# GROW Crosswalk to Texas Rising Star

#### **About LENA**

LENA is a national nonprofit on a mission to transform children's futures through early talk technology and data-driven programs. LENA's early talk technology, sometimes referred to as a "talk pedometer," is the global standard for measuring early language environments, including conversational turns. Visit <a href="www.lena.org">www.lena.org</a> or email <a href="mailto:info@lena.org">info@lena.org</a> to learn more.

## How LENA Grow Supports Texas Rising Star

LENA Grow is an evidence-based professional development program that helps teachers improve classroom language environments in early learning settings, complementing Texas Rising Star's focus on teacher-child interactions. To measurably improve interactions with each child in their classroom, teachers participate in LENA Grow's five-week reflective feedback cycle. The cycle employs LENA's "talk pedometer" technology, strengths-based coaching, and early talk strategies to increase conversational turns, one of the most predictive metrics of child outcomes. Conversational turns are simple back-and-forth verbal interactions between a child and an adult. Peer-reviewed research shows conversational turns have a positive impact on brain structure (Romeo et al., 2018a), brain function (Romeo et al., 2018b; Huber et al., 2023), executive functioning (Romeo et al., 2021), literacy skills (Weiss et al., 2022), vocabulary development (Duncan et al., 2022), social-emotional development (Gómez & Strasser, 2021 and LENA Foundation, 2023a), and middle school IQ scores (Gilkerson et al., 2018).

LENA Grow supports continuous quality improvement in the Texas Rising Star Category 2: Teacher-Child Interactions. Analysis shows LENA Grow helps improve CLASS® scores (LENA Foundation, 2023b and 2023c). Children in LENA Grow classrooms have shown accelerated GOLD® scores in the language, literacy scores, and social-emotional domains (Dynia, 2022; Heilmann & Moyle, 2022; LENA Foundation 2023b and 2023d). Additional evaluations have shown improvements in language development as measured by LENA Developmental Snapshot (LENA Foundation, 2022a), and social-emotional development as measured by the Devereux Early Childhood Assessment (DECA) (LENA Foundation, 2022b). Just as Texas Rising Star serves teachers across a wide variety of settings, LENA Grow is implemented in a variety of early learning settings throughout the U.S., including private/state-funded child care centers, school districts, and family child care homes, and Head Start programs (LENA Foundation, 2025).



# Alignment of LENA Grow Core Elements to Texas Rising Star Categories

On the following pages, see further explanations of each category, as well as the core elements of LENA Grow.

	exas Rising Star m Assessment Record Form		LENA Grow Professional Development Program: Core Elements											
Category	Category Subcategory		Early Talk Strategies	LENA Room Reports	LENA Child Reports	LENA Program Impact Reports	Weekly Strengths- based Coaching	Weekly Goal Setting, Documentati on, and Practice	Family Engagement					
Category 1	Staff Qualifications, Orientation, and Training	<b>√</b>	√	<b>√</b>		<b>√</b>		√						
	Group Size/Staff Ratios	√		√	√									
	Warm and Responsive Style	√	√	√			√	√						
Category	Language Facilitation and Support	√	√	√	√		√	√	√					
2	Play-Based Interactions and Guidance		√	√			√	√						
	Support for Children's Regulation		√	√	√		√	√						
	Instructional Formats and Approaches to Learning		√	√	√		√	√						
	Family Education		√		√			√	√					
Category 3	Family Involvement		√		√			√	√					
	Program Management	√		√	√	√	√	√						
Category	Indoor Learning Environments	√	√					√						
4	Outdoor Learning Environments	√	√					√						

