



Alignment to The Pyramid Model for Promoting Social Emotional Competence in Infants and Young Children

About LENA

LENA stands for Language ENvironment Analysis. 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" or a "FitBit® for conversation," is the global standard for measuring early language environments, including conversational turns. Visit www.LENA.org or email info@LENA.org to learn more.

How LENA Grow Supports the Pyramid Model

[LENA Grow](#) is a practice-based professional development program that helps educators equitably improve classroom language environments in early learning settings, **complementing the Pyramid Model's focus on promoting healthy social-emotional development**. LENA's technology measures conversational turns, a metric strongly predictive of child outcomes, and tied directly to responsive relationships and high-quality early learning environments. Conversational turns are measured at the level of the classroom and individual child alike, providing **data-rich feedback reports designed to facilitate a practice-based coaching framework** that gives educators the tools they need to provide each and every child with the language support they need. Research shows that **LENA Grow has a positive impact on social-emotional development** as measured by DECA (Devereux Early Childhood Assessment).¹ Just as the Pyramid Model serves educators and caregivers 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, family child care homes, and Early Head Start and Head Start programs.

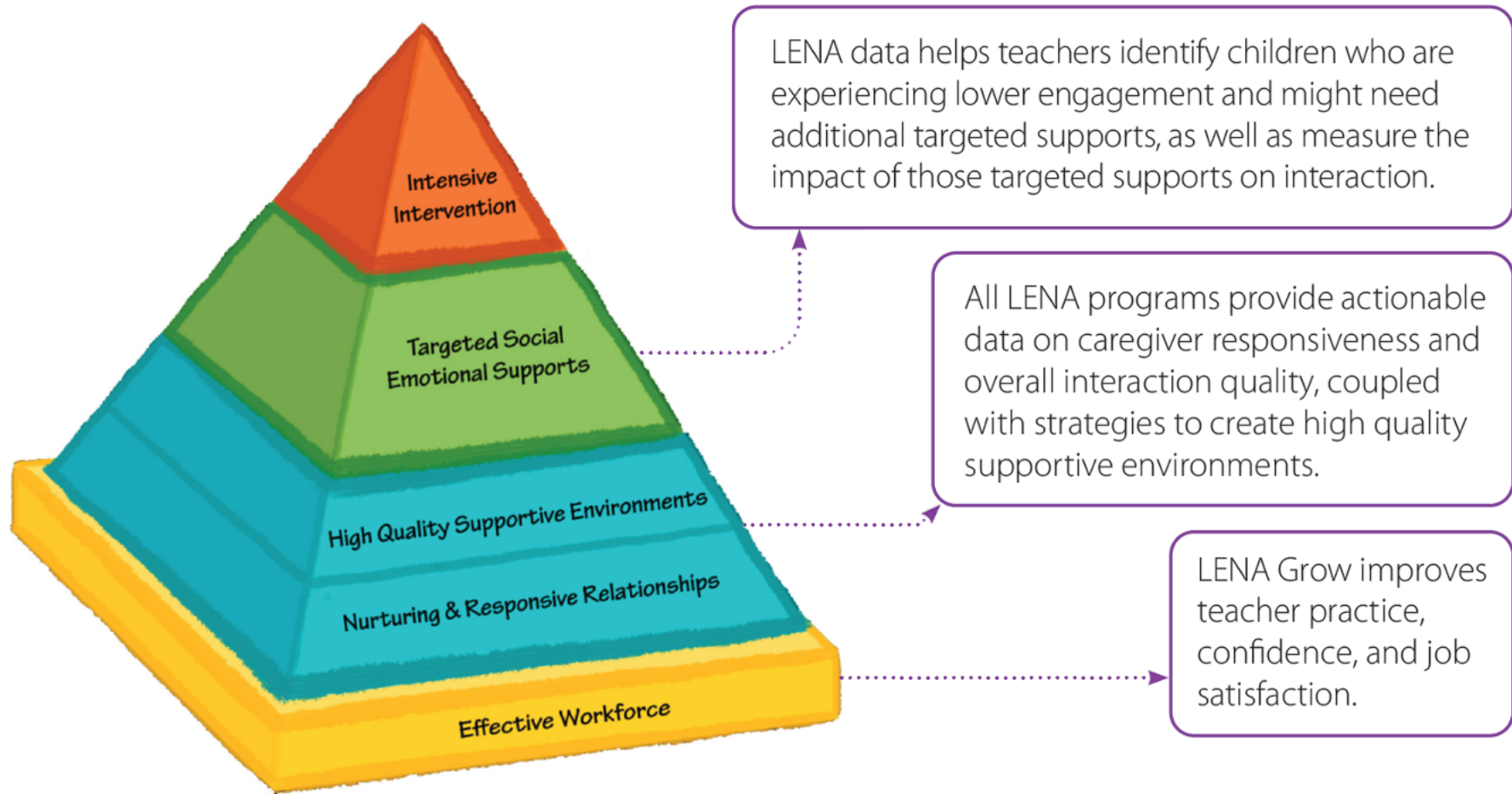
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Alignment of LENA Grow and the Pyramid Model

