



Key Concepts to Inform Grade-Level Reading Policy

Smart investments in children's early years produce the best outcomes in education, health and economic well being for North Carolina. When all children are given the best opportunity to realize their potential and grow up to be productive adults who can give back and strengthen our communities, North Carolina prospers.

The ability to read is essential to a child's success in life.

Reading in the early grades predicts high school success. Those who read well, go on to graduate, but those who aren't reading well by the end of third grade, are four times more likely to drop out of high school.

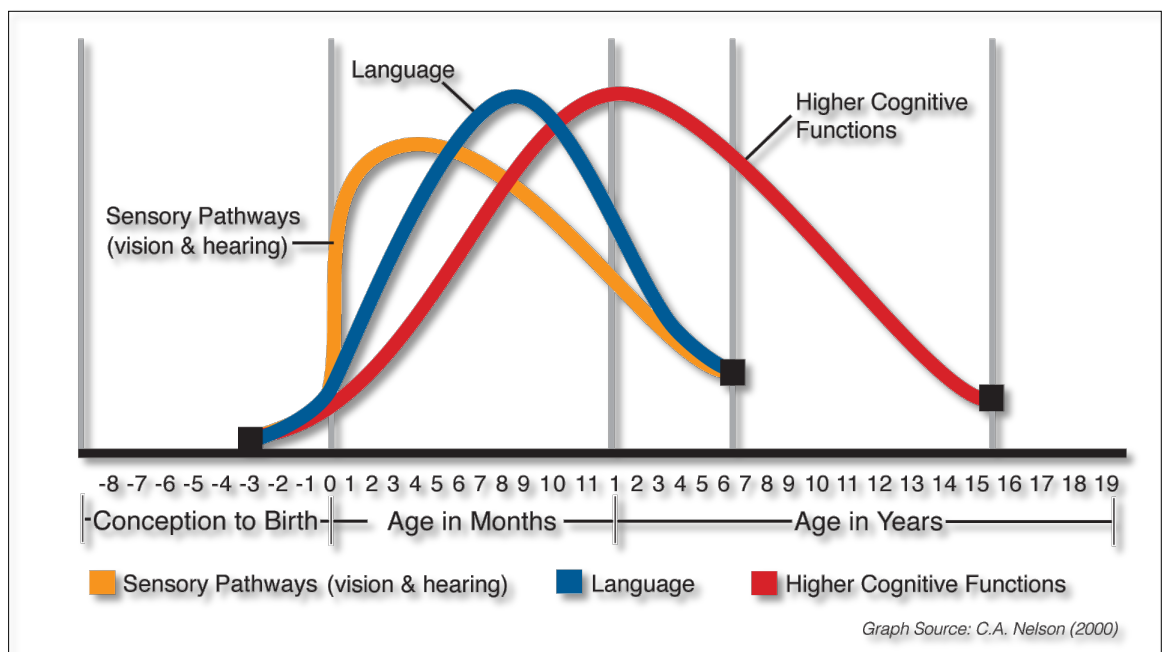
As lawmakers work to support children's reading proficiency, the following key concepts in children's development should guide policy.

Brains are built not born.¹

Child development is a dynamic, interactive process that is not predetermined. It occurs in the context of relationships, experiences and environments.²

- The brain is one of the only organs not fully developed at birth.
- Most of the cells are there, but the connections – the wiring that forms the architecture – is not. These connections develop in early childhood.
- Every experience a baby has forms a neural connection in the brain. In the early years, 700 connections (synapses) are formed every second.
- Not all of these connections will last. After connections peak, the brain begins a pruning process.
- Connections that are used more are strengthened and those that are not are pruned, providing either a strong or weak foundation for all future health and learning.

