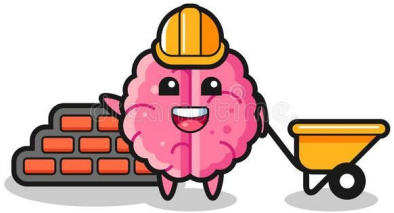
Be a brain builder!



Raleigh Cato, Ed.S., NCSP
School Psychologist
San Juan BOCES

Outcomes

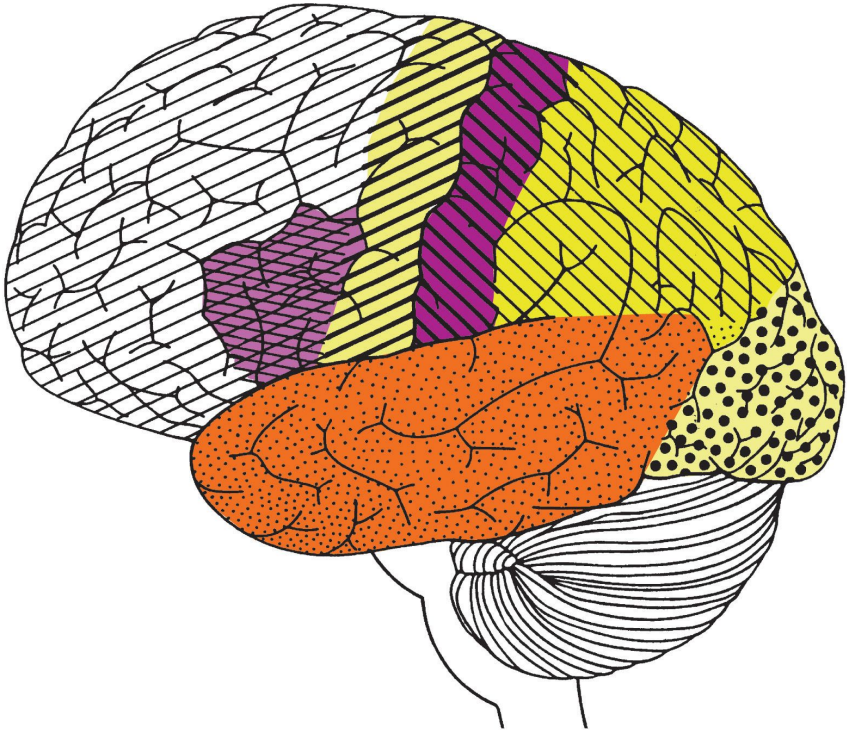
1. Participants will understand core principles of brain development in early childhood

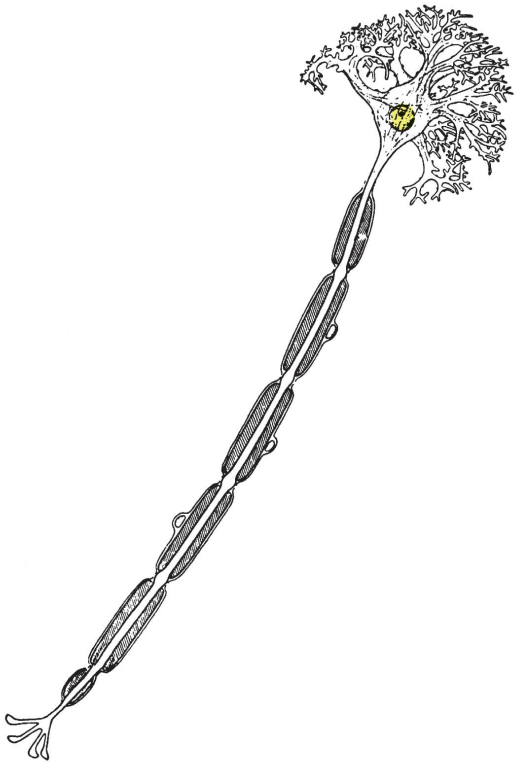
2. Participants will develop awareness of brain building practices and resources

