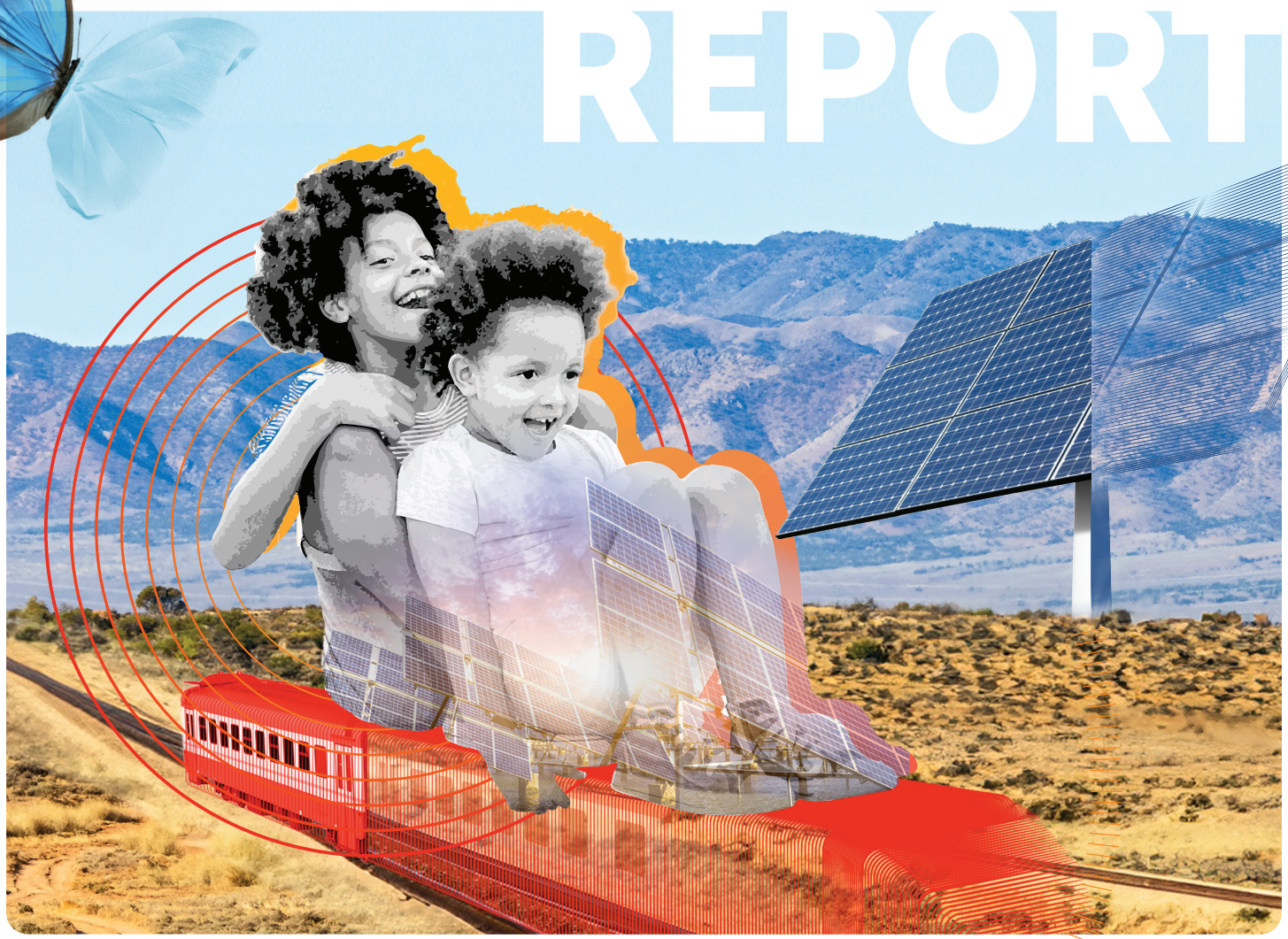
AccelerateLEARNING
THE LEADER in STEM EDUCATION

IMPACT & RESEARCH REPORT



2025

Executive Summary

In 2025, the Accelerate Learning Inc. (ALI) research team conducted numerous research activities across all ALI's products. These include:

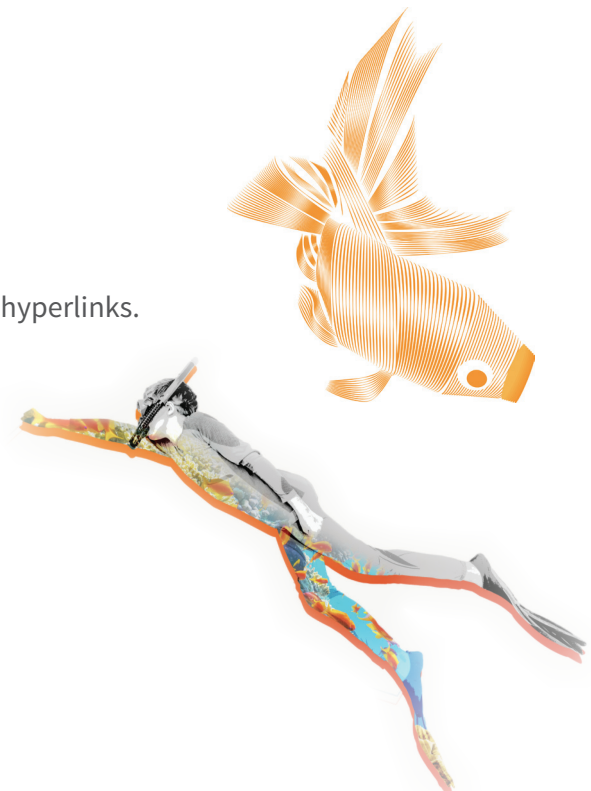
- 10 efficacy studies
- 3 product use studies
- 2 case studies
- 2 customer advisory board activities and customer surveys
- 5 dissemination activities
- 5 grants projects
- setup of 10 upcoming projects
- 4 industry awards named ALI products as winners or finalists

In total, the team worked on 15 studies and over 30 projects/activities this year, as we continued to expand the evidence of ALI STEM products' effectiveness. We also built a new internal infrastructure, including three new tools and a lunch-and-learn. Finally, a new grant for $1.7M was awarded to Collaborate Science.

In the following sections, we describe each research activity type and its importance. Studies are then summarized by product. If ALI conducted the study internally, we use the term "We" to indicate who conducted the research; evaluations by external parties note explicitly who partnered with us to conduct the study/activity. Please note that the report provides a brief overview of all activities conducted in 2025, although data for many studies was gathered across 2023 and 2024. When possible, full studies are linked. Studies can also be found on the website:

acceleratelearning.com/research

🔗 The callout icon within this report denotes active hyperlinks.



BY THE NUMBERS

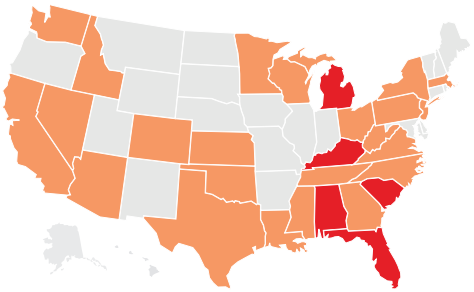
Math Nation

9,497
SCHOOLS

6,237,081
STUDENT LOGINS

2,251,395
VIDEOS WATCHED WEEKLY

In 2025, Math Nation was used in **38 states**, with the largest user bases in **Florida, Michigan, South Carolina, Alabama,** and **Kentucky.**



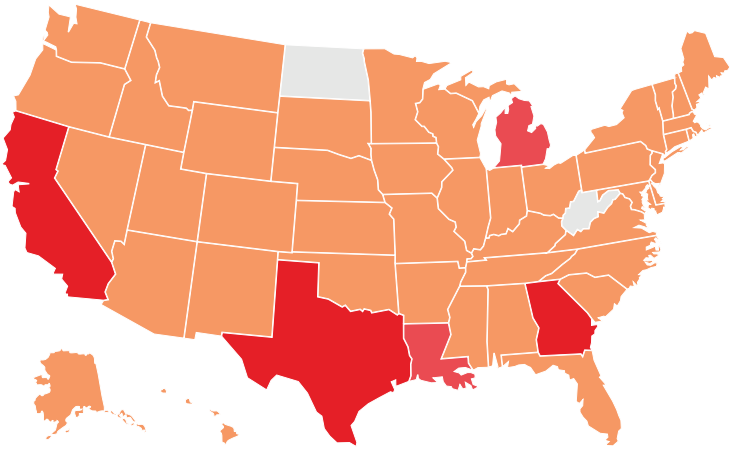
STEMscopes Science

6.7K+
SCHOOLS

122K+
EDUCATOR/STAFF ACCOUNTS*

711K+
HANDS-ON EXPLORE ACTIVITIES ACCESSED BY A TEACHER

Based on the number of schools above, **~5.3% of the nation's schools** (public or private) across **48 states** are using STEMscopes Science products, with the largest user bases in **Texas**, **California** and **Georgia**. Although these states have the most schools using STEMscopes Science, **Michigan** and **Louisiana** included teachers who clicked around the various scopes of the STEMscopes Science program the most.



BY THE NUMBERS

STEMscopes Math**

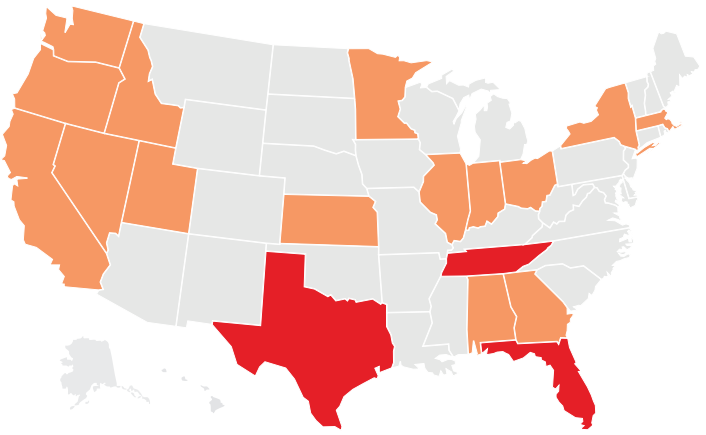
2K+
SCHOOLS

161K+
EDUCATOR/STAFF ACCOUNTS*

758K+
HANDS-ON EXPLORE ACTIVITIES ACCESSED BY A TEACHER

Based on the number of schools above, **~1.6% of the nation's schools** (public or private) across **19 states** are using STEMscopes Math products, with the largest user bases in **Texas**, **Florida** and **Tennessee**.

