

PAMELA CANTOR, M.D.

FOUNDER and SENIOR SCIENCE ADVISOR



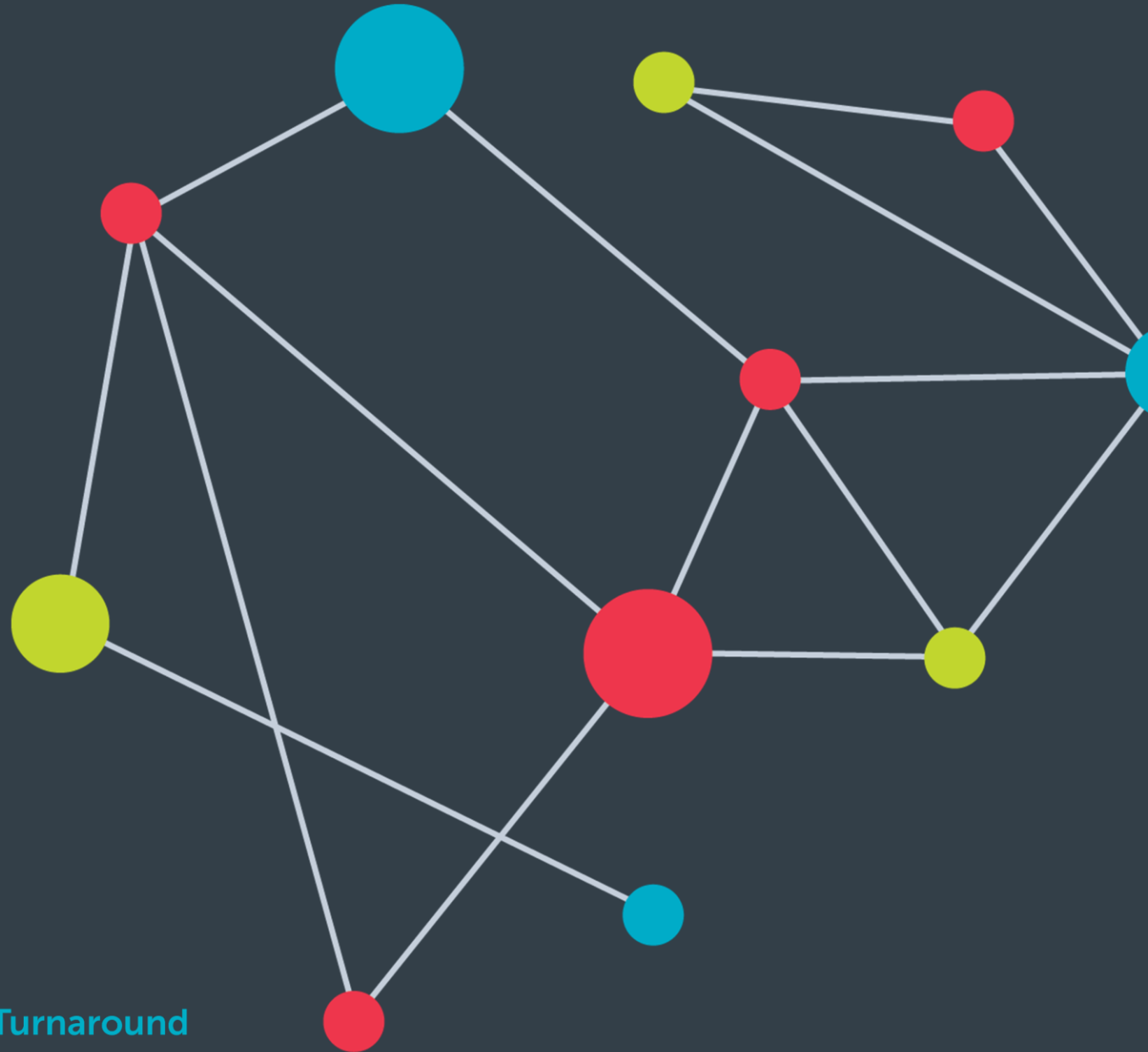
TURNAROUND
FOR CHILDREN

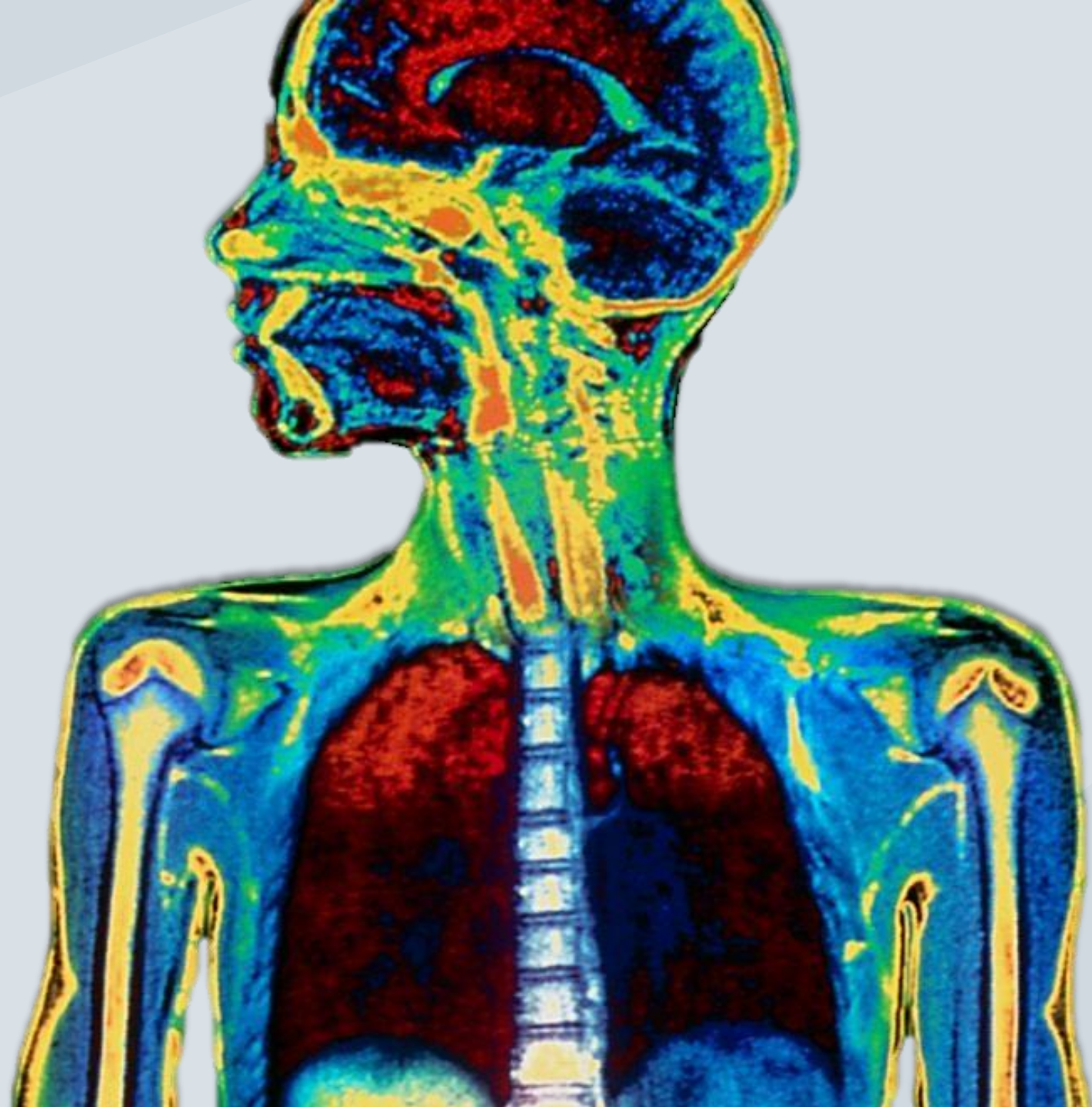
turnaroundusa.org



[@DrPamelaCantor](https://twitter.com/DrPamelaCantor)

[@Turnaround](https://twitter.com/Turnaround)



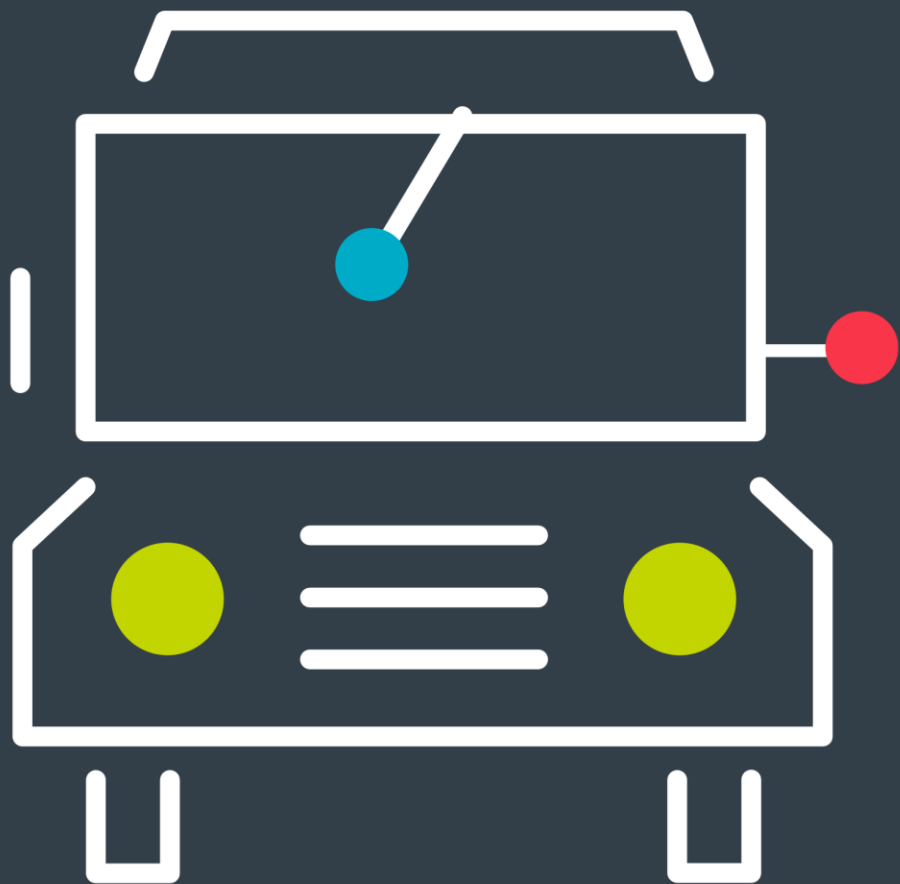




By studying
illness, we
learn about
health.