#### Core Elements of LENA Grow

- 1. **Research base:** LENA Grow is rooted in over a decade of peer-reviewed research linking conversational turns to improved language, brain, and social-emotional development. Over 400 researchers and clinicians in over 40 countries have used LENA technology to study early language development. (LENA Foundation, 2025b).
- 2. **Early talk strategies:** LENA's early talk strategies, the 14 Talking Tips, are research-based techniques for increasing early talk and supporting healthy language development. Three research-based "active ingredients" power the 14 Talking Tips: creating joint attention, increasing conversational turn-taking, and then recasting (Warren 2015). At each coaching session, teachers receive research-based materials that provide strategies for increasing interactive talk. Areas of focus include personal care, transitions, indoor play, outdoor play, mealtimes, shared reading, early math, early literacy, and songs & rhymes.
- 3. **LENA Room Report:** At each coaching session, teachers review the Room Report, which provides objective interaction data on overall room averages and child-specific averages. It quantifies the number of conversational turns in the classroom across the day.
- 4. **LENA Child Report:** At each coaching session, teachers review the Child Report, which provides a detailed view of each individual child's experience across the day, including hourly counts of interactions and child vocalizations that highlight further engagement opportunities for teachers. This report is also used to engage families in a conversation about their child's early talk experiences and language development.
- 5. **Impact Report:** The LENA Grow Impact Report describes LENA Grow, defines turns, explains the importance of interactive talk, and displays the program's outcome data. Outcomes reported include the total number of children, teachers, and classrooms served, teacher sentiments about the program and its impact, and the numerical change in Conversational Turns from beginning to end of the sequence, including its statistical significance.
- 6. **Weekly strengths-based coaching:** LENA Grow coaches provide 30-60 minutes of coaching each week. The Coach Guide supports them in bringing a strengths-based lens to the data analysis and goal setting conversation with teachers.
- 7. **Weekly goal setting, documentation, and practice:** At each coaching session, the teacher sets a specific and measurable goal for the coming week. The teacher then documents progress toward that goal as they practice integrating early talk strategies throughout the week, including the next LENA Day.
- 8. **Family Engagement:** A Family Talk handout is provided each week for teachers to send home. Teachers also spend one coaching session developing a family engagement strategy and making plans for how they will engage families in extending quality interactions into the home setting.

These elements work together to provide a cohesive, empowering professional development experience for teachers that drives meaningful and lasting increases in interaction (LENA Foundation, 2023c). This change leads to more equitable language environments, higher CLASS® scores, accelerated language development, and increased teacher job satisfaction and self-efficacy (Dynia, 2022; Heilmann & Moyle, 2022; LENA Foundation, 2023b, 2023c and 2024).

#### How LENA Grow Supports Each Texas Rising Star Categories

#### Category 1: Director and Staff Qualifications and Training

LENA Grow helps teachers form a reflective practice habit that improves responsive caregiving and promotes continuous improvement. LENA Grow motivates teachers to be active participants in their professional development. It helps them not only understand the how but also the *why* of what they practice, building skills in data literacy, goal setting, and child observation. Upon completion, teachers consistently report greater confidence and job satisfaction. The LENA Grow program sequence is designed with the flexibility to support a program's goals, as well as those of individual teachers. Two stackable five-week sequences can be delivered in a variety of ways, depending on the program and classroom needs: as a standalone five-week sequence, with both sequences back-to-back or months apart. Completion provides 4.5 hours for LENA Grow 1 Essentials and 3.5 hours for LENA Grow 2 Insights.

LENA Grow program outcomes include the following:

- A deeper understanding of the important connection between language interaction and early brain development.
- Strategies to increase quality interactions equitably, achieved through the reflective feedback cycle.
- Objective data on which times of day promote the most/least amount of interactive talk and which children experience the most/least amount of interaction.
- Guidance on how to interpret data and apply it toward setting goals for lasting positive behavior change.

LENA Grow has the potential to reduce teacher turnover through increased teacher self-efficacy (LENA Foundation 2023d). Survey data consistently verifies 90+ percent of teachers report an increase in confidence and job satisfaction after completing LENA Grow, and 95+ percent either like or love the program and would recommend the program to others (LENA Foundation, 2021).

#### Category 2: Teacher-Child Interactions

Through the reflective feedback cycle, LENA Grow strengthens teacher-child interactions, which are a foundation for classroom quality. The LENA Room Report and LENA Child Report provide a clear, hour-by-hour picture of how classrooms compare to national adult word count and conversational turn benchmarks. Using an accurate measure of adult words and conversational turns for a classroom, administrators can make decisions on how best to distribute staff resources to ensure optimal talk environments for all children across the day. In line with best practice principles of adult learning, the LENA Grow feedback cycle offers teachers valuable opportunities to learn strategies aimed at enhancing communication with children. It enables educators to set measurable goals, apply these strategies in their classrooms, and reflect on both their own performance and each child's experience through objective feedback reports. In line with best practice principles of adult learning, the LENA Grow feedback cycle offers teachers valuable opportunities to learn strategies aimed at enhancing communication with children. It enables educators to set measurable goals, apply these strategies in their classrooms, and reflect on both their own performance and each child's experience through objective feedback reports.