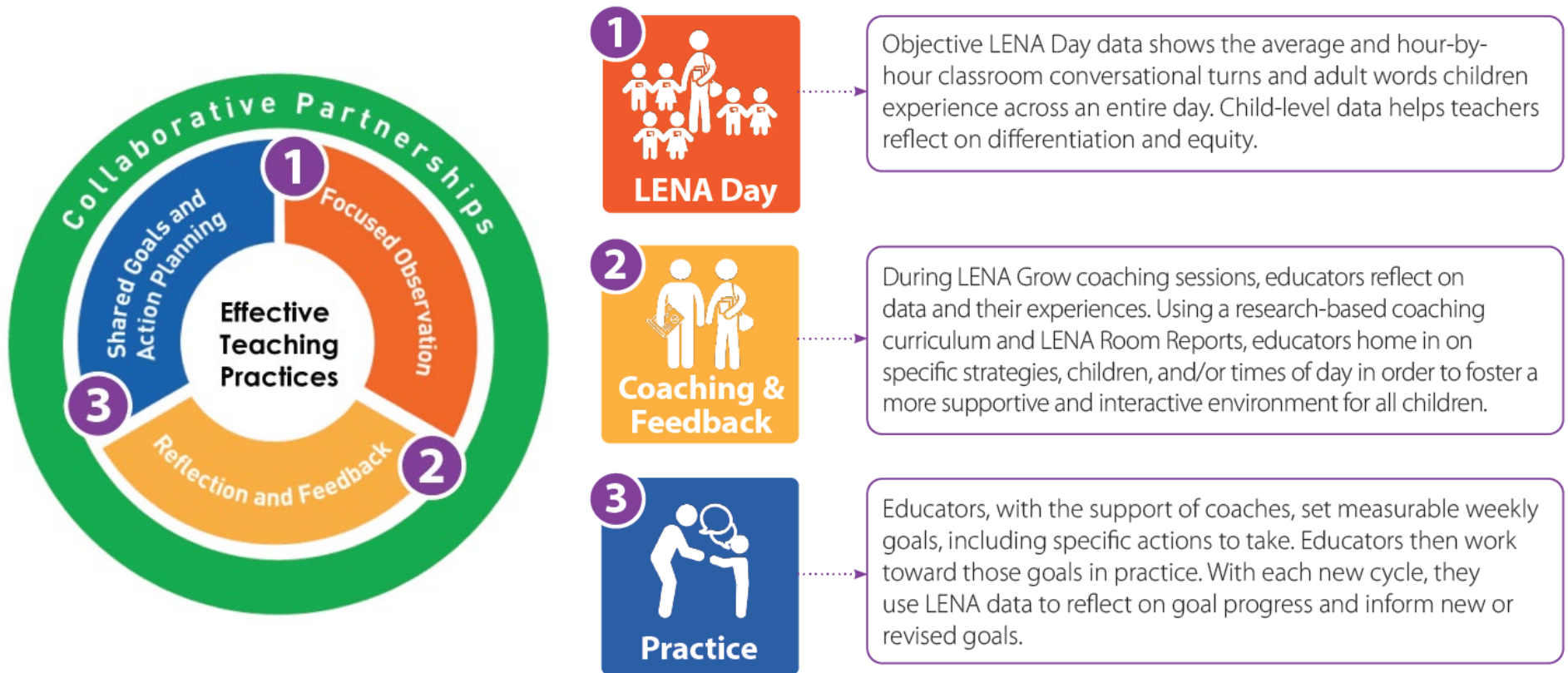
LENA helps programs develop and reinforce the base, Tier 1, and Tier 2 of their Pyramid.

