

Putting Science into Action to Support Early Childhood Development and Health

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Cuyahoga County Office of Early Childhood/Invest in Children
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Find Us: Center on the Developing Child at Harvard

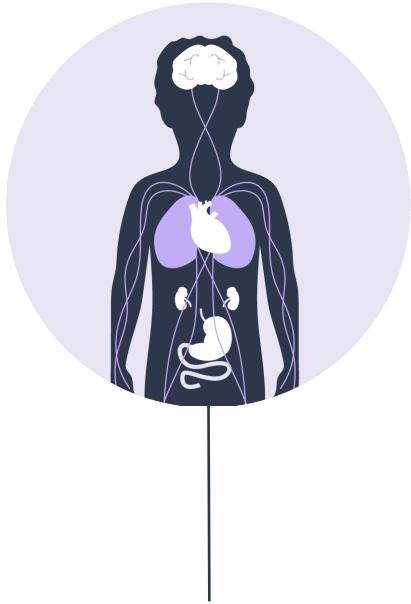




Where do you work?

What we are learning...

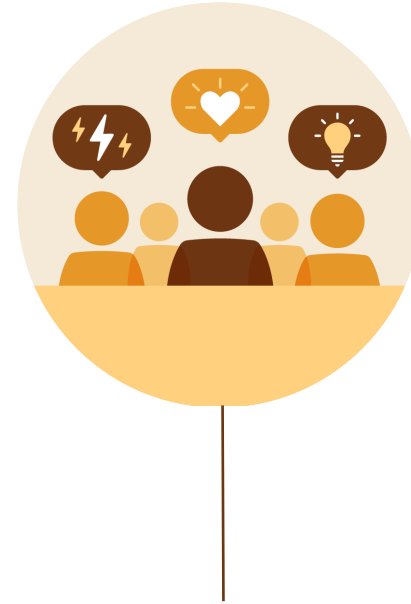
Advances in Biology are Deepening Our Understanding of Development and Lifelong Health