3. Participants will walk away with free tools to use in their everyday lives and share with families

Brain development

A few brain basics

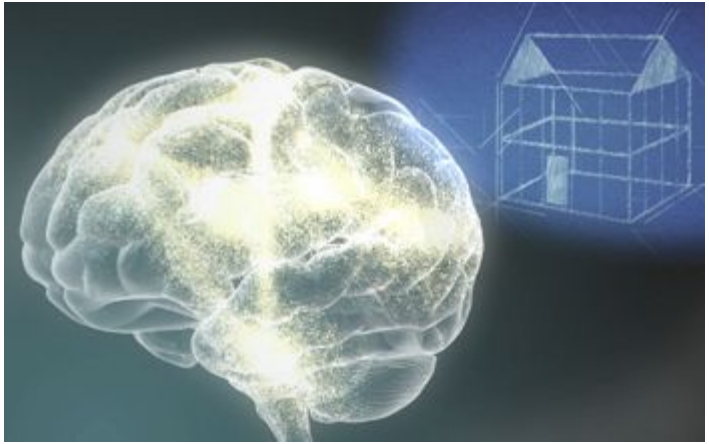




Why brains?

The brain is a **highly integrated organ** and its multiple functions operate in coordination with one another.

- Life support - heart, lungs, hormones, digestion, etc.
- Sensorimotor - moving, feeling, coordinating
- Communication - expressing and understanding, social
- Social-Emotional-Behavioral - feeling and interacting
- Cognition - thinking and learning, problem solving
- Executive Functions - “adulting”



Early experiences affect the development of **brain architecture**, which provides the foundation for all future learning, behavior, and health. Just like a house that needs a solid and strong foundation, the brain needs a strong foundation for all future development.

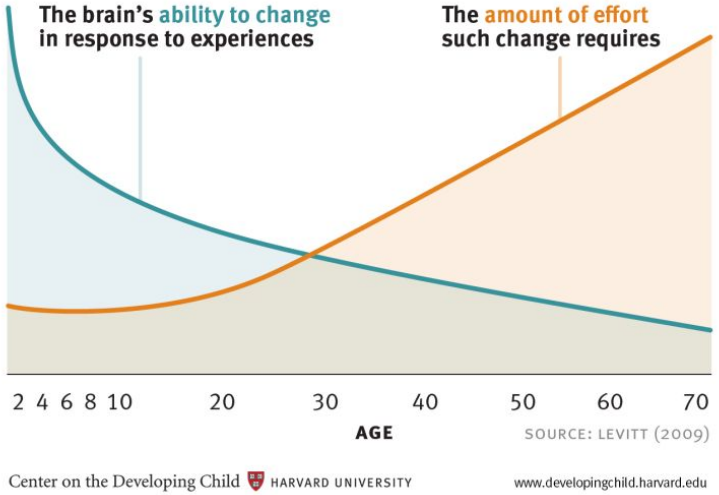
Wise words from the folks at harvard

Brains are built over time, from the bottom up. The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood.

Brain architecture is comprised of billions of connections between individual neurons across different areas of the brain. These connections enable lightning-fast communication among neurons that specialize in different kinds of brain functions.

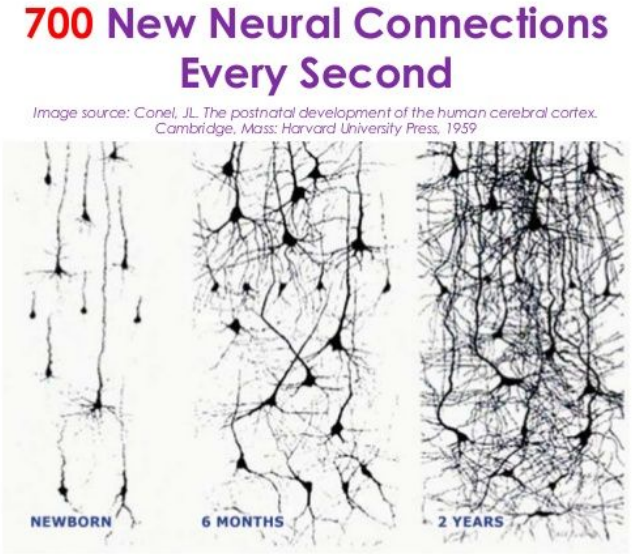
The interactions of genes and experience shape the developing brain. Although genes provide the blueprint for the formation of brain circuits, these circuits are reinforced by repeated use.

A major ingredient in this developmental process is the serve and return interaction between children and their parents and other caregivers in the family or community.