LENA's early talk strategies, the 14 Talking Tips, are research-based techniques for increasing early talk and supporting healthy language and social-emotional development (Warren, 2015). Three research-based "active ingredients" power the 14 Talking Tips: creating joint attention, increasing conversational turn-taking, and then recasting. LENA's 14 Talking Tips, used throughout the program, aligns with the five TRS Teacher-Child Interactions subcategories: Warm Responsive Style; Language Facilitation and Support, Play-based Interactions and Guidance, Support for Children's Regulations, and Instructional Formats and Approaches to Learning.

Peer-reviewed research has established a causal link between increased conversational turns, the core metric LENA measures, and improved social-emotional competencies in the first three years of life (Gómez & Strasser, 2021 and LENA Foundation, 2023a). Further, research has shown LENA Grow has impacts on children's social and emotional health, including improved DECA (Devereux Early Childhood Assessment) scores (LENA Foundation, 2022b).

#### Category 3: Program Administration

Family Involvement Family Education LENA Grow offers the opportunity for teachers to engage families in two-way communication at each step of the program. The LENA Grow Teacher Guide embeds a family engagement component into each week of the program, including an activity to help teachers establish and track a family engagement plan. Family engagement materials highlight the classroom's weekly focus, encouraging families to extend similar interactive talk strategies into the home. Additional resources to introduce the program to families and to support family self-efficacy and confidence include a shareable slideshow and social media toolkit. Resources are available in both English and Spanish, and the 14 Talking Tips are available in twelve languages. The LENA Child Report provides a window into the child's language experience in the classroom and can serve as a tool to aid in ongoing school-home communication. LENA Grow's individualized Child Reports provide data that can support IEP goal setting and tracking.

Program Management Program evaluations have shown LENA Grow to support child assessment outcomes and increase the ability of early childhood professionals to individualize curriculum and set developmental goals that focus on promoting interaction and language development. Objective data on each child's language environment, along with individualized feedback sessions on how to interpret the data, supports teachers in setting goals for lasting positive behavior change. This results in positive outcomes for the young children they are supporting. LENA Grow classrooms have shown increases in Gold (Dynia, 2022; Heilmann & Moyle, 2022; LENA Foundation 2023b and 2023d), LENA Developmental Snapshot scores (LENA Foundation, 2022a), and DECA Objective data reports provide both hourly counts and daily averages to support early childhood professionals in creating and achieving intentional, measurable goals for increased interactive conversation with individual children.

LENA Grow provides directors/administrators quantitative data that can help increase equity for all children as well as provide inclusive techniques that support children of all learning abilities and languages. LENA data indicate that even in classrooms and environments that are highly interactive, many children spend large portions of the day in relative silence or language isolation (LENA Foundation, 2022c). Even in settings that are considered high quality overall, assumptions cannot be made about each individual child's experience or about equity of access to interaction and learning opportunities. LENA's data shows the importance of seeing both child-level measurements and classroom-level measurements to ensure equitable outcomes. Children who begin the program in relative isolation see the greatest gains in interaction. LENA data shows that children who start the program experiencing fewer than 15 conversational turns per second experience a 58% average increase in conversational turn rates by the end of the program (LENA Foundation, 2024).

#### Category 4: Indoor and Outdoor Environment

LENA's Conversation Starters focus on various classroom routines, including personal care routines, transitions, mealtimes, indoor and outdoor play, as well as shared reading, math, literacy, and songs & rhymes. These practical strategies enhance the implementation of a variety of curriculum models. LENA Grow's coaching sessions, room-level data reports, and individual child reports empower teachers to enhance the quantity of conversational turns within their classrooms. The reports provide hour-by-hour insights, enabling educators to pinpoint specific times of day to assess how engaged children are during various activities. With this knowledge, teachers can modify engagement strategies, schedules, curricula, and materials boost child engagement, thereby optimizing cognitive development through consistent daily interactions.