Interactive development of multiple systems



Developmental Environments



Variation in sensitivity to the environment



Timing and critical periods

The Brain is Connected to the Rest of the Body

BRAIN & AUTONOMIC NERVOUS SYSTEM

Depression
Anxiety Disorders

HEART & CARDIOVASCULAR SYSTEM

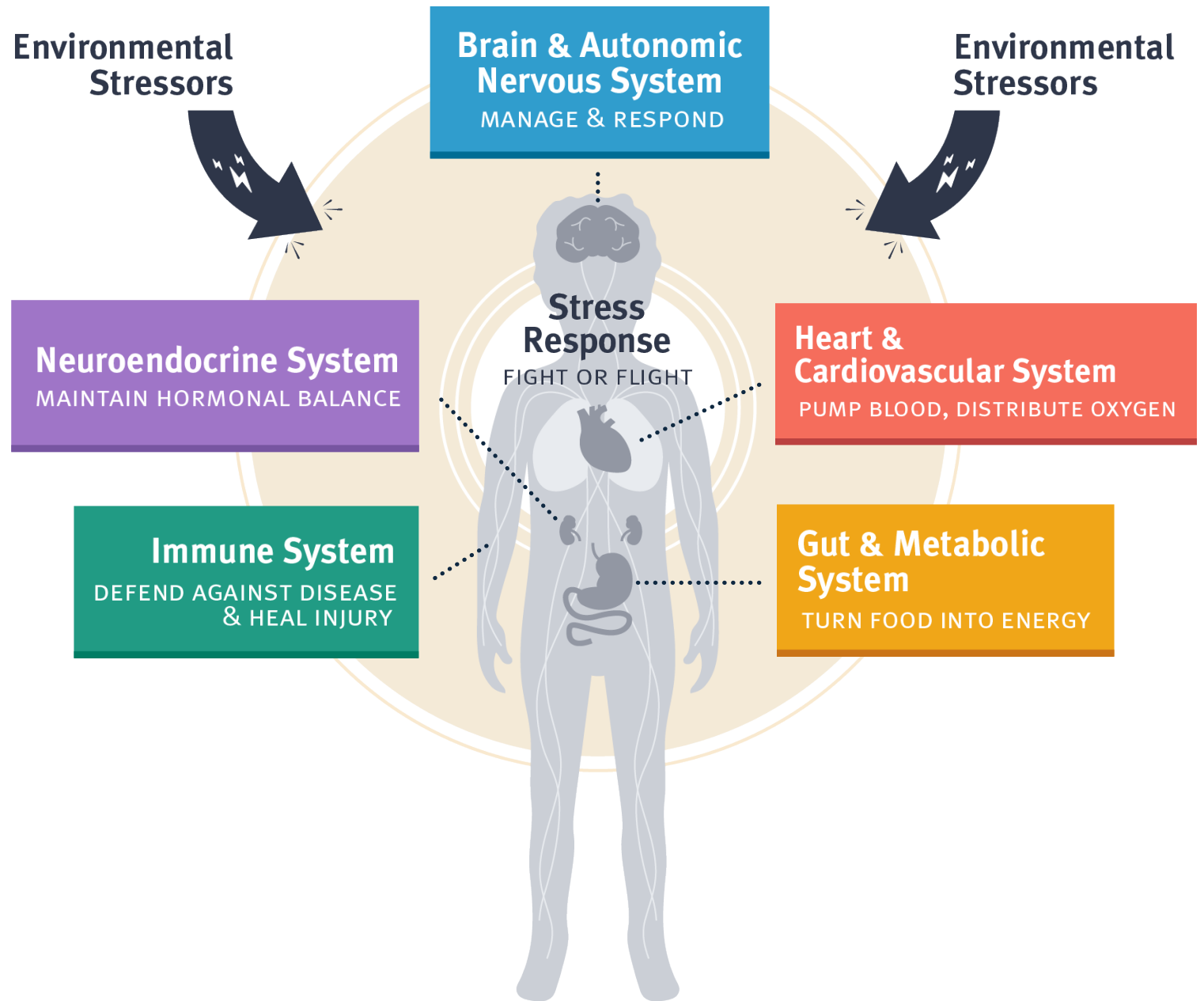
Cardiovascular Disease
Asthma

GUT & METABOLIC SYSTEM

Metabolic Syndrome
Diabetes
Obesity

IMMUNE SYSTEM & NEUROENDOCRINE SYSTEM

Immunodeficiency
Inflammation



Place Matters.

**Where Children Live
Affects Their Health &
Development**

Child Opportunity Index

[100 LARGEST U.S. METRO AREAS; 72,000 CENSUS TRACTS; 29 INDICATORS]



