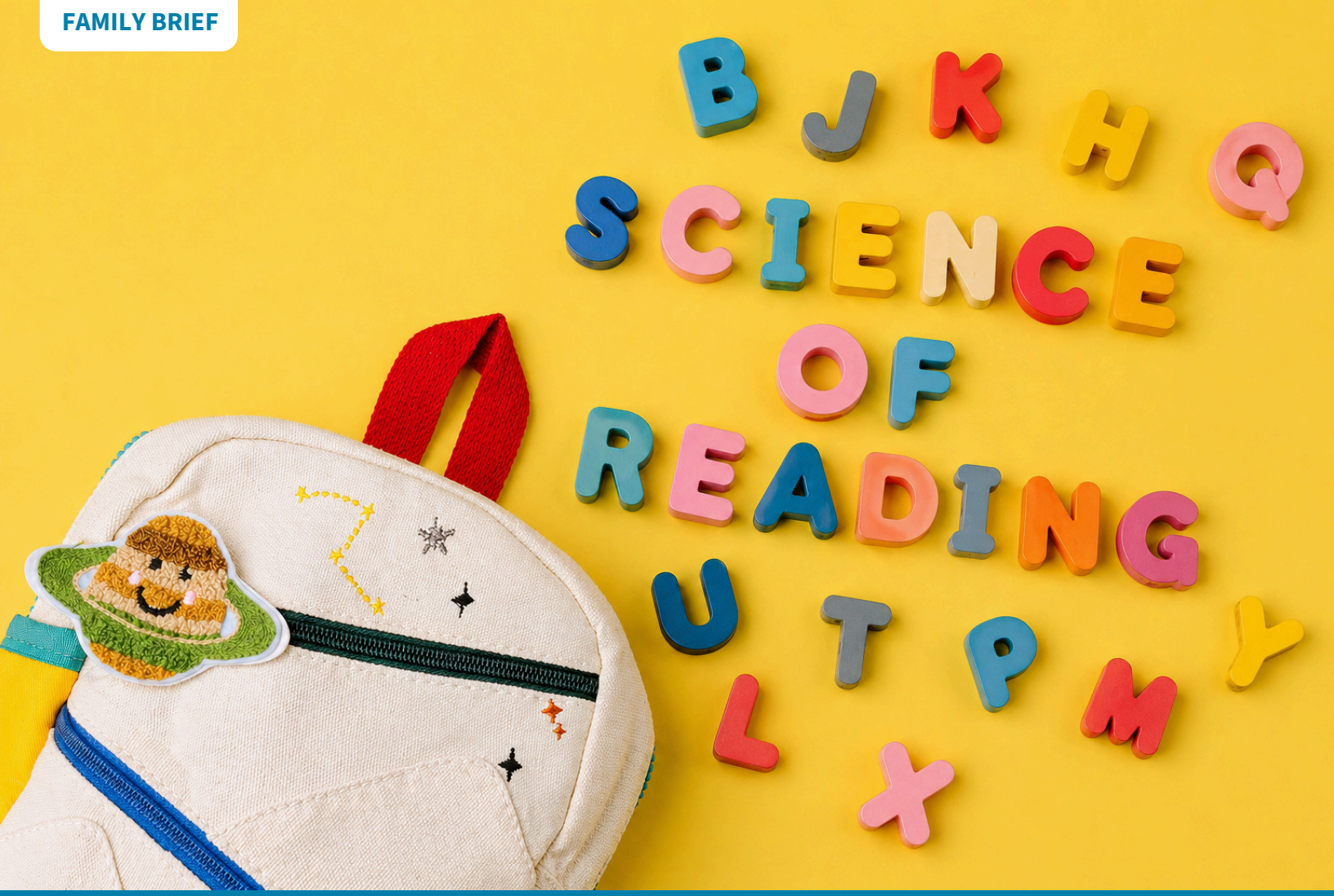
FAMILY BRIEF



THE SCIENCE OF READING

How Kids Learn to Read & Understand Text

Reading is connected to everything a child learns, from math and science to history and beyond. This brief explains how children learn to read, what strong instruction looks like, and how families can support it at home.

The "**science of reading**" is the name for a large body of research about how reading and writing develop, why some children have difficulty, and which kinds of teaching are most effective. It is not a single program, curriculum, political slogan, or quick fix. It is informed by research from many fields, including cognitive psychology, education, linguistics, neuroscience, communication sciences, and school psychology, conducted over decades and across languages. One of the most important findings is that learning to speak and learning to read are not the same. Most children learn spoken language naturally when they are surrounded by people who talk with them. Reading is different. Children need clear teaching that helps them connect speech, print, spelling, and meaning.

