



# THE RESEARCH BEHIND READING FOR SUCCESS

By Reading Is Fundamental

**Reading**  
Is Fundamental

## Explore the Research

Results from the National Assessment of Educational Progress (NAEP) show students' literacy rates have remained below proficient for nearly three decades (U.S. Department of Education, 2017). When aggregated, NAEP scores showed elementary schools eligible for free or reduced lunch scored 14 points lower than the national average score (U.S. Department of Education, 2017). Suggesting a significant achievement gap exists during the school year for students living in or near poverty. Research has shown this gap widens during the summer months due to a phenomenon known as “summer slide” or “summer learning loss” (Alexander, Entwisle and Horsey, 1997; Cooper, Nye, Charlton, Lindsay, & Greathouse, 1996; Allington & McGill-Franzen, 2003).

Summer learning loss speaks to the decline in student access to high-quality learning experiences in low-income rural and urban areas during the summer months when they are not enrolled in school (Alexander & Condliffe, 2016). In a meta-analysis of 11 studies of summer learning loss, Cooper et al. (1996) found low-income students in grades kindergarten through 8th grade were, on average, three months behind middle-class students in reading proficiency when they returned to school in the fall.

The cumulative long-term effect of chronic summer learning loss is startling. Alexander, Entwisle and Olsen (2007) found that by the end of fifth grade, low-income students can be nearly three grade equivalents behind higher-income students in reading proficiency. Chronic summer learning loss can be attributed to limited literacy activity (Storch & Whitehurst, 2001; Xu & De Arment, 2016) and the absence of appropriate educational materials in homes during the summer months (Neuman & Celano, 2001). However, increasing student access to books and educational materials may not fully address the problem. One ethnographic study suggested that working-class families obtain books and educational resources for their children's use in the summer, but may be less skilled at organizing and facilitating use of these materials on their own (Chin & Phillips, 2004). RFS is a comprehensive program that provides high-quality learning experiences designed to prevent summer learning loss and support family engagement.

<sup>1</sup> NAEP is a congressionally mandated program administered by the National Center for Education Statistics within the U.S. Department of Education. NAEP assesses reading in 4th and 8th grades every 2 years, and every 4 years for 12th grade.

## RFS During the Summer Months

One of the goals of RFS is to provide children and families with summer materials that connect literacy activities with STEM-based content in ways that are easy to use and understand. To improve students' science knowledge RFS includes Cognitive Academic Language (CAL) within the program resources. CAL describes subject-specific academic vocabulary words (e.g., STEM-specific terms such as "hydrocarbon" or "photosynthesis") not commonly used in casual conversations. CAL words are also known as Tier Three words within Common Core State Standards (Beck, McKeown, & Kucan, 2002). If a student is not familiar with STEM-specific CAL, they may struggle to understand STEM informational texts or answer questions on STEM assessments, even if the student has the background knowledge needed to successfully respond. Students' reading experiences and exposure to high-quality content are critical factors in the maintenance of their CAL vocabulary and lexical quality, especially during the summer months (Stafura & Perfetti, 2014). As students build their STEM-based CAL experiences, the size and sophistication of their vocabulary steadily increases (Castles, Rastle, & Nation, 2018). RFS resources are designed to blend summer reading activities with STEM-based content to create enjoyable learning experiences that reduce the negative impact of summer learning loss and strengthen the connections between students' word-decoding skills and reading comprehension. As such, RFS includes STEM within program materials by embedding CAL language intentionally, explicitly, and with frequent repetition (Calderon, 2000; Beck, McKeown, & Kucan, 2002) within all RFS books and program resources.



## Background on RIF & RFS

As the nation's oldest and largest nonprofit children's literacy organization, RIF has provided more than 415 million books to 50 million children. RIF has more than 53 years of experience in developing literacy programs. RIF first created the RFS, with grant funding from the U.S. Department of Education Innovative Approaches to Literacy (IAL). The RFS study was designed to determine how elementary schools in the poorest and/or most rural areas across the country could address summer learning loss if provided with a) access to opportunities for enrichment; b) engaging STEM-themed informational books for the classroom and children's ownership; c) expertly created learning resources that link classroom activities to STEM-themed informational books aligned with specific state and/or Common Core standards; d) parent engagement and e) professional development for educators on how to introduce, use, and reinforce the RFS materials.

Policy Studies Associates conducted an independent evaluation of RFS, and found that 61% of students experienced no summer learning loss and 57% of those students showed statistically significant gains on reading proficiency from spring to fall each year on their standardized Iowa Test of Basic Skills (ITBS) scores (Sinclair, White, Hellman, Dibner & Francis, 2015). Most significant, students in each grade who were initially at or below the 10th percentile experienced the greatest increase in their reading ITBS scores (Sinclair, White, Hellman, Dibner & Francis, 2015; Alexander, Pitcock, & Boulay, 2016).

RFS also developed a professional development component for teachers and provided more than 750,000 books to 173 schools over a two-year period. Each teacher received scaffolded teaching guides, and formal training on how to use children's literature as informational text.

The RFS study findings were promising and provided a pathway forward for effectively addressing summer learning loss and providing more STEM reading content for children in low-income rural and urban communities. Since the RFS research study, RIF has maintained its focus on reducing summer learning loss, and has continually field-tested its STEM-based literacy curriculum, teacher professional development, and community engagement strategies through various RIF programs and events throughout the U.S.

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