LENA's strengths-based approach to improving language environments provides teachers a deeper understanding of the connections between language interaction and early brain development. Peer-reviewed research from scholars at Harvard University, Columbia University, and other institutions has linked conversational turns not just to language development but also to brain structure (Romeo et al., 2018a), brain function (Romeo et al., 2018b; Huber et al., 2023), and executive functioning (Romeo et al., 2021). fMRI imaging technology has visually shown the relationship between interactive language experiences and brain activity. Conversational turns also support children's developmental progression in emerging language and literacy. Children in LENA Grow classrooms have shown increases in Teaching Strategies Gold scores (Dynia, 2022; Heilmann & Moyle, 2022; LENA Foundation 2023b and 2023d), and LENA Developmental Snapshot scores (LENA Foundation, 2022a). In addition, peer-reviewed research has shown a link between increased conversational turns in preschool settings and improved literacy skills (Weiss et al., 2022) and vocabulary development (Duncan et al., 2022),

# LENA's 14 Talking Tips Alignment to Texas Rising Star Classroom Assessment Form Category 2: Teacher-Child Interactions

This alignment was based on the Texas Rising Star Classroom Assessment Record Form (CARF) all ages revised 10-01-24

			14 Talking Tips												
	Texas Rising Star Classroom Assessment Record Form: ategory 2 Teacher-Child Interactions	1: Talk about what you're doing and thinking.	2: Comment on what they're doing or looking at.	3: Name things that they're interested in.	4. Get down to their level: face to face.	5: Touch, hug, hold.	6: Tune in and respond to what they look at, do, and	7: Wait for their response.	8: Imitate them, and add words.	9: Make face, use gestures.	10: Take turns — don't do all the talking.	11: Repeat and add to what they say and do.	12: Follow their lead, do what interests them.	13: Encourage them, be positive.	14: Be silly! Relax and have fun!
	P-WRS-01 Creates a warm, safe, and nurturing				<b>√</b>	√	√	√						√	√
	P-WRS-02 Uses frequent positive nonverbal behaviors to increase feelings of acceptance					<b>√</b>				<b>√</b>					√
sive Style	P-WRS-03 Has a patient, relaxed style that helps maintain calmness in the	√				√		√		√				√	√
Responsive	P-WRS-04 Notices and attends to children's needs and signals		<b>√</b>		<b>√</b>	√	√	√							
Warm and	P-WRS-05 Responds promptly and sensitively to children's cognitive and affective signals		<b>√</b>		>		√	√		<b>√</b>	<b>√</b>	<b>√</b>			
	P-WRS-06 Demonstrates an ability to adjust one's own behavior to meet the needs, interests, and abilities of individuals/groups of children		√	<b>√</b>	<b>√</b>		√	√	√		√	√	√		

							1	4 Talki	ng Tip:	S					
	Texas Rising Star Classroom Assessment Record Form: ategory 2 Teacher-Child Interactions	1: Talk about what you're doing and	2: Comment on what they're doing or looking at.	3: Name things that they're interested in.	4. Get down to their level: face to face.	5: Touch, hug, hold.	6: Tune in and respond to what they look at, do, and say.	7: Wait for their response.	8: Imitate them, and add words.	9: Make face, use gestures.	10: Take turns — don't do all the talking.	11: Repeat and add to what they say and do.	12: Follow their lead, do what interests them.	13: Encourage them, be positive.	14: Be silly! Relax and have fun!
	P-LFS-01 Listens to children attentively and responds appropriately to their language, vocalizations, and nonverbal attempts at communication		<b>√</b>		√		√	<b>√</b>	√	√	√				
-anguage Facilitation and Support	P-LFS-02 Uses positive verbal responses and encouragement to provide reinforcement or acknowledge positive behavior or accomplishments	√	√			√				√			√	√	√
age Facilitat	P-LFS-03 Uses language to add meaning or expand on children's interests or agenda	√	<b>√</b>	<b>√</b>			√		<b>√</b>			<b>√</b>	<b>√</b>		
Langus	P-LFS-04 Communicates with children throughout the day	√	<b>√</b>	<b>√</b>	<b>√</b>		<b>√</b>		<b>√</b>	<b>√</b>		<b>√</b>	<b>√</b>		
	P-LFS-05 Uses descriptive language (specific labels and descriptors)	V	<b>√</b>	√			√		√			<b>√</b>			

