

Too Small to Fail

A Joint Initiative of the Clinton Foundation and The Opportunity Institute



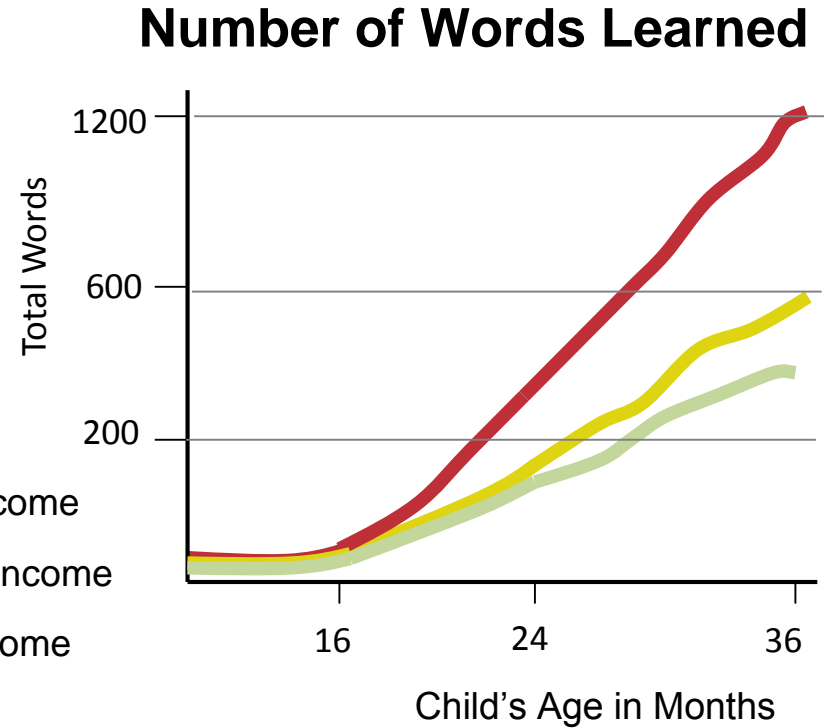
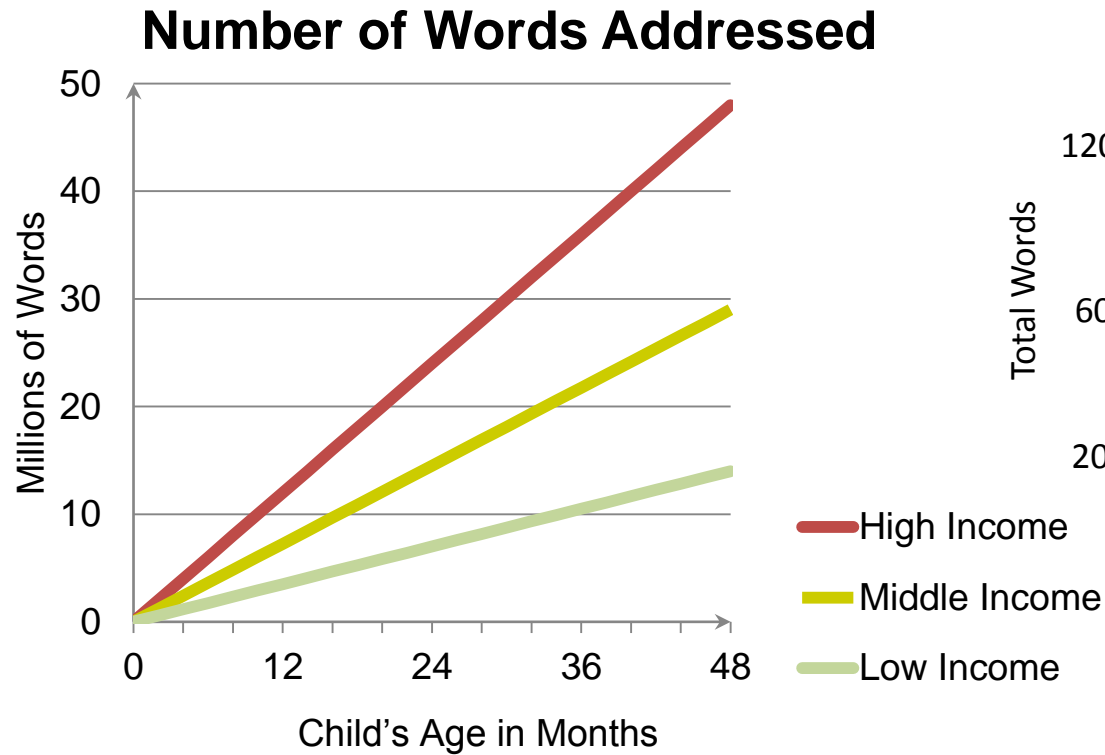
Goals

Increase awareness and spark positive change in parents and communities to boost early brain and language development in children ages 0-5.