Access to healthy food



Economic opportunities



Safe, green space



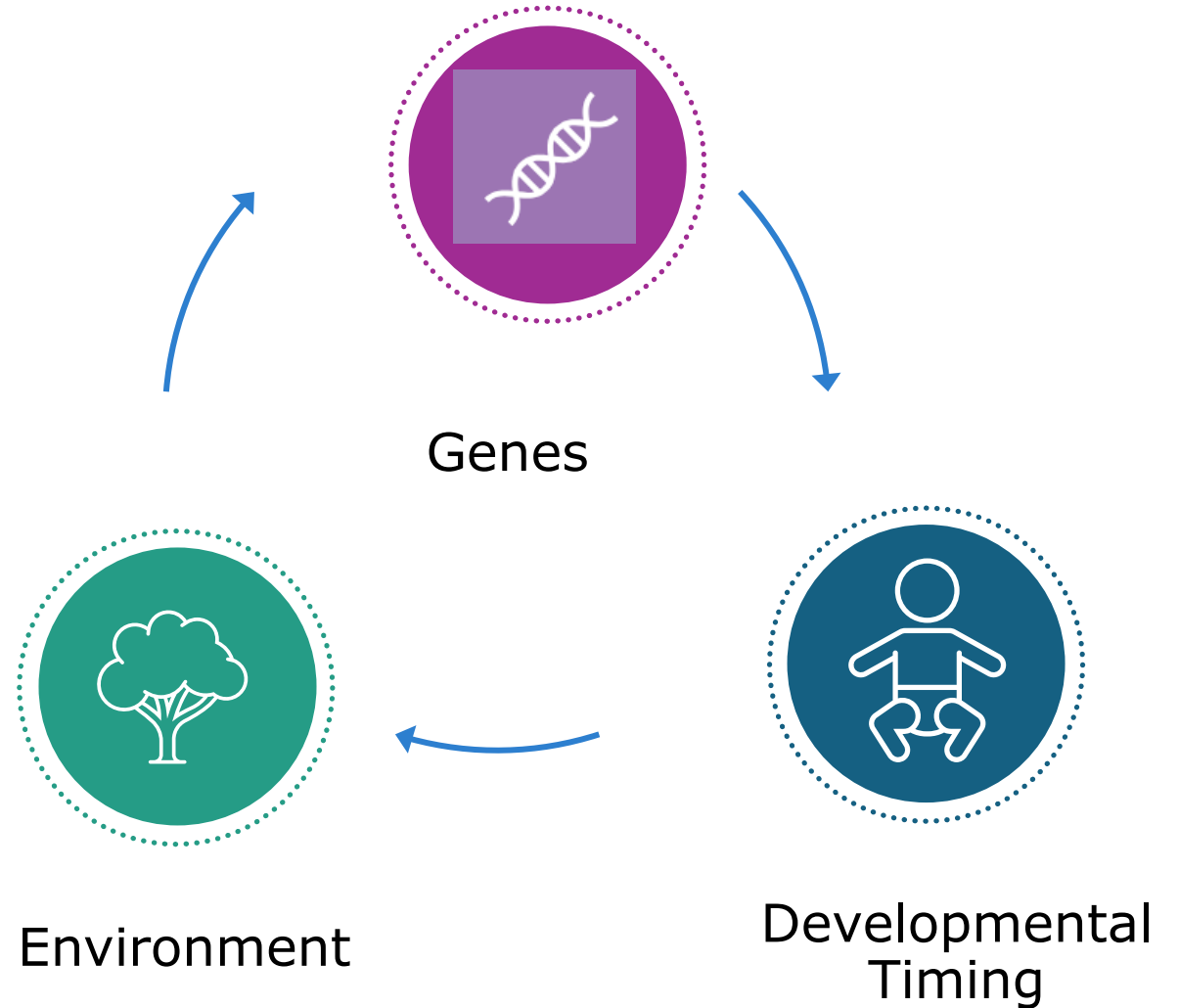
Air pollution



Toxic waste proximity

**Variation in
sensitivity to the
environment.**

Heterogeneity.



Timing Matters



The sensitivity of developing biological systems is typically greater in the **prenatal period** than in young children



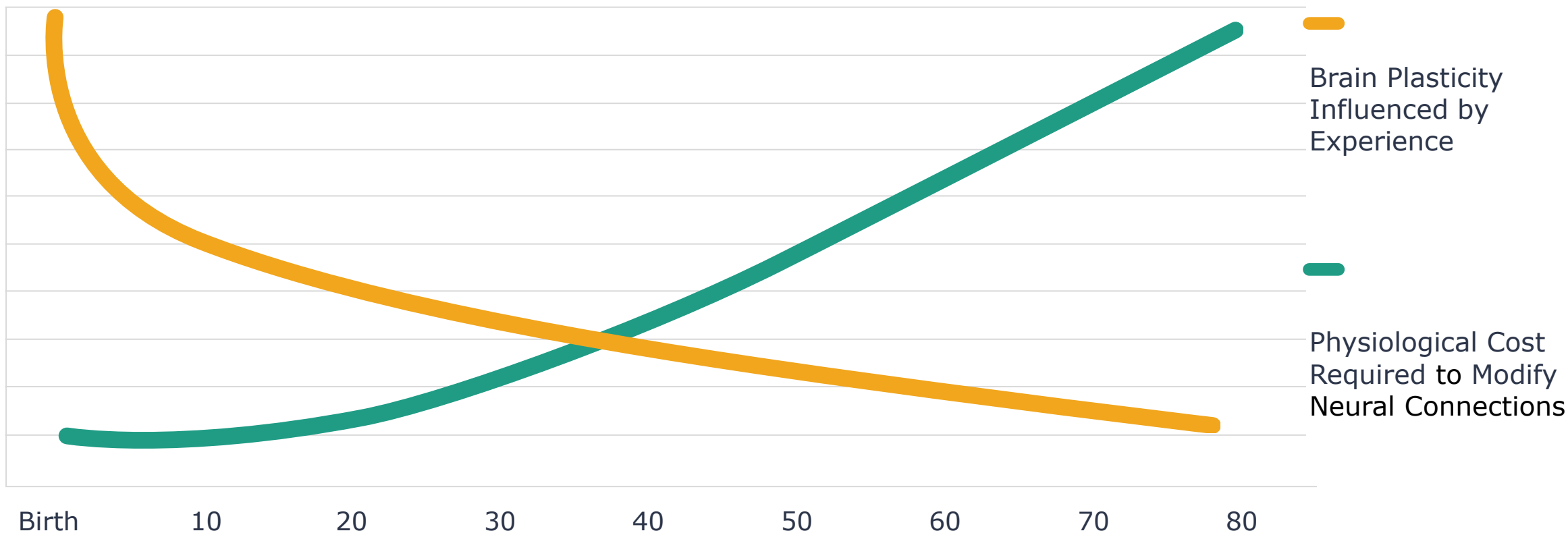
Young children are more susceptible to most adverse exposures than adolescents