LENA Grow is an evidence-based way for programs to foster an effective workforce,² and for teachers to build nurturing, responsive relationships and ensure high-quality, supportive learning environments.^{3,4} LENA data counts conversational turns, which peer-reviewed research shows has a positive impact on social-emotional competencies.⁵ LENA reports help teachers determine which children might benefit from additional targeted supports.



Alignment of LENA Grow to Practice-Based Coaching

LENA Grow is a tool in the toolkit for coaches who use Practice-Based Coaching. LENA Grow's five-week sequence follows the cycle of Practice-Based Coaching, focusing on the evidence-based practice of increasing conversational turns (back-and-forth interactions). During the program, teachers are encouraged to explore effective teaching practices by focusing on LENA's 14 Talking Tips, research-based techniques for increasing early talk and supporting healthy language development.



Alignment of LENA Grow Core Elements to Teaching Pyramid Observation Tool for Preschool Classrooms (TPOT)

Teachers learning to talk meaningfully with children is the foundation of LENA Grow and is also the foundation of many of the items measured in the TPOT/TPITOS. Below, we show the ways the LENA Grow curriculum directly supports specific TPOT items that are indicative of positive relationships and high-quality learning environments.

TPOT Items*	LENA Grow Professional Development Program: Core Elements						
	Research Base	Early Talk Strategies	LENA Room Reports	LENA Child Reports	Weekly Strengths-based Coaching	Weekly Goal Setting, Documentation, and Practice	Family Engagement
1. Schedules, Routines, and Activities		√	√	√		√	
2. Transitions Between Activities Are Appropriate		√				√	
3. Teachers Engage in Supportive Conversations with Children	√	√	√	√	√	√	
4. Promoting Children's Engagement	√	√		√	√		
6. Collaborative Teaming		√	√		√	√	√
13. Connecting with Families		√		√		√	√

*Items 5, 7, 8, 9, 10, 11, 12, and 14 are not explicitly addressed in the LENA Grow program. However, it is important to note that 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.⁵ Further, research has shown LENA Grow has impacts on children's social-emotional health, including improved DECA (Devereux Early Childhood Assessment) scores.¹

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.⁶
2. **Early talk strategies:** At each coaching session, teachers receive research-based curriculum 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 reports the number of conversational turns in the classroom across the day.
4. **LENA Child Report:** The Child Report 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. **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.
6. **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.
7. **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.

How LENA Grow Supports Each TPOT Item

1: Schedules, routines, and activities

A predictable schedule helps children feel secure and know what's coming next. Within that schedule, flexibility is important to keep children engaged in play-based learning. LENA Grow's 14 Talking Tips include strategies that promote responsive activities, such as Talking Tip #12: "Follow their lead, do what interests them." LENA Grow's Conversation Starters posters give even more detailed ideas of how to integrate these strategies into a typical child-focused schedule during activities such as outdoor play, transitions, and shared reading.

LENA Grow's Room and Child Reports show teachers how much interaction children are experiencing during each hour of the day. This data allows teachers to reflect on their schedule and planned activities to better understand which are promoting the most conversational turns, and to use a strengths-based approach to extend what's working to other parts of the day.

2. Transitions between activities are appropriate

In week 2 of LENA Grow, educators focus on maximizing interaction during personal care routines and transitions, using the Conversation Starters poster for ideas. Talking Tip #1: “Talk about what you’re doing and thinking,” encourages teachers to narrate their expectations and what is happening to help children transition more effectively.

3. Teachers engage in supportive conversations with children

LENA Grow’s coaching sessions, room-level data reports, and individual child reports help teachers focus on increasing the quantity of conversational turns in their classrooms. LENA data focuses on conversational turns because peer-reviewed research has linked conversational turns not just to language development,⁷ but also to brain structure,⁸ brain function,⁹ executive functioning,¹⁰ literacy skills,¹¹ and vocabulary development¹² early in life. MRI imaging technology has visually shown the relationship between interactive language experiences and brain activity, including white matter growth.¹³

The reports show hour-by-hour data, helping teachers focus on specific times of day to better understand how engaged children are during different activities. They also show individual child data, helping teachers understand the kinds of supports and activities that are most effective and engaging for each child and where there are opportunities for increased engagement.