- For parents and young children, make small moments big.
- For communities, empower people and places to make these moments happen more often.



Research: A Strong Base



Source: Hart & Risley (1995)

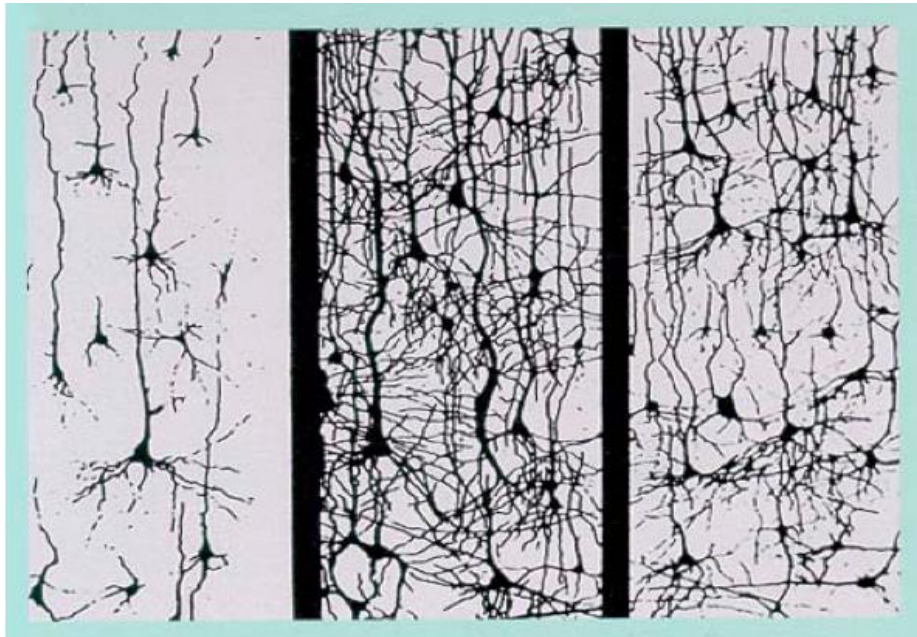
Research: The Opportunity

Neuroplasticity

At birth

6 years old

14 years old



Drawing supplied by H.T. Chugani M.D., Chief, Division of Pediatric Neurology, Children's Hospital of Michigan

**TOO SMALL
TO FAIL**



**TALK
READ
SING**
TALKING IS TEACHING.ORG

Talking is Teaching: Talk, Read, Sing Campaign Approach

Air Game

- Hollywood
- Univision
- National partnerships
- National media

Ground Game/Cities Strategy

- Trusted messengers in community touch points
- Environmental prompts & local paid media
- Tools to facilitate change



Ground Game/Cities Strategy

Our campaign's **3 components** to motivate behavior change:

1. Trusted messengers in community touch points
2. Environmental prompts & paid media
3. Tools to facilitate change

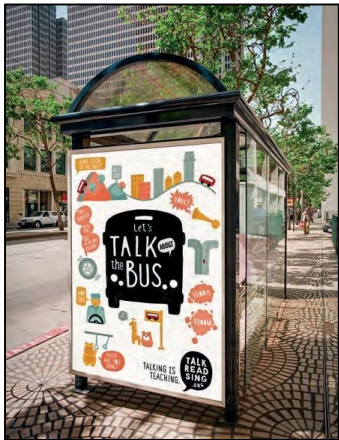


Trusted Messengers

- Pediatricians & nurses
- Faith leaders
- Child care providers
- Early educators
- Home visitors
- Librarians



Environmental Prompts



Bus shelters



Laundromats



Playgrounds



Grocery Stores

Tools to Facilitate Change



Tote Bags



Baby Blankets



Books



Sesame Guide



Federal Tip Sheets



Text Reminders



Expanding to Early STEM



Why is Early Math Important?