Adolescents are more sensitive to many exposures than adults

Why timing matters...

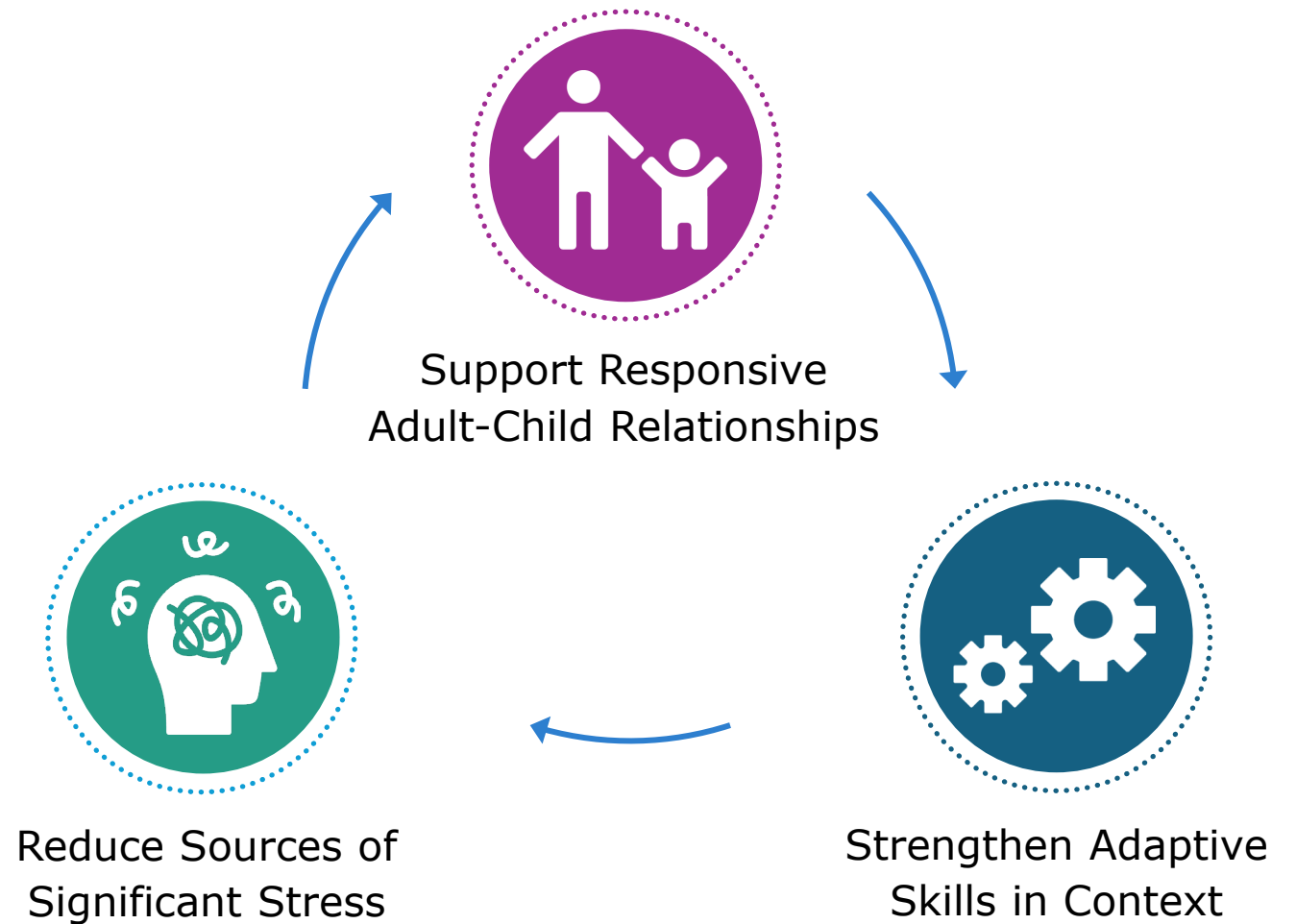
Science-Informed Early Childhood Policy Begins by Understanding **Why Early Experiences are so Important for the Developing Brain**