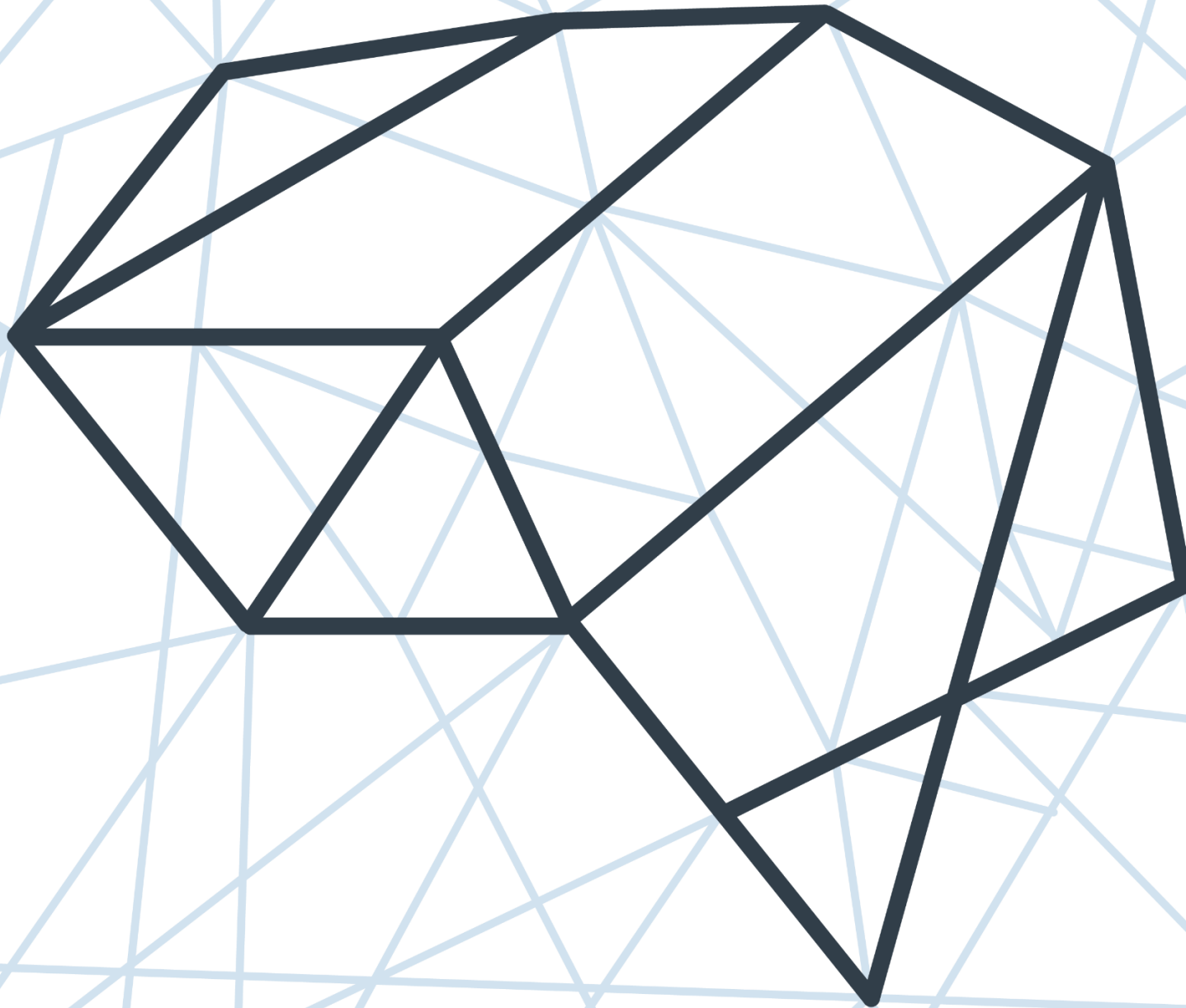
CONTEXT

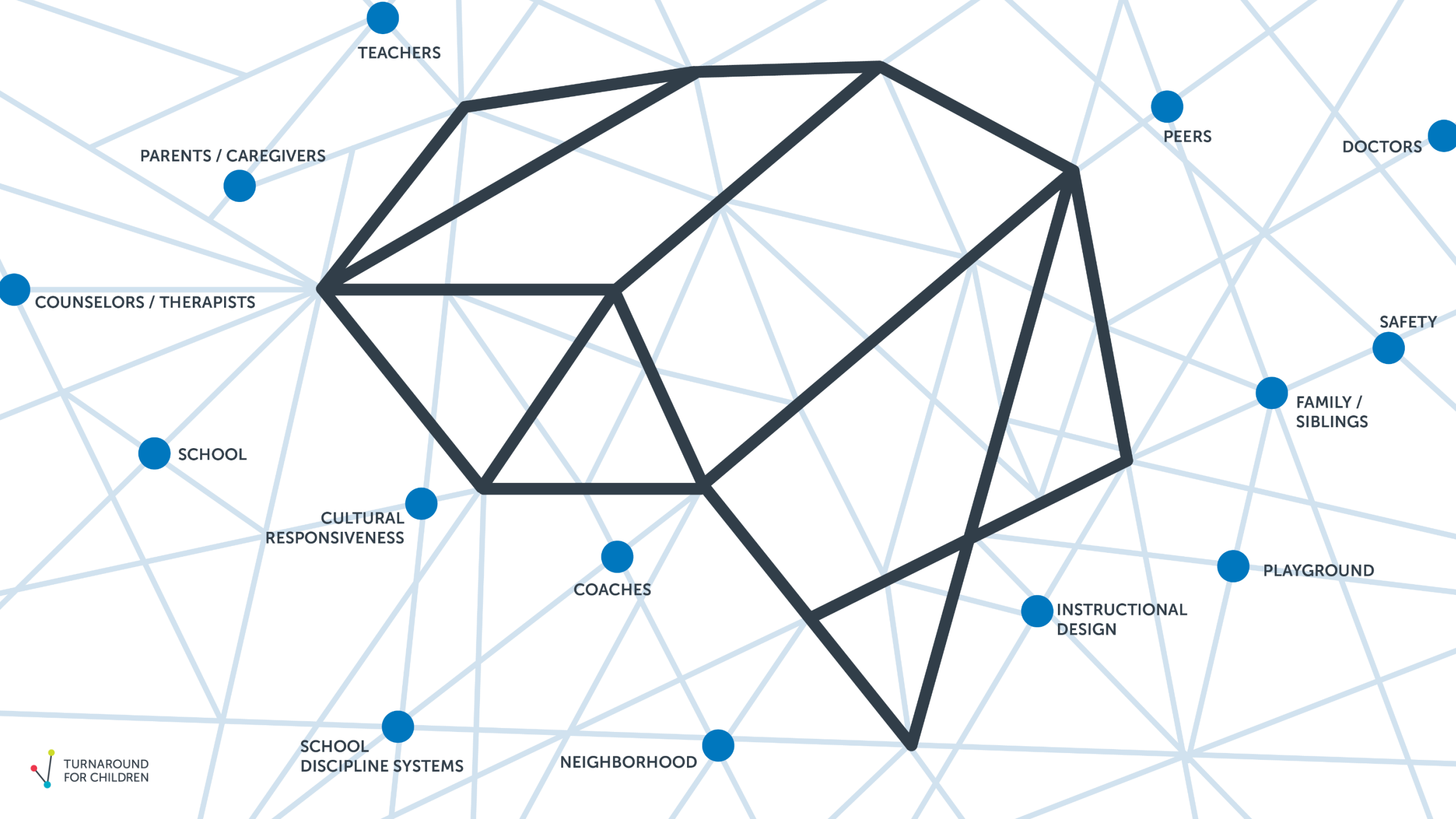


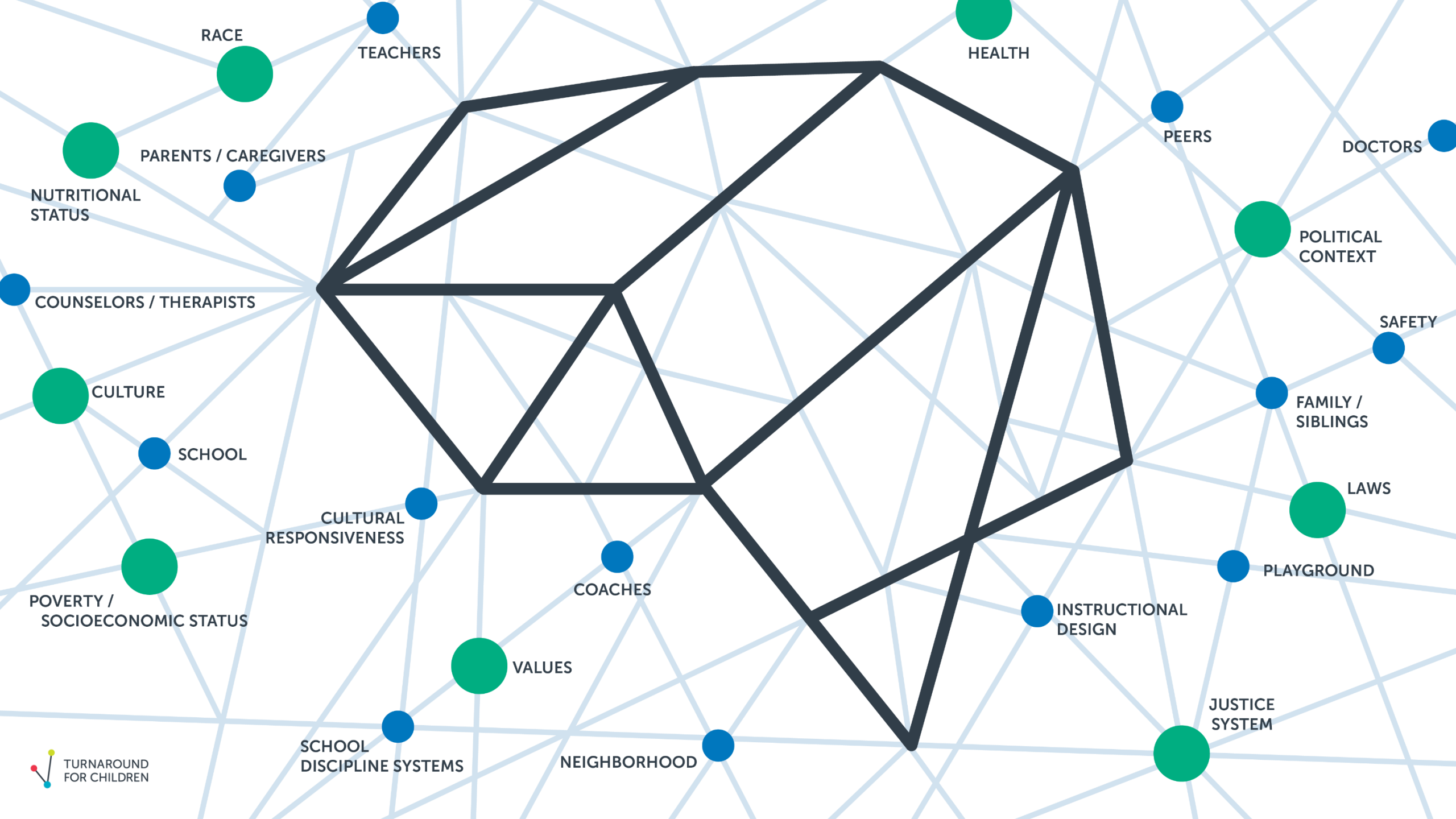


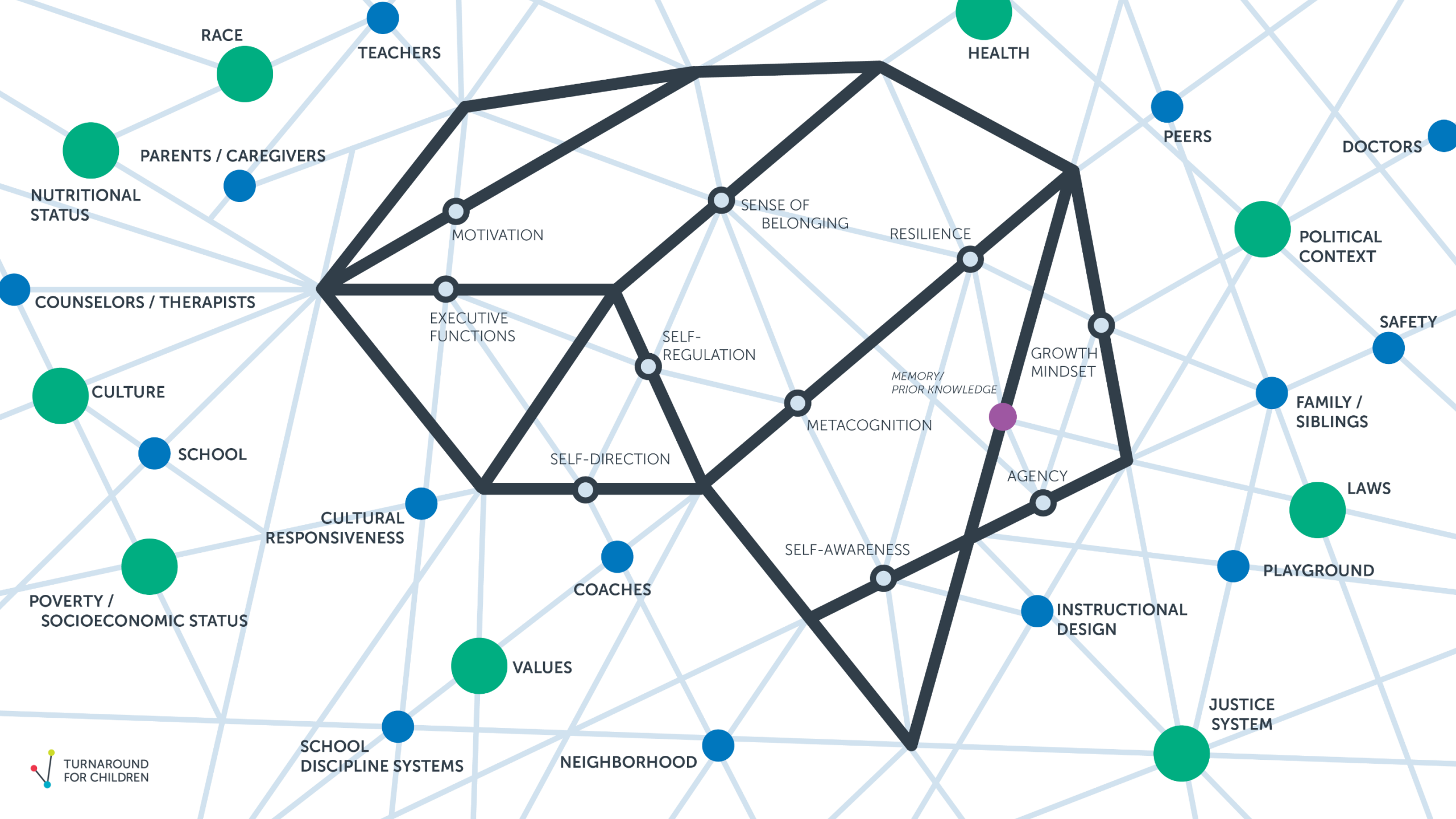
Context drives
our biology and
the expression
of our genes.

