

*"The Secret Science of Songs aligns the power of SONGS with early childhood development, recognizing that young children use SOUND and RHYTHM, through MUSIC and LANGUAGE, as natural tools of expression."*

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## The Need

Across the United States, early childhood students are not meeting age-appropriate developmental benchmarks, particularly in language, literacy, and cognitive readiness—creating long-term academic and workforce gaps.



### Kindergarten Readiness Gap

Only about one-third of U.S. children enter kindergarten fully prepared, with significant deficiencies in early literacy, language development, and social-emotional skills.

Source: Brookings Institution

<https://www.brookings.edu/articles/disparities-in-early-learning-and-development/>



### Declining Academic Performance

According to the National Center for Education Statistics, a growing percentage of students are performing below basic levels in reading and math, with learning gaps beginning in early childhood and widening over time.

<https://nces.ed.gov>



### Early Literacy Crisis:

The National Assessment of Educational Progress (Nation's Report Card) shows that over 60% of 4th graders are not proficient in reading, reflecting foundational skill gaps that originate in early learning years.

<https://www.nationsreportcard.gov>



### Language & Cognitive Development Gaps:

Research from Harvard Center on the Developing Child confirms that early brain development is highly dependent on rich, patterned interactions (including sound and language exposure), yet many children lack sufficient early stimulation. <https://developingchild.harvard.edu>



### Underutilization of Music in Cognitive Development

Despite strong evidence that music-based pattern recognition, rhythm, and song experience support early brain development, these tools are not systematically integrated into early education models.

## The Solution

*The Secret Science of Songs* is a child-centered, research-based framework that integrates music, language, and cognitive development through structured yet playful song experiences.



### Core Components of Song Game

#### Component #1: Song Pattern Recognition

Focus on recognizable, repeatable patterns in sound and rhythm that children can learn, enjoy, and recreate.

#### Component #2: Song Game Methodology

Children experience songs as interactive play, while teachers serve as creative game leaders rather than performance directors.

#### Component #3: Rhythm-Based Learning Tools

Simple instruments such as drums and maracas reinforce auditory perception and help define song patterns.

#### Component #4: Educator Accessibility

Designed for early childhood providers and K-3 teachers, including those with little or no formal music training.



### TARGET POPULATION

- Young children in early learning and primary grade programs, approximately ages 2 through 8
- Musically untrained adults-including early childhood educators and K-3 teachers-who need practical classroom strategies



## Research & Foundation

**The Secret Science of Songs is grounded in more than 40 years of classroom-based action research and is supported by established research in early childhood cognitive development, auditory neuroscience, and music perception.**

- Research confirms that even in infancy, children demonstrate a natural ability to perceive and process rhythmic and auditory patterns, forming a foundational link between music, language, and brain development.
- Studies in auditory neuroscience further show that speech and language acquisition are deeply connected to rhythm and sound pattern recognition, reinforcing the importance of early exposure to structured musical experiences.
- For young children, the meaning of songs is not in the words-but in the patterns of sound and rhythm.

Morehouse, P. (2012) Investigating Young Children's Music-making Behavior: A Developmental Theory. Microform Edition Online: ProQuest LLC [https://scholarship.claremont.edu/cgu\\_etd/73/](https://scholarship.claremont.edu/cgu_etd/73/)



### Outcomes & Impact

- Strengthens early cognitive development through sound and pattern recognition
- Supports language growth, auditory processing, and school readiness
- Increases engagement through play-based, age-appropriate learning
- Improves social interaction, confidence, and creative expression