Built to connect

A baby's brain is wired to grow from birth! It starts off with billions of neurons. During your child's earliest years, their brain makes 1 million neural connections every single second.

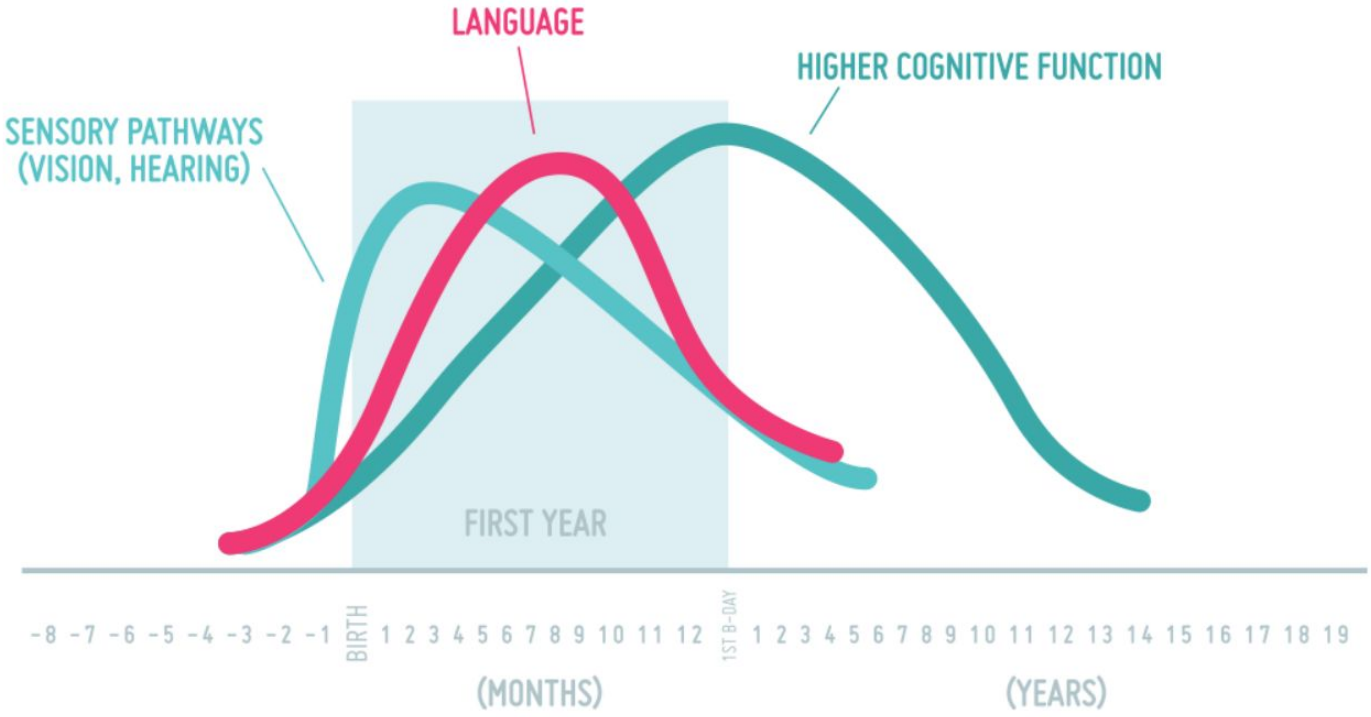


"When children solve new problems, they exercise their brains. Brains need exercise, just like the rest of our bodies."