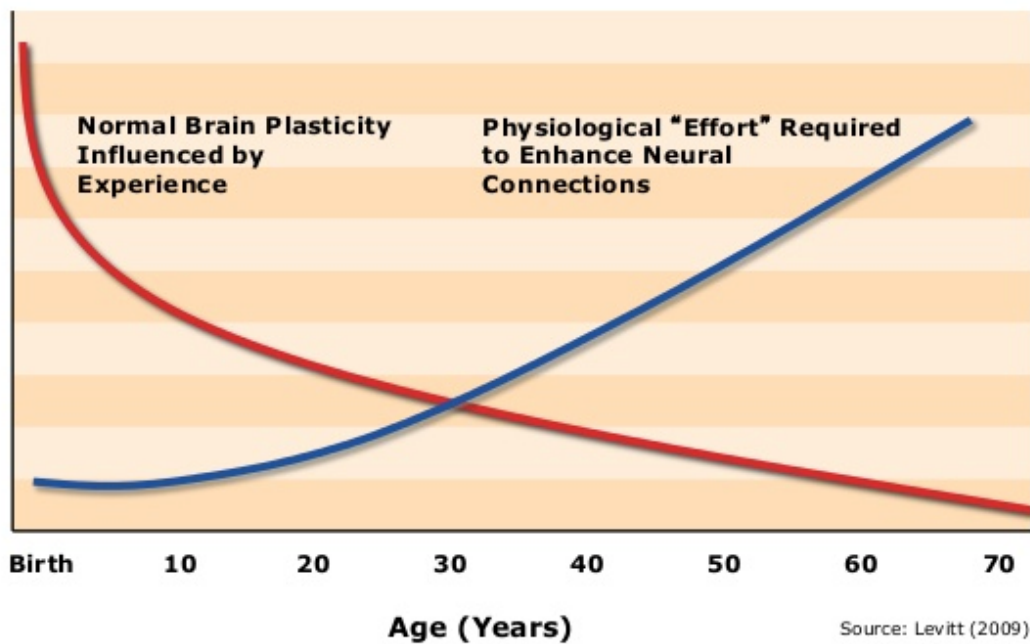
This graph shows when synapse connections peak for vision and hearing, language and higher cognitive functions.



Birth to age eight represents a critical developmental continuum.

The most rapid period of development in a human life happens from birth to eight.

Ability to Change Brains and Behaviors Decreases Over Time³



Literacy development begins at birth.

Reading proficiency is a cumulative process that develops from birth and is rooted in early brain development.

- Children need good health, social-emotional skills and cognitive development during the early years to build a strong foundation for learning.⁴
- All of the domains of a child's development —physical, social-emotional, cognitive, language and literacy— are interrelated and interdependent. You can't do one without the others.⁵
- Early literacy and later reading success are linked. A young child's ability to talk, listen and understand spoken and written words is related to later literacy achievement in reading, writing and spelling.⁶
- If a child is not reading at grade level by the end of first grade, that child has about a 10 percent chance of reading at grade level by the end of fourth grade.⁷

Grade-level reading is achievable.

There is not a magic bullet to achieving third grade literacy, but there are strong, evidence-based strategies to get us there. Beginning developmentally appropriate literacy programs at an early age is the most effective preventive action against reading failure.⁸

¹ Center on the Developing Child (2007). *The Science of Early Childhood Development* (InBrief). www.developingchild.harvard.edu.

² Child Trends. (2013) *The Research Base for a Birth through Age Eight State Policy Framework*. <http://www.childtrends.org/?publications=the-research-base-for-a-birth-through-eight-state-policy-framework-2>.

³ Center on the Developing Child. *Core Concepts in the Science of Early Child Development*. http://developingchild.harvard.edu/resources/multimedia/interactive_features/coreconcepts/.

⁴ Child Trends. (2013) *The Research Base for a Birth through Age Eight State Policy Framework*.

⁵ National Institute for Early Education Research. (2006) *Early Literacy: Policy and Practice in the Preschool Years*. <http://nieer.org/resources/policybriefs/10.pdf>.

⁶ National Institute for Literacy. (2007) *Early Literacy: Leading the Way to Success*. http://lincs.ed.gov/publications/pdf/EL_policy09.pdf.

⁷ Nemours. Frequently Asked Questions: Reading Readiness. www.nemours.org/service/health/brightstart/about/faq.html.

⁸ *ibid*