

Reimagining School Readiness

Overview of Key Findings

A literature review of over 150 research studies indicates that we are missing the mark in preparing our children for school by equating “school readiness” with a finite checklist of academic skills to be mastered by age five. Instead, we should think about school readiness as a robust developmental process that spans the early childhood years through age eight. All children are capable of developing the skills they need if the adults in their lives provide developmentally appropriate and rich experiences to boost learning and cognitive development. These six key findings provide a research-backed roadmap for how to do that.



Talk & Play

Quality adult-child interactions shape children’s thinking skills. The conversations we have, the questions we ask, and the experiences we provide matter.

Simple shifts in our approach and language use with children can boost their learning and cognitive development. When very young children experience more high-quality language exchanges, even if they cannot respond verbally, their brains learn to process language more efficiently. Research suggests one successful approach for language learning and other key school readiness skills is guided play - with an emphasis on adults providing thoughtful questions and prompts.

Children with stronger social skills do better in school, in the workplace, and in life.

Children’s early social emotional skills have been correlated with positive life outcomes across a wide range of domains in adulthood, including: education, employment, criminal activity, substance use, and mental health. Fortunately, social-emotional skills can improve with adult support and intervention. Children learn key social emotional skills through child-directed play, conversations about emotions, and adults’ support of children’s helping behaviors.



Science & Math

Science learning is critical for the development of higher-order thinking but is missing from most early school experiences.

By learning to observe, alter, and explain phenomena; to ask good questions and imagine different solutions; and to connect or evaluate information, children are developing higher-order thinking processes. Providing opportunities for exploratory, hands-on science learning—with thoughtful adult support—is one way to turn children’s innate curiosity into experiences that prepare the brain for complex, conceptual thinking later in life.

Demonstrating strong math skills at an early age predicts long term success in school, not just in later math learning but also in later reading proficiency.

Longitudinal research demonstrates that foundational mathematical understanding—more than any other content area—predicts long-term success on school achievement measures, and that early success in math predicts both math and reading performance through high school. Research also demonstrates the importance of spatial education and growth mindset, as key methods to support success in early math learning.



Body & Brain

Planning, self-awareness, and self-control—what psychologists refer to as “executive functions”—predict positive school and life outcomes.

The executive functions are a suite of higher order thinking skills responsible for directing the brain’s power and attention. Executive function skills are fundamental to school readiness, and fortunately, research demonstrates that these skills can be improved through a diverse range of activities, including guided play. Children can strengthen executive functions by using planning to generate ideas for what to play, working memory to remember rules of games, inhibitory control to follow the rules, and cognitive flexibility to consider different perspectives and strategies.

Higher-order thinking, retention of information, and creativity flourish when children experience minimized stress and when their basic needs are met.

When children experience positive and safe environments, they learn more and retain more information. A small amount of stress is normal and healthy for children, but prolonged and chronic stress can fundamentally alter the architecture of the brain, changing how growing children respond to stress for the rest of their lives. Research shows that healthy food, regular sleep, mindfulness activities, and especially caring relationships with adults can protect children and help them manage adversity.

To learn more, please visit: BayAreaDiscoveryMuseum.org/library-toolkit