Source: Levitt (2009)

What can we do with the science?

3 Science-Based Principles to Drive Greater Impacts Across Sectors



More than **1 Million** New Neural Connections Form
Every Second in the Earliest Years of Life



Early Relationships Are Drivers of Brain Development



Adaptive Skills in Context: Our “Air Traffic Control System”



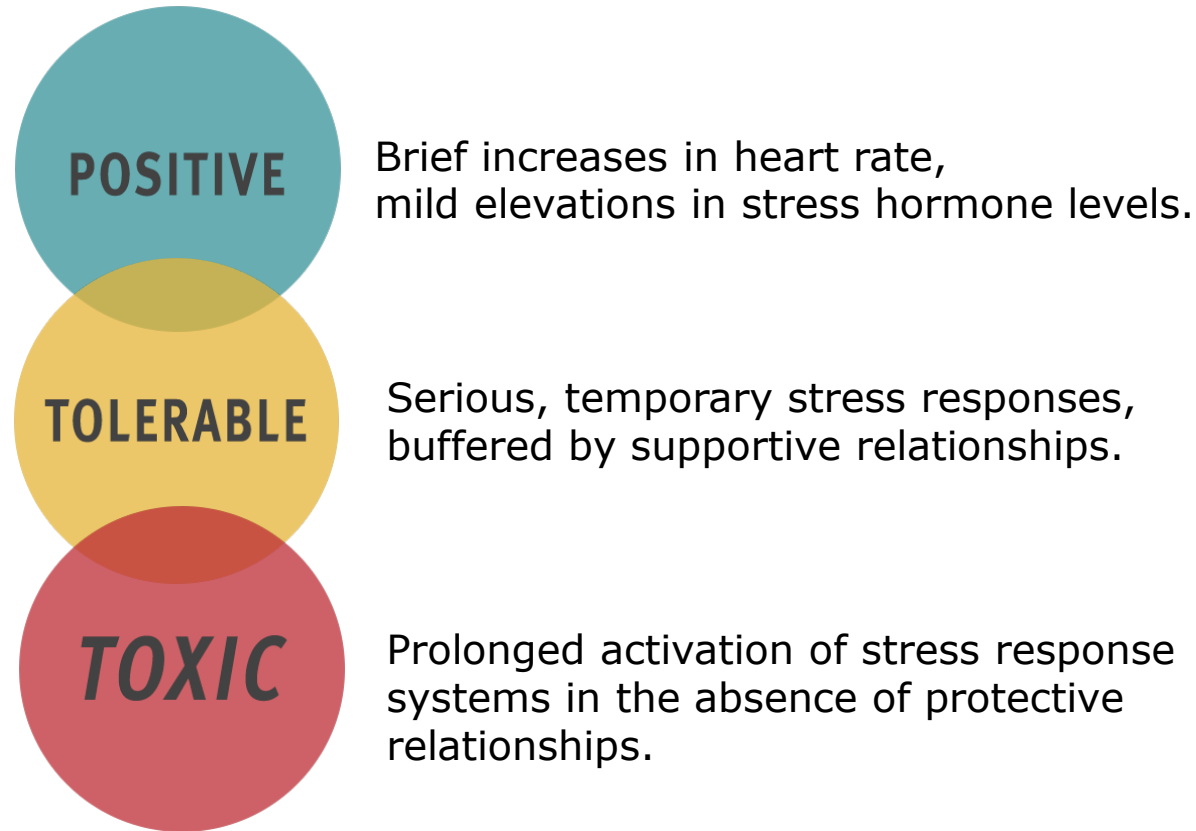
Focus and sustain attention

Set goals and make plans

Make a new plan when the situation changes

Follow rules, control impulses, and delay gratification

Three Levels of Stress



What do these principles look like in programs?

