But we also need to understand that because the **developing brain is so sensitive to all kinds of experiences**, these childhood times are a perfect window of opportunity for building

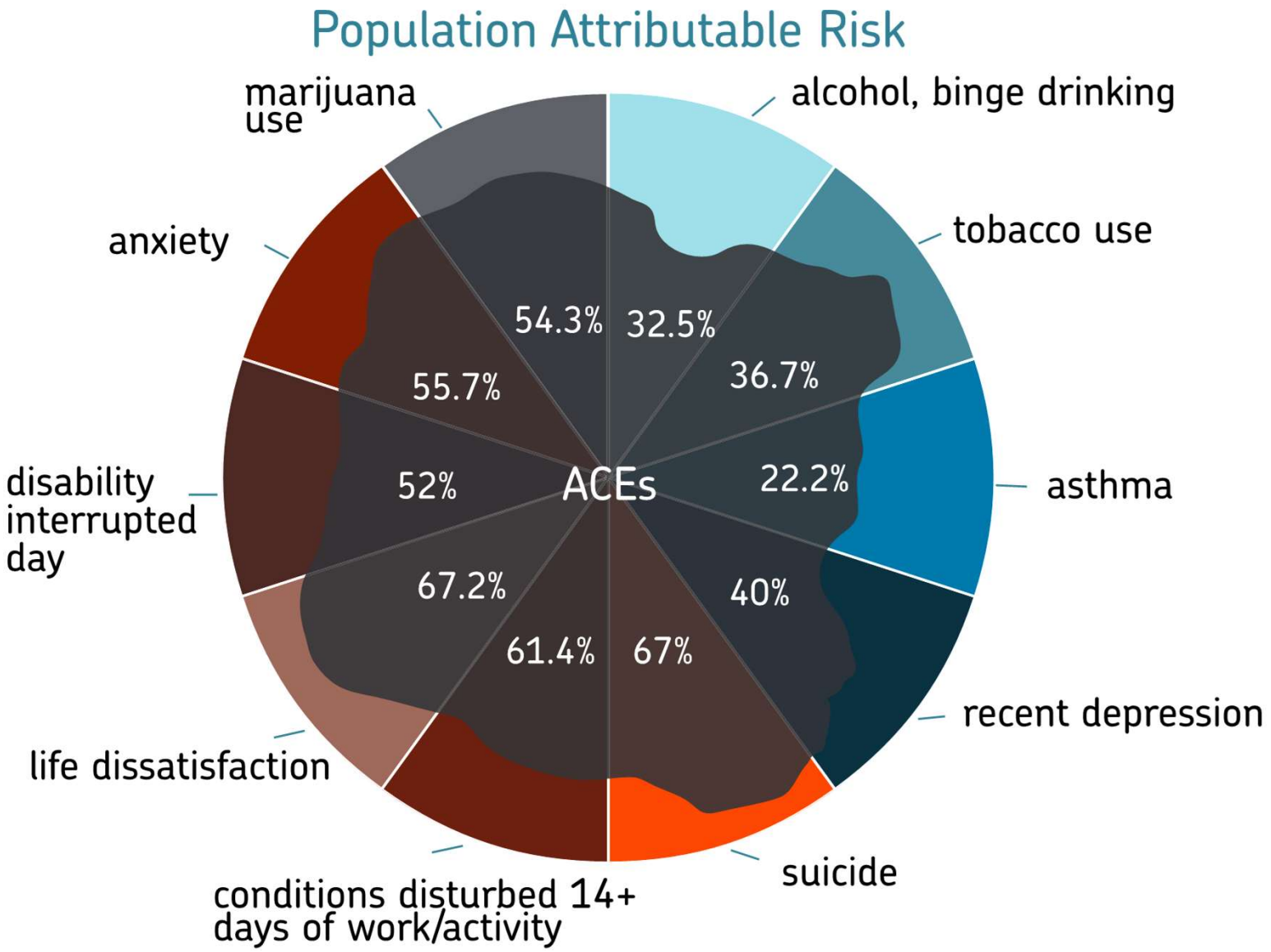
RESILIENCE!



If toxic stress can be hardwired into our biology,
then think about this:

Before we assume that a student's behaviors are a rebellious choice, let's think about the possibility that adversity could be at the heart of the challenging behavior we're seeing.

Understanding ACEs is a Powerful Path to Health and Wellbeing


Population Attributable Risk
marijuana use
alcohol, binge drinking
anxiety
tobacco use
54.3%
32.5%
55.7%
36.7%
disability interrupted day
52%
ACEs
22.2%
asthma
67.2%
40%
61.4%
67%
recent depression
life dissatisfaction
suicide
conditions disturbed 14+ days of work/activity

Now we understand that ACEs are common and have a strong cumulative impact on the risk of common health and social problems.