4. Promoting children’s engagement

Conversational Turns are one way to measure a child’s classroom engagement. As teachers reflect on LENA data, they are reflecting on why children are or are not engaged throughout the day. According to years of data, children who begin LENA Grow in relative isolation see the greatest gains in conversational turns. For instance, children who start the program experiencing fewer than 15 conversational turns per hour, the national median, experience a 56% average increase in conversational turn rates by the end of the program.¹⁴ LENA’s Inside Early Talk report established an average of 40 turns per hour as the benchmark for maximizing later child outcomes.¹⁵ This level of interaction is particularly challenging to reach in an early childhood education setting, but LENA Grow helps teachers better understand how to reach it.

LENA’s supporting curriculum, including the 14 Talking Tips, gives teachers concrete strategies to increase engagement. For example, Talking Tip #4: “Get down on their level: face to face” reminds teachers how important it is to communicate at eye level. Talking Tip #6: “Tune in and respond to what they look at, do, and say” and Talking Tip #2: “Comment on what they’re doing or looking at” encourage teachers to stay attuned to children’s interests and maintain their engagement with language.

8. Collaborative teaming

LENA Grow coaching is designed to be implemented with teaching teams. Teachers share a Room Report and are encouraged to discuss their goals with one another during coaching sessions. LENA Grow posters are meant to be posted publicly where all adults who spend any time in the classroom can reference them, and coaches are encouraged to ensure all center staff are aware of the program and its purpose, promoting a culture of talk across the school, center, or home.

LENA reports include an hourly Adult Word Count, which helps the teaching team reflect on their own engagement at specific times of day. LENA Grow Family Engagement resources are also designed to bring families into the fold and ensure shared information and efforts between the classroom and home environments.

13. Connecting with Families

In week 2 of LENA Grow, teachers create an action plan for family engagement. LENA Grow provides handouts focused on the importance of interaction for brain development that can be shared with the family to create a shared understanding of a child's language experiences. These resources can be shared in person, electronically, or on paper, and are designed to encourage a two-way conversation about how to provide a child with the interaction they need to thrive.

Alignment of LENA Grow Core Elements to Teaching Pyramid Observation Tool for Infant-Toddler Classrooms (TPITOS)

Teachers learning to talk meaningfully with children is the foundation of LENA Grow and is also the foundation of many of the items measured in the TPOT/TPITOS. Below, we show the ways the LENA Grow curriculum directly supports specific TPITOS items that are indicative of positive relationships and high-quality learning environments.

TPITOS Items*	LENA Grow Professional Development Program: Core Elements						
	Research Base	Early Talk Strategies	LENA Room Reports	LENA Child Reports	Weekly Strengths-based Coaching	Weekly Goal Setting, Documentation, and Practice	Family Engagement
1. Teacher provides opportunities for communication and building relationships.	√	√	√	√	√	√	
2. Teacher demonstrates warmth and responsivity to individual children.		√		√		√	
4. Teacher promotes children's active engagement.	√	√		√	√		
5. Teacher is responsive to children's expression of emotions and teaches about feelings.		√				√	
9. Teacher conveys predictability through carefully planned schedule, routines, and transitions.		√	√	√		√	
11. Teacher collaborates with his or her peers to support children's social-emotional development.		√	√	√	√	√	√
13. Teacher has effective strategies for communicating with families and promoting family involvement in the classroom.		√		√		√	√

*Items 3, 6, 7, 8, 10, and 12 are not explicitly addressed in the LENA Grow program. However, it is important to note that 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.⁵ Further, research has shown LENA Grow has impacts on children's social-emotional health, including improved DECA (Devereux Early Childhood Assessment) scores.¹

How LENA Grow Supports Each TPITOS Item

1. Teacher provides opportunities for communication and building relationships.

LENA Grow's coaching sessions, room-level data reports, and individual child reports help teachers focus on increasing the quantity of conversational turns in their classrooms. LENA data focuses on conversational turns because peer-reviewed research has linked conversational turns not just to language development,⁷ but also to brain structure,⁸ brain function,⁹ executive functioning,¹⁰ literacy skills,¹¹ and vocabulary development¹² early in life. fMRI imaging technology has visually shown the relationship between interactive language experiences and brain activity, including white matter growth.¹³

The reports show hour-by-hour data, helping teachers focus on specific times of day to better understand how engaged children are during different activities. They also show individual child data, helping teachers understand the kinds of supports and activities that are most effective and engaging for each child and where there are opportunities for increased engagement.