Establishing and maintaining relationships

- Reducing staff turnover in early childhood programs to build relationships

Adult skill building

- Program that supports adult caregivers in identifying meaningful goals and breaking down into action steps

Decreasing administrative burden

- Categorically eligible for SNAP if eligible for Head Start/Early Head Start
- Extend deadlines for unhoused families to gather application docs



What do these science principles look like in your work?

- Support responsive relationships
- Strengthen core skills in context
- Reduce sources of significant stress

Turn and talk with a neighbor



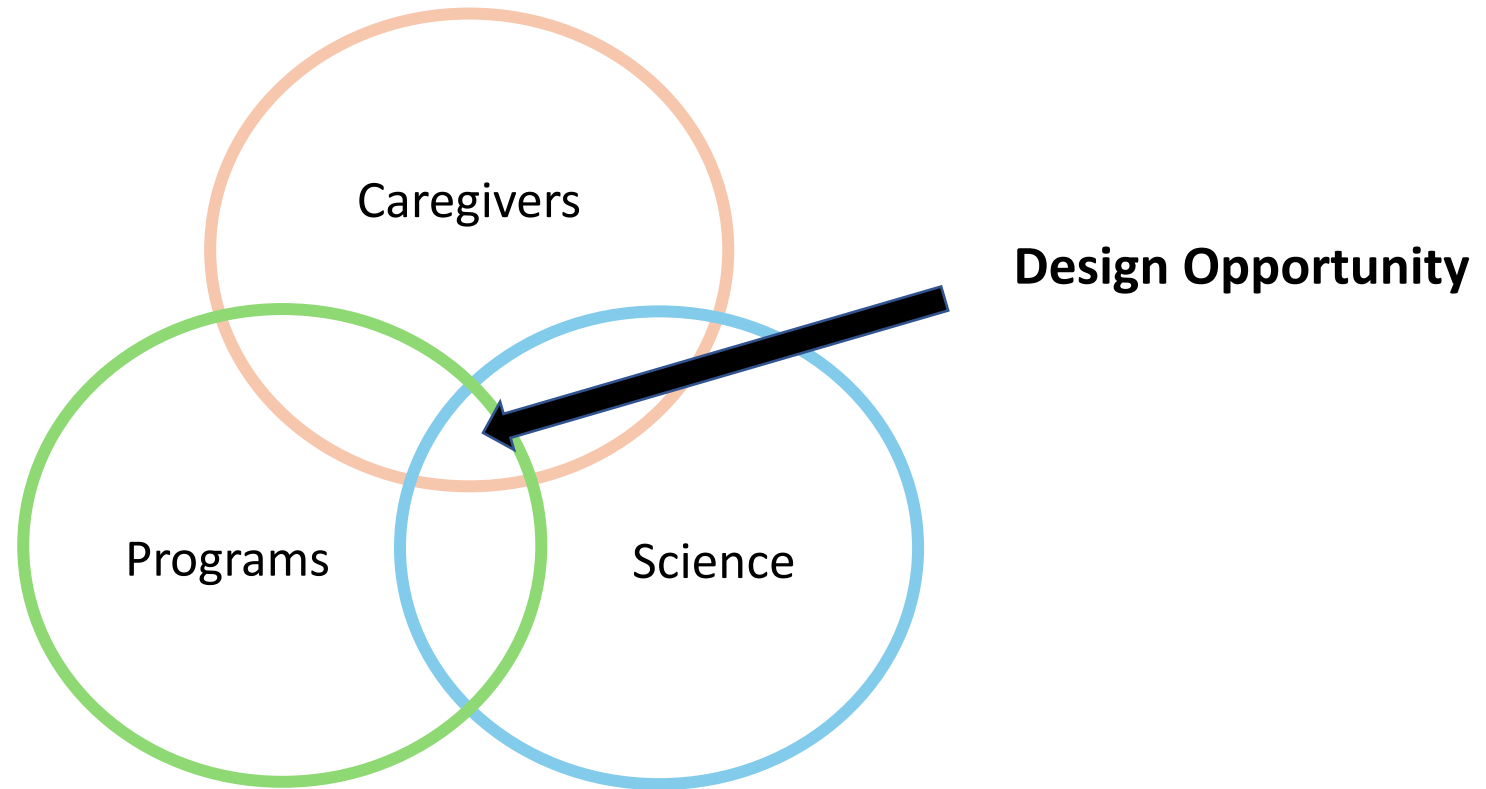
Taking Science Off the Shelf and Putting it into Action