This is where **PREVENTING ACEs** and their intergenerational transmission is the greatest opportunity for improving the well-being of human populations.

WHAT IS OUR PIECE OF THE PUZZLE?

TRAUMA-SENSITIVE CLASSROOMS

School Safety

The state of Texas invested a total of **$1.1 billion** dedicated to school safety for the 2025-26 school year.

Districts spend far more than they receive from the state to comply with the law. For example, Northside ISD, the fourth-largest district in Texas, spends more than **$10 million** a year to have an armed guard on each campus, while only receiving about **$3 million** from the state safety allotment.

SELF-REGULATION

Self-regulation skills are critical for students because they are **foundational to nearly every aspect of a child's development, influencing their academic achievement, social-emotional well-being, and future success in life.**

At its core, self-regulation is the ability to manage your thoughts, feelings, and actions to achieve your goals.

THIS WORKS WELL AS A FIRST STEP BECAUSE…

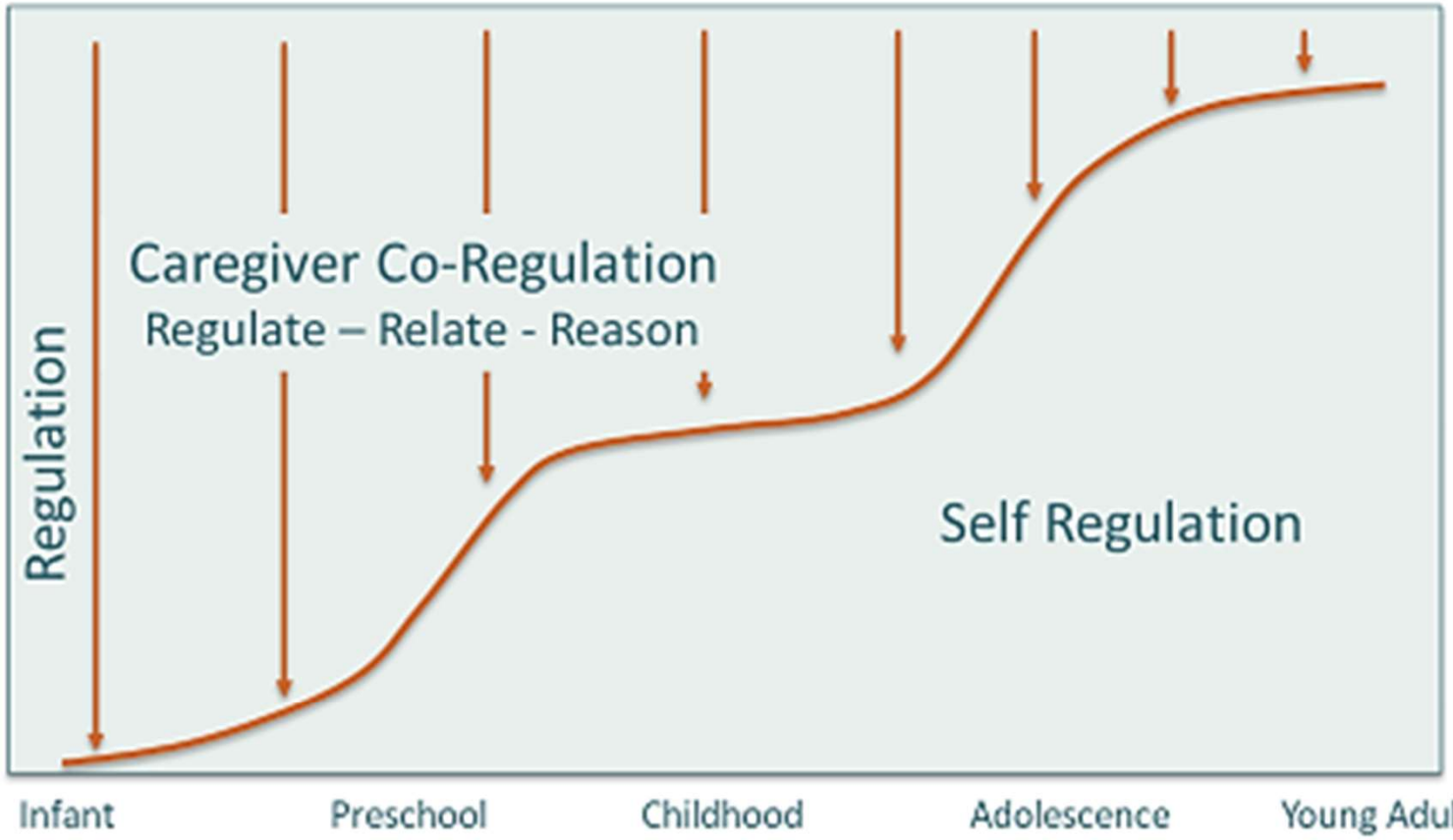
- It benefits ALL students, not only those with trauma
- It is relatively simple to implement
- It reduces behavioral incidents
- It improves classroom climate
- It supports academic readiness

