

Science of Reading: What is it?

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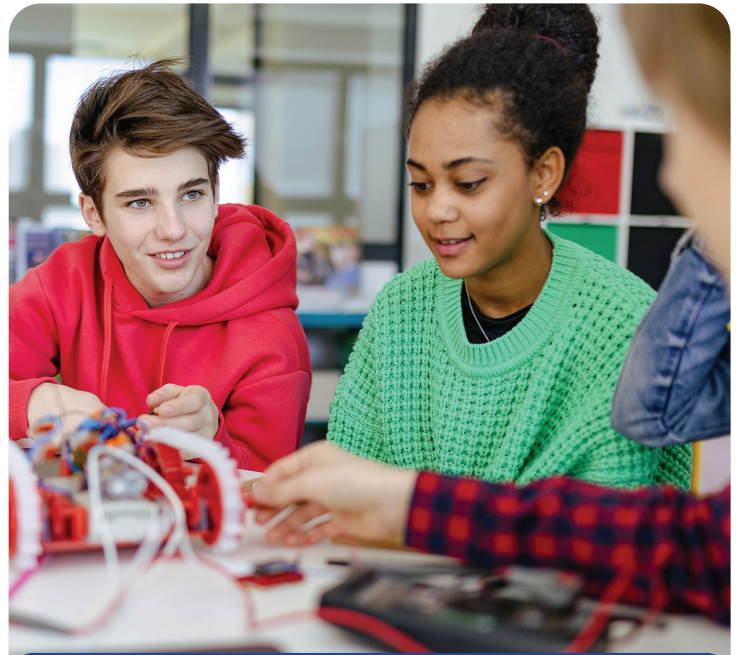
KEY IDEA #1

The Science of Reading Reflects a Body of Research

The Science of Reading refers to a body of research—50+ years of interdisciplinary research that documents and describes how children develop reading and writing skills and competencies. This research also features the principles and practices for research-based instructional design and opportunities to learn.

The Science of Reading is not a single approach or entity—the term refers to a large, diverse body of evidence that should be used to inform curriculum and pedagogy.

The Science of Reading reflects research in education, psychology, linguistics, neuroscience, sociology, speech and language pathology, implementation science, and other fields. Integrating discoveries from across disciplines creates a comprehensive understanding of the reading and writing processes.



Defining Literacy for Today and Tomorrow

The ability to read, write, speak and listen as a means of identification, understanding, interpretation, creation, and communication; the ability to communicate in diverse ways and with diverse audiences; the ability to understand and use print in an increasingly text-mediated, information-rich, digital and fast-changing world.

[\(Check out NYSED's Briefs on Advanced Literacies.\)](#)

KEY IDEA #2**The Science of Reading Informs Instruction from Early Childhood Through Adolescence, for All Populations**

The Science of Reading clearly shows that there are effective ways to teach reading, from early childhood through adolescence (PreK-12) for all populations, including students at-risk for or identified with disabilities as well as multilingual and English Language Learners. With the appropriate structures, supports, and/or individualized interventions, every student can develop as a reader. Unfortunately, many common instructional practices and approaches have not been anchored in the Science of Reading; this is especially the case with word reading instruction in the primary grades, and vocabulary, comprehension, and fostering engagement across all grades—for all students, especially English Language Learners. As an evolving body of research, the Science of Reading should continually inform prevention and intervention efforts and shape daily instruction.

KEY IDEA #3**The Science of Reading Emphasizes the Importance of Structured Literacy Instruction That Develops the "Big Six" Skills and Competencies**

Structured literacy instruction is a term used to capture the features of effective literacy instruction and implementation, drawing on the Science of Reading. It is a framework that should be used to maximize opportunities for student learning and literacy outcomes.

PRINCIPLES OF STRUCTURED LITERACY INSTRUCTION

1 Systemic and Cumulative

The reading process is broken down into skills that are introduced systematically and in a logical sequence.

2 Explicit and Direct

Instruction is clear; students are not expected to make assumptions. Teachers provide clear examples.

3 Responsive and Authentic

Learning pathways are personalized, differentiated, culturally and linguistically relevant, and context-based.

The "Big 6" Skills and Competencies

The Science of Reading highlights key skills and competencies that support effective reading and writing. The "Big 6" skills and competencies are reinforced and enhanced as they are applied in the process of crafting written expression—in turn, writing bolsters the development of the "Big 6."

Vocabulary

A student's internal dictionary, it is comprised of words and their meanings

Oral Language

Includes speaking and listening, providing the foundation for written language

Phonological Awareness

An awareness of speech sounds whereas phonemic awareness is the ability to identify and manipulate sounds



Fluency

The ability to read connected text with accuracy, expression, and at an appropriate rate

Phonics

An instructional method that involves systematically matching sounds with the letters that represent the sounds

Comprehension

The complex process and ultimate goal of reading that involves constructing meaning from and interpreting texts

See **Brief 3**, which further describes the reciprocal relationship between reading and writing.

KEY IDEA #4**The Science of Reading Emphasizes and Reflects the Importance of Fostering a Culturally Responsive Teaching Environment**

The Science of Reading highlights that it is in student-centered, culturally responsive and inclusive classrooms characterized by rigor and high expectations that children develop literacy skills for life. In order to achieve these results, stakeholders must incorporate an equity and inclusion lens in every facet of their work. [The NYSED Culturally Responsive-Sustaining Education Framework](#) offers a set of guidelines intended to help education stakeholders create student-centered learning environments – ones that are conducive to effective and equitable instruction.

Culturally Responsive-Sustaining Education and the Science of Reading**Welcoming, Affirming Environments**

Students feel represented, reflected, understood, and valued

Experiences that are academically rigorous, intellectually challenging, and adaptive to language and ability needs.

Effective & Equitable Instruction**Inclusive Curriculum and Assessments**

Ongoing Professional Learning and Support
Support in auditing curriculum for inclusion of marginalized voices and experiences

KEY IDEA #5**The Science of Reading Suggests Key Instructional Approaches to Build Literacy Skills—Many of Which Also Cultivate Learners’ Social-Emotional Skills**

In high-quality literacy learning environments, students simultaneously build literacy and social-emotional skills. Engagement with rich texts provides a platform for interactions and discussions that promote perspective taking and abstract reasoning. Learning cycles and thinking and talking routines focus ideas and encourage collaborative problem solving. A comprehensive instructional plan integrates explicit teaching of literacy and social-emotional skills, all while supporting opportunities for integrated application. [The NYSED Social Emotional Learning Framework](#) further outlines this relationship between social-emotional learning and academic achievement.

Reflect and Analyze

- Which of the five key ideas resonates with you the most and why?
- Describe the relationship between the Science of Reading and Culturally Responsive-Sustaining Education.
- Describe strategies for integrating literacy and social-emotional learning in the classroom, and discuss how this integration is advantageous for students.

Key References & Resources

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RESOURCES

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ACTIVITY FOR BRIEF 1

SCIENCE OF READING: WHAT IS IT?

- Take a moment and think about which of the five key ideas resonates with you the most. Be prepared to also share why this key idea resonates with you. In a minute, you will share the key idea and your reasoning with a partner.
- When prompted by the Facilitator, stand up and find someone who identified a different key idea. You can indicate the key idea that resonated with you the most by holding up that number of fingers.
- For example, if key idea 3 resonated with you the most, you would hold up 3 fingers then look for someone who was holding up 1, 2, 4, or 5 fingers.
- Once you find your partner, introduce yourself and then discuss why the key ideas you selected resonated with you the most.