Science X Design: a process and tools to apply science to practice

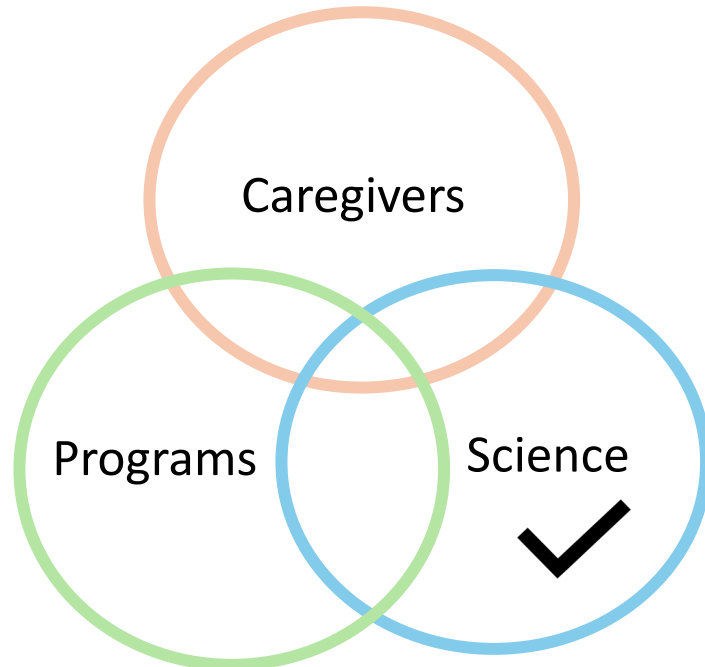
- Teams of service providers and leaders
- Self guided
- 4-6 weeks
- 4 units
- Facilitator guide, workbook, resource list



Emphasis on 360 Design Approach



Unit 1: What Does the Science of Early Childhood Development Tell Us?



Support Responsive Adult-Child Relationships

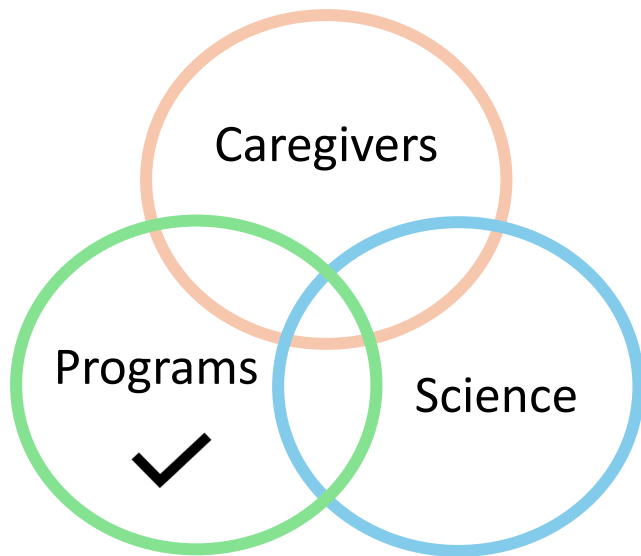


Strengthen Adaptive Skills in Context



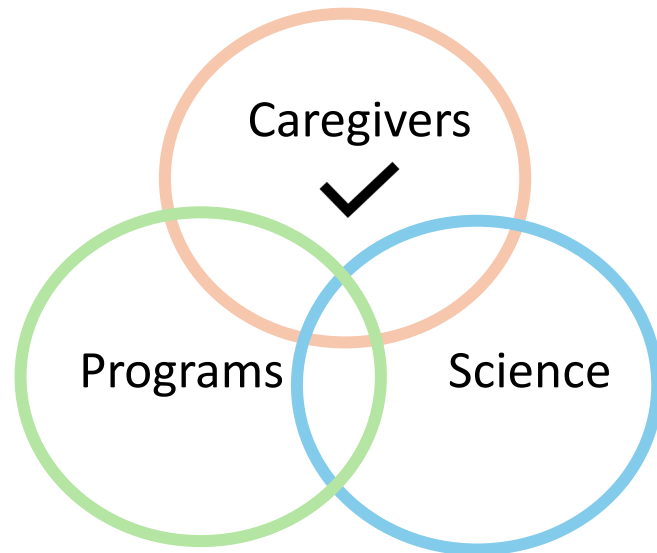
Reduce Sources of Significant Stress

Unit 2: What is Happening in the Program?