OUR PIECE OF THE PUZZLE

Self-regulation develops through
interaction with people
such as parents, teachers, coaches, or anyone
who provides a predictable, responsive, and
supportive environment.

These adults, teachers, parents, and other
care givers teach self-regulation
through **CO-REGULATION**.

Co-Regulation, then Self-Regulation



ACE Interface

Adapted from: Rosenbalm, K.D., & Murray, D.W. (2017). Caregiver Co-regulation Across Development

OUR PIECE OF THE PUZZLE

If a child's behavior is aggressive or withdrawn in response to stress, we can intentionally focus first on regulating ourselves.

This has to start with an awareness of
our own thoughts and feelings.

OUR PIECE OF THE PUZZLE

From there, the next step is to make a connection with the person experiencing stress. So, in other words, **first, we REGULATE, then we RELATE**. We can then begin to reason – to explain, teach, ask questions and coach.

With this kind of support, children can mirror the self-regulated state of the adult and learn what to do when they are having those BIG feelings.

BUILDING RESILIENCE

Defining Resilience and Protective Factors for Students

What is Resilience?

- Ability to adapt, recover, and thrive despite adversity, challenges, or trauma. It involves **emotional, cognitive, and social skills** that help students navigate difficulties while maintaining their well-being and **academic success**.

- **Resilience is** not a fixed trait but **a dynamic process** that can be strengthened through supportive relationships, positive experiences, and coping strategies.

Strategies to Create a Safe, Supportive Environment

Predictability and Structure in the Classroom:

- Establishing routines and clear expectations
- Visual schedules and consistent transitions

Establishing Trust and Fostering Positive Relationships:

- Building rapport with students
- Active listening and empathy

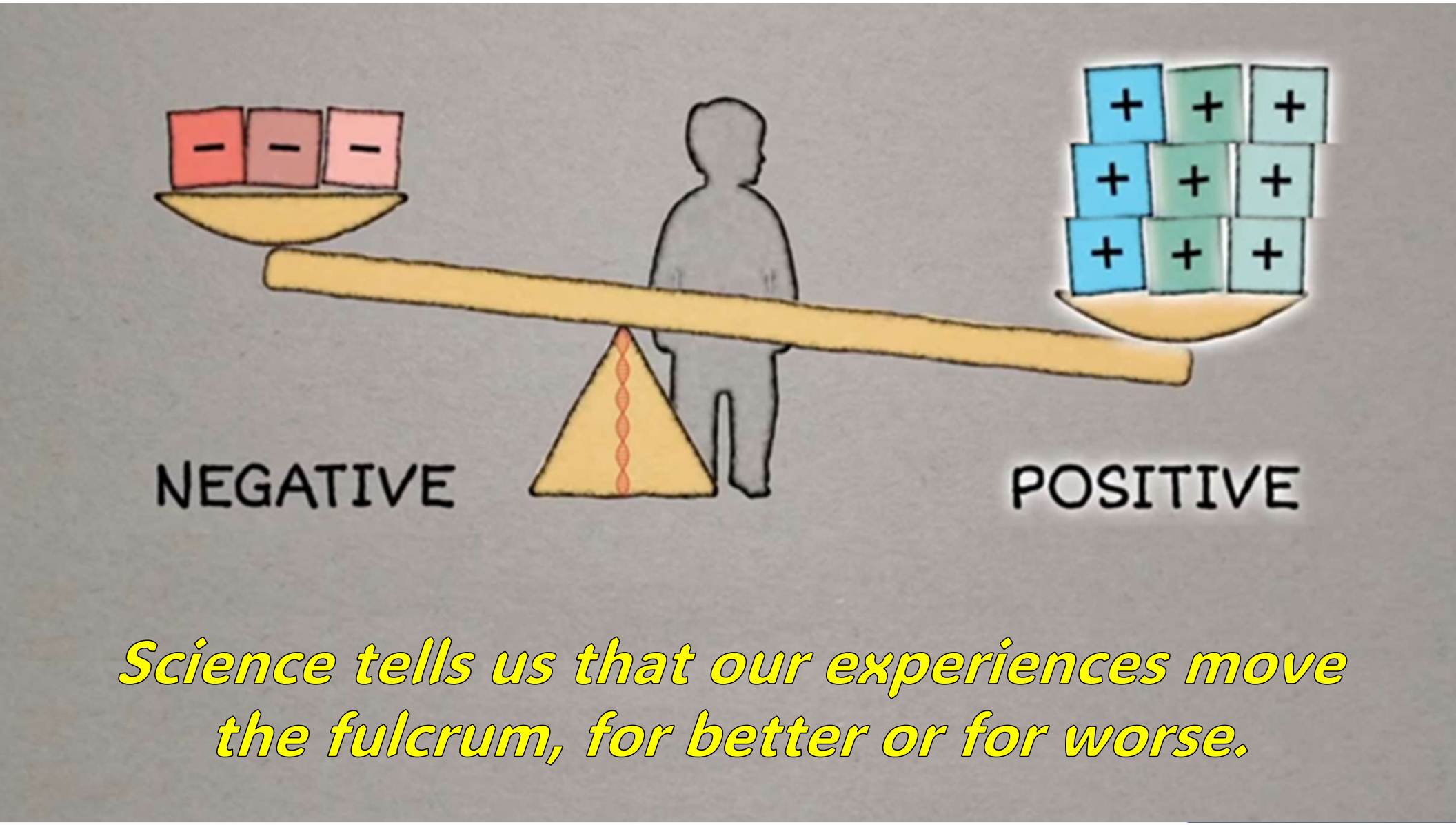
Recognizing and De-escalating Triggers:

- Identifying potential triggers in the classroom
- Techniques for calming students in distress

Defining Resilience and Protective Factors for Students

What are Protective Factors?

- Conditions or attributes in individuals, families, schools, and communities that enhance resilience and reduce the negative impact of stress, adversity, or trauma. These factors help students develop a strong foundation for emotional and academic success.



Science tells us that our experiences move the fulcrum, for better or for worse.

PROTECTIVE FACTORS FOR STUDENTS

- **Individual Factors:** Self-esteem, coping skills, emotional regulation
- **Family Factors:** Supportive family relationships, stable home environment
- **Community Factors:** Positive peer relationships, access to resources
- **School Factors:** ***Positive teacher-student relationships, safe and predictable classroom environments, trauma-informed practices, strong school connectedness, restorative practices, and academic supports and interventions.***

Fostering Resilience Through Relationships, Routines, and Reflection

Building Strong Relationships

- Encourage open communication and trust between students and teachers
- Promote peer support and mentorship opportunities

Establishing Routines

- Create consistent daily schedules to provide security
- Use routines to reinforce positive behaviors and expectations

Reflection Practices

- Implement regular reflection activities (journals, discussions)
- Encourage students to recognize their growth and challenges

Involving Families and Communities in Supporting Traumatized Students

Engagement Strategies

- Regular communication with families about student progress and needs
- Workshops and resources for families on trauma and resilience

Community Partnerships

- Collaborate with local organizations for additional support services
- Create a network of resources to assist families in crisis

School-Wide Strategies to Support Trauma-Impacted Students

Collaboration Across Staff

- Foster teamwork among educators, counselors, and support staff
- Establish a trauma-informed school culture through shared training

Mental Health Resources

- Provide access to counseling and mental health services for students
- Develop referral systems for students in need of additional support

Staff Training and Development

- Regular professional development on trauma-informed practices and resilience
- Encourage staff self-care and awareness of their own experiences

Classroom Resilience Self-Assessment Checklist

CAMPUS RESILIENCE ACTION PLAN



A PARTING THOUGHT....

Benefits for your Classrooms:

- **Higher academic achievement**
- **Improved attendance**
- **Improved peer relationships**
- **Safer classroom climate**

A PARTING THOUGHT….

As we work to prevent the accumulation of ACEs, – Let's keep in mind that we don't have to get to ACE Scores of zero – **bringing scores down any amount will have HUGE EFFECTS**.

We might not be able to prevent a first ACE from occurring in a family. **But we certainly can notice when students have five ACEs and make sure that number doesn't go to ten!**

And not only that, but by doing so we can prevent ACEs for the next generation.

A PARTING THOUGHT....

ANY action we take to prevent ACEs
– whether large or small –
can profoundly improve our future.

Thank You

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