							1	4 Talki	ng Tips	5					
Texas Rising Star Classroom Assessment Record Form: Category 2 Teacher-Child Interactions		1: Talk about what you're doing and thinking.	2: Comment on what they're doing or looking at.	3: Name things that they're interested in.	4. Get down to their level: face to face.	5: Touch, hug, hold.	6: Tune in and respond to what they look at, do, and	7: Wait for their response.	8: Imitate them, and add words.	9: Make face, use gestures.	10: Take turns — don't do all the talking.	11: Repeat and add to what they say and do.	12: Follow their lead, do what interests them.	13: Encourage them, be positive.	14: Be silly! Relax and have fun!
	P-LFS-07 Allows children time to respond to questions before providing the answer or asking another question				√			√			√				
Facilitation and Support	P-LFS-08 Engages individual children in back-and-forth conversations (3–5 turns) about a variety of topics; for infants and toddlers, provides commentary and encourages back-and-forth vocalization/ gestures	>	<b>\</b>		<b>~</b>		~	<b>~</b>			√		~		
Language Fa	P-LFS-09 Expands on children's understanding or initiation by elaborating on what children say or draw attention to		<b>√</b>	<b>√</b>			<b>√</b>		<b>√</b>			√	√		
	P-LFS-10 Models back language for children on how to express complete ideas or sentences based on what the child has communicated	√	√				√		√			√	√		

								14 Talki	ing Tip:	S					
Texas Rising Star Classroom Assessment Record Form: Category 2 Teacher-Child Interactions		1: Talk about what you're doing and thinking.	2: Comment on what they're doing or looking at.	3: Name things that they're interested in.	4. Get down to their level: face to face.	5: Touch, hug, hold.	6: Tune in and respond to what they look at, do, and	7: Wait for their response.	8: Imitate them, and add words.	9: Make face, use gestures.	10: Take turns — don't do all the talking.	11. Repeat and add to what they say and do.	12: Follow their lead, do what interests them.	13: Encourage them, be positive.	14: Be silly! Relax and have fun!
	P-PBIG-01 Supports a playful attitude on an ongoing basis for children to make believe, make choices, and adjust activities to their own interests		√	√			√						√	<b>√</b>	<b>√</b>
ns and Guidance	P-PBIG-02 Participates and expands on play initiated by children to reinforce language, ideas, and social development		<b>√</b>	<b>√</b>	<b>√</b>		<b>√</b>		<b>√</b>		√		<b>√</b>		<b>√</b>
Play-Based Interactions and Guidance	P-PBIG-03 Provides guidance when children are working, in order to progressively build skills and knowledge rather than using overly directive strategies		√		√		V	√				V	√		
	P-PBIG-04 Provides opportunities for and/or facilitates children's social interactions with their peers	√					√					√	√	√	

			14 Talking Tips												
Texas Rising Star Classroom Assessment Record Form: Category 2 Teacher-Child Interactions		1: Talk about what you're doing and thinking.	2: Comment on what they're doing or looking at.	3: Name things that they're interested in.	4. Get down to their level: face to face.	5: Touch, hug, hold.	6: Tune in and respond to what they look at, do, and	7: Wait for their response.	8: Imitate them, and add words.	9: Make face, use gestures.	10: Take turns — don't do all the talking.	11. Repeat and add to what they say and do.	12: Follow their lead, do what interests them.	13: Encourage them, be positive.	14: Be silly! Relax and have fun!
tion	P-SCR-01 Models or encourages emotional expression	√					<b>√</b>		√			√		√	
ren's Regulation	P-SCR-02 Provides children with short explanations that help them understand why they are feeling a certain	<b>√</b>			<b>√</b>		<b>√</b>			<b>√</b>		<b>√</b>			
Support for Children'	P-SCR-03 Explains logical consequences for behaviors rather than providing arbitrary	<b>√</b>					√								
dns	P-SCR-07 Assists children in their communications and interactions with peers	√			<b>√</b>			<b>√</b>					<b>√</b>	√	
Instructional Formats & Approaches to Learning	P-IFAL-03 Routine and/or transition times are used as opportunities for incidental learning	V	√				√					√			

Note: The following CARF measures were not aligned with LENA's 14 Talking Tips: P-GSSR- 01; P-GSSR- 02; P-SCR-04; P-IFAL-01; P-IFAL-02; P-IFAL-04; P-IFAL-05; P-IFAL-06

# LENA Grow Texas Impact Report

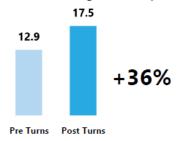


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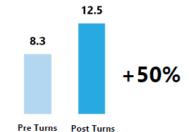
Grow 1/Legacy 1/1/2017 - 12/31/2024

## **Child Equity**

LENA Grow is designed to encourage more equitable talk environments. Two segments of children measure this impact:



Children who started out experiencing less talk than their peers in the same classroom (in the bottom third) had an average increase of +4.6 turns per hour.



Children who started out experiencing less talk than the national median of 15 turns per hour had an average increase of +4.2 turns per hour.

