

# ***TouchMath Supporting NextGen Mathematics***

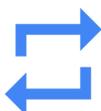


## **Research-Based Best Practices**



TouchMath® follows research-based best practices by carefully including engagement, feedback and multisensory methods. In a 2008 study, a researcher found that using the TouchMath® program increases computation skills and provides a computation strategy that students use independently. Half of the students in the study met the goal of 100% improvement on computation tasks. Knowledge of TouchPoints® allows ease of use and increases critical thinking skills.

## **Concrete-Representational-Abstract Continuum**



The TouchMath® program is grounded in the CRA-Continuum. The Concrete-Representational-Abstract Continuum is a sequence of instructional practices and research-based best practices that reflect how most students learn – by moving from an instructional focus on concrete representations (manipulative materials) and modeling to semi-concrete representations (drawings, pictures and images) to abstract mathematical thinking (using only numerals or solving problems mentally.)

## **Next Generation Math Standards**



TouchMath® is the only curriculum program that uses a numeral as a manipulative, instantly making a potentially daunting abstract concept into a real and concrete action. TouchMath® is aligned to Common Core and Next Generation Math Standards with a concentration on Focus, Coherence, Application, and Modeling throughout the curriculum.

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## **Response-to-Intervention**



Response to Intervention (RtI) is an early detection, prevention, and support system that attempts to identify and assist struggling students with appropriate levels of intervention. The essential components for implementing a successful RtI framework include high-quality, scientifically based classroom instruction, ongoing student assessment, and multi-tiered instruction. TouchMath® provides both a support and multi-level intervention system to assist students who fall within the Tier 1, 2 and 3 levels of the IDEA Response-to-Intervention framework.

## **Standards of Mathematical Practice**



The TouchMath® Program has embedded strategies that enable students to access and persevere by using TouchPoints® for operations (addition, subtraction, division, and multiplication) to alleviate strain on working memory and to keep students focused on the content task at hand. TouchMath® supports the SMPs: *Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Model with mathematics. Use appropriate tools strategically. Attend to precision. Look for and make use of the structure. Look for and express regularity in repeated reasoning.*

## **Visualizations in Mathematics**



Visualization in the math classroom is supported by the Next Generation Math Standards (Common Core State Standards), Mathematical Progressions, Universal Design for Learning, CRA-Continuum, and neuroscience research. TouchMath® is closely tied to visualization strategies in mathematics – the multisensory, CRA approach makes critical math concepts appealing and accessible for students who struggle to understand grade-level content.

## **Universal Design for Learning**



The Universal Design for Learning plays a pivotal role in both the TouchMath® Program and student achievement for a wide range of learners: general education, special education (mainstreamed and resource room,) intervention, remediation, English Language Learners (ELL's), and students performing above or below grade level.