Learning to read is one of the most important parts of a child's education. It affects every subject, from math word problems to science, history, art, and later job training. But reading is also more complicated than it may look. A skilled reader seems to "just read," but the brain is doing several jobs at once: recognizing printed words, connecting letters to sounds, understanding vocabulary, using background knowledge, following grammar, making inferences, and keeping track of meaning across sentences and paragraphs.

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A useful way to understand reading is called the Simple View of Reading. It says that reading comprehension depends on two large abilities working together: word recognition and language comprehension. Word recognition means reading the words on the page accurately and fluently. Language comprehension means understanding spoken and written language: vocabulary, sentence structure, background knowledge, and reasoning. Both sides are needed for strong reading comprehension. A child may understand stories when an adult reads aloud but struggle to read the words independently. Another child may read the words accurately but not understand what the passage is saying. These are different problems and need different kinds of support.

Word Recognition
x Language Comprehension
Reading Comprehension

The Simple View of Reading
(Gough & Tunmer, 1986)

Scarborough's Reading Rope gives parents another helpful picture. Skilled reading is like a rope made of many strands. Some strands involve word recognition: phonological awareness, decoding, and automatic recognition of familiar words. Other strands involve language comprehension: background knowledge, vocabulary, language structures, verbal reasoning, and knowledge of how books and texts work. When the strands are strong and woven together, reading becomes more fluent and meaningful. When one strand is weak, the whole rope is affected.

Five Core Elements of Literacy

A strong science of reading program teaches several connected skills:

Phonological awareness is the ability to notice and work with sounds in spoken language, such as rhymes, syllables, and individual sounds. Phonemic awareness is a more specific skill: hearing and manipulating the individual sounds in words. For example, a child who can hears that "ship" has three sounds, /sh/ /i/ /p/, is using phonemic awareness. This matters because letters represent sounds.

Phonics is the teaching that connects sounds to letters and letter patterns. In English, this includes simple patterns, such as "m" representing /m/, and more complex patterns, such as "igh" in "light" or "tion" in "station." Good phonics instruction is explicit and systematic. That means the teacher introduces patterns in a planned order, gives examples, provides guided practice, corrects errors, and reviews to earlier skills so they stick.

The Five Elements of Literacy

- Phonemic Awareness — hearing sounds in words
- Phonics — matching sounds to letters
- Vocabulary — knowing words
- Fluency — reading accurately at pace
- Comprehension — understaning the text

Fluency is the bridge between word reading and comprehension. A fluent reader reads accurately, at a reasonable pace, and with expression. Fluency does not mean racing or being able to read at a certain speed. It means the child is no longer spending all their mental energy figuring out every word. When word reading becomes more automatic, the child has more attention available for meaning.

Vocabulary and background knowledge are also central. A child cannot understand a passage about the water cycle, migration, ancient Egypt, or a word problem if the words and ideas are mostly unfamiliar. This is why strong reading instruction includes rich read-alouds, conversation, knowledge-building units in science and social studies, and direct teaching of important word meanings. It is also why reading aloud to children remains valuable even after they can read some books independently.

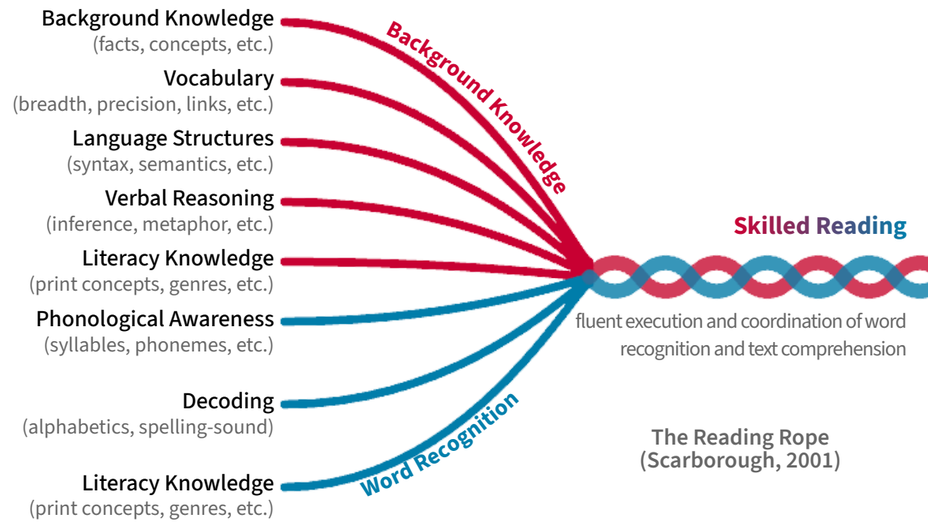
Comprehension is the goal, but it is not a single skill that can be taught by repeatedly asking children to "find the main idea." Children understand text when they can read the words, know what the words mean, follow the sentences, connect ideas, use background knowledge, make inferences, and monitor when something does not make sense. Strategies such as summarizing, asking questions, and rereading can help, but they work best when children also have the word reading skills and knowledge needed to understand the text in the first place.