***Note: Numbers are based on the 2024-2025 school year.*



NISE

CAMPUS STEM CERTIFICATE (NCSE)

17 schools completed the National Certificate for Stem Excellence (NCSE); **23** are in progress.

11 schools completed the National Certificate for Stem Excellence - Recertification (NCSE-R), while **2** more are in progress.

132 schools total, across **20** states (and **3** countries), have achieved National Certificate for STEM Excellence (NCSE) distinction.

DISTRICT STEM CERTIFICATE (NCSE-D)

1 district completed the National Certificate for Stem Excellence (NCSE), **1** is in progress.

4 districts total across **2** states (**3** in Texas, **1** in Alabama) have achieved National Certificate for STEM Excellence-District (NCSE-D) distinction.

TEACHER STEM CERTIFICATE (NCST)

1,003+ educators earned the National Certificate for STEM Teaching (NCST), with **2,860** more in progress.

Among the NCST-certified educators, **~100** have requested NISE to transfer their certificate to American College of Education (ACE) to receive graduate credits.

9,261+ educators, spanning all **50** states, have earned their NCST since 2016.

MICRO CERTIFICATES

1,786 STEM micro certificate licenses were requested in 2025.

Efficacy Studies (ESSA Tier 2 or Tier 3)

Efficacy studies in education are often defined as “the power of a product/intervention to produce the desired effect.” Put another way, ALI’s efficacy studies seek to show the effect of our products on STEM outcomes in real-world settings. We design our studies to match the Every Student Succeeds Act (ESSA) and What Works Clearinghouse (WWC) higher tiers/standards of evidence. With these studies, we want to help schools feel confident that our products are research-supported as the best products on the market.

KIDE SCIENCE

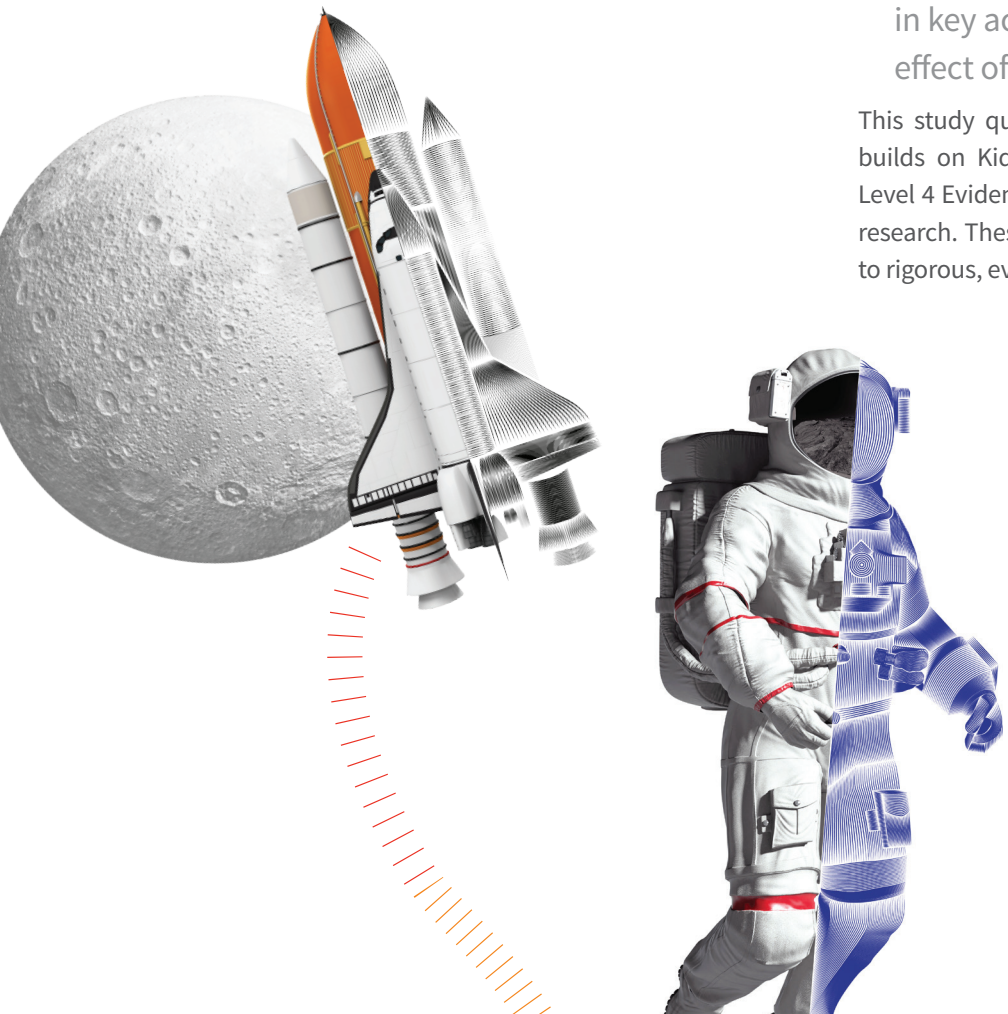
LXD Research on Efficacy in Georgia Kindergarten Classrooms

An outside evaluator, LXD Research, evaluated the impact of Kide Science’s play- and story-based STEAM program on kindergarten students’ academic growth in math and literacy. This quasi-experimental study analyzed student progress throughout the 2023–2024 school year, comparing outcomes between Kide classrooms and non-participating classrooms. Results showed that kindergarten students who entered school “Ready” and received Kide Science instruction demonstrated greater stability in math and literacy performance and improved comprehension skills compared to their peers

The study included 982 kindergarten students from Forsyth County School District, Georgia, and compared Kide Science implementation to standard district instructional practices. Student outcomes were measured using the Georgia Kindergarten Inventory of Developing Skills (GKIDS) assessment at the beginning and end of the school year.

> Statistical analyses indicated that students in Kide classrooms, particularly those with teachers who used Kide more frequently, were significantly less likely to experience declines in key academic skills, suggesting a protective effect of frequent Kide use.

This study qualifies as ESSA Level 3: Promising Evidence and builds on Kide’s prior designation by LXD as achieving ESSA Level 4 Evidence: demonstrates a rationale that is supported by research. These designations affirm Kide Science’s commitment to rigorous, evidence-aligned early STEM education.



ESSA PROMISING III

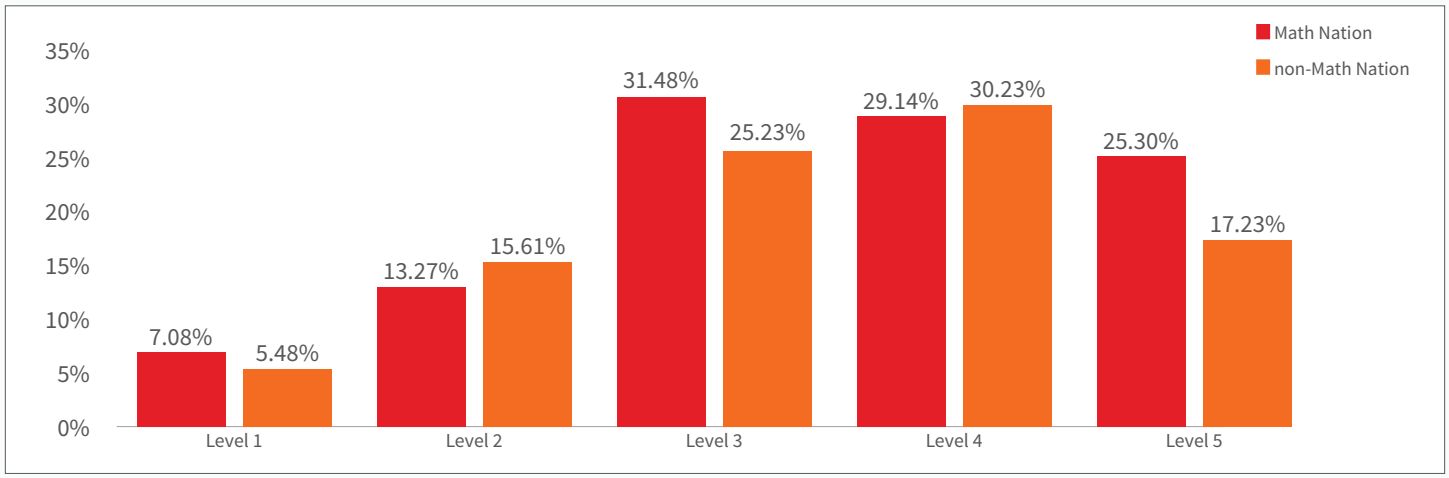
LXDRESEARCH AT CHARLES RIVER MEDIA

MATH NATION

2023-24 Math Nation Florida Algebra 1 Study

We published results from a quasi-experimental study that evaluated the impact of the Math Nation Algebra 1 curriculum, aligned to Florida's Benchmarks for Excellent Student Thinking (B.E.S.T.) standards. Using propensity score weighting and student achievement data from the Florida Department of Education, the study compared outcomes between 1,154 Math Nation schools and 430 matched comparison schools. Key performance indicators included Algebra 1 End-of-Course proficiency levels and scale scores. **Schools using Math Nation had significantly more students achieving at the highest level of proficiency (Level 5) compared to schools using other programs.** As shown in the figure below, 25.3% of students in Math Nation schools scored at level 5, compared to only 17.2% in non-Math Nation schools, a statistically significant difference. Math Nation schools also had fewer students scoring at Levels 2 and 3, suggesting that Math Nation helps shift students upward across proficiency bands, not just into basic proficiency, but into advanced performance. Even at lower usage thresholds, such as students completing just two or more sessions, statistically significant gains were observed in both Levels 3 and 5, with emerging effects beginning at Level 2. These results indicate that Math Nation not only increases proficiency rates overall but also helps more students reach the highest levels of achievement.