#### **Teachers**

At the end of a 5-week sequence, teachers complete a survey reporting on the impact of the LENA Grow program.



Recommend LENA Grow to other teachers (n=169)



Now feel more confident in teaching abilities (n=169)



Increased overall **job**satisfaction
(n=169)



Increased communication with families (n=168)



Saw changes in **children's** language development (n=168)

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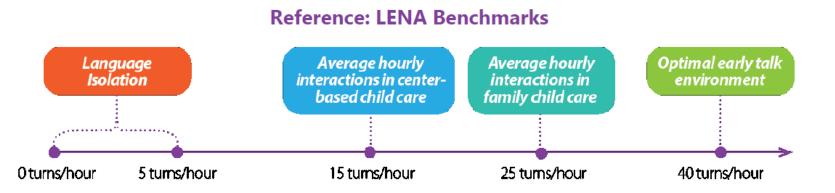
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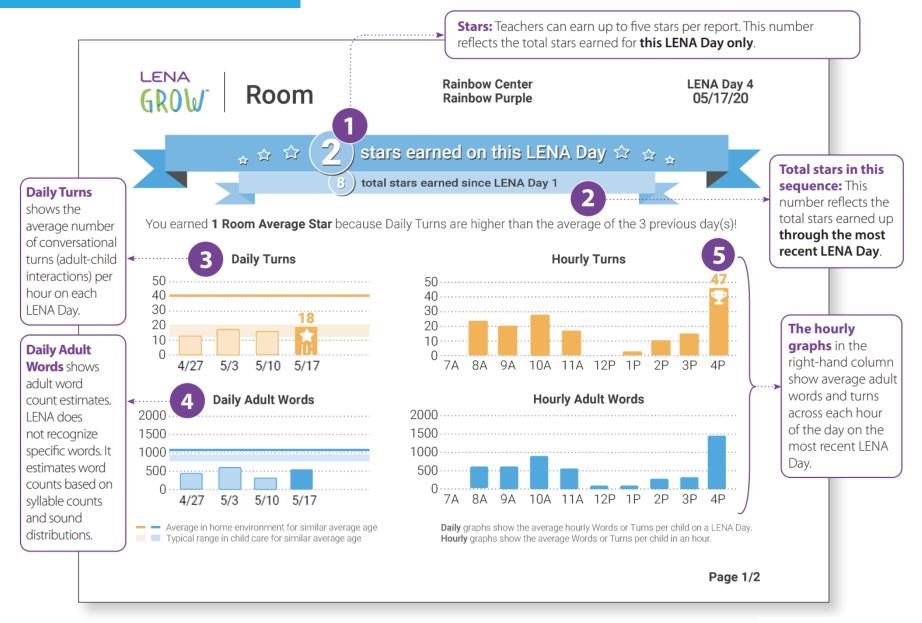




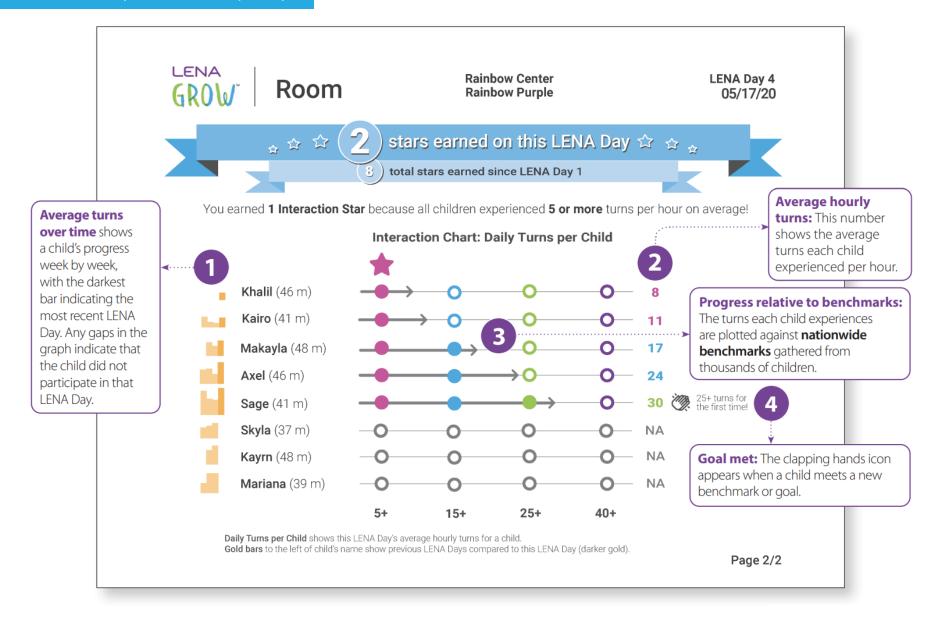
These conversational turns benchmarks are derived from the baseline LENA data of more than 15,000 children across more than 2,000 classrooms worldwide. Publicly funded, privately funded, center-based, and family child care sites are all represented within the sample, as are all 10 Head Start regions. Further information can be found at lena.org/research.