- Children's math knowledge at K-entry predicts 5th grade achievement in math and reading ¹
- Math knowledge gap at kindergarten entry for children from lower SES families ²

1. Claessens, Duncan, & Engel, 2009; Duncan et al., 2007

2. Denton & West, 2002

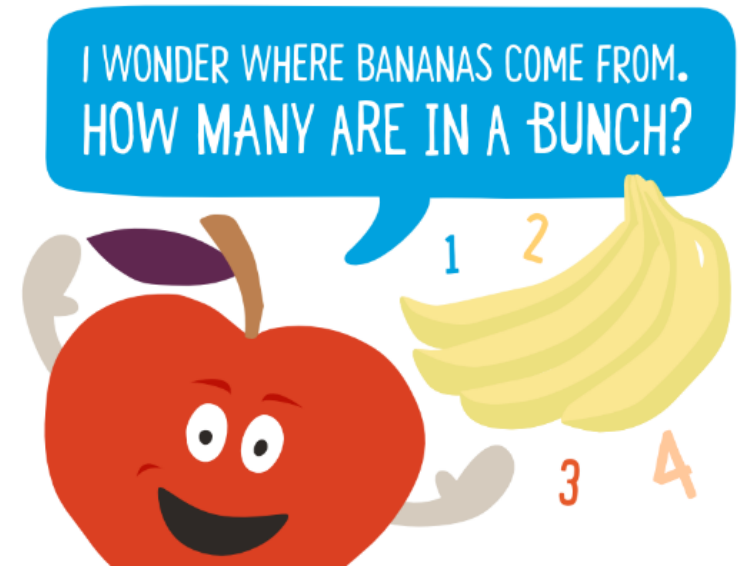
What is Early Math?



What works?

Evidence from Early Math Intervention Studies:

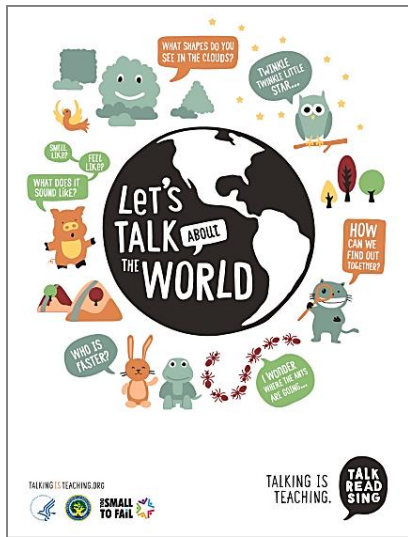
- Play, exploration, hands-on
- Emphasis on math-related language



Clements & Sarama, 2011; Frye et al., 2013; Greenes et al., 2004; Griffin, 2004; NAEYC & NCTM, 2002; Ramani & Siegler, 2011; Sarama & Clements, 2004; Starkey et al., 2004

Let's Talk, Read and Sing about STEM

- Partnership between TSTF, HHS & ED
- Concrete tips for families and early educators of children 0-5
- Poster with creative prompts
- Available in English and Spanish



LET'S TALK, READ AND SING ABOUT STEM!

TIPS FOR FAMILIES WITH YOUNG CHILDREN

Children begin discovering the world around them from the moment they are born. When you talk, read and sing with your child, you're helping her learn. It can be as simple as counting your baby's toes during bath time, asking your toddler a question about the sky, or encouraging preschool-age children to build with blocks! In fact, very young children can learn some of the basic concepts underlying science, technology, engineering and math (STEM). You can discover STEM with your child in many ways. Talk, read, sing, play, sign or use other ways to communicate – whatever works best for your family.

For children with disabilities or developmental delays, communicate with your service providers and keep each other informed of your child's individual learning style and methods you are using to make your child's language environment as rich as possible.

While we provide some tips, we know every child is unique. As always, you should do what is best and most developmentally appropriate for your child.

WHAT IS STEM?

"STEM" stands for science, technology, engineering and math. STEM can refer to the subjects individually or one or more working together, but can also mean a way of doing things that includes solving problems, asking questions and exploring the world around us.

For example, children learn about the concept of technology when they're exploring tools or simple machines. These can be items they use every day like a pair of scissors, or things they might see like the wheels of a car as they walk outside.

For young children, we focus on STEM through exploration, play and building curiosity about the world and the way things work. STEM learning is important for everyone and can happen anytime, anywhere. The real-life skills that people develop when learning STEM help make everyone better problem-solvers and learners.