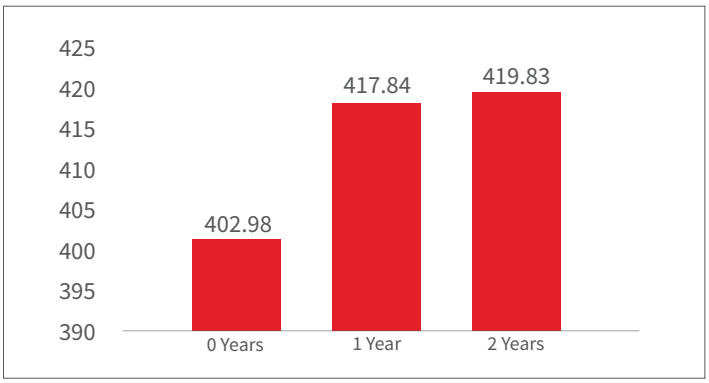
Figure 1: Estimated means of student proficiency levels for Math Nation vs. non-Math Nation schools



Duration of Math Nation Use Predicts Algebra 1 Achievement in Florida Study

In this post-hoc quasi-experimental study, we examined the relationship between the number of years schools used the Math Nation B.E.S.T. Algebra 1 program and student outcomes on Florida's 2024 Algebra 1 End-of-Course (EOC) exam. Using statewide school-level data from 1,583 Florida high schools and controlling for prior performance and demographic characteristics, **the study demonstrated that sustained use of Math Nation was consistently associated with statistically significant gains in Algebra 1 achievement. Each additional year of Math Nation use was associated with an increase in students achieving Level 5 and Level 4 proficiency and, as the figure below demonstrates, improved overall scale scores.** These gains are notable as they emerged after adjusting for a broad set of student and school characteristics, including enrollment, economic disadvantage, and racial/ethnic composition.

Figure 2: 2024 Algebra 1 EOC scale score by years of Math Nation use



STEMSCOPES MATH

2024-2025 STEMscopes Math Texas Elementary Study

This study examined how 4th grade students in Texas schools that used STEMscopes Math performed on the state's STAAR test in math, compared to students in matched schools that used other math programs. We looked at schools' average scale scores and benchmark achievements overall. We also examined student subgroup performance in STEMscopes Math versus non-STEMscopes Math schools. Lastly, we examined how school usage over time affected 2024 STAAR math scores. **Results indicated that students in schools using STEMscopes Math in 4th grade had higher STAAR benchmarks than comparison schools in all positive categories (Approaches, Meets, Masters), and a lower percentage of students who did not meet grade level benchmarks. STAAR scale scores in STEMscopes schools were 6.49+ points higher than in non-STEMscopes schools.** This means STEMscopes schools gained more across the 4th grade year: STEMscopes schools gained ~103 points on average between 3rd and 4th grade, while control schools gained ~96 points. All the above impacts were statistically significant.

All student subgroups in STEMscopes Math schools had positive increases above and beyond comparison groups' 2024 average scales scores in non-STEMscopes Math schools. Differences were significant for males, females, African American students, Hispanic/Latinx students, White/Caucasian students, and English Language Learners as well as English speakers. Impacts were similar across subgroups. Finally, STEMscopes Math schools that used the curriculum for longer had significantly higher 2024 average scale scores and a higher percentage of students that met grade level expectations. **For every additional year of use, schools' average scale score increased 2.88 points, and the percentage of students meeting grade level when increased 0.65 percentage points. Thus, schools where students had STEMscopes Math in 2nd, 3rd, and 4th grade (three years) had average scale scores that were 8.64 points higher in 2024 than matched controls.** There was also a 1.95+ percentage point increase in the percent of students meeting grade level expectations (M = 43.93%) in schools that used STEMscopes for three years compared to non-STEMscopes schools (M = 41.98%).

Figure 3: Point difference at each proficiency level for 4th grade students at STEMscopes Math vs. non-STEMscopes Math schools (note all differences are significant p<.05)

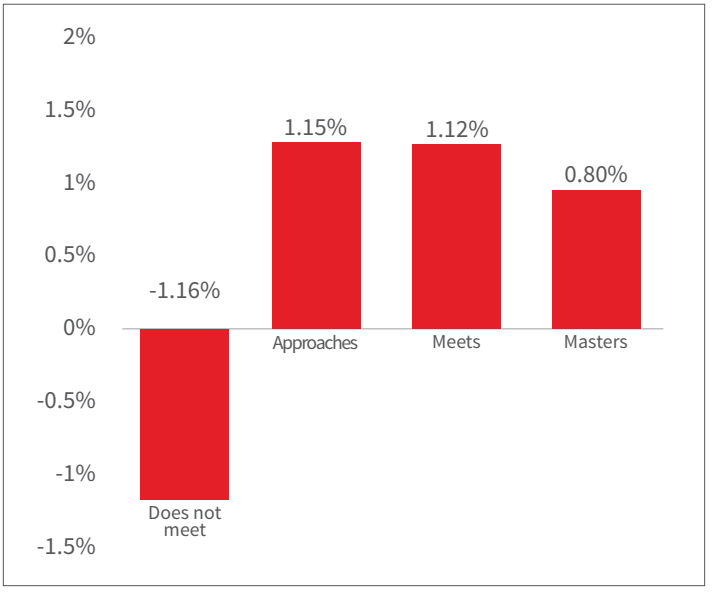
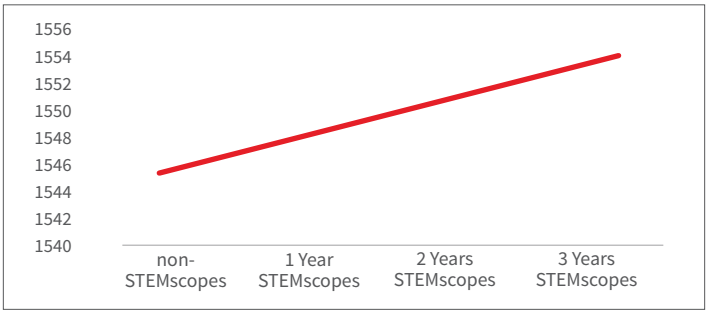


Figure 4: Increase in 2024 average scale score based on how many years a school used STEMscopes Math

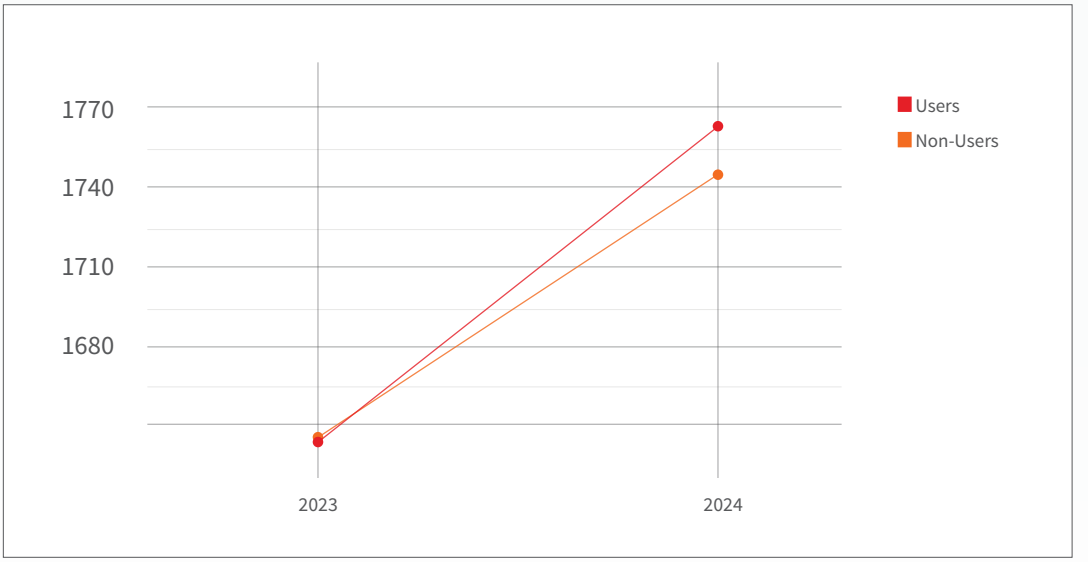


Texas Math Study with LXD Research and WiKIT

This retrospective study analyzed Texas state test outcomes as a result of a public data request. Data include STAAR Math state test scores from 2023-2024 to evaluate the impact of STEMscopes use on math achievement via the STAAR Math, assessed in Grades 3-5. The study compared student-level outcomes of STEMscopes users and nonusers with two- and three-year quasi-experimental designs. Covariates included previous year's STAAR Math scores, and user and non-user groups were matched to be similar on key student demographics.

STEMscopes Math use significantly predicted STAAR math scores and mastery level. STEMscopes use significantly predicted differences in '24 math scores. With '23 math as baseline, program users had significantly higher 2024 STAAR Math scores (1706.8) than the comparison group (1685.5; $F(1, 4013) = 35.47$, $p < .001$, partial $\eta^2 = 0.009$). When combining Grades 4 & 5, STEMscopes positively predicted STAAR Math Mastery level (on grade level or above) in 2024 ($x^2(2, n = 4016) = 35.4$, $p < .001$). The same patterns emerged for 4th and 5th grade separately: user status was significantly related to math score outcomes and mastery level. When evaluating math score growth over multiple years, STEMscopes use remained a significant predictor in '24 math outcomes, even including '22 and '23 math baseline scores ($F(1, 1204) = 9.86$, $p = 0.001$, partial $\eta^2 = 0.008$, Cohen's $d = 0.18$).