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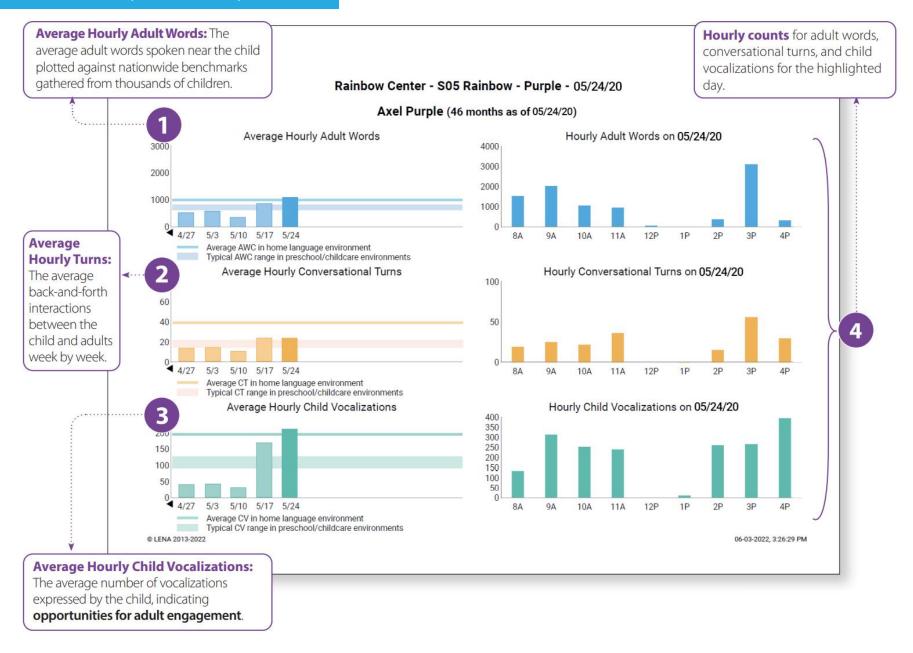
# Reference 1: Sample Room Report p1