For parents of children who are learning English or speak another language themselves, talk about STEM in your home language, in English, or both. Research shows that bilingual children have an easier time understanding math concepts and developing strong thinking skills. When families use their native language, it helps children hear a rich sense of self. Bilingual students have certain cognitive and social benefits that facilitate success in school and life.

Sources: Zickuhr, M., & Aronson, B. (2008). Your child hears a lot of languages. National Center for Language Acquisition.

LET'S TALK, READ AND SING ABOUT STEM!

TIPS FOR INFANT/TODDLER TEACHERS & PROVIDERS

From birth, children are inquisitive. You can nurture early science, technology, engineering and math (STEM) concepts and skills through daily routines and play and exploration activities that you provide for the babies and children in your program. By talking, reading, singing, playing, signing, or using other ways to communicate – whatever works best for your infants and toddlers – you can help them purposefully develop STEM skills. For example, count a baby's toes, describe the changing leaves with children, or talk with a toddler as you play with blocks together!

Research shows that having a strong foundation in early math, for example, can lead to higher achievement in both math AND reading later in school. In addition, interacting with many different materials in early childhood prepares students for science and engineering later in school. Use the **bolded STEM words** in these tips to communicate about early STEM concepts with young children every day. It's never too early to start!

Partner with families and encourage them to try these strategies at home, in their home language. Early exposure to some language instruction is critical for fostering a rich sense of self, and research has shown that students who are bilingual have certain cognitive and social benefits that facilitate success in school and life.

For children with disabilities or developmental delays, communicate with their other service providers and keep each other informed about the strategies you are using to enhance their language environment.

While we provide some tips, we know every child is unique. As always, you should do what is best and most developmentally appropriate for each child.

WHAT IS STEM?

"STEM" stands for science, technology, engineering and math. STEM can refer to the subjects individually or one or more working together, but can also mean a way of doing things that includes solving problems, asking questions, and exploring the world around us.

For example, children learn about the concept of technology when they're exploring tools or simple machines and investigating how they work. These can be items they use every day like a pair of scissors, or things they might see like the wheels of a car as they walk outside.

For young children, we focus on STEM through exploration, play and building curiosity about the natural world and the way things work. STEM learning is important for everyone and can happen anytime, anywhere. The real-life skills that people develop when learning STEM help make everyone better problem-solvers and learners.

For children who are learning English as an additional language, talk about STEM in the children's home language, in English, or both. Research shows that bilingual children have greater mental flexibility, which may be helpful in understanding math concepts.

Sources: Zickuhr, M., & Aronson, B. (2008). Your child hears a lot of languages. National Center for Language Acquisition.

LET'S TALK, READ AND SING ABOUT STEM!

TIPS FOR PRESCHOOL TEACHERS & PROVIDERS

From birth, children are curious. You can build on that natural curiosity by developing their interest in science, technology, engineering and math (STEM). Use daily routines to build on skills and concepts in math and science. By talking, reading, singing, playing, signing or using other ways to communicate – whatever works best for your preschoolers – you can help develop their STEM skills through play and exploration. Easy ways to promote young children's natural abilities as scientists and engineers is by encouraging them to document their observations by drawing, painting, or recording their voices describe what they are noticing, constructing towers with blocks or other objects, and talking about the changes in nature – like the weather!

Use the **bolded STEM words** in these tips to build early science, technology, engineering, and math skills with young children every day. It's never too early to start! Research shows that having a strong foundation in early math, for example, can lead to higher achievement in both math and reading later in school. In addition, interacting with many different materials in early childhood prepares students for science and engineering later in school.

Partner with families and encourage them to try these strategies at home, including in their home language. Demonstrating the value of a child's home language is critical for fostering a strong sense of self, and research has shown that students who are bilingual have certain cognitive and social benefits that facilitate success in school and life.

For children with disabilities or developmental delays, communicate with their other service providers and keep each other informed about the strategies you are using to make their language environment richer.

While we provide some tips below, we know every child is unique, and it is important to keep in mind that no 3-, 4- or 5-year-old is the same. As always, you should do what is best and most developmentally appropriate for each child.

WHAT IS STEM?

"STEM" stands for science, technology, engineering and math. STEM can refer to the subjects individually or one or more working together, but can also mean a way of doing things that includes solving problems, asking questions, and exploring the world around us.