Dr. Philip Zelazo

Vroom Advisor

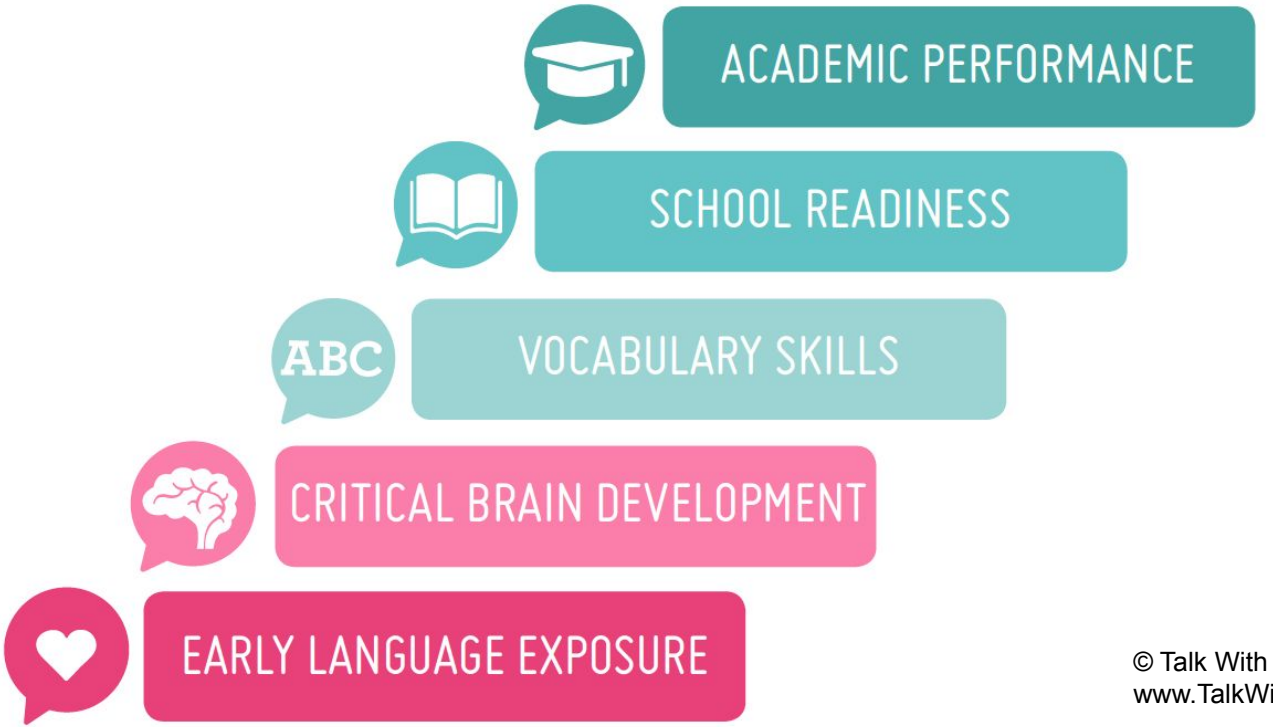
Brain Development Over Time



Harvard Center on the Developing Child

CO Brain Injury Steering Committee: Adapted from Miller, 2007; Reitan and Wolfson, 2004; Hale and Fiorello, 2004

EARLY LANGUAGE EXPOSURE ENHANCES VOCABULARY AND ACADEMIC PERFORMANCE



Brain building practices

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From the awesome folks at Vroom