2. Teacher demonstrates warmth and responsiveness to individual children.

LENA's supporting curriculum, including the 14 Talking Tips, gives teachers concrete strategies to foster responsive relationships. Talking Tip #5: "Touch, Hold, Hug" and Taking Tip #12: "Follow their lead, do what interests them" help teachers to nurture warm and responsive interactions.

LENA Grow's Room and Child Reports show individual child data, illustrating for teachers how much interaction each child experiences during the day. During the strengths-based coaching session, teachers have an opportunity to reflect on their engagement with each child and set goals accordingly.

4. Teacher promotes children's active engagement.

Conversational turns are one way to measure a child's classroom engagement. As teachers reflect on LENA data, they are reflecting on why children are or are not engaged throughout the day. According to years of data, children who begin LENA Grow in relative isolation see the greatest gains in conversational turns. For instance, children who start the program experiencing fewer than 15 conversational turns per hour, the national median, experience a 56% average increase in conversational turn rates by the end of the program.¹⁴ LENA's Inside Early Talk report established an average of 40 turns per hour as the benchmark for maximizing later child outcomes.¹⁵ This level of interaction is particularly challenging to reach in an early childhood education setting, and LENA Grow helps teachers better understand how to reach it.

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5. Teacher is responsive to children's expression of emotions and teaches about feelings.

Teachers receive research-based curriculum materials that provide ideas on how to effectively engage young children during times of the day that may be stressful, including personal care routines, transitions, and mealtimes. The Talking Tips, including Talking Tip #5: "Make faces, use Gestures" and Talking Tip #13: "Encourage them, be positive," provide teachers effective strategies for interacting with children to support understanding of emotions and feelings.

9. Teacher conveys predictability through carefully planned schedule, routines, and transitions.

A predictable schedule helps children feel secure and know what's coming next. Within that schedule, flexibility is important to keep children engaged in play-based learning. LENA Grow's 14 Talking Tips include strategies that promote responsive activities, such as Talking Tip #12: "Follow their lead, do what interests them." LENA Grow's Conversation Starters posters give even more detailed ideas of how to integrate these strategies into a typical child-focused schedule during activities such as outdoor play, transitions, and shared reading. In week 2 of LENA Grow, educators focus on maximizing interaction during personal care routines and transitions, using the Conversation Starters poster for ideas. Talking Tip #1: "Talk about what you're doing and thinking" encourages teachers to narrate their expectations and what is happening to help children transition more effectively.

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11. Teacher collaborates with his or her peers to support children's social-emotional development.

LENA Grow coaching is designed to be implemented with teaching teams. Teachers share a Room Report and are encouraged to discuss their goals with one another during coaching sessions. LENA Grow posters are meant to be posted publicly where all adults who spend any time in the classroom can reference them, and coaches are encouraged to ensure all center staff are aware of the program and its purpose, promoting a culture of talk across the school, center, or home.

LENA reports include an hourly Adult Word Count, which helps the teaching team reflect on their own engagement at specific times of day. LENA Grow Family Engagement resources are also designed to bring families into the fold and ensure shared information and efforts between the classroom and home environments.

13. Teacher has effective strategies for communicating with families and promoting family involvement in the classroom.

In week 2 of LENA Grow, teachers create an action plan for family engagement. LENA Grow provides handouts focused on the importance of interaction for brain development that can be shared with the family to create a shared understanding of a child's language experiences. These resources can be shared in person, electronically, or on paper, and are designed to encourage a two-way conversation about how to provide a child with the interaction they need to thrive.

Using LENA Grow and Pyramid Model in Conjunction: Examples

Interaction is a main ingredient. When a teacher says, 'Oh it was a rough day, it just didn't go well,' that's where I really want to lean in and explore: 'How do we communicate THROUGH that? How can talk help us make the best of those situations?'

— **Coach Paula Bellville of the Virginia Infant Toddler Specialist Network** on how she uses a Pyramid mindset during her LENA Grow coaching sessions.

The following examples show how to use LENA data and strategies to support Tier 1 and Tier 2 Pyramid. They are intended to help teachers and coaches apply specific Pyramid techniques within the context of the LENA Grow program. Each example is based on an example LENA report from Week 4 of the program.

