ORIGO Education's mission to make learning mathematics meaningful, enjoyable, and accessible for all.

The development of all ORIGO Education resources, including *ORIGO Stepping Stones 2.0 ©2022* ("Stepping Stones 2.0") is grounded in our mission and beliefs:

We believe:

Learning is a social process that requires language and discourse.

Students who develop strong thinking, problem-solving, and communication skills grow into productive, innovative members of society.

Content taught conceptually, and in a logical, learner-friendly sequence develops understanding and success.

Technology empowers rather than replaces educators.

Development of *Stepping Stones 2.0*

We bring conceptual understanding of mathematics to the forefront of teaching and learning. Our instructional approach builds on students' natural ability to develop understanding and number sense. It helps students avoid misconceptions and promotes confidence with efficient thinking strategies. It also cements concepts and skills with games and practical applications.

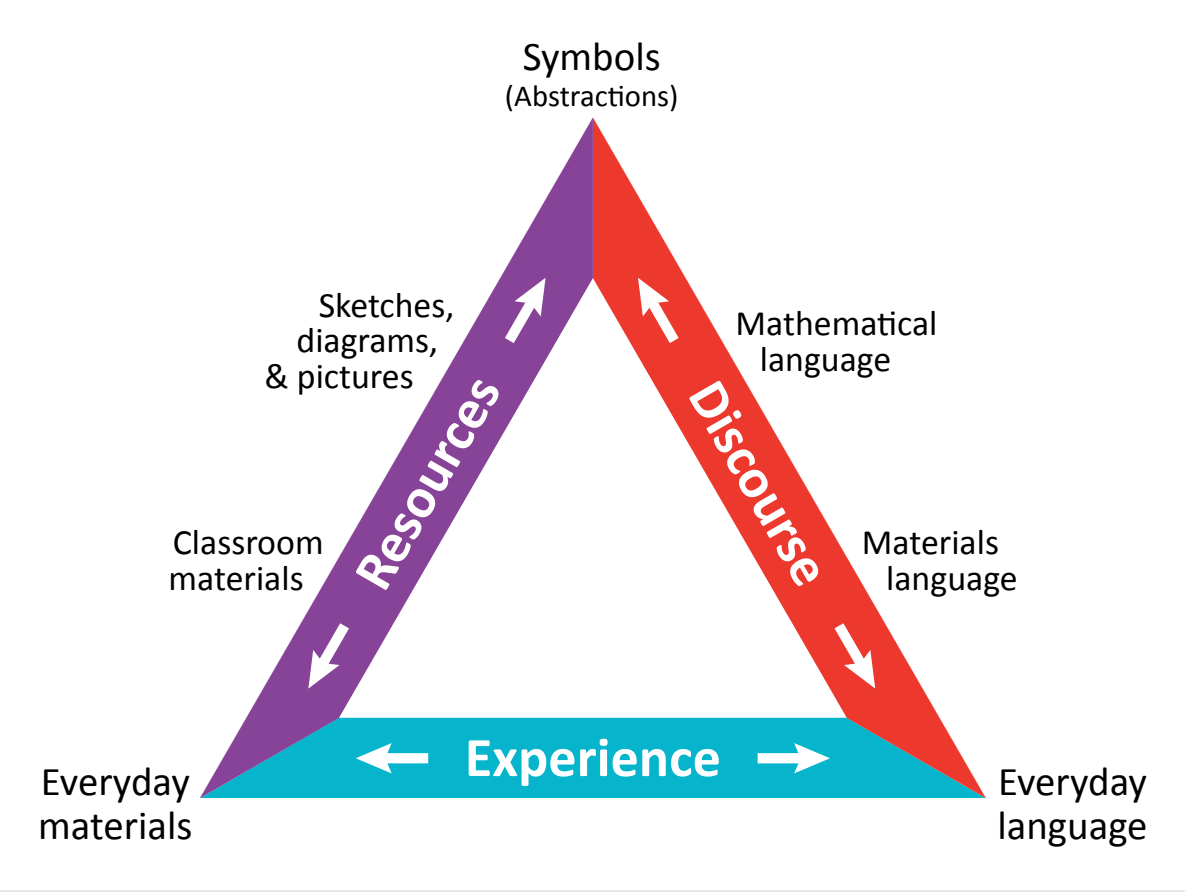
Spaced teaching and practice approach

We believe that an effective curriculum must carefully build a structure of understanding so that all prerequisite topics are in place before subsequent topics are connected. Without these careful connections, learning is largely superficial. In *Stepping Stones 2.0*, key ideas and skills have been identified and placed in smaller blocks. These blocks, or "spaced teaching and practice experiences," are spread throughout the school year. In the lessons that follow a concept, work is included to master what was taught alongside other content development. This allows students to easily connect new topics to existing knowledge. Although practice is an essential component of any mathematics curriculum, *Stepping Stones 2.0* requires less daily practice time because key ideas are revisited through purposeful practice during everyday lessons. This spaced practice approach is proven to reduce the likelihood of forgetting content that is previously taught.

Approach to teaching concepts

Mathematics involves the use of symbols, so a major goal of elementary programs is to prepare students to read, write, and interpret mathematical symbols.

Stepping Stones 2.0 introduces symbols gradually after students have had many meaningful experiences with a model ranging from everyday materials, to classroom materials, and then to sketches, diagrams, and pictures, as shown on the left side of the diagram below. Symbols are also abstract representations of verbal words so that students move through distinct language stages.



This approach serves to build a deeper understanding of the concepts underlying abstract symbols. In this way, *Stepping Stones 2.0* better equips students with the confidence and ability to apply mathematics in new and unfamiliar situations.

Teaching skills

Current standards typically call for students to develop procedural fluency and basic computational skills based on physical and visual models, place-value linked strategies, and mathematical reasoning. In other words, students are expected to know how to figure out the answer (and why that method works) rather than simply memorizing facts on flash cards. ORIGO Education believes that students master skills over time as they engage in four distinctly different stages of activities:

1) Introduce

Students are introduced to a skill or strategy using contextual situations, concrete materials, and pictorial representations to help them make sense of the mathematics.

2) Reinforce

Understanding of the skill or strategy is reinforced through fun games and activities that connect the concrete and pictorial representations to the abstract symbols of the practice stage.