Name of Program or Unit of Focus:	Support Responsive Adult-Child Relationships	Strengthen Adaptive Skills in Context	Reduce Sources of Significant Stress
How do you see this principle reflected currently?			
Do you see any areas where the program may counteract this principle? Or could be in stronger alignment?			

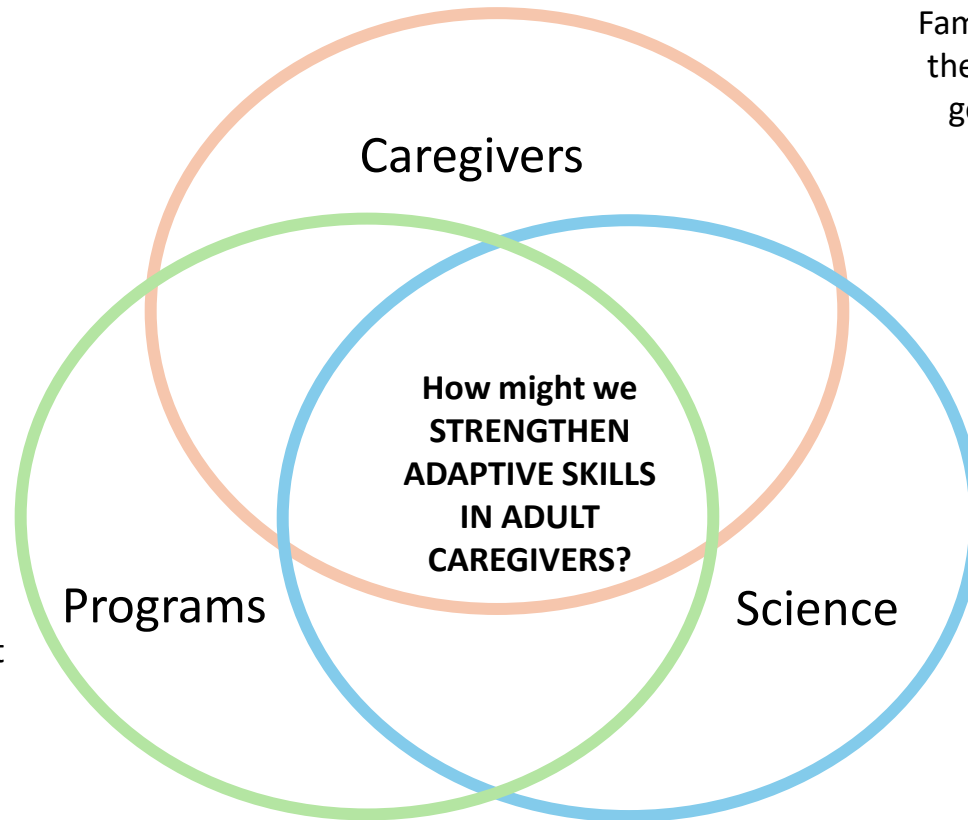
Unit 3: What is the Caregiver Perspective?



What are your hopes and dreams for your children?

What gets in the way of reaching those hopes and dreams?

Unit 4: Putting it All Together



Families wanted to get better at managing their time, their money, being able to set goals and solve problems. (Core Skills)

Staff want capacity to support core skill development in families (empower v. enable families).

Strengthen adaptive skills in context

Opportunities for Impact: Examples from Science X Design Users

Staff inconsistent knowledge of the science of early childhood development

- Professional development opportunities and brainstorm interpretation for different cultural backgrounds

Intake process burdensome

- Intake form too long, gathers information they can get elsewhere

Lack of trust in home visiting staff

- Hire staff from community, former clients

Siloed programming

- “Any door in” approach
- Train staff on other programs/resources



Question and Answer



Thank you!

www.developingchild.harvard.edu