Writing and spelling are also related to reading. Writing helps children think about sounds, letters, word parts, sentence structure, organization, and meaning. Spelling is especially useful because it forces children to analyze the sounds and parts of words. Older students also need practice writing in different subjects: explanations in science, arguments in social studies, reports, narratives, notes, and summaries. Reading and writing build upon one another from early years through secondary school.

The classroom approach that puts these ideas into practice is often called structured literacy, which is:

- **Explicit**; the teacher directly explains and models what students need to learn.
- **Systematic**; skills are taught in a planned sequence.
- **Cumulative**; new learning builds on earlier learning, with regular review.
- **Diagnostic**; teachers check what students know and adjust instruction when students are stuck.

Parents may hear debates about balanced literacy, leveled readers, cueing, and decodable books. The key idea is that children should not be taught to identify unfamiliar printed words by guessing from the picture, the first letter, or what would make sense in the sentence. Context can help a reader confirm meaning after a word is read, but it should not replace decoding. But, this does not mean children should only read dull phonics work-sheets. Children do benefit from decodable texts, which contain many words with the spelling patterns they have already learned. These books give children a chance to practice. At the same time, they should hear and discuss other texts that build vocabulary, knowledge, curiosity, and love of stories.



The Reading Rope
(Scarborough, 2001)

Supporting Reading at Home

Parents do not need to become reading specialists to support their child's literacy development. The most useful role is to create language-rich routines, stay informed about the instruction the child is receiving at school, and give early readers practice with the building blocks of spoken language.

One of the most important of those building blocks is phonemic awareness, the ability to hear and manipulate the individual sounds in words. This is a skill that develops in stages. Children typically move from noticing bigger units of sounds before smaller ones, starting with words, then syllables, then individual *phonemes.* Phonemes are the the separate sounds that make up a word like “cat” (/k/, /æ/, /t/). Phonemic awareness is not the same as phonics. It is purely about sound, not print, and it develops through listening, speaking, and play. Simple activities at home can build this skill meaningfully, and they require just a few minutes of conversation or a book already on the shelf!

Ways to Build Reading Skills at Home

- **Build a reading routine**. Even ten or fifteen minutes a day builds the habit! Before bed, after school, whenever it fits.
- **Talk about what you read**. Follow your child's curiosity wherever it leads, like questions about the real world, memories it brings up, or arguments about whether a character made the right call. The conversation is the point!
- **Play with sounds**. Rhyme words, clap syllables, stretch the sounds in simple words, or ask what sound a word starts or ends with. Phonemic awareness develops through this kind of low-stakes play and requires no materials.
- **Explore new words**. When your child encounters an unfamiliar word, resist supplying the definition immediately. Ask them to guess from context, then talk it through. Noticing and wondering about new words is a habit that compounds over time.

Want more ideas? Your child's teacher can suggest activities matched to what they are working on in class. You can also download free activities from The BRIDGE Portal at go.rutgers.edu/bridge.

Beyond sound work, reading together and talking around books builds the language comprehension side of the reading equation. Before reading, ask what the child thinks the book might be about. During reading, pause to ask what they notice or predict. After reading, ask why a character acted a certain way, or how the information connects to something familiar. These conversations build vocabulary, background knowledge, and reasoning, all of which support comprehension as children become more fluent readers.

Families should also know that speaking multiple languages is an asset, not a complication. Speaking a home language does not harm reading development. Strong oral language in any language supports thinking, vocabulary, storytelling, and background knowledge. Families should keep talking, telling stories, singing, explaining, and reading in the language they know best.

If you believe your child is struggling, speak to their school. Share anything you have noticed, and remember that reading difficulties are not a sign of low intelligence or effort. Children need joy, books, conversation, and encouragement. A strong approach, guided by the science of reading and supported by their family at home is a recipe for success!

The BRIDGE Initiative

The Building Resources for Inclusive Development and Growth in Education (BRIDGE) Initiative is a partnership between Rutgers University and the NJ Department of Education Office of Special Education. It promotes strong partnerships between families and schools to help students with disabilities make steady progress towards their learning goals. Learn more at go.rutgers.edu/bridge.