- **Reference: Example Week 4 LENA Grow Room Report**
- **Example 1: Daily Activities: Designing a Schedule that Promotes Child Engagement**
- **Example 2: Action Plan**



Room

Rainbow Center V3
Training Room

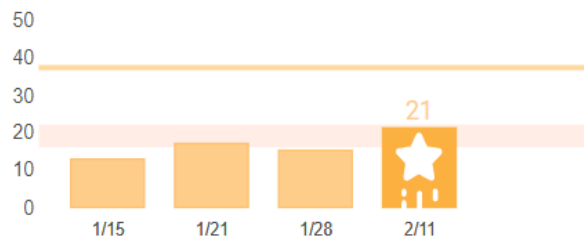
LENA Day 4
2/11/23

2 stars earned on this LENA Day

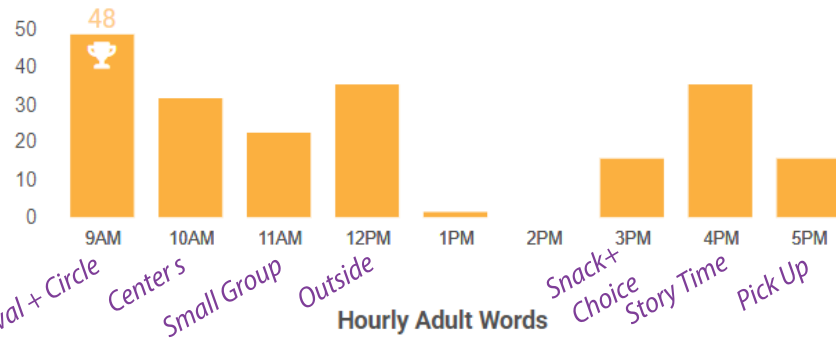
6 total stars earned since LENA Day 1

You earned **1 Room Average Star** because Daily Turns are higher than the average of the previous 3 day(s)!

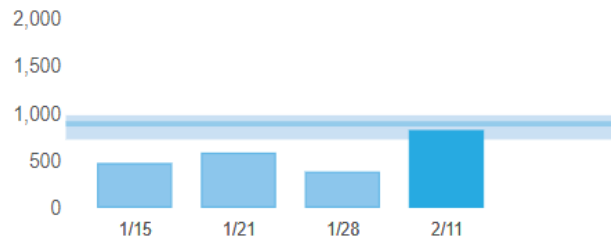
Daily Turns



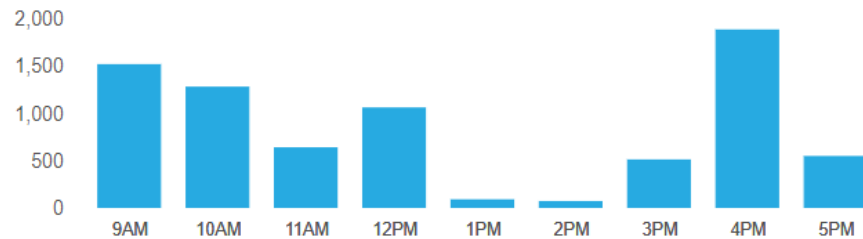
Hourly Turns



Daily Adult Words



Hourly Adult Words



— Average in home language environment for similar average age
— Typical AWC range in preschool/child care environments

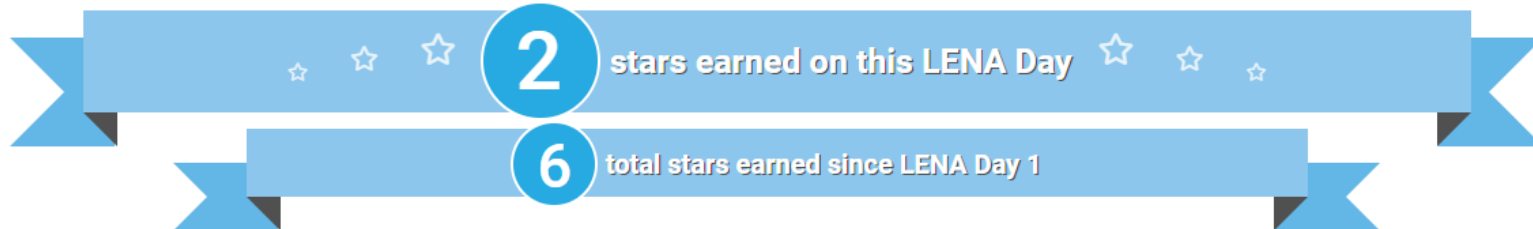
Daily graphs show the average hourly Words or Turns per child on a LENA day.
Hourly graphs show the average Words or Turns per child in an hour.