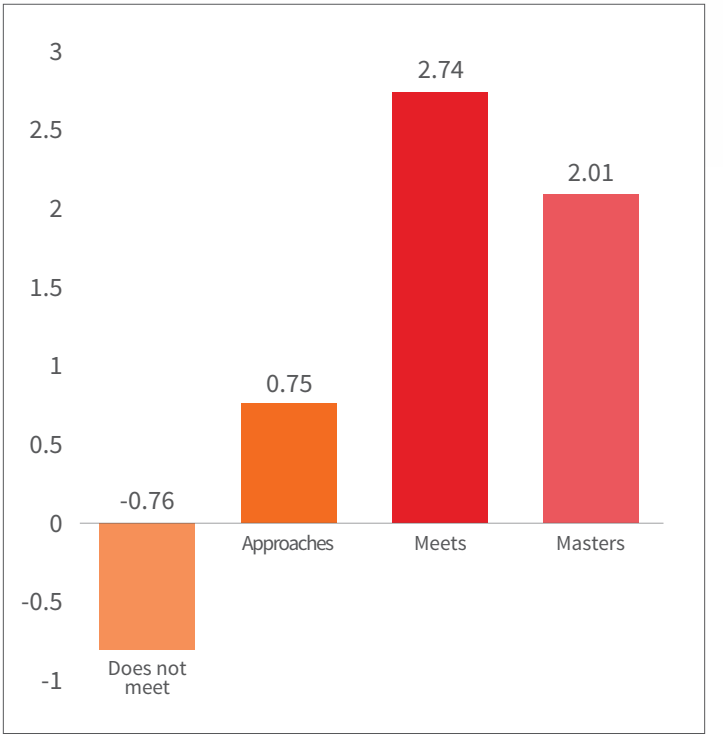
Figure 5: Grade 4 science proficiency rate



2024-2025 STEMscopes Math Texas Algebra Study

This study examined how Algebra 1 students (8th, 9th grade) in Texas schools that used STEMscopes Math performed on the state's End-of Course (EOC) Algebra 1 test, compared to students in matched schools that used other math programs. We looked at schools' average scale scores and benchmark achievements overall. **Results indicated that students in schools using STEMscopes Math for Algebra 1 had higher STAAR Algebra 1 EOC benchmarks than comparison schools in all positive categories (Approaches, Meets, Masters) with a significant increase for the "meets" category, and a lower percentage of students who did not meet grade level benchmarks. STAAR EOC average scale scores in STEMscopes schools were 34.40+ points higher than in non-STEMscopes schools. This finding was significant.** When we compare 2024 scores to 2023 EOC Algebra scores, we see that average scale scores at STEMscopes schools scale scores remained stable and high, while comparable scores at non-STEMscopes schools had significant decreases. Student subgroups in STEMscopes Math schools had positive increases in average scale scores compared to their peers in non-STEMscopes Math schools. Differences were significant for females, Hispanic/Latinx students, and White/Caucasian students.

Figure 6: Percentage Point difference at each proficiency level for Algebra 1 students at STEMscopes Math vs. non-STEMscopes schools



STEMSCOPES SCIENCE

2023-2024 External Study: The Impact of STEMscopes Science on 5th Grade Students' Science Achievement

The Center for Research and Reform in Education (CRRE) is a research center affiliated with the School of Education at Johns Hopkins University (JHU) and specializing in K-12 education program evaluations. Accelerate Learning contracted with CRRE to conduct a prospective quasi-experimental study on the impact of STEMscopes Science Curriculum on science achievement in Lonestar ISD (an anonymized large school district in Texas), as measured by the STAAR assessment and MAP scores for 5th grade students. This report also includes an analysis of the associations between program usage and achievement. To test the impact of the STEMscopes Science Curriculum on science achievement, JHU CRRE compared STAAR science outcomes for students in all 8 schools using STEMscopes with those in 8 comparison schools using other science curricula, for a total of 990 students. To ensure the comparability of students and schools, comparison schools were selected for inclusion prior to data collection, based on their similarity in prior achievement and student demographics. The study followed both groups during the 2023–2024 school year.

The results of this evaluation show a significant and positive impact of the STEMscopes Science curriculum on students' science achievement. This outcome offers evidence of the efficacy of STEMscopes, which **meets ESSA Tier 3 requirements**.

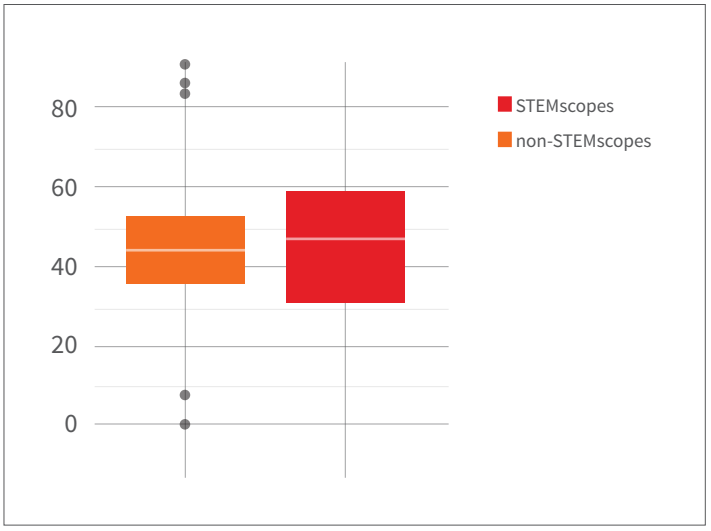
- On **STAAR**, STEMscopes students **outscored comparison students by approximately 94 points**; this impact was **statistically significant** ($p < .05$).
- On **MAP**, STEMscopes students **outscored comparison students by 2.3 points**, which approached statistical significance ($p < .07$).
- Subgroup analyses did not show that the impacts of STEMscopes varied by student subgroups.
- Analyses of STEMscopes usage showed that median **unique scope usage was significantly positively associated with STAAR science achievement scores.**

2023-2024 External Study: Alabama STEMscopes Science Elementary Study

An independent evaluator conducted a study to examine the influence of the **STEMscopes Science curriculum on Alabama 4th grade students' performance on the Science ACAP (Alabama Comprehensive Assessment Program)**. The goal was to determine whether use of the curriculum led to higher proficiency rates. The evaluator analyzed publicly available assessment data from 143 elementary schools that administered STEMscopes Science to 4th grade students during the 2023–2024 school year. To ensure fair comparison, a matched control group of 143 schools with similar demographics that did not use STEMscopes Science was created. Matching considered several demographic characteristics, including student composition by race, ethnicity, gender, special education status, English language learner (ELL) status, and socioeconomic status.

Results indicated that schools using STEMscopes Science had significantly higher 4th grade Science ACAP proficiency rates—**2.94 percentage points higher**—than non-STEMscopes schools. Positive gains were observed across student subgroups in STEMscopes schools. **The differences were statistically significant for Black/African American students, special education students, and females**. The evaluator concluded that these results provide promising evidence that the STEMscopes Science curriculum may help improve science achievement for Alabama 4th graders. The study meets criteria for ESSA (Every Student Succeeds Act) Tier 2 evidence, indicating moderate evidence of effectiveness.

Figure 7: Grade 4 science proficiency rate

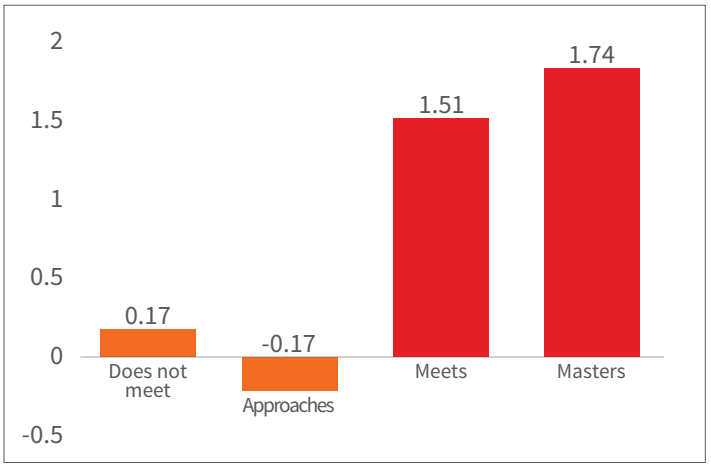


2023-2024 STEMscopes Science Texas Biology Study

We examined the impact of STEMscopes Science-Biology curriculum via a rigorous study that compared STAAR Biology outcomes in schools using STEMscopes with those from schools using other programs on the 2024 State of Texas Assessments of Academic Readiness (STAAR) End-of-Course (EOC) Biology test. Across the 2023–2024 school year, 377 middle and high schools in Texas used STEMscopes Science for biology instruction (~20% of all middle and high schools in Texas). We wanted to make sure that the schools we compared to the STEMscopes schools were similar in many ways, so any differences in scores could be attributed to STEMscopes Science. We matched schools based on several characteristics, including the percentage of students from different ethnic/racial backgrounds, the overall size of the school, and the percentage of students receiving special services. We then evaluated school level performance using STAAR scale scores and benchmarks. We considered student subgroup performance as well.

Results indicated that students in schools using STEMscopes Science for biology had significantly higher STAAR Biology EOC benchmarks than comparison schools in the two highest positive categories (Meets, Masters). STAAR EOC average scale scores in STEMscopes schools were 22.08+ points higher than in non-STEMscopes schools. These findings were significant. All student subgroups in STEMscopes Science schools had positive increases in average scale scores compared to those in non-STEMscopes schools. Differences were significant for males, females, low-income students, and English Language Learners. Impacts were similar across subgroups.

Figure 8: Point difference at each proficiency level for Biology students at STEMscopes Science vs. non STEMscopes schools (red columns were significant, p<.05)



Product Use Studies

Product use studies refer to smaller scale studies that ask qualitative and quantitative research questions but often without the rigor of a control group. They are "process" studies that help us gather research about a variety of program outcomes (e.g., what is working and what needs improvement) before we conduct a larger study. In traditional research, these are sometimes called pilot studies or "promising studies," to use language borrowed from ESSA.