Brain Building Basics

Again from the good folks at Harvard

Serve and Return

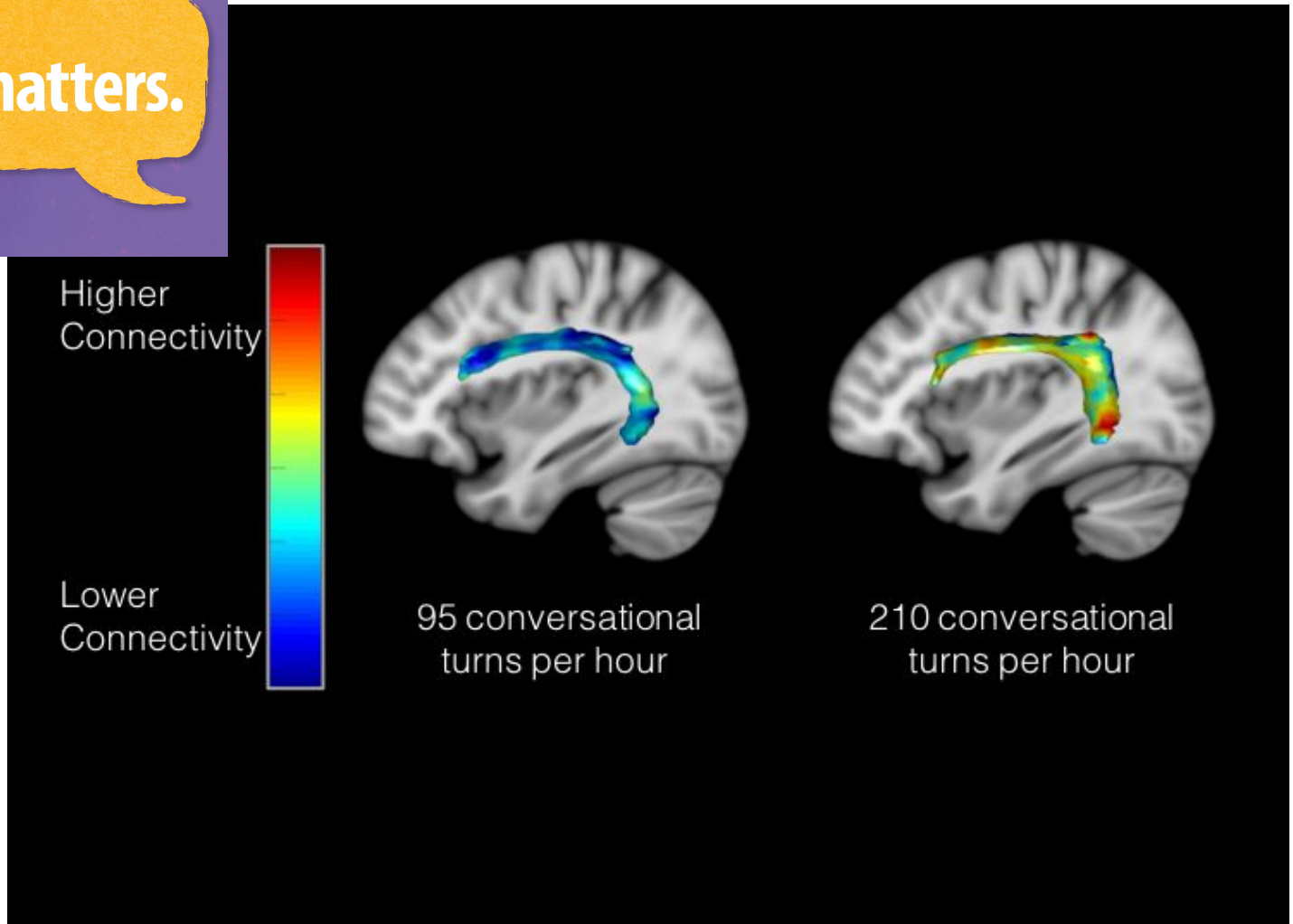
Exciting research from LENA

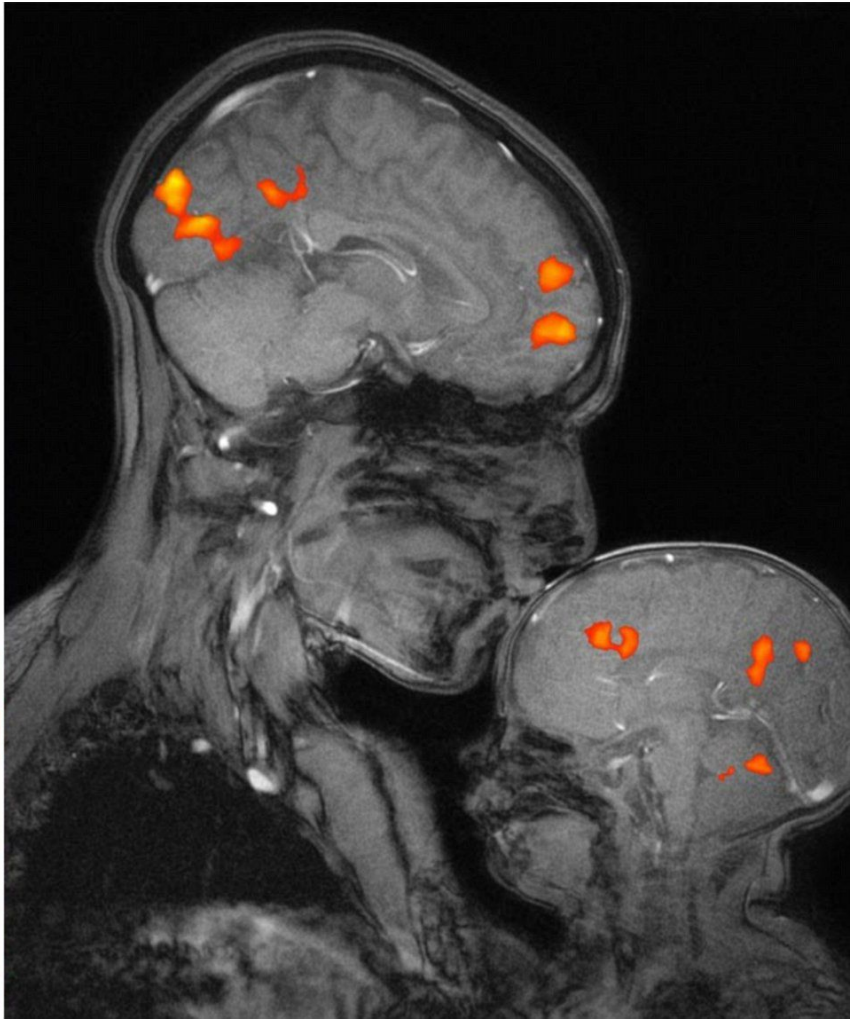
LENA®
Building brains through early talk