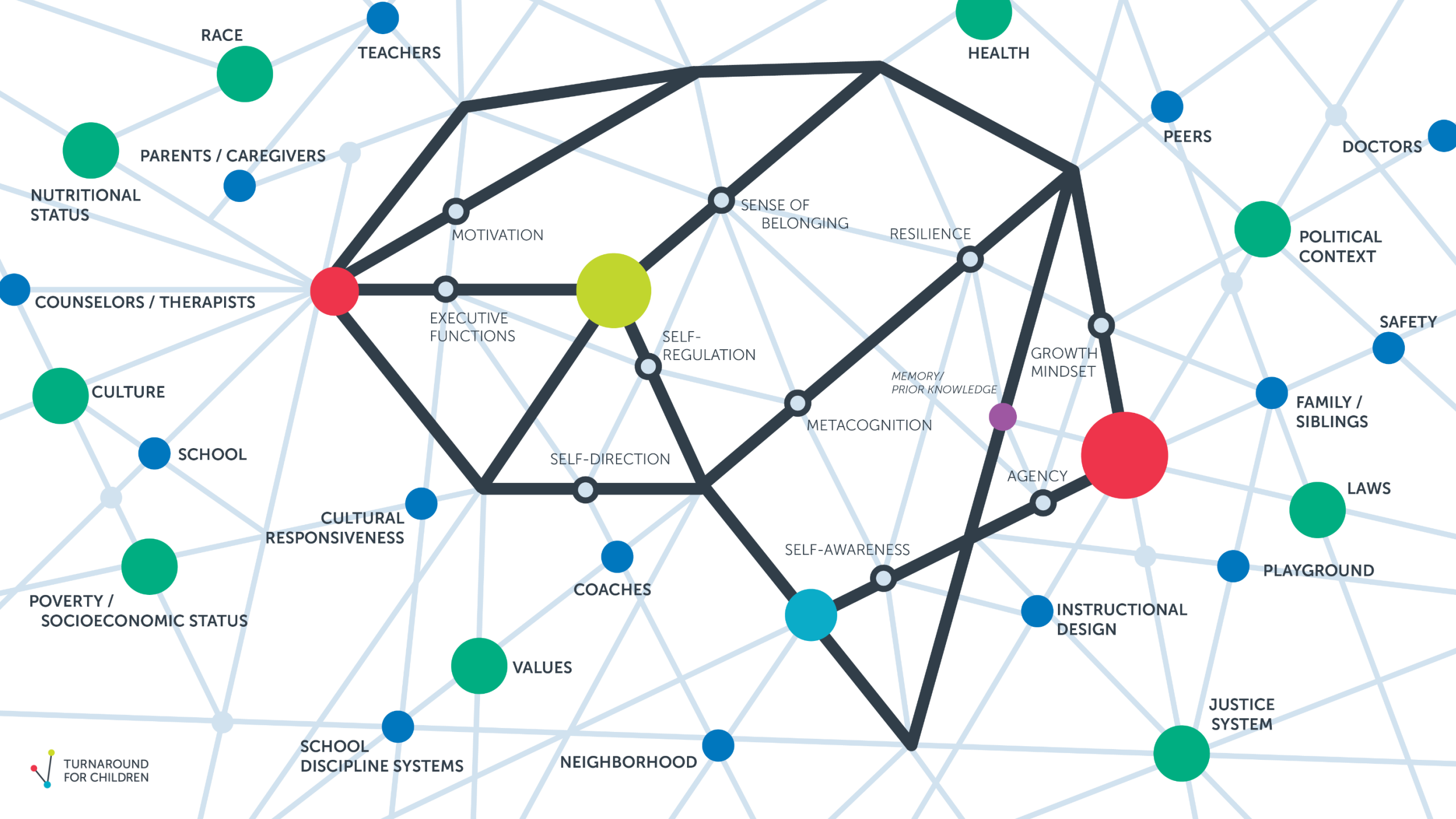


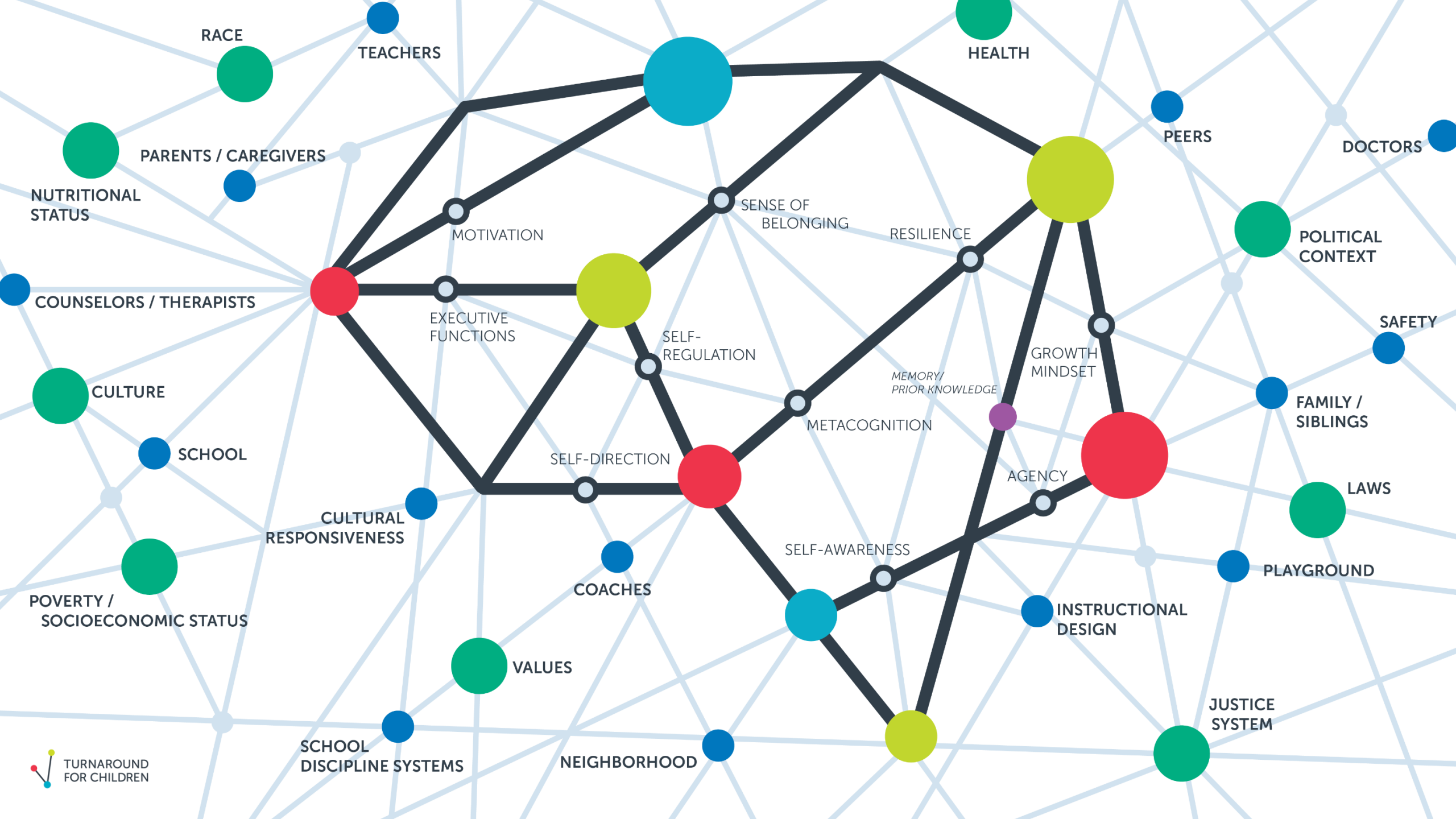


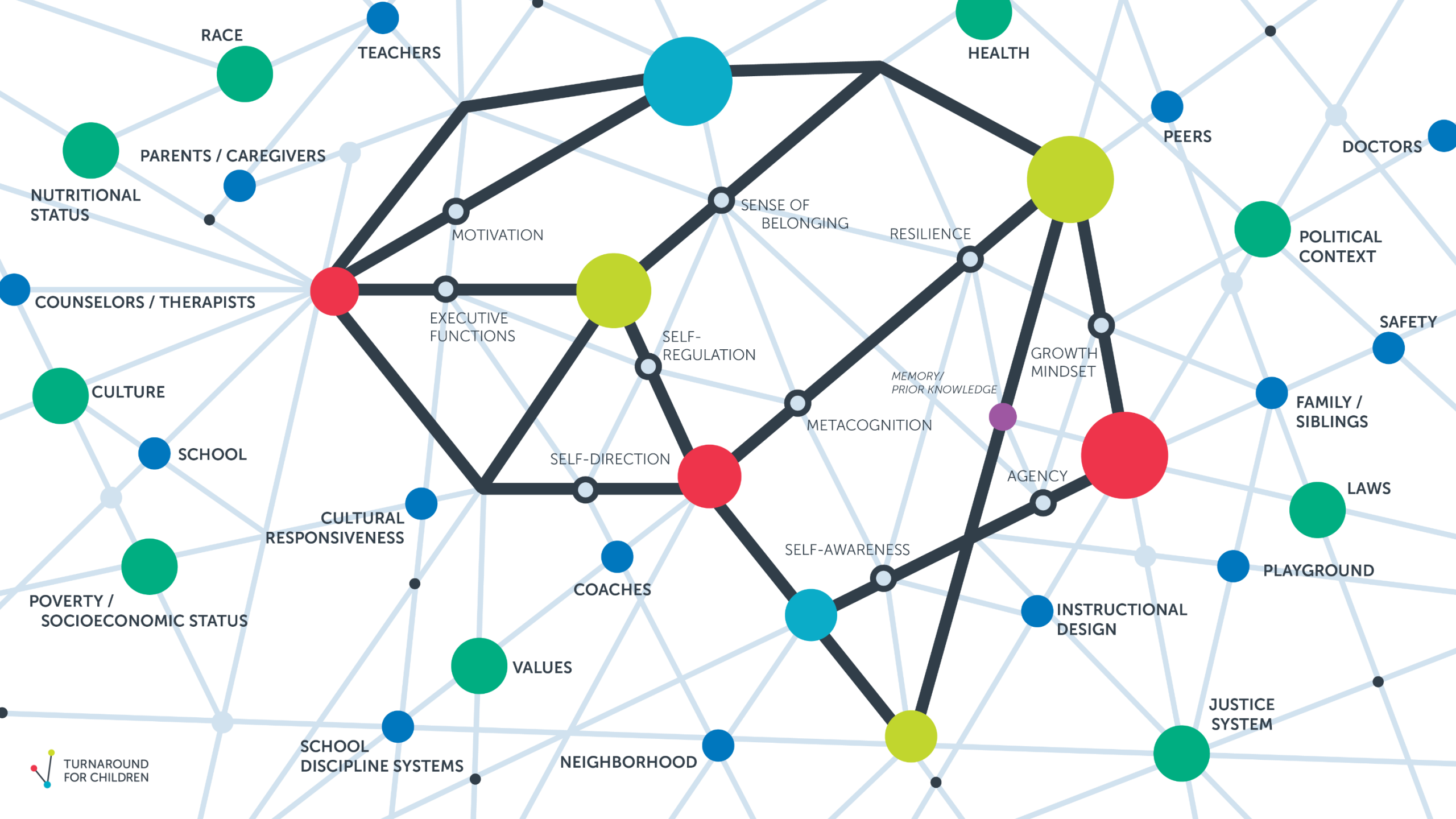








