

# CARNEGIE LEARNING

## Carnegie Learning's Math Solutions

### Publisher's Background Information

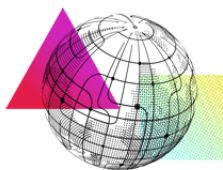
Born from decades of learning science research at Carnegie Mellon University, Carnegie Learning has become a recognized leader in the ed tech space, using artificial intelligence, formative assessment, and adaptive learning to deliver groundbreaking solutions to education's toughest challenges. Carnegie Learning is changing the way we think about learning and creating powerful results for teachers and students alike.

Rooted in a scientific understanding of how people learn, as well as an understanding of how to apply the science to the classroom, the Carnegie Learning Math Solution is designed to activate student thinking, generate curiosity, and develop productive habits that lead to a deep understanding of mathematics. The Math Solutions are comprehensive instructional resources focused on developing key concepts through collaborative problem solving in MATHbook lessons, while also using intelligent software to provide personalized pathways to mathematical understanding.

Carnegie Learning is committed to continually improving products and services to meet the needs of educators and students, driven by these Guiding Principles:

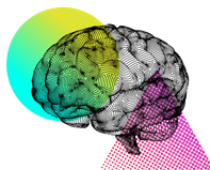
All Students Are  
Capable  
Learners

**Perspective  
matters**



Students Learn  
by  
Doing

**Production  
matters**



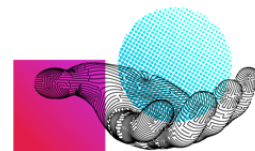
Students Learn  
Through  
Assessment

**Knowledge  
emerges over time**



Education Is  
a Human  
Endeavor

**Collaboration  
is key**



Carnegie Learning's internal researchers collaborate with various independent research organizations, tirelessly working to understand more about how people learn and how to best facilitate learning. We supplement this information with feedback and data from our products, teachers, and students, to continuously evaluate and elevate our instructional approach and delivery.

The Carnegie Learning Math Solution instructional approach is a culmination of the collective knowledge of our researchers, instructional designers, cognitive learning scientists, and master practitioners.



## ENGAGE

Activate student thinking by tapping into prior knowledge and real-world experiences



## DEVELOP

Build deep mathematical understanding through collaboration and questioning



## DEMONSTRATE

Students reflect on and evaluate what was learned

Carnegie Learning's instructional resources are designed to activate student learning, generate curiosity, develop key concepts through collaborative problem solving, and develop productive habits that lead to deep understanding of mathematics. Routine collaboration, conversation, questioning and demonstration of that knowledge through reflection and evaluation engages students and deepens mathematical understanding.