# Reference 1: Sample Room Report p2



# Reference 2: Sample Child Report



#### References

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- Duncan, R., et al. (2022). Predictors of preschool language environments and their relations to children's vocabulary. *Infant and Child Development* 32(1). <a href="https://doi.org/10.1002/icd.2381">https://doi.org/10.1002/icd.2381</a>
- Dynia, J. (2022). The Impact of a Language-Based Intervention with Individualized Coaching in Early Childhood Education Classrooms [White paper]. SproutFive Center for Early Childhood Innovation. <a href="https://drive.google.com/file/d/1dlN71WcKQ">https://drive.google.com/file/d/1dlN71WcKQ</a> FZAxnTWOWfNQihmCoAXCul/view
- Gilkerson, J., et al. (2018). Language Experience in the Second Year of Life and Language Outcomes in Late Childhood. *Pediatrics* 142(4). <a href="https://doi.org/10.1542/peds.2017-4276">https://doi.org/10.1542/peds.2017-4276</a>
- Gómez, E., & Strasser, K. (2021). Language and socioemotional development in early childhood: The role of conversational turns. *Developmental Science*, 24(5). https://doi.org/10.1111/desc.13109
- Heilmann, J., & Moyle, M. (2022). *Evaluation of LENA Grow in Milwaukee Head Start Classrooms* [White paper.] Next Door Milwaukee. <a href="https://www.nextdoormke.org/wp-content/uploads/2023/01/2022-Evaluation-of-LENA-Grow-in-Milwaukee-Head-Start-Classroom Research.pdf">https://www.nextdoormke.org/wp-content/uploads/2023/01/2022-Evaluation-of-LENA-Grow-in-Milwaukee-Head-Start-Classroom Research.pdf</a>
- Huber, E., et al. (2023). Language Experience During Infancy Predicts White Matter Myelination at Age 2 Years. *Journal of Neuroscience* 43(9): 1590-1599. https://doi.org/10.1523/JNEUROSCI.1043-22.2023
- LENA Foundation (2021). An eye-opening experience: Survey shows overwhelming positivity for LENA Grow among teachers and coaches. *LENA Blog*. <a href="https://www.lena.org/teachers-coaches-love-lena-grow/">https://www.lena.org/teachers-coaches-love-lena-grow/</a>
- LENA Foundation (2022a). Preliminary findings suggest LENA Grow accelerates language development. *LENA Blog*. <a href="https://www.lena.org/lena-grow-developmental-snapshot-preliminary-results/">https://www.lena.org/lena-grow-developmental-snapshot-preliminary-results/</a>
- LENA Foundation (2022b). Research shows links between LENA Grow participation and social-emotional growth. LENA Blog. <a href="https://www.lena.org/research-shows-links-between-lena-grow-participation-and-social-emotional-growth/">https://www.lena.org/research-shows-links-between-lena-grow-participation-and-social-emotional-growth/</a>
- LENA Foundation (2022c). QRIS and interaction: Do quality rating systems reflect individual experience? *LENA Blog*. <a href="https://www.lena.org/qris-and-interaction/">https://www.lena.org/qris-and-interaction/</a>
- LENA Foundation (2023a). Study finds causal link between conversational turns and socioemotional development in babies. *LENA Blog*. <a href="https://www.lena.org/conversational-turns-and-socioemotional-development-research/">https://www.lena.org/conversational-turns-and-socioemotional-development-research/</a>
- LENA Foundation (2023b). Coaching for impact in Sarasota County: Increased TS GOLD® and CLASS® scores. *LENA Blog*. <a href="https://www.lena.org/lena-grow-coaching-child-care-sarasota/">https://www.lena.org/lena-grow-coaching-child-care-sarasota/</a>
- LENA Foundation (2023c). "Mae Mae's House": One teacher's story behind on evaluation of LENA Grow in Milwaukee. LENA Blog. <a href="https://www.lena.org/lena-grow-evaluation-next-door-teacher-story/">https://www.lena.org/lena-grow-evaluation-next-door-teacher-story/</a>

- LENA Foundation (2023d). With language and social delays on the rise, here's one part of the solution. LENA Blog. <a href="https://www.lena.org/language-and-social-emotional-delays-lena-grow/">https://www.lena.org/language-and-social-emotional-delays-lena-grow/</a>
- LENA Foundation (2023e). Survey results suggest LENA Grow improves educators' professional outlook. *LENA Blog.* <a href="https://www.lena.org/teacher-perception-survey-results-lena-grow/">https://www.lena.org/teacher-perception-survey-results-lena-grow/</a>
- LENA Foundation (2024). LENA Grow Program Impact [Brochure]. https://www.lena.org/LENA-Grow-Impact
- LENA Foundation (2025a). LENA's impact is powered by partnerships. <a href="https://lena.org/where-are-LENA-programs">https://lena.org/where-are-LENA-programs</a>
- LENA Foundation (2025b). Research Breakthroughs that make a difference. <a href="https://www.lena.org/research">https://www.lena.org/research</a>
- Romeo, R., et al. (2018a). Language Exposure Relates to Structural Neural Connectivity in Childhood. *Journal of Neuroscience* 38(36): 7870-7877. https://doi.org/10.1523/JNEUROSCI.0484-18.2018
- Romeo, R., et al. (2018b). Beyond the 30-Million-Word Gap: Children's Conversational Exposure Is Associated with Language-Related Brain Function. Psychological Science 29(5). https://doi.org/10.1177/0956797617742725
- Romeo, R., et al. (2021). Neuroplasticity associated with changes in conversational turn-taking following a family-based intervention. *Developmental Cognitive Neuroscience* 49. https://doi.org/10.1016/j.dcn.2021.100967
- Warren, S. (2015). Right from Birth [White paper]. https://info.lena.org/hubfs/RightFromBirth Warren.pdf
- Weiss, Y., et al. (2022). Language input in late infancy scaffolds emergent literacy skills and predicts reading related white matter development. *Frontiers in Human Neuroscience* 16. https://doi.org/10.3389/fnhum.2022.922552