KIDE SCIENCE

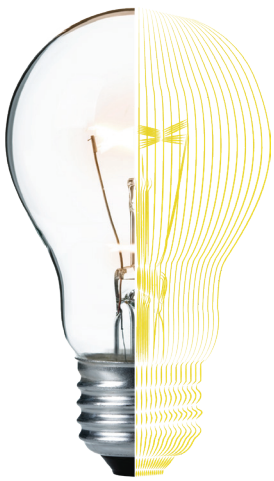
Playful Inquiry and STEM Education in Early Childhood: Pre- and Post-Training Analysis of Kide Science + PAUTA México 2025

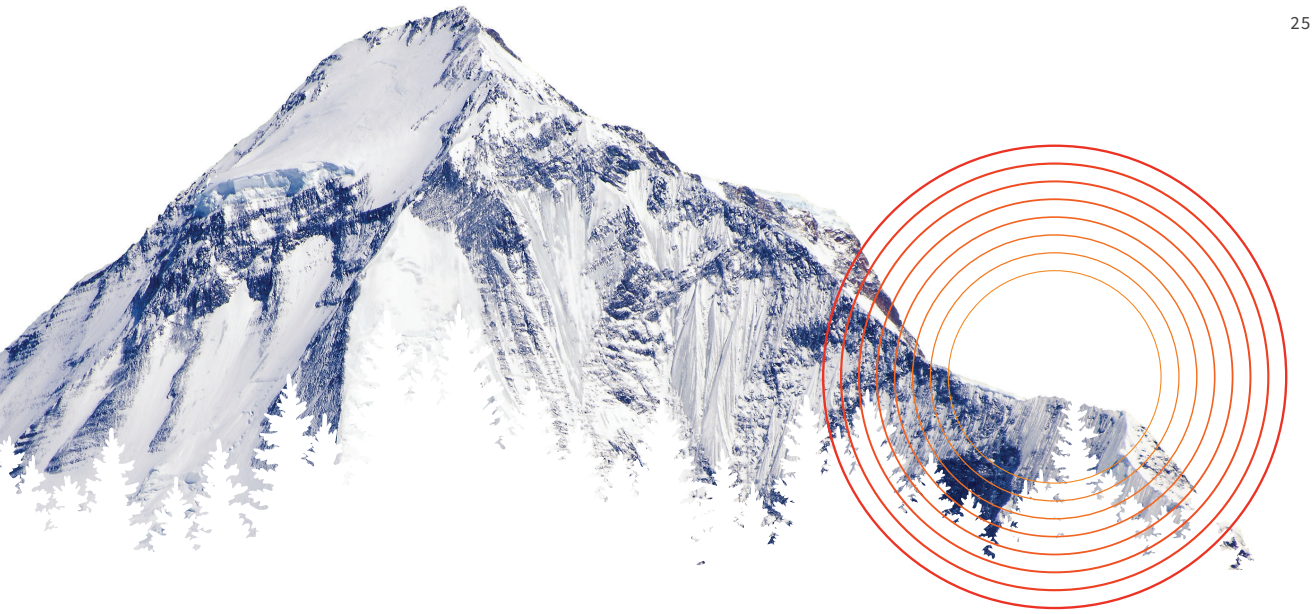
This study integrated findings from surveys conducted in 2025 to investigate teachers' prior experience with STEM teaching and playful pedagogies, identify barriers and support needs for integrating STEAM in early childhood classrooms, evaluate teachers' experiences and feedback after participating in the training program, and examine how the playful inquiry methodology influenced teachers' confidence and readiness to implement STEM strategies. A total of 54 teachers from 31 schools across two Mexican states participated in the program.

Results indicated that prior to the training, few teachers had systematically integrated STEM into their teaching plans. Commonly used strategies included interdisciplinary projects combining science, mathematics, and art, as well as collaborative teaching with peers. Teachers valued interdisciplinarity as a way to help children connect concepts and apply knowledge creatively. The barriers most frequently identified were lack of training in STEM pedagogy, limited time to integrate STEM due to administrative burdens, and insufficient educational materials and technological resources.

> After the training, teachers reported gaining practical strategies that they could implement in their classrooms. They emphasized the value of inquiry-based learning, where questioning, hypothesis-making, and open-ended exploration were encouraged.

They also described critical thinking through play, where games provided problem-solving contexts, and intentional questioning, where open-ended prompts stimulated curiosity. Teachers highlighted the STEAM interdisciplinarity approach, which connected science with art, storytelling, and everyday contexts, as well as collaborative learning methods such as group discussions, debates, and teamwork. They noted the importance of student agency, giving children opportunities for experimentation, classification, and decision-making. Teacher feedback also pointed to the effectiveness of multimedia resources, particularly videos featuring Sesame Street characters, which were engaging and meaningful for children. Many appreciated the clear structure of the inquiry phases—problem situation, experimentation, and results.





STEMSCOPES MATH

2024–2025 Pleasanton ISD, TX STEMscopes Math Coaching Study

Table 1: Effect of coaching on Pleasanton Elementary scores in 2025 vs. 2024

Grade	Estimated point change with coaching (plus standard error)	Is this significant (p<0.05)?	How big of an effect did coaching have? (0-.05 small, .06-.20 medium, >.20 big)	What are the odds a student achieved meets or masters? *means significant
3rdgrade	21.94 (14.80)	No, p=0.17	0.07	**1.83* 2.27***
4th grade	41.50 (14.88)	Yes, p < 0.01	0.13	**1.59* 1.89***
5th grade	58.26 (21.73)	Yes, p < 0.01	0.13	**2.09* 2.08***

The study examined whether STEMscopes Math plus coaching increased student math achievement in Texas. There were a few big questions: 1. Did students do better on the 2025 STAAR test compared to the 2024 test because their teachers received additional coaching during the 2024–2025 school year? 2. Was STEMscopes Math program usage associated with student growth? 3. Did students with STEMscopes Math + Coaching outperform other students who did not have STEMscopes Math on the 2025 STAAR? The study included 1,308 3rd–8th grade students in Pleasanton ISD and 1,513 comparison students from two schools in different Texas districts. Results indicated that coaching significantly increased 2025 STAAR math performance for elementary students (3rd – 5th, see Table 1), but not for middle school students in Pleasanton when compared to 2024.

There was also an association between STEMscopes Math online program usage by teachers and student math learning throughout the year. In our statistical model, we looked at how "every 10 clicks" across the 5Es (versus in a specific component) predicted math growth. When we view the findings this way, we see an interesting pattern. We see what is called a "main effect" of the 5E composite: that is, **for every ten 5E clicks there is a 0.48 (half a point) increase in growth.** From a statistical standpoint, we would characterize this as a medium effect. There was also an effect called an "interaction" such that not all teacher clicks predicted student scores in the same way. If a student had a low fall math score, then higher usage of the 5E model by their teacher predicted greater math growth across the year, or an enhanced effect. In contrast, for students who started average or higher in the fall, the benefit of additional usage tapered or was dampened. This may suggest that students with higher fall achievement need more of the "acceleration" activities that are available in the STEMscopes Math program. Program click data suggested this element was not used often.

Finally, when we compared student performance at Pleasanton ISD to performance at other districts and schools, **results indicated that STEMscopes Math plus coaching was associated with a positive and significant effect, such that students who were taught with STEMscopes Math and whose teachers were coached scored 15.19 points higher, on average, than students in the comparison group.** There were also significant differences in students' achievement of STAAR benchmarks. We compared 2025 benchmarks across the two groups. STEMscopes Math students were 1.70 times more likely to meet and 1.61 times more likely to master grade level expectations relative to comparison peers. We also considered "did the student move from one benchmark to another?" Results indicated that students taught with STEMscopes Math plus coaching were 1.45 times more likely to move up a benchmark between 2024 and 2025 relative to comparison peers.

STEMSCOPES SCIENCE

2025-2025 Crandall ISD, TX STEMscopes Science Study

This study evaluated teacher perceptions of the new STEMscopes Science platform as well as potential effects on student science learning via district assessments and STAAR Science tests. Early elementary teachers reported that they liked the new characters and story cards. Teachers of older grades noted that the new platform was more streamlined, more user friendly, and easier to use. Teachers reported high student enjoyment (BOY M = 74. 23, EOY M = 76.20) and engagement (BOY M = 74.15, EOY M = 77.20) on a scale of 0–100 at both beginning (BOY) and end of year (EOY). Likewise, 87% of teachers reported that students were more interested in science after a year of instruction with STEMscopes (the other 13% reported students were similar to BOY). All teachers reported they were likely or very likely to recommend that their district continue to use STEMscopes Science, and all but one (somewhat likely), were likely or very likely to recommend it to a colleague. Follow-up student-level analyses of science scores are anticipated in the new year.

Case Studies

A case study is an in-depth analysis of an individual or small group. In our case, it typically focuses on the successful use of a product in one school and includes administrative and teacher interviews as well as descriptive numbers that help the reader better understand the school context and the products' use in the school. ALI's public relations team helped the research team gather case studies.

KIDE SCIENCE

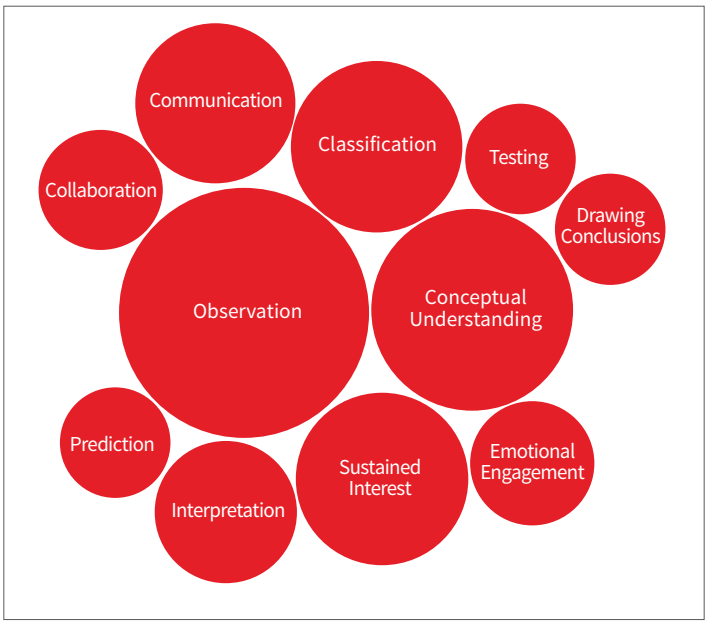
Play-Based STEM Learning in Action: Heatherton Girls' School and Kide Science

Heatherton Girls' School, part of the historic Berkhamsted School Group (established 1541), is renowned for combining innovative, research-based teaching with a nurturing environment. In 2023, its leadership discovered Kide Science's play-based, inquiry-driven lessons and recognized a strong alignment with their educational philosophy. This led to a groundbreaking research partnership between Heatherton, Kide Science, and the University of Helsinki, centered on exploring how playful, STEM-focused lessons impact early learners. As part of the study, teachers integrated Kide's story-based lessons into daily learning and into broader classroom activities, including math, literacy, and the arts. Teachers tracked growth in core science skills (like observation and classification) using structured diaries, observation grids, and digital platform tools. Student work was displayed in inspiring learning portfolios, sparking ongoing curiosity and reflection.