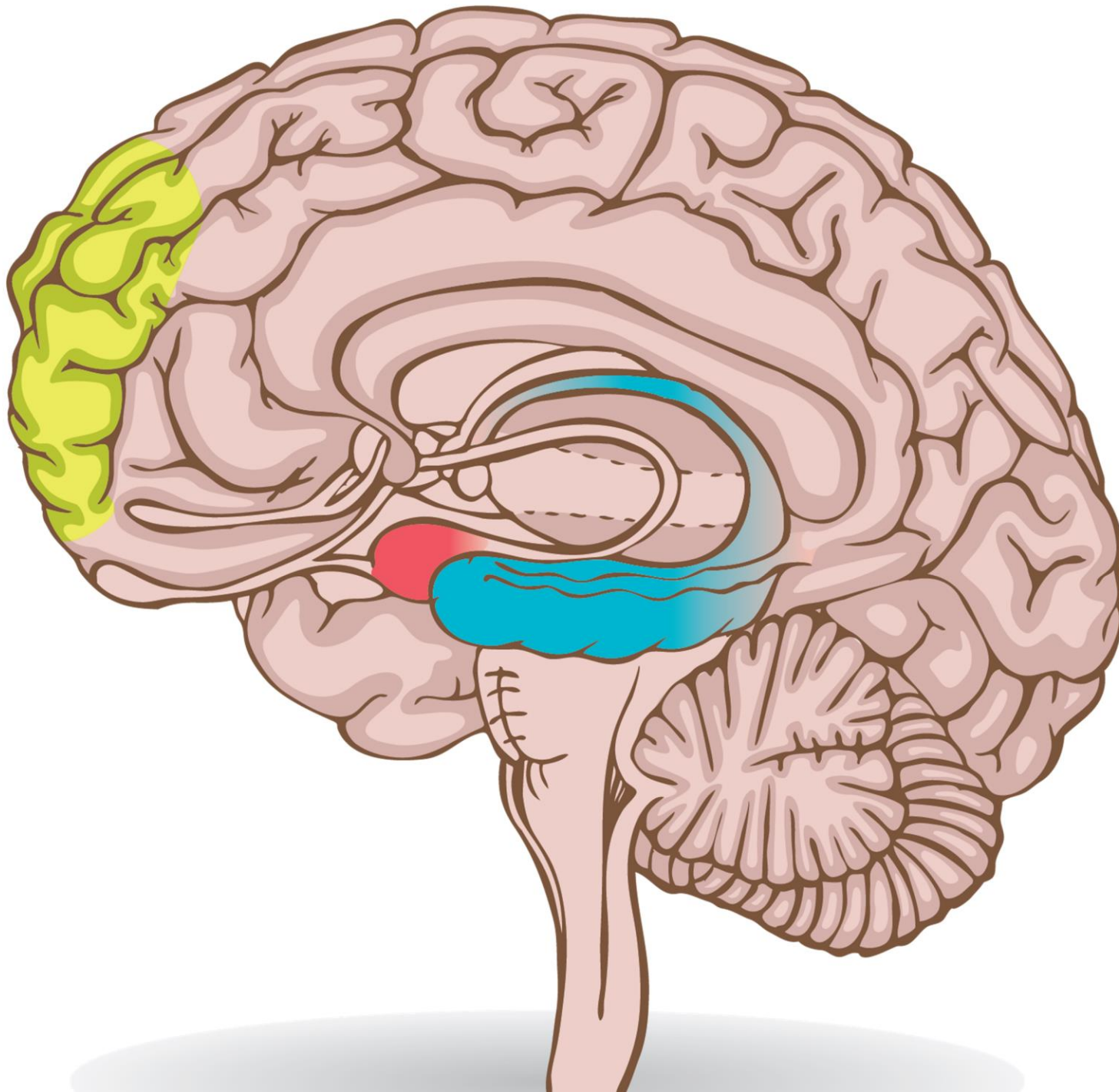






There are
20,000 genes
in the
human genome —

fewer than 10%
get expressed.



