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## Ten Ways Parents Can Help School-Age Children Develop a “Reading Brain” According to Scientific Learning Experts

Neuroscientists and Developers of Fast ForWord® Software Series Provide Insights into the Skills Needed to Read Proficiently at Any Age  
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As children return to school this fall, reading experts at Scientific Learning Corporation, a leading provider of neuroscience-based software products that develop cognitive skills to read and learn, recommend a number of activities parents can do at home to help their children develop a “reading brain” and become more fluent readers.

“We take reading for granted, and yet numerous statistics find that too many of our nation’s students, regardless of age and background, struggle with reading.” said Dr. Paula Tallal, a world-recognized authority on language-learning disabilities and a founder of both the Center for Molecular and Behavioral Neuroscience at Rutgers University and Scientific Learning. “What scientific research tells us is that the ability to read is one of the most complex skills we can learn in our lifetime. It also shows us that the brain can change and learn at any age and, in effect, be rewired for reading.”

According to the National Institute for Child Health and Human Development, National Reading Panel, National Institute for Literacy and other research organizations, the reading skills of phonemic awareness, phonics, fluency, vocabulary and comprehension as well as the cognitive skills of memory, attention processing and sequencing are critical to reading fluently. Dr. Tallal provides the following pointers on how parents can help their school-age children develop and fine-tune these essential skills at home:

- **Phonemic awareness** – the ability to hear, identify and manipulate the sounds of spoken language and to understand that words are made of sequences of phonemes, the smallest units of sound that make a difference in the meaning of words. Students with developed phonemic awareness skills can judge whether two words rhyme and are able to isolate and substitute the beginning, middle and ending sounds in a word. Teaching rhymes, songs and short poems and playing simple word games (e.g. “How many words can you rhyme with sat?”) help children develop phonemic awareness.
- **Phonics** – the understanding that there is a predictable relationship between phonemes (the sounds of spoken language) and graphemes (the letters and spellings that represent those sounds in written language). Parents should help younger children practice the alphabet by pointing out letters whenever they see them and teaching them their name and other everyday words. Playing games like, “How many words can you make using the letters in spaghetti?” works well with older children.
- **Fluency** – the ability to read a text accurately and quickly. Fluent readers can recognize words automatically and understand their meaning at the same time. To help develop fluency, children should be encouraged to read aloud to their parents and even re-read the

same story several times. Parents should read to their children as well as have them follow along as they read.

- **Vocabulary** – the words that readers must know to communicate effectively. Parents can help children build a strong vocabulary by teaching them the meaning of important words and promoting the use of a dictionary. They can also teach their child how to use context clues while reading to figure out unknown words and learn base words and affixes to decode words.
- **Comprehension** – the ability to derive meaning from text. Good readers have a purpose for reading, which is why parents should help their children find time to read for pleasure and find interesting books that they want to read on their own. Parents who discuss with their children what they're reading are also helping them read for meaning.
- **Memory** – the ability to store information and ideas, which is essential for word recognition, comprehension of complex sentences and remembering instructions. Engaging children in memory games like 'Concentration' and encouraging them to re-tell stories help improve memory skills.
- **Attention** – the ability to focus on information and tasks, while ignoring distractions. Fluent reading requires sustained and focused attention. To increase attention span, parents should have children set time goals for sticking to a task, like doing homework or reading quietly. Children should also learn to read or study in a quiet room, free from television, radio and other distractions.
- **Processing** – in the context of reading, the ability to distinguish and associate individual speech sounds with their corresponding letter and word forms. Listening games, such as identifying sounds in words that sound like something else (e.g., the *s* sounds like a hissing snake), help train the ear to capture and interpret sounds clearly and accurately.
- **Sequencing** – skills used for maintaining order, such as the order of letters within words or words within a sentence. Creating picture stories where the order of the images is used to tell a story is an effective way to develop sequencing skills in young children. For those learning how to spell, mixing up letter tiles and having them unscramble the letters to form a word also helps.

“The final and perhaps most important thing that parents can do to help their kids develop a reading brain is to recognize that reading problems require intervention,” Dr. Tallal added. “Early intervention is important, especially with the aid of scientifically-based reading intervention programs that target different areas of reading instruction, but it’s never too late to help children become better readers.”