> The program boosted students' enthusiasm, motivation, collaborative problem-solving, and scientific thinking.

All children—regardless of starting level—showed notable growth, with even the least advanced achieving steady progress. Block diagrams revealed gains not only in scientific processing but also in developing scientific language and identification as "little scientists." Educators embraced a shift from delivering content to co-exploring with students. Teachers reported a newfound confidence and joy in STEM instruction, becoming more responsive to children's questions and more open to student-led inquiry.

The image shown here shows how often different skills were observed in teachers' weekly journals.



STEMSCOPES SCIENCE

Idaho Falls Increases 8th Grade Science Proficiency

When Idaho adopted new science standards in 2018, Idaho Falls School District 91 (SD 91) began the search for a new science curriculum for grades 6–8. "We didn't have materials that aligned with the Next General Science Standards (NGSS)," said Todd Brown, curriculum coordinator for Idaho Falls SD 91. "The science materials that we had were outdated, and it was pretty helter-skelter as to what teachers were using in their classrooms." In 2019, after reviewing multiple options, a district committee selected STEMscopes Science NGSS 3D.

Since implementing STEMscopes Science NGSS 3D, students have achieved steady gains on the ISAT. In 2022, 29.3% of 8th grade students scored at the Proficient and Advanced levels. By 2024, that number had risen to 38.5%. In contrast, statewide 8th grade science scores remained flat, dropping slightly from 41.2% in 2022 to 41% in 2024.

"Our committee chose STEMscopes because it aligns with the Next Generation Science Standards, which was important to us," said Brown. "It follows the 5E model and provides hands-on opportunities. Our committee was also impressed with the technology components, like the digital simulations and student supports."

Idaho Falls SD 91 began using STEMscopes Science in grade 6 in its elementary schools and grades 7-8 in its middle schools in August 2019. Since then, the percentage of students achieving proficiency in science has increased significantly.

Table 2: Idaho Falls SD 91 ISAT – Science, percent proficient and above, Grade 8

Year	% Proficient	Change
2021-22	29.3%	n/a
2022-23	32.9%	**+3.6%**
2023-24	38.5%	**+5.6%**

Customer Advisory Board

Some of the most important research activities we conduct are designed to ensure that the feedback of teachers and school experts about our products is being heard. Research in this category tends to be "descriptive," meaning we are describing and listening to the opinions of our users to make sure we give them exactly what they want and need. In 2025, we completed our Customer Advisory Board activities via an in-person meeting in Houston, TX (rescheduled due to a 2024 weather event). The CAB is a representative group of users and STEM education experts who provide general feedback on instructional innovation, curriculum enhancement, and educator support. The main session of the meeting explored the role of AI in instruction, data-driven decision making, and curriculum selection priorities, followed by breakout sessions on STEMscopes Science, STEMscopes Math, and Math Nation. Across all sessions, participants emphasized the importance of:

- **Streamlined tools** that save instructional time and reduce manual tasks.
- **Differentiation and accessibility** supports for diverse learners.
- **Strong alignment** among curriculum design, assessments, and instructional pacing.
- **Flexible, teacher-friendly resources** that work in both digital and print environments.

Main Session Discussions

The Main Session discussions reflected both enthusiasm and caution about AI use. While some districts encourage AI planning, alignment, and assessment, others require structured training and use requirements. Participants identified opportunities to streamline grading, support targeted interventions, and improve accessibility through AI. Because data collection remains largely manual, there was interest in faster, more actionable insights. Curriculum priorities included ease of use, clear standards alignment, varied assessments, cross-disciplinary connections, and training.

STEMscopes Science Discussions

The STEMscopes Science discussions reinforced the importance of the Explore phase of the 5E while noting barriers such as resource demands. Teachers called for expanded differentiation, stronger CER integration, and enhanced reading supports. They praised the accessibility of editable materials, rigorous Engage/Explore activities, and robust assessment tools, and recommended logistical simplifications, enhanced reading supports, and improved platform navigation.

STEMscopes Math Discussions

The STEMscopes Math discussions centered on curriculum updates informed by teacher feedback, including pacing guides, expanded assessments, ELL supports, and flexible Google Slides. Strengths included editable scope calendars, hyperlinked resources, and student-facing materials with embedded modeling. Recommendations focused on slide design, the need to ensure that teachers still navigate to the platform, differentiation resources (for teachers and students), and bridge kits for districts transitioning to new versions.

Math Nation Discussions

The Math Nation discussions emphasized the value of the On-Ramp tool and supplemental resources (e.g., Desmos, iExcel, EdPuzzle) to enhance practice and engagement. Teachers praised the teacher editions and ACT preparation materials. Areas for improvement included expanding below-grade-level supports, adding pre/post assessments, increasing spiraled review, improving video and warm-up engagement, diversifying exit ticket questions, and providing parent-facing instructional materials.

Customer Surveys

NISE

Each year ALI collects customer surveys regarding NCSE and NCST satisfaction. Highlights of 2025 work is shown below for these two programs.

NCSE (National Certificate for Stem Excellence)

- 100% of NCSE completion survey participants state they would recommend the process to other campuses.
- 100% rate their coach's content knowledge and facilitation skills as 5/5 stars.

NCST (National Certificate for STEM Teaching)

- 95% of NCST graduates would probably/likely recommend the NCST to a colleague.
- 96% state support provided by their NCST coach was helpful/very helpful.
- 91% of survey respondents state their coach's feedback was very prompt or prompt.
- 70% of survey respondents state that they purchased the NCST on their own (up from 50% in 2024).
- 61% of survey respondents shared that their reason for completing the NCST was "I currently teach science, technology, engineering or mathematics; the NCST will help me differentiate myself as a STEM teacher."
- 29% learned about the NCST from a colleague (up from 28% in 2024), 42% from a district initiative (no change from 2024).
- NCST Graduate shared "I recently completed the NCST. I just wanted to praise my coach. She was such a good communicator from day one. The material is fabulous, but I know the gains I have made through this process would not have been as significant without Virginia's [my coach's] constructive guidance. I'm so thankful I had the opportunity to gain from her wisdom."

Dissemination

The most important part of the research process is that we conduct high quality studies of our products. Yet also important is making sure those studies are described and disseminated. Below we present our new internal structures, peer reviewed research papers, and conference presentations. Peer reviewed papers are written by experts in the field and undergo the scrutiny of other experts in the field. They can range in topic and type, including reviews, original research, data reports, and theory articles (to name a few). Conference presentations describe research that was presented nationally and internationally to peers.

INTERNAL INFRASTRUCTURE

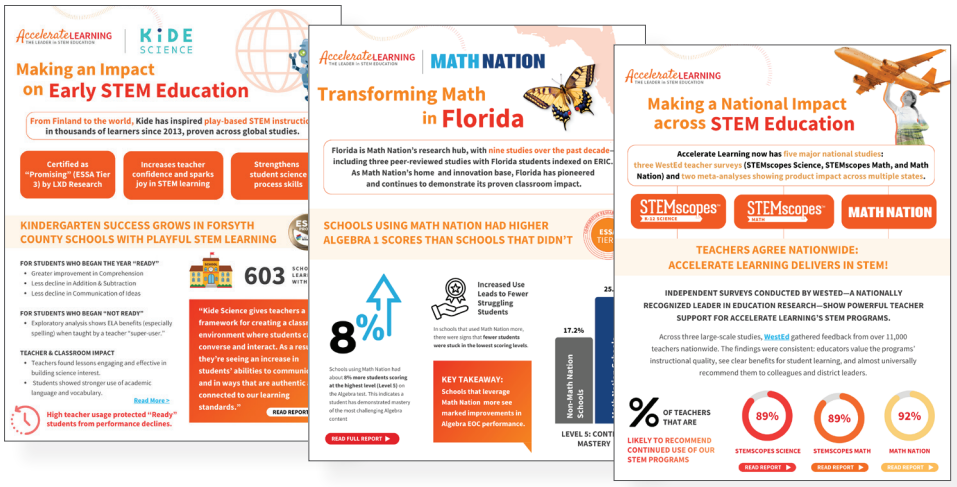
At the beginning of 2025, the research department met with sales and surveyed our sales team to determine how best to categorize and disseminate internally all the studies that we have at ALI. This process led to the creation of several key tools including the research synthesis, state one pagers, and the AI research assistant and database. Reid and Janelle also conducted an ALI lunch-and-learn session to help other departments learn about all these new tools to disseminate **over 100 studies** (and counting) that we have conducted at ALI to ensure that our products are research supported and effective.

Research Synthesis

The research synthesis lists all studies conducted at ALI by state, product, year, and study author (internal or external researcher). Each study includes a summary of what and who was studied and key findings.

One Pagers

In close collaboration with ALI marketing, we created “one pagers” (front and back) for each state where at least one study had been conducted for Math Nation, STEMscopes Math, or STEMscopes Science. Across products, we have conducted studies in 23 states so far. As can be seen from the images below, the one pagers briefly summarize key findings for a given state and product, including ESSA status. They can be handed out or emailed to prospective schools who wish to see our impact in their home state. We also have a national impact one pager and one pagers by product (Collaborate Science, NISE, Kide) as we continue to grow their national impact.