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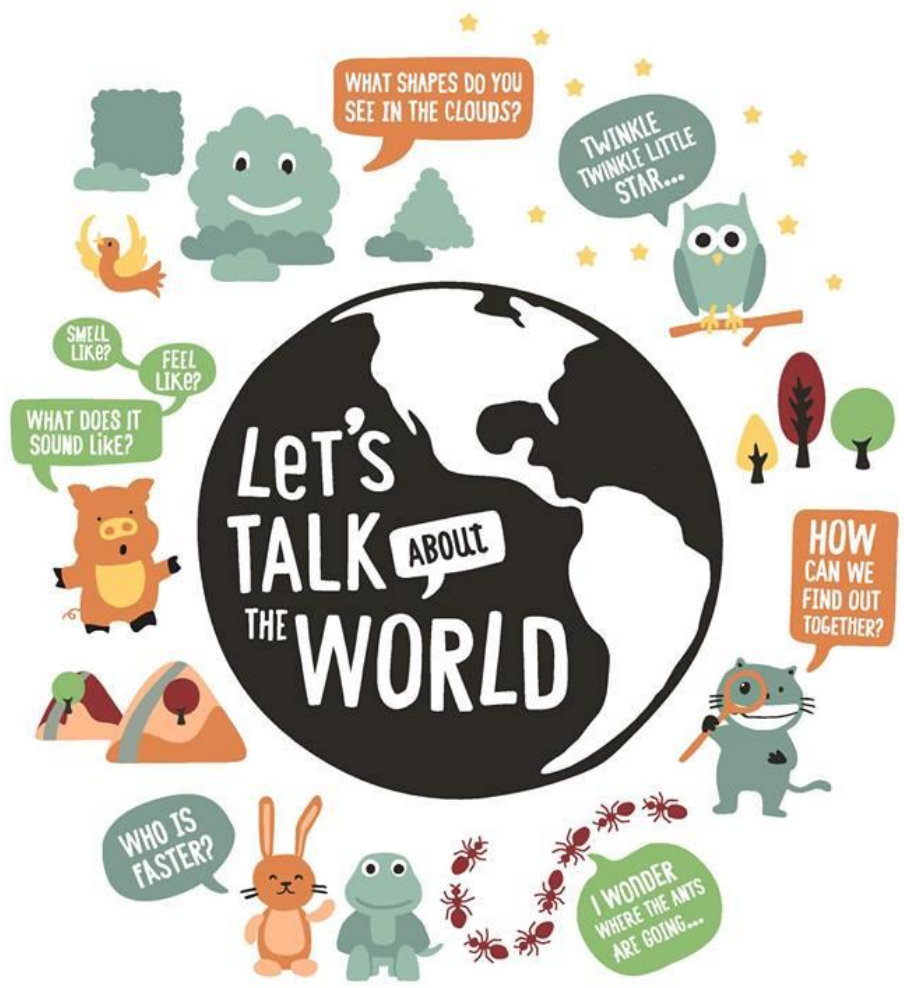
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Find these and more at <http://toosmall.org/community/resources>





TALKING IS TEACHING.ORG



SMALL TO FAIL

TALKING IS
TEACHING.



LET'S TALK ABOUT STEM

LET'S OBSERVE THE WORLD!

EVERYWHERE YOU GO, TALK ABOUT WHAT YOU SEE AND DESCRIBE WHAT YOUR BABY IS LOOKING AT OR POINTING TO: "LOOK AT THAT BIG, BLUE TRUCK! HOW MANY WHEELS DOES IT HAVE ALL TOGETHER? 1, 2, 3, 4 WHEELS."



LET'S TALK ABOUT STEM

ENJOY A SHAPE SNACK.

OFFER A RECTANGLE CRACKER. CUT
A PIECE OF CHEESE INTO A TRIANGLE.
TALK ABOUT AND TRACE EACH SHAPE
WITH YOUR FINGER BEFORE
YOU EAT IT.



LET'S TALK ABOUT STEM

DURING BATH TIME, PLAY
FILL AND DUMP WITH A CUP:
IT TEACHES YOUR CHILD ABOUT
MEASUREMENT CONCEPTS
LIKE FULL AND EMPTY.



#LET'STALKMATH



LET'S TALK ABOUT STEM

USE ALL YOUR SENSES

AT THE GROCERY STORE, DISCOVER THE SMELL, FEEL AND TASTE OF DIFFERENT ITEMS WITH YOUR CHILD. HOLD AN ORANGE AND SAY, "WHAT DOES AN ORANGE LOOK LIKE? FEEL LIKE? IT'S ROUND AND SMOOTH."