HOW CONTEXT GETS INSIDE THE BRAIN





John Nash



Kingary



3

THINGS TO REMEMBER ABOUT BRAIN DEVELOPMENT

Malleability

**Experience-
Dependent
Growth**

Context

PREFRONTAL CORTEX

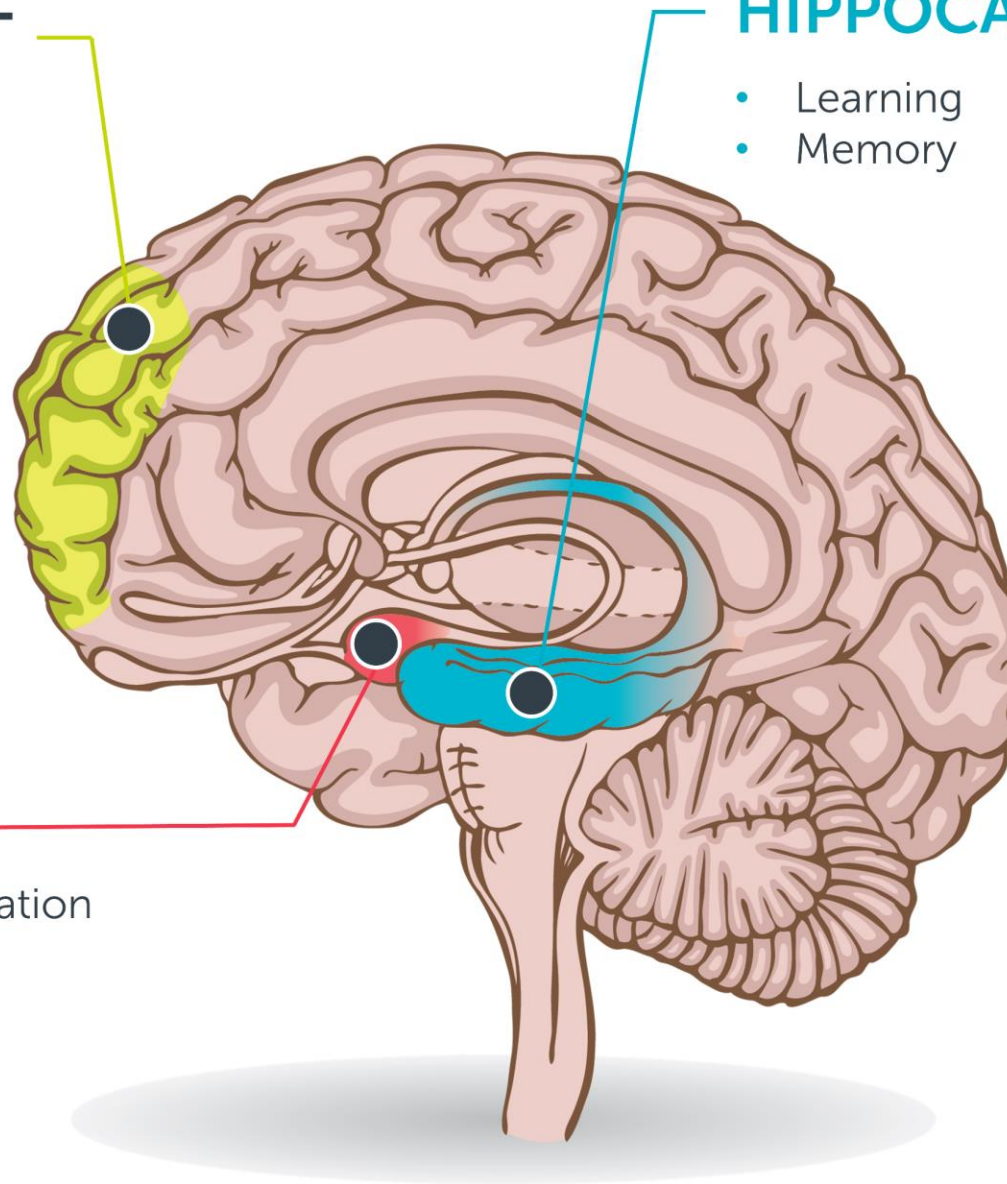
- Attention
- Concentration
- Focus

HIPPOCAMPUS

- Learning
- Memory

AMYGDALA

- Emotional Regulation
- Reactivity





CORTISOL



OXYTOCIN





he has for k

MLK

Mary - 15-929

e was bon. in Atlanta

he skip Quc



ACEs

ADVERSE CHILDHOOD EXPERIENCES

- Physical abuse
- Emotional abuse
- Sexual abuse
- Physical neglect
- Emotional neglect
- Mental illness in the home
- Domestic violence
- Incarcerated relative
- Substance abuse in the home
- Loss of a parent (death, divorce)
- Racism
- Witnessing violence
- Lack of neighborhood safety and trust
- Bullying
- Foster care



Adversity
doesn't just
happen **to**
children, it
happens **inside**
their brains
and bodies.



OXYTOCIN



CORTISOL







THE MARSHMALLOW TEST



THE MARSHMALLOW TEST





THE MARSHMALLOW TEST





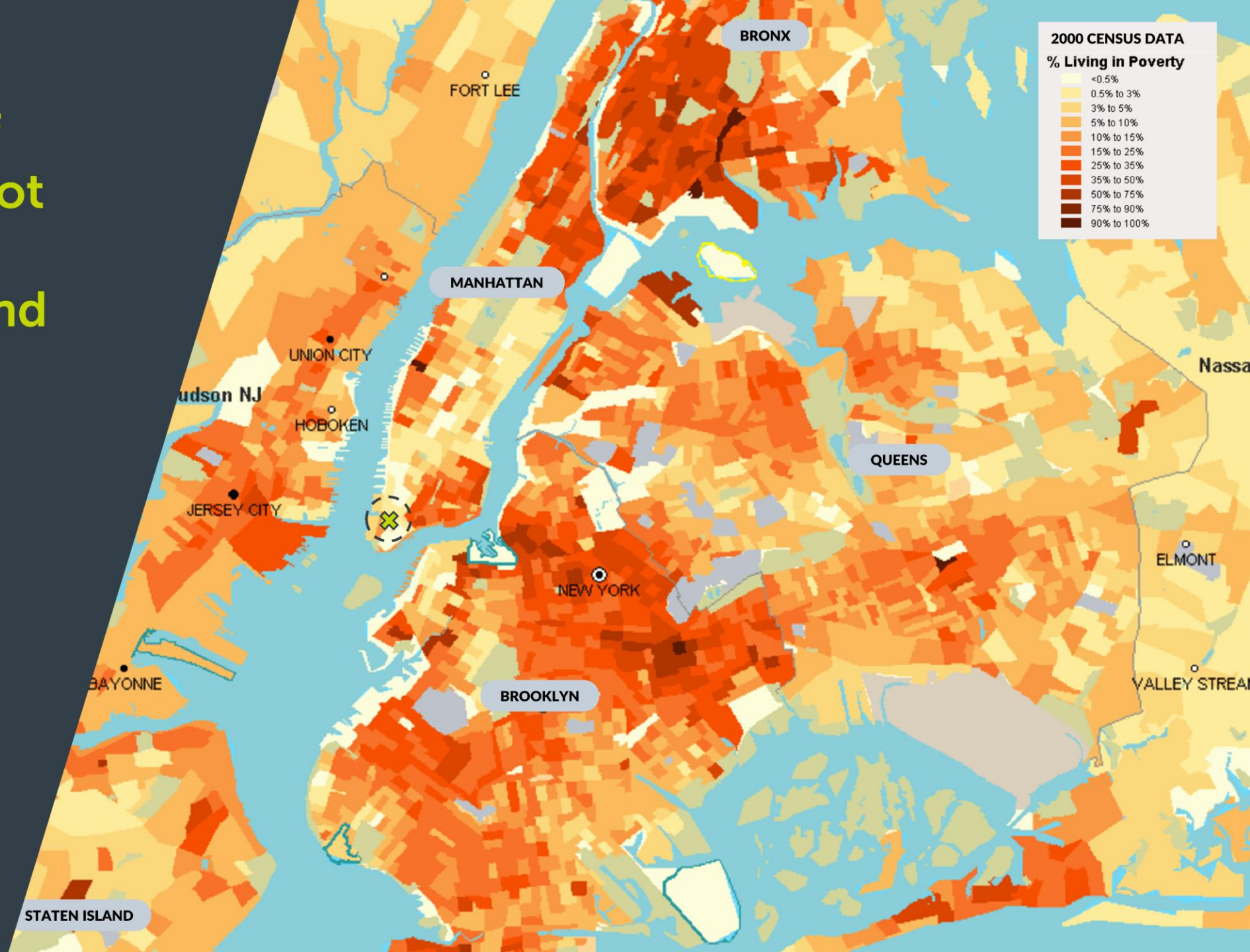








The greatest concentration of symptoms was not at Ground Zero, but in children and schools in the communities of deepest poverty.