A 10-year study by LENA researchers confirms that the amount of talk with adults that babies experience in the first three years of life is related to their verbal abilities and IQ in adolescence. The paper, "Language Experience in the Second Year of Life and Language Outcomes in Late Childhood," was released for the first time today through advanced online publication in *Pediatrics*.

The results: the adult words and especially the conversations the children experienced between 18 and 24 months correlated 10 years later with their IQ, verbal comprehension, vocabulary, and other language skills. The amount their parents talked to them was important, but the amount they talked with them ("conversational turns") was even more important.

Early talk matters.





30 MILLION WORDS...

In 1995, a study by researchers Betty Hart and Todd Risley found that **some children heard thirty million fewer words by their fourth birthdays than others**.

Children who heard more words were better prepared when they entered school. These same kids, when followed into third grade, had bigger vocabularies, were stronger readers, and got higher test scores.

Dr. Dana Suskind, founder and director of the Thirty Million Words Initiative, learned of this thirty million word gap in the course of her work as a cochlear implant surgeon at University of Chicago Medical School. Galvanized by the knowledge that every parent possesses the key to their child's optimum brain development—and most do not even know it—she began a new research program to find the best ways to bridge that gap.

Brain builder toolkit

Serve and return

1

Notice the serve and share the child's focus of attention.

2

Return the serve by supporting and encouraging.

3

Give it a name!

Serve and Return

4

Take turns...and wait. Keep the interaction going back and forth.

5

Practice endings and beginnings.

Children signal when they're done or ready to move on to a new activity. They might let go of a toy, pick up a new one, or turn to look at something else. Or they may walk away, start to fuss, or say, "All done!" When you share a child's focus, you'll notice when they're ready to end the activity and begin something new.

WHY? *When you can find moments for children to take the lead, you support them in exploring their world—and make more serve and return interactions possible.*

Brain Building Basics™

Look

Children use their eyes to learn. See what catches your child's attention and talk about it. Or connect eye-to-eye, then smile, chat, hug, or make funny faces!

Follow

Young children learn best when you follow their lead. Tune into your child's words, sounds, movements, and ideas! Then respond with your own words and actions.

THE 1ST T

TUNE IN

Make a conscious effort to notice, focus, and respond to what your child is communicating.

WHY? A child who receives consistent Tuning In is more likely to stay engaged longer, to initiate communication and, ultimately, to learn more easily.

Brain Building Basics™

THE 2ND T

TALK MORE

Surround your child with rich language. It's not just the number of words, but the kind of words and how they're said.

Chat

Children's brains light up when you talk, sing, or make sounds back and forth with them. Chat about your day, food, and what's around you, or string sounds together for a fun conversation!

Brain Building Basics™

Take Turns

Children learn from taking turns when you play, talk, or explore. After they go, take your turn. Then repeat: they go, you go, they go, you go!