Room

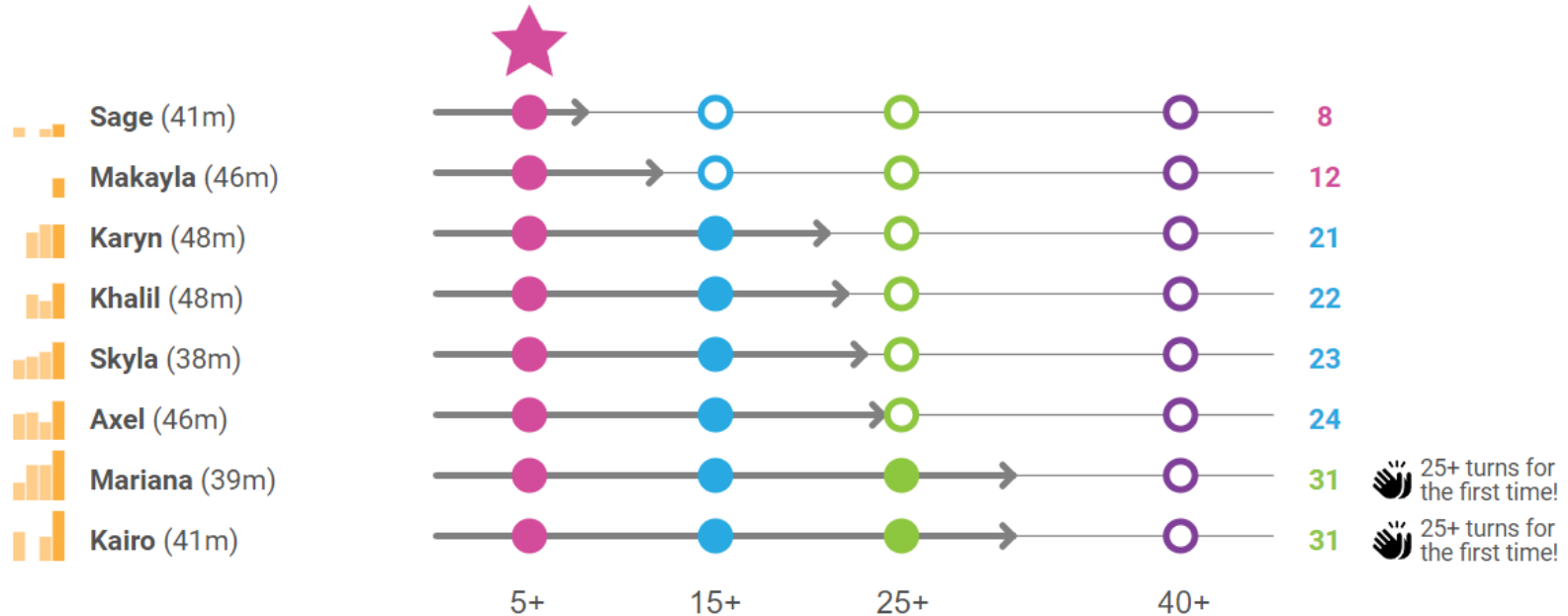
Rainbow Center V3
Training Room

LENA Day 4
2/11/23



You earned 1 Interaction Star(s) because all children experienced 5 or more turns per hour on average!

Interaction Chart: Daily Turns per Child



Daily Turns per Child shows this LENA Day's average hourly turns for a child.
Gold bars to the left of the child's name show previous LENA Days compared to this LENA Day (dark gold).