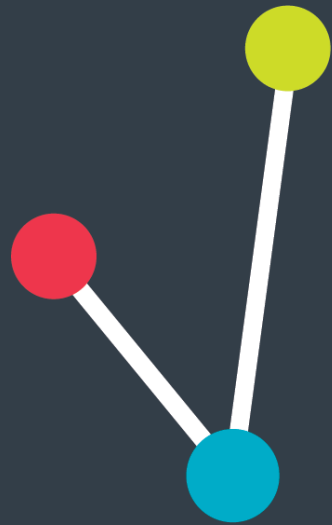




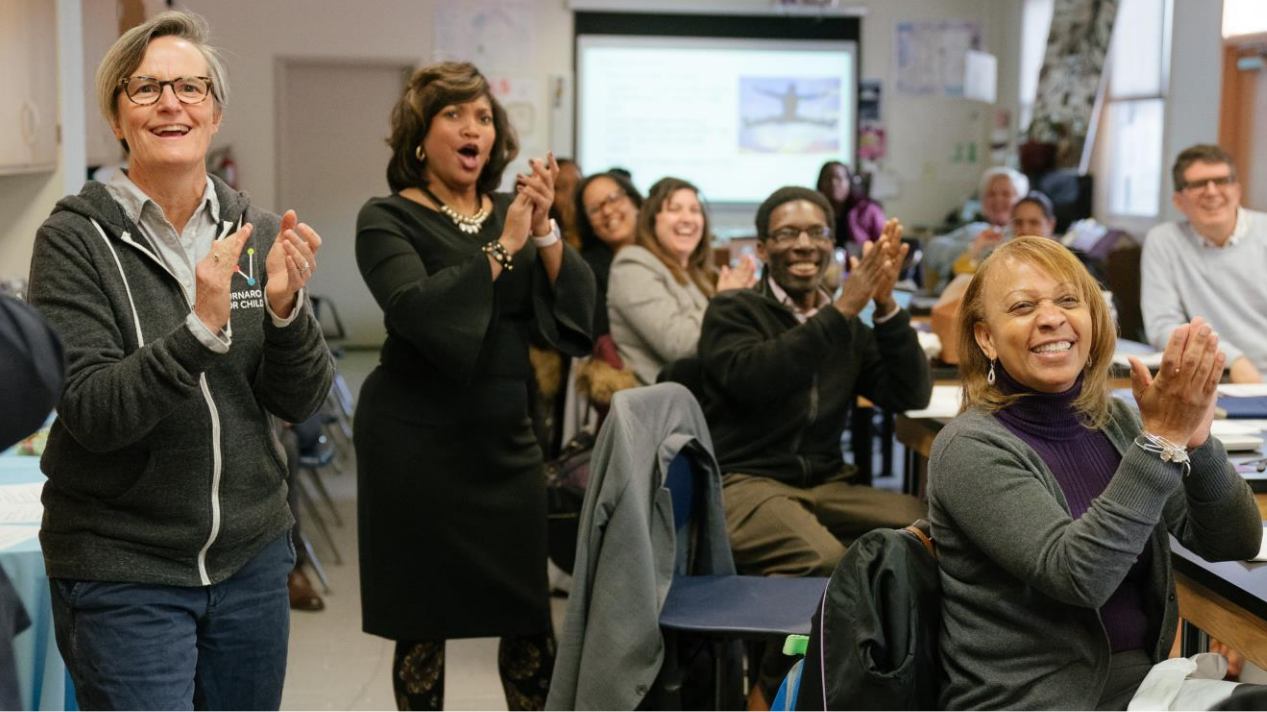








TURNAROUND FOR CHILDREN





51%



of public school students live
in low-income households —
the highest level since the National Center for
Education Statistics began tracking the figure

ACADEMY





Students unready for learning



Negative school culture



Academic underperformance



Teachers feel unprepared for challenges

A person's hands are shown holding a whiteboard. The whiteboard has several math problems written on it: $2 + 5 = 7$, $6 + 4$, $1 + 1 = 2$, $6 + 6 = 12$, and $1 + 1 = 2$. A black marker is visible on the right side of the whiteboard. The text "INSTEAD OF ASKING CHILDREN" is overlaid on the image.

INSTEAD
OF ASKING
CHILDREN

TO
BEAT
THE
ODDS,

A group of children in a classroom are raising their hands. A young boy in the foreground is smiling and looking towards the camera. The text "WE CAN CHANGE THE ODDS." is overlaid on the image.

WE
CAN
CHANGE
THE
ODDS.

SoLD: *THE SCIENCE OF LEARNING AND DEVELOPMENT INITIATIVE*



SoLD: *THE SCIENCE OF LEARNING AND DEVELOPMENT INITIATIVE*



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APPLIED DEVELOPMENTAL SCIENCE

2018

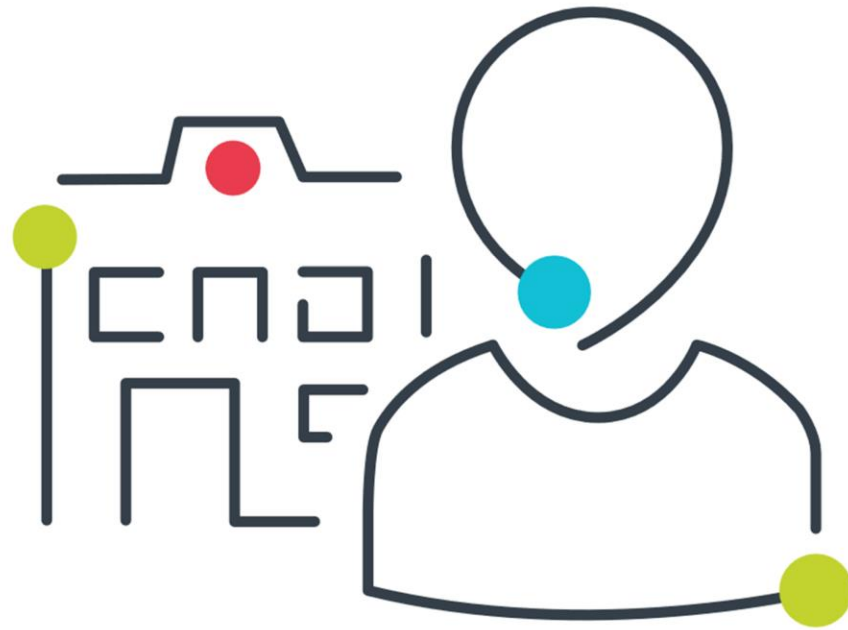
**MALLEABILITY, PLASTICITY, AND INDIVIDUALITY:
HOW CHILDREN LEARN AND DEVELOP IN CONTEXT**

**DRIVERS OF HUMAN DEVELOPMENT:
HOW RELATIONSHIPS AND CONTEXT SHAPE
LEARNING AND DEVELOPMENT**

2019

**IMPLICATIONS FOR EDUCATIONAL PRACTICE OF
THE SCIENCE OF LEARNING AND DEVELOPMENT**

WHOLE CHILD PERSONALIZATION OF LEARNING



SoLD:

*THE SCIENCE OF
LEARNING AND
DEVELOPMENT
INITIATIVE*

**WHOLE CHILD
PERSONALIZATION
OF LEARNING**



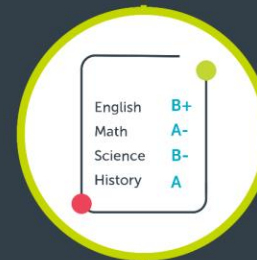




WHOLE CHILD PERSONALIZATION REQUIRES INTEGRATION OF TOOLS AND PLATFORMS



*DEVELOPMENT OF
SKILLS AND MINDSETS*



CONTENT MASTERY



*INDIVIDUALIZED
LEARNING
PATHWAYS*



TURNAROUND
FOR CHILDREN

BUILDING BLOCKS FOR LEARNING

A Framework for
Comprehensive
Student
Development

INDEPENDENCE
AND SUSTAINABILITY

Self-
Direction

Curiosity

Civic
Identity

PERSEVERANCE

Resilience

Agency

Academic
Tenacity

MINDSETS FOR
SELF AND SCHOOL

Growth
Mindset

Self-
Efficacy

Sense of
Belonging

Relevance
of School

SCHOOL
READINESS

Self-
Awareness

Social Awareness/
Relationship Skills

Executive
Functions

HEALTHY
DEVELOPMENT

Attachment

Stress
Management

Self-
Regulation





BUILDING BLOCKS FOR LEARNING

A Framework for
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HEALTHY
DEVELOPMENT





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BUILDING BLOCKS FOR LEARNING

A Framework for
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SCHOOL
READINESS



HEALTHY
DEVELOPMENT







Fire Drill



1. **Stop!** Line up quickly and quietly with the emergency bag.
2. Follow your teacher down the stairs.
3. **Walk!** Don't run!
4. Line up quietly outside.

CLEVELAND ELEMENTARY CORE VALUES

...d
We will show responsibility for our actions
We will make positive choices

grity
We will be honest with ourselves and others
We will fulfill commitments and promises

nership
We will have courage to think independently
We will demonstrate problem-solving and decision-making skills

...d others
We will honor ...

amina
We will work hard
We will grow our brains
We will persevere



Tardy Procedures



If you arrive after 8:30am, you must first report to the front office and get a tardy slip.

Tuesday Schedule

8:00 - 8:15	Morning Meeting
8:15 - 8:45	ELL Block #1 (75 min.) Read (Student 100 min.)
8:45 - 9:00	Music
9:00 - 9:30	ELL Block #2 (75 min.)
9:30 - 10:00	Language
10:00 - 10:30	Math
10:30 - 1:00	ELL Block #3 (continued - 10 min.)
1:00 - 1:30	Art/PE
1:30 - 2:00	ELL Block #4 (continued - 10 min.) Student

Thursday LEAF Schedule

8:00 - 8:15	Specialist #1 (ELL Block #1) 8:00 - 8:30 (ELL Block #2) 8:30 - 9:00
8:15 - 8:45	ELL Block #1
8:45 - 9:00	Morning Meeting
9:00 - 9:30	ELL Block #2 (75 min.) Read (Student 100 min.)
9:30 - 10:00	Music
10:00 - 1:00	ELL Block #3 (continued - 10 min.)
1:00 - 1:30	Art
1:30 - 2:00	ELL Block #4 (10 min.) Read (Student 100 min.)
2:00 - 2:30	Student

212

Ms. Johnson

INDEPENDENT ...