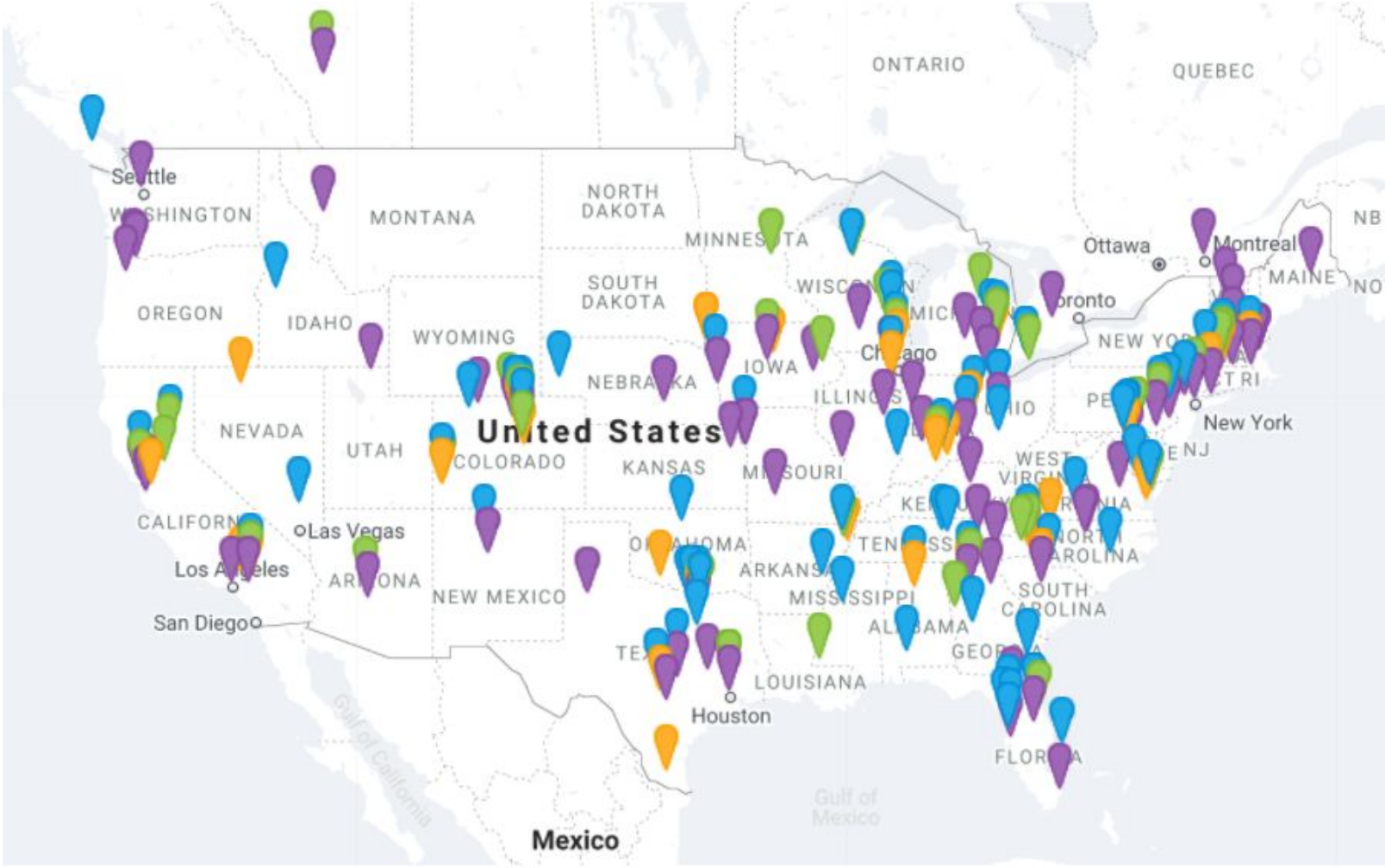
Stretch

Children's brains grow strong when you help them stretch their learning further. Keep a moment going: ask your child a question that starts with what, when, where, how, or why!

THE 3RD T

TAKE TURNS

Engage your a child in a conversational exchange. This is the most valuable of the Three T's for a child's developing brain.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Bring Vroom tips into your community or organization and get families excited about brain building

1000+ activities designed to help young brains grow strong. Our early learning experts created Vroom tips to complement existing efforts within communities.

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Center on the Developing Child
HARVARD UNIVERSITY

Self-Evaluation

1. Participants will understand core principles of brain development in early childhood

   None --- a little --- a lot --- too much

2. Participants will develop awareness of brain building practices and resources

   None --- a little --- a lot --- too much

3. Participants will walk away with free tools to use in their everyday lives and share with families

   None --- a little --- a lot --- too much