ALI Research Assistant and Database

As part of our Microsoft CoPilot license, ALI employees can create AI agents designed to perform specific tasks. This year, the research department created an ALI research study database on the Accelerate Learning Sharepoint site that has all full studies (versus summaries). Please note that a similar database, created on Seismic, includes only recent studies. The ALI Sharepoint database was then used to train our new ALI Research Assistant agent. This agent can pull data from any ALI study. ALI team members can query the agent about what studies have been conducted in an area, grade levels studied, or any other information they would like from the database. Along with our website, this ensures that research is available to all team members so that it can ultimately be used internally and provided to customers across a variety of settings.

PUBLISHED RESEARCH PAPERS

Representation Matters: Students Choose Their Study Expert

By Kaitlyn E. May and Liza Bondurant. Published in NCTM's Mathematics Teacher Learning and Teaching Journal in July, 2025.

Math Nation uses diverse "Study Experts" to make math learning more relatable and motivating. This NCTM-featured article reveals how allowing students to see themselves reflected in educators—for instance, in race, language, or culture—boosts confidence, engagement, and achievement across all learners, especially in Title 1 settings. This is an important way to support equitable math instruction.

UNDER PEER REVIEW

Enhancing the Evaluation of High-Quality Instructional Material with Empirical Evidence

By Janelle J. Montroy, Christopher J. Thompson, Ryan Miskell, Kaitlyn E. May, & J. Reid Whitaker

A brief review paper that looks at the history of High Quality Instructional Materials (HQIM), the current state of HQIM, and who determines whether materials meet standards of high quality. The paper also asks whether the current process could be improved with the inclusion of efficacy research that demonstrates product effectiveness at improving student outcomes.

In-Service Science and Mathematics Teachers' Reported Uses and Affordances of a U.S. Comprehensive STEM Curriculum Product

By Rebecca Hite, Associate Professor in the STEM Education Department at Texas Tech University

This study reports on a questionnaire completed by 327 elementary STEM and secondary science and mathematics teachers in Texas who use STEMscopes Science in their classrooms. Guided by a framework in which teachers' uses of curriculum products were characterized as piecemeal, with adaptations, or by force, the study found that 20% reported the curriculum product contained activities that were easy and/or ready-to-use, 20% adapted the product for classroom use (as high-quality ideas and resources, useful for planning, and helpful in supporting differentiation), and over one-fourth (26%) of sampled teachers were compelled to use the product due to district mandates or to prepare for state testing. Teachers agreed that the use of STEMscopes Science supported their math/science content knowledge (72%) and improved their instruction (80%). Yet only 5% indicated that their own professional learning was the primary benefit of the product. Findings of this research are valuable in supporting pre- and in-service teachers as they navigate the ever changing and more commercialized landscape of K-12 STEM education in the U.S.

SCIENTIFIC CONFERENCE PRESENTATIONS

Math Nation: Gates conference in KY

In December of 2025, the ALI Math Nation Research team attended the 8th biannual grantees gathering of the Advancing Innovative Math Solutions (AIMS) Collaboratory. As a part of the Engagement Collaborative for Research & Equity (ENCORE) Cohort, ALI and our research partner WestED function as a subnetwork of the AIMS group and officially joined the convening group in June 2024. The conference provides grantees opportunities to develop new relationships and learn more about other grantees' work to support high-quality mathematics experiences for priority students. The program included a mix of whole group sessions, table conversations, and concurrent sessions to support grantees in research and development on student-facing features aimed to increase student motivation, engagement, and persistence, and teacher-facing features aimed to improve teacher efficiency and effectiveness. Teia Anderson presented in a concurrent session on Math Nation implementation in Florida.

STEMscopes Math and Math Nation: Society of Research on Educational Effectiveness (SREE)

ALI research submitted a symposium to the Society of Research on Educational Effectiveness (SREE). The SREE conference is a nationally renowned event that convenes leading researchers and practitioners to advance rigorous education research. The 2025 conference was held in Chicago in October 2025 and provided opportunities to meet potential new partners and explore cutting edge research and methods in the field of education. The full conference included a jam-packed schedule of paper presentations, symposia, and moderated discussions.

ALI's symposium, which focused on Math Nation and STEMscopes Math's Algebra 1 impact, was well received. One of our partners at WestEd acted as a discussant for the symposium, and presentations were conducted by our partners at Mississippi State University and our own Janelle Montroy.

Grants and Upcoming Projects

ALI is currently conducting research studies that are funded by five research grants. In the summaries below, we first list our current grant support and then note upcoming projects. These are projects that have been initiated and are now in process, with results expected in the coming years.

Grants

MATH NATION

Math Nation K-5 IM, Bill and Melinda Gates Foundation

Through a $4.8M investment from the Bill and Melinda Gates Foundation, ALI began development of the first K-5 Math Nation product in 2023, centered around the created content from the OER white label Illustrative Mathematics (IM). This investment is focused on scaling high quality OER instructional materials by supporting the development of Math Nation's K-5 curriculum so that it is aligned with Illustrative Mathematics OER. Math Nation is leveraging the OER IM curriculum to create resources and activities around the IM content, while enhancing the content by developing digital features similar to those in the middle school/high school product line. These features include Study Expert Videos, Test Yourself, Check Your Understanding, and Teacher Prep videos. The research component will study the design and efficacy of the Math Nation platform to increase context, motivation, engagement, and persistence in math for Black, Latino, and low-income students.

In partnership with WestEd, rapid-cycle usability testing for the Math Nation K-5 IM product began in July 2024. To date, Math Nation has completed filming approximately 400 Study Expert videos for Unit 1 of the Math Nation K-5 IM product and has an additional round of testing targeted to specific features of the Study Expert videos. The rapid-cycle testing protocol leverages a process where distinct components of the new Math Nation K-5 IM product are tested for usability, feasibility, and impact in quick succession. ALI is collaborating with WestEd to recruit additional schools to continue the usability testing plan, which includes sessions with diverse students and teachers engaging with the curriculum.

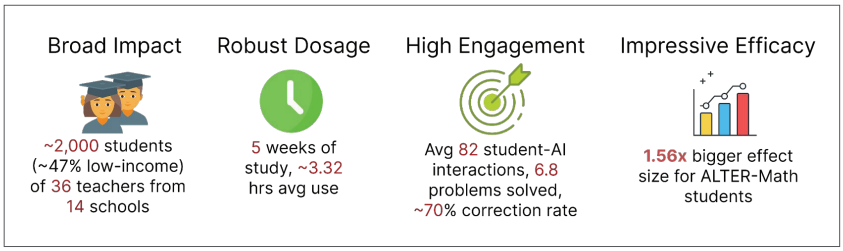
The findings of the usability study include the following:

- After watching the bio videos, students were asked which Study Expert they would like to learn from. When asked why they chose a specific Study Expert, students named interests they shared with them, such as having a dog or liking cars. Some students noted that the Study Expert "knew a lot about math" or "seemed nice."
- Students performed notably better when the Study Expert worked through things with them instead of having the worksheet filled out before the lesson started.
- Students had an easier time with the lesson if they were told to use the pause button before completing the worksheet.
- Students liked lessons where Experts didn't "move too fast" through the material.
- Study Experts should explicitly define math-specific terms during the videos and make sure the terms are grade-appropriate.
- Teachers expressed a preference for lesson videos that start with context setting or storytelling before jumping right into problem-solving.
- Teachers agreed that having Study Experts use the same manipulatives for the same lesson supports classroom use of the videos. With this change, students can choose any Study Experts and will have the appropriate materials in front of them.
- Teachers reported that their students would be responsive to the bio videos and that the videos should have a balance between the personal interests of the Study Expert and math-related experience that the Study Expert shares.

Math Nation Algebra 1 Alabama, Education Innovation Research (EIR)

With funding from the U.S. Department of Education's Mid-Phase Education Innovation and Research (EIR) grant competition, ALI, in partnership with the Alabama State Department of Education (ALSDE) and WestEd, is conducting a multi-year randomized control trial (RCT) to evaluate the impact of Math Nation's Algebra 1 curriculum on student achievement, instructional quality, and opportunity to learn. The study spans four years and includes $2.9M in federal funding for ALI. In the first implementation year (2023–2024), 34 high schools in Alabama were randomly assigned to the Math Nation treatment group (n = 17) or a business-as-usual control group (n = 17). All participating teachers were offered four days of in-person professional development and 10 hours of virtual professional development to support high-quality implementation of the curriculum. Findings from WestEd's Year 1 evaluation point to positive outcomes, including high achievement on state assessments for students using Math Nation and strong teacher satisfaction with Math Nation's alignment to state standards. Furthermore, teachers reported the curriculum was especially beneficial for diverse learners, citing On-Ramp supports and multilingual video content as key assets.

ALTER-Math, LEVI Foundation



ALI received $1.3M in grant monies through the LEVI Schmidt Foundation to partner with the University of Florida Lastinger Center to design and evaluate ALTER-Math, a math tool that leverages artificial intelligence (AI) to deepen student understanding of math concepts. ALTER Math is designed to address key learning challenges such as knowledge retention, critical thinking, and deep understanding. This tool leverages the "learning by teaching" pedagogy, where students take on the role of the teacher, explaining math concepts to a simulated audience or peers. This approach is engaging and also supports key learning processes like self-reflection and identifying misconceptions. To further boost learning outcomes, we are integrating the latest AI technologies to support and guide students throughout their math journey. We believe this tool has the potential to make a significant impact on math learning. Our initial findings show statistically significant learning growth in students who used ALTER-Math compared to students in the control group. Specifically, accessing ALTER-Math tends to increase students' learning gains (defined as post-quiz score – pre-quiz score) by 1.56 times. We have received great feedback from teachers and all of them confirmed that they would use ALTER-Math in their future teaching.