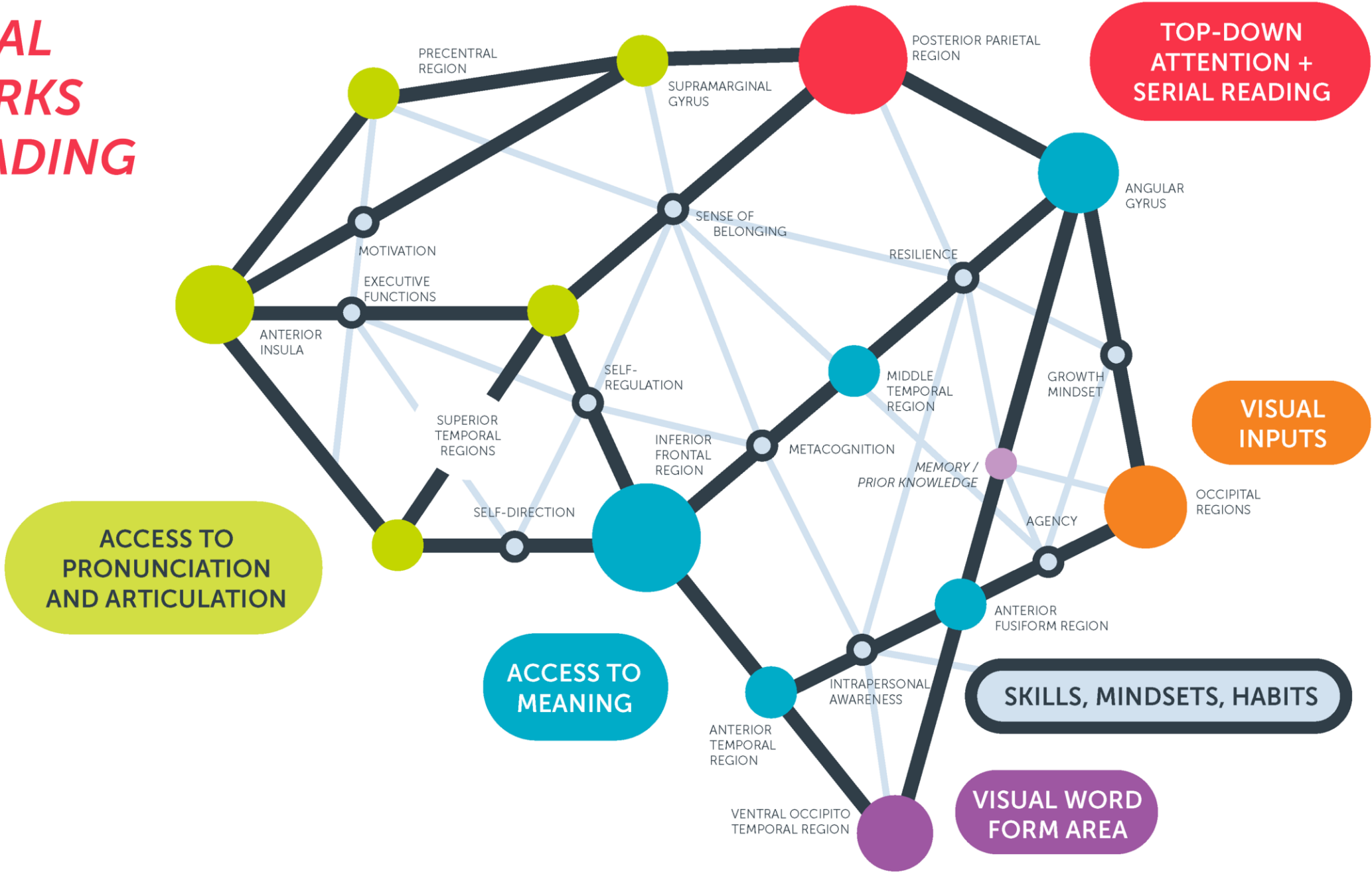








CORTICAL NETWORKS FOR READING

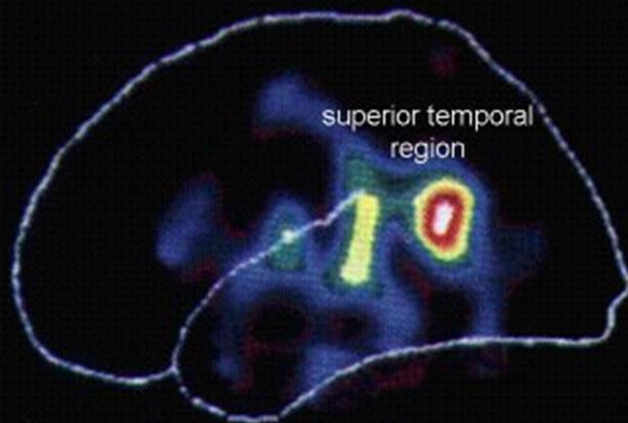


Meet the Ee-hip-en-hop,
who are experts at knowing
which foods are the best
for everybody that's growing.

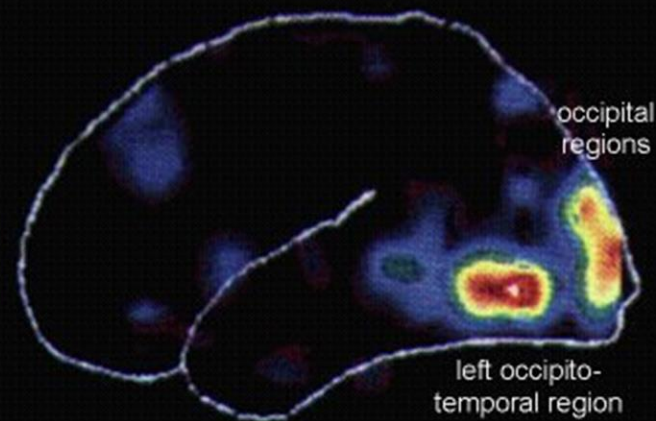
They eat—
pasta, rice, cereal,
muffins, and breads,
which they munch at small tables
they wear on their heads.

Vegetables

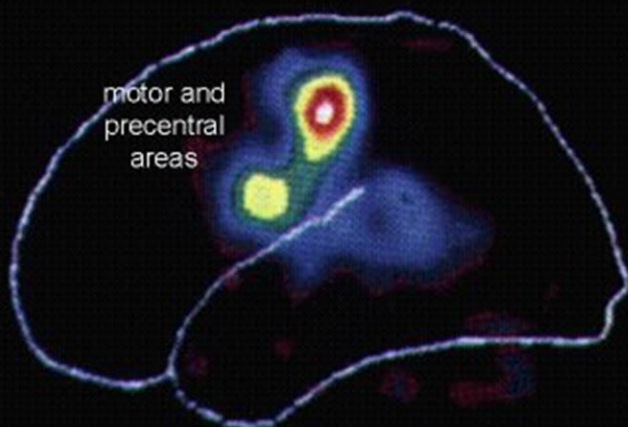
3-5 SERVINGS
DAILY



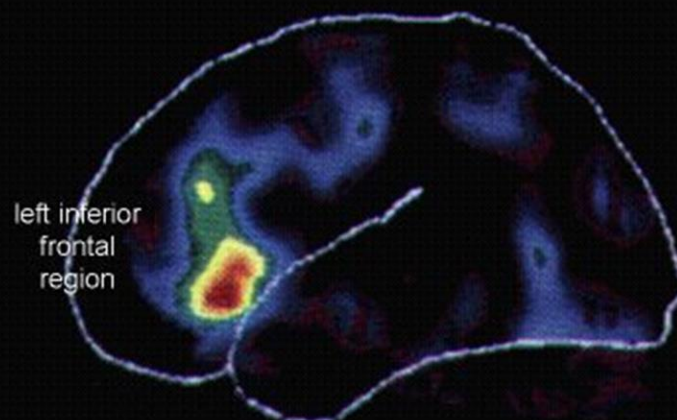
Listening to words



Reading words



Producing words



Associating words



*PRACTICES TO BUILD
RELATIONSHIPS AND TRUST:*



edutopia

HOW LEARNING HAPPENS

edutopia.org/how-learning-happens

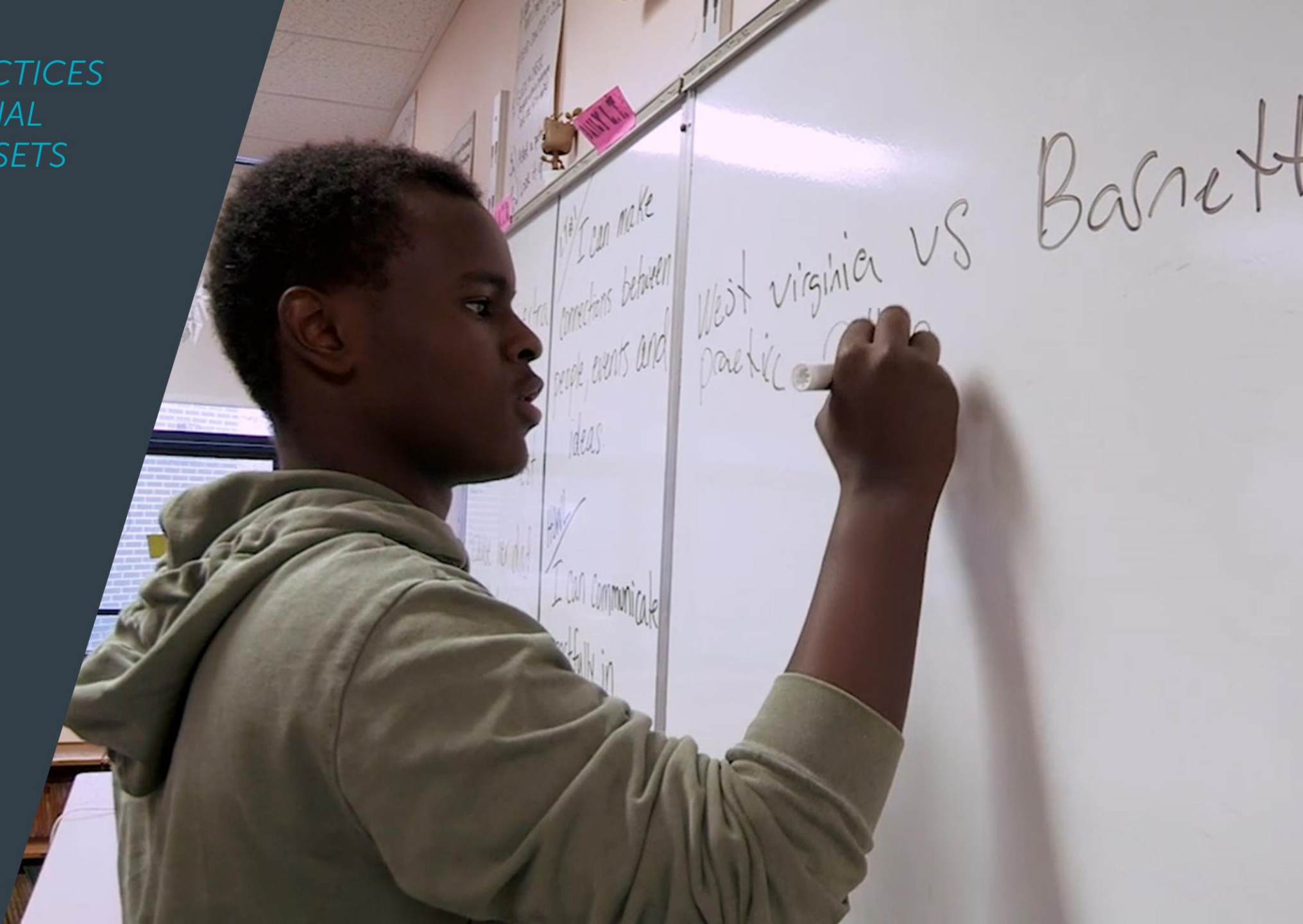


*PRACTICES TO BUILD
RELATIONSHIPS AND TRUST:*

- **2x10**
- **ADVISORIES**
- **LOOPING**



INTEGRATED PRACTICES
TO BUILD ESSENTIAL
SKILLS AND MINDSETS



I can make
connections between
people, events and
ideas.