Example 1

Daily Activities Using LENA Grow Talking Tips

Schedule	One new way I will build relationships
Arrival Conversation Starters Poster: <ul style="list-style-type: none"> Personal Care & Transitions 	<i>I will use Talking Tip #4: Get down to their level, face to face and greet each child warmly and by name as they arrive.</i>
Circle Time Conversation Starters Posters: <ul style="list-style-type: none"> Early Literacy Early Math Songs and Rhymes 	<i>I will use Talking Tip #10: Take turns, don't do all the talking and ensure that I allow children plenty of time to speak and that I respond to what they say.</i>
Center Time Conversation Starters Posters: <ul style="list-style-type: none"> Early Literacy Early Math Songs & Rhymes 	<i>I will use Talking Tip #12: Follow their lead, do what interests them and allow each child to choose their center. Then, I will circulate and spend time with a few specific children in their center, following their lead in play.</i>
Small Group Conversation Starters Posters: <ul style="list-style-type: none"> Early Literacy Early Math 	<i>I will use Talking Tip #13: Encourage them, be positive to better support children during our literacy small group to show that I care and believe in them.</i>

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Outside Conversation Starters Poster: <ul style="list-style-type: none"> Outdoor Play 	<i>I will use Talking Tip #2: Comment on what they are doing or looking at to show children that I am interested in their interests.</i>
Snack Conversation Starters Poster: <ul style="list-style-type: none"> Mealtimes 	<i>I will use Talking Tip #11: Repeat and add to what they say and do to validate what children are sharing with me socially during snack.</i>
Story Time Conversation Starters Poster: <ul style="list-style-type: none"> Shared Reading 	<i>I will use Talking Tip #7: Wait for their response to show that I respect and value their thoughts and opinions, even when they are difficult for them to express.</i>
Goodbye Circle Conversation Starters Poster: <ul style="list-style-type: none"> Personal Care & Transitions 	<i>I will use Talking Tip #14: Be silly! Relax and have fun! to show children that I have enjoyed their company all day long.</i>
Transitions Conversation Starters Posters: <ul style="list-style-type: none"> Personal Care & Transitions 	<i>I will use Talking Tip #1: Talk about what you're doing and thinking to make expectations clear AND to explain what I'm thinking and feeling during transition.</i>

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Example 2

Action Plan

Using LENA Grow data

Goal (based on a selected teaching practice)	NO	IN PROGRESS	YES
<p>The teaching practice I am working on is: <i>(copy this right off the Needs Assessment)</i> <i>Get down on the floor and follow child's lead in play (Needs Assessment 3), use Talking Tip #4 Get on the child's level & #12 follow their lead</i></p>			
<p>I will work on this teaching practice <u>Choice time after nap (3-4pm)</u> _____ <i>(time, day, part of routine)</i> <i>(Optional) I will work on this teaching practice with</i> <u>Sage and Makayla</u> _____ <i>(specific children)</i></p>			
<p>I will: <i>(describe exactly what you will do if you are implementing this teaching practice)</i> <i>Join the children on the rug in the block area for at least 20 minutes so that I can have more intentional interactions that are at their face level. I will follow their lead, observing and commenting on their play, asking open ended questions, and modeling with my own actions.</i></p>			
Action Steps to Help Me Achieve My Goal	RESOURCES NEEDED	DUE DATE	
<i>Discuss plan with my co-teacher so that I can be sure she has a line of sight on the children in the other centers while I'm on the floor.</i>	<i>None</i>	<i>LENA Day 5</i>	
<i>Review the block area set up to make sure I can see at least one or two other centers from that area and that there is enough space for me to join the children without taking up play area.</i>	<i>None</i>	<i>LENA Day 5</i>	
<i>Talk to my center director about when to complete the other tasks (paper work) that I often try to multi-task and complete during choice time.</i>	<i>None</i>	<i>LENA Day 5</i>	
Prepare to Collect Data			
<p>How will you know when you have met your goal? <i>(Remember to focus on implementation of the teaching practice)</i> <i>I will know I met my goal if I am on the floor for 20 minutes between 3-4pm each day. I will know my goal is having a positive impact if I see that my LENA data has increased for that time period for the room as a whole and/or for the specific children who were in the block area while I was there. On our last LENA Day (2/10/2023) we averaged around 18 turns/hour between 3-4pm and we'd like to be closer to 25.</i></p> <p>What data will you collect about implementation of this teaching practice? <i>(Will you record how often you used the practice? What you did? How the children responded?)</i> <i>I will collect data using LENA Grow at least weekly where I can see the change in Conversational Turns experienced by the children in my care. I will use my LENA log to make notes of anything I notice during that time (e.g. a specific child is talking more, etc). We will also compare tracking on behavior management to see if challenging behaviors decrease during the time that I am being more intentional with the children.</i></p>			

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- ¹⁵ "Inside Early Talk," <https://info.lena.org/inside-early-talk>