3) Practice

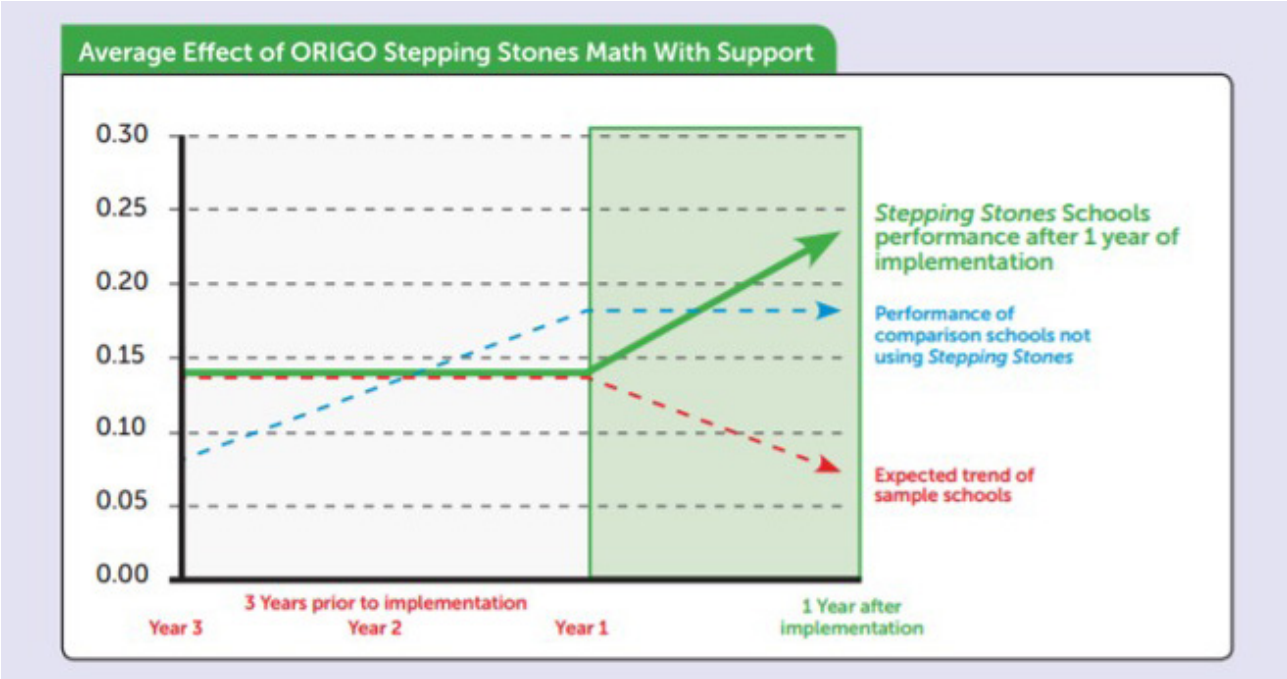
When students are confident with the skill or strategy, they move to the third stage where visual models are no longer used. This stage develops accuracy and speed of recall. Written and oral activities are used to practice the skill to develop fluency.

4) Extend

Students extend their understanding of the skill or strategy. For example, the use-tens thinking strategy for multiplication can be extended beyond the number fact range to include computation with greater whole numbers, and eventually to decimal fractions.

Evidence of efficacy

At ORIGO Education, every resource, solution, and service we provide is based on research. We know our products work because the research behind each one validates its basis. We engaged the American Institutes for Research (AIR) to conduct an external independent evaluation of the efficacy of the *Stepping Stones 2.0* mathematics curriculum. The study sampled 559 grade-level classes across 39 districts in six states and was designed to meet the What Works Clearinghouse Tier 2 design standards, which is the highest possible rating for a quasi-experimental design. The study found that pairing *Stepping Stones 2.0* math with sufficient implementation support has a statistically significant positive effect on mathematics proficiency.



The research basis of our products and results of these studies can be found here.

Supplemental services

ORIGO Education provides supplemental services, including both embedded and on-site professional learning. Embedded within *Stepping Stones 2.0* is a growing library of professional learning videos on contemporary elementary school mathematics. ORIGO Education's *MathEd* is an invaluable resource that provides teachers with ongoing access to professional learning videos. These informative sessions provide teachers with the practical skills to help develop deeper understanding of the mathematical standards and practices in the classroom.

ORIGO Education believes, and research confirms, that having a mathematics curriculum and resources program that provides positive outcomes for students, teachers, and the school community starts with effective implementation. We leverage the work of the National Implementation Research Network best practices and frameworks around four stages of the implementation process: exploration, installation, initial implementation, and full implementation. ORIGO Education has taken the lead to use the science of implementation to help schools and districts offer *Stepping Stones 2.0* with integrity. We provide all customers with tools and implementation support to assist them in reaching their desired level of implementation, resulting in positive impact on student achievement.

Summary

ORIGO Stepping Stones 2.0 ©2022 is a world-class mathematics program, built from a solid foundation of research, which embeds strategic approaches toward language and concept development. Formal and informal studies continue to indicate that students of teachers who effectively implement *Stepping Stones 2.0* achieve greater results than their peers. Through careful sequencing of content, proven instructional design, and engaging professional learning, ORIGO Education is committed to making mathematics meaningful, enjoyable, and accessible for all. Please contact us to learn more about *Stepping Stones 2.0* and how we can partner to meet your elementary mathematics needs.