✓
I can communicate
effectfully in
class discussion.

A3 West virginia vs Barnette
C practice Collage

B2 Aleks

A1 Dry Ice observation

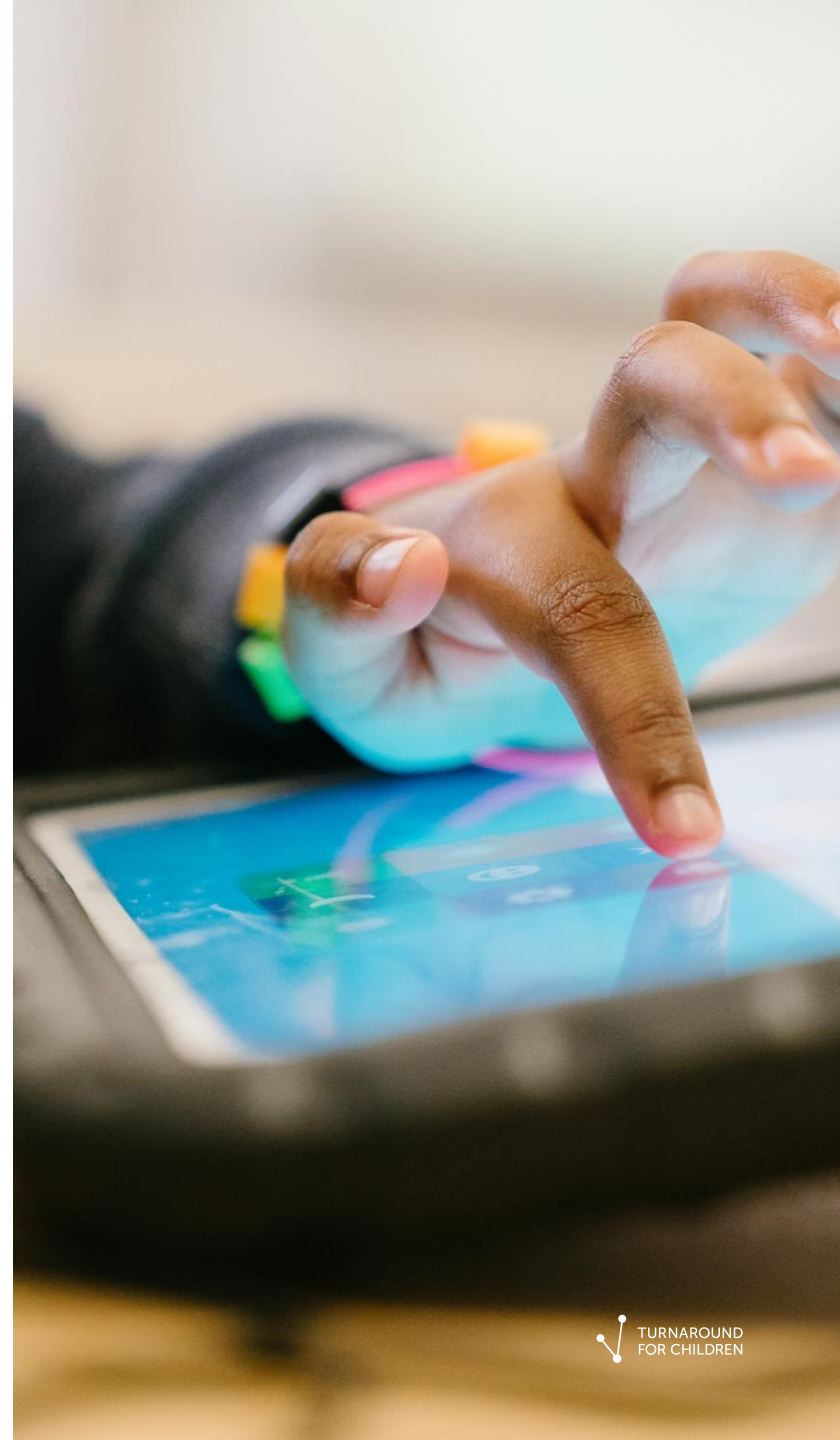
A4 Book club

B1 SS vocab quiz - Trn

D French verb links

A2 Spanish past tense verbs









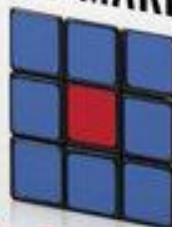
$6 + 6 = 12$
 $1 + 7 =$

"OVERTURNS OUR FUNDAMENTAL ASSUMPTIONS ABOUT TALENT."
—ADAM GRANT, Wharton professor and New York Times bestselling author of *Give and Take* and *Originals*

THE END OF AVERAGE

UNLOCKING OUR POTENTIAL
BY EMBRACING WHAT MAKES
US **DIFFERENT**

"CONSISTENTLY MIND-BLOWING."
—DAN HEATH, coauthor of the New York Times bestsellers
Made to Stick, *Switch*, and *Decisive*



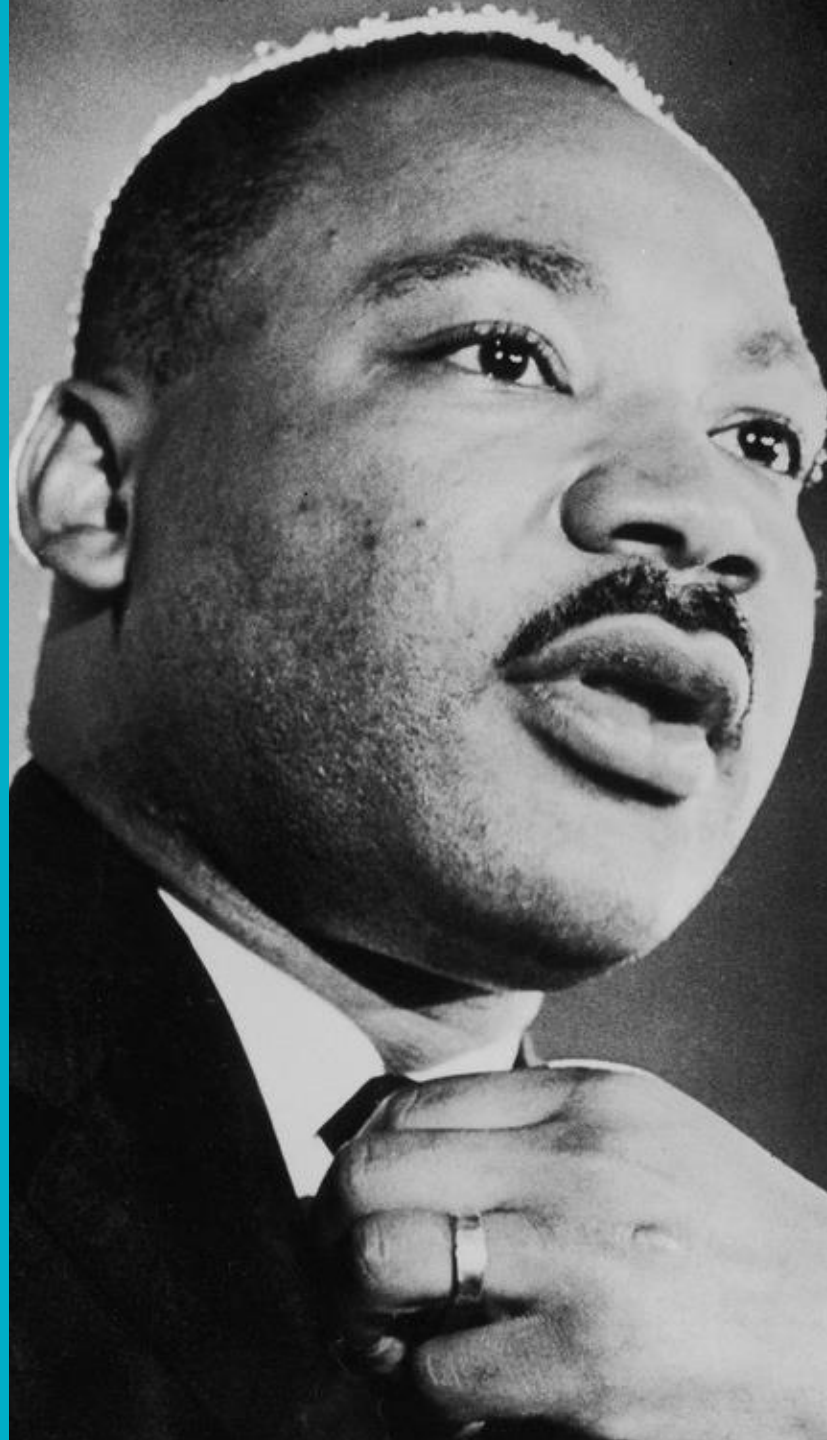
TODD ROSE

"SUBVERSIVE AND READABLE." —NEW YORK TIMES





Skills exist in
a potential
state in *all*
children.

















MATH CENTERS

LOOK WHO'S PITCHING IN!

Math Wall

Fractions

Numerator

Denominator

3

27

$\frac{3}{6}$

$\frac{4}{6}$

4

25

$\frac{1}{2}$



Objective: SWBAT understand a fraction as part of a whole.

SMARTboard content:

If the yellow rhombi on the hexagon to find the answer.

What do rhombi do?

Place the blue rhombi on the hexagon to find the answer.

WORDS of the WEEK

Charles H.

Houston

pledge

positive

respect

behavior

courage

copious

voracious

punctual

studious

institution

MINUS

PLUS

DIVIDE

MULTIPLY

LESS THAN

GREATER THAN







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