Early Literacy & STEM in Action



Dr. Dayna Long, M.D.



Dr. Dayna Long is a pediatrician at the University of California San Francisco Benioff Children's Hospital Oakland (BCHO). Her main clinical work is in primary care and asthma clinic. Dr. Long is also:

- BCHO Spokeswoman for the *Too Small to Fail's* Talking is Teaching campaign.
- Adviser for the White House Bridging the Word Gap- Incentive Prize challenge and the Bridging the Word Gap Research Network.
- Medical Director at the Center for Community Health and Engagement (CCHE), which provides leadership in implementing a platform for population and preventative health care for BCHO patients.
- Co-Founder and Medical Director of the Family Information and Navigation Desk (FIND), which addresses the social and environmental factors that impact health outcomes by connecting families with community-based resources that satisfy unmet basic needs, such as food insecurity and housing.
- Site Principal Investigator for the National Institute of Health (NIH) funded AsthmaNet trials.

UCSF Benioff Children's Hospital Oakland

Early Literacy

- Serves 0-2 year olds
- Share literacy messages & tools

Early Math

- Serves 2-5 year olds
- Share math messages & tools

Hospital-wide

- Communications & events





Early Math Talking Points

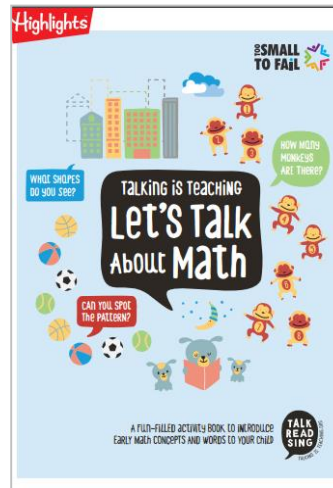
- You probably naturally talk to your child throughout the day.
- It might be surprising, but you can help your child learn **early math skills**, just by talking to them every day.
- You are helping your child every time you **count out loud** or look for **shapes**. You can “talk math” during your usual routine.
- It’s true that children who hear their families talk about math will do better in **math AND reading** when they reach elementary school.
- Talk, read and sing with your child every day in the **language you are most comfortable** using.
- The **bond** you form from talking together can help with hard behavior too! It’s fun and easy to do together.



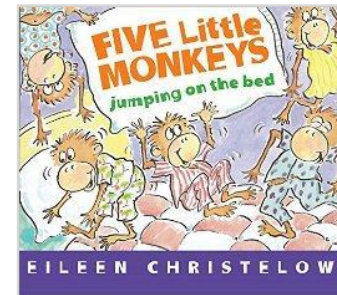
Early Math Tools



Toddler T-shirts



Highlights Guide



Books



TRUSTED MESSENGERS:

Have we magnified attention? Have we motivated action?

61% learned something new
from the pediatrician

65% reported that they would act differently based on the information

96% remembered the doctor talking about the importance of talking, reading and singing to children, weeks later

What did you learn?

The relationship between talking, reading and singing and brain development

Babies are learning “more than I knew”



Voices of Oakland parents

“**The book you gave us was the first book she has ever got.** She is getting smarter; we go out and buy her more books now.”

“I have always talked, read and sung to my kids but I guess **having the tools to remind me what to do is great.** Makes those things habits and not after thoughts.”

“**They laugh a lot** when I sing.”

“He loves to sing. We do it together. **I sing to him and he sings back.**”

“Dad reads at night and my child says ‘la la la la,’ which means **dad should sing.**”

“She doesn’t quite talk but **she speaks to me in the way she can.**”

Lessons Learned & Next Steps



Lessons Learned



- Not “one-size fits all” approach
- Intentionally integrated into existing efforts
- Intended to enhance, not duplicate, existing efforts

Questions for Discussion

- What kind of family activities do you currently offer?
- What do you think the barriers to doing these activities would be for families?
- Are parents already engaging in these activities?



Call to Action: What You Can Do

- Create buy-in from your leadership and staff
- Host Talking is Teaching trainings for your fellow staff
- Integrate messages and tools into your work with families
- Display campaign posters in your agency
- Reinforce campaign messages on social media
- Partner with other agencies to reach more parents