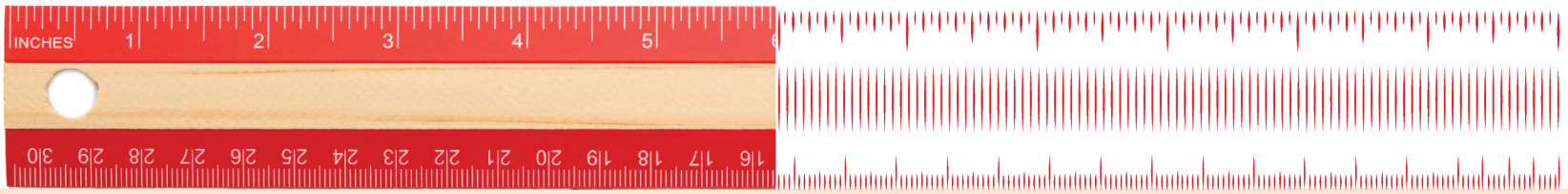
Math Nation Florida B.E.S.T. K-5 Development & 6-8 Efficacy, Bill & Melinda Gates Foundation

ALI was awarded a $2.75M grant from the Bill & Melinda Gates Foundation to support the research and development of the Math Nation Florida B.E.S.T. product line. The project has two main goals: 1) to develop a high-quality, digital print-enhanced K-5 Math Nation curriculum aligned to the Florida B.E.S.T. standards, incorporating developmental research and learning trajectories, and 2) to conduct a rigorous efficacy study of Math Nation for grades 6-8, assessing its impact on learning outcomes for priority students in Florida. With the K-5 curriculum in development, Math Nation will expand its Florida B.E.S.T. offerings to include all K-12. In partnership with WestEd, ALI is conducting a year-long impact study across Florida during the 2025–2026 academic year, using a quasi-experimental design. Treatment schools receive full access to Math Nation and its training, while control schools will follow standard curricula without Math Nation. The study analyzes the impact of Math Nation on student performance, using FAST data from all middle schools in Florida, including those in the MEP analysis, to estimate effects overall and by student demographics. Findings from this study will provide valuable insights into the effectiveness of Math Nation in improving student outcomes and will inform future curriculum development and scaling decisions in other states and districts.

COLLABORATE SCIENCE

Education Innovation Research Grant (EIR)

In partnership with Michigan State University, Alabama A&M University, and WestEd, ALI received a $1.7M grant from the U.S. Department of Education's Mid-Phase Education Innovation Research (EIR) grant competition. The purpose of the grant is to fund the scale-up of a new evidence-based, elementary science curriculum program, Collaborate Science: Multiple Literacies in Project-Based Learning. The program will equip teachers to integrate phenomena-driven project-based learning with the principles of the Framework for K-12 Science and the performance expectations of the Next Generation Science in order to improve student science learning. Collaborate Science integrates science learning with literacy development in day-to-day science lessons. Pilot schools in Alabama and Michigan are implementing the program during the 2025–2026 school year as the project team recruits schools for full implementation starting in the next school year. The project will fully support the implementation of Collaborate Science and rigorously evaluate the program in participating districts with an eye on science and ELA outcomes.



Upcoming Projects

MATH NATION

Georgia: Research Partnership with Georgia Southern University

As part of the Georgia statewide implementation of Math Nation, we are partnering with the Georgia Department of Education and faculty at Georgia Southern University (GSU) to support an independent research study evaluating Math Nation's impact. GSU is leading a two-phase research effort. In 2025–2026, GSU will analyze a teacher survey study focused on instructional use and perceptions of Math Nation. In 2026–2027, GSU will conduct an efficacy study examining student outcomes and program impact. To support this work, ALI is providing platform access to Georgia schools through the state contract, hosting and deploying the GSU-developed survey, and sharing collected data with GSU securely for independent analysis.

Mississippi: Five-Year Longitudinal Study of Math Nation Usage and MAAP Performance (2021–2026)

We are partnering with Mississippi State University's Research and Curriculum Unit to conduct a five-year longitudinal study examining the relationship between school-level Math Nation usage and student performance on the Mississippi Academic Assessment Program (MAAP) in mathematics. The study uses historical and current statewide data to explore whether higher engagement with Math Nation is associated with stronger outcomes on state assessments.

Louisiana: Math Nation in East Baton Rouge, an Evaluation Partnership with WestEd

We are partnering with WestEd to evaluate implementation and early outcomes of Math Nation in Louisiana. The multi-year evaluation focuses on understanding the effectiveness of Math Nation in supporting math instruction and student achievement in middle and high school classrooms. WestEd is leading an independent analysis of usage patterns, instructional implementation, and student learning outcomes using district-provided data. The study will examine correlations between Math Nation engagement and student performance.

South Carolina: District Implementation with American Institutes for Research

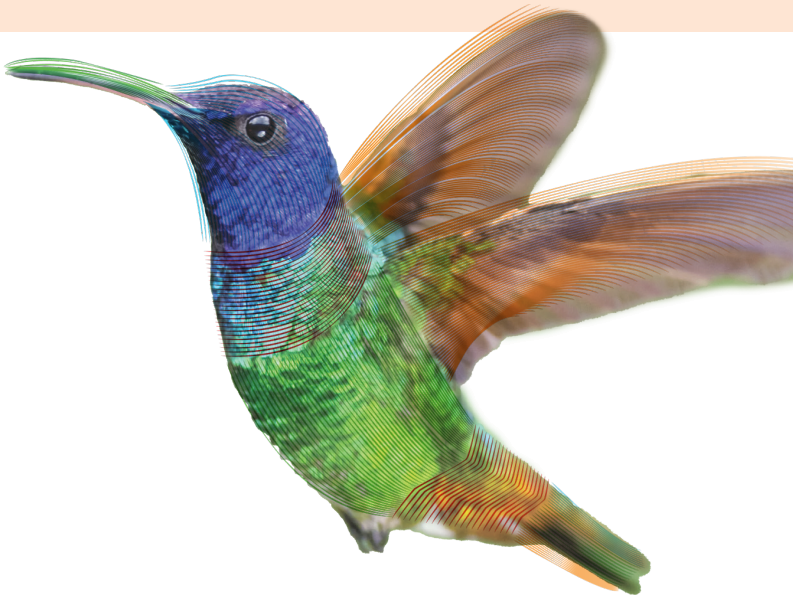
We are partnering with the American Institutes for Research on a district-level efficacy study of Math Nation in Sumter County School District in South Carolina. The study focuses on understanding how Math Nation implementation influences math outcomes at the middle and high school levels within a single-district context.

Florida: Math Nation Use and Assessment Outcomes in Okaloosa County

We are conducting an internal research study in collaboration with Okaloosa County School District in Florida to analyze the relationship between Math Nation usage and student achievement on Florida state assessments during a period of major statewide assessment transition. The multi-year analysis spans three academic years (2021–2024) and includes anonymized, student-level data, including assessment outcomes, demographic information, and Math Nation platform usage data. The study is designed to compare student performance before and after Florida's transition to the B.E.S.T. standards and FAST exams, and to assess how Math Nation usage supported students during this shift in testing and instruction.

Machine Learning: Auburn University

Accelerate Learning is partnering with Auburn University and the University of Alabama at Birmingham to utilize machine learning and deep learning techniques to evaluate the efficacy of specific Math Nation and STEMscopes components in determining student achievement. This model will then be used to make comparisons across states, grade levels, Math Nation/STEMscopes usage groups, and student subgroups. The project seeks to develop predictive models to identify critical factors influencing student outcomes. The developed model can be used in further projects to create comparisons with larger datasets (e.g., student-level datasets, datasets that incorporate multiple states). Overall, this project will develop a powerful framework for analyzing data, uncovering actionable insights, and developing predictive models to support evidence-based decision-making.



STEMSCOPES MATH

STEMscopes Math After-School Program, CA

STEMscopes Math is partnering with an elementary school district in Central Valley, CA to investigate the impact of STEMscopes Math when it is used as an after-school program to supplement learning that occurred during regular instruction. Data collection is occurring this school year with results expected in fall 2026.

STEMscopes Math Efficacy Study in Florida

STEMscopes Math is partnering with an outside evaluator at Florida State University to study STEMscopes Math impact in Florida. The study will broadly compare schools that use STEMscopes Math as their core curriculum to schools that use other products, using Florida's FAST data.

MULTIPLE PRODUCTS

The Impact of ALI Products Together Study

This study is in partnership with a charter school in Florida that uses STEMscopes Math for elementary math, Math Nation for middle school math, and STEMscopes Science throughout. We will investigate whether using similar products (STEMscopes Science and Math together) is easier for teachers, given their similar pedagogies and planning. We also investigate the transition between STEMscopes Math and Math Nation in preparing students for the annual Florida FAST assessments.

NISE

Potential Efficacy Study

NISE has partnered with a large Texas ISD to provide district level STEM certification. We are in the process of securing approval for a two-year study of NISE's efficacy on improving teacher and student outcomes. This study would primarily evaluate teacher-level changes and, in turn, how teacher change impacts student achievement. It would also consider the role of school and district support for large-scale professional development in STEM.

2025 Awards

As we conclude this report, we would like to celebrate some of our product successes this year.

MATH NATION

Math Nation was named a finalist in the "Best Mathematics Instructional Solution" category of the 2025 CODiE Awards, the premier peer-recognized program celebrating innovation and excellence in technology.

Math Nation was also selected as a winner in the 2025 Educators Pick Best of STEM Awards, the only awards program judged by STEM educators. Math Nation was named the winner in the "Best of STEM for Grades 6-12 Mathematics" category.

STEMSCOPES SCIENCE

One of only five science programs recognized, STEMscopes Science has been listed on the EvidenceforEssa.org website as a program that shows promising research evidence. EvidenceforEssa.org is run by the Center for Research and Reform in Education at Johns Hopkins University and provides districts, schools, and the public an easy means of viewing curricula materials that have been stringently vetted as having "strong," "moderate," or "promising" evidence based on the Every Student Succeeds Act (ESSA) standards of evidence for conducted educational product research.

STEMSCOPES MATH

STEMscopes Math was selected as a finalist in the "Best of STEM: Hands-on Learning" category.

NISE

NISE was selected as a winner in the 2025 Educators Pick Best of STEM Awards. NISE was chosen as the winner in the "Best Professional Development for STEM" category. The Educators Pick Best of STEM Awards spotlight innovative products, technologies, and services that are changing the world of STEM education. The awards program is operated by Catapult X and The Teich Group in partnership with MCH Strategic Data, the National Science Teaching Association, and the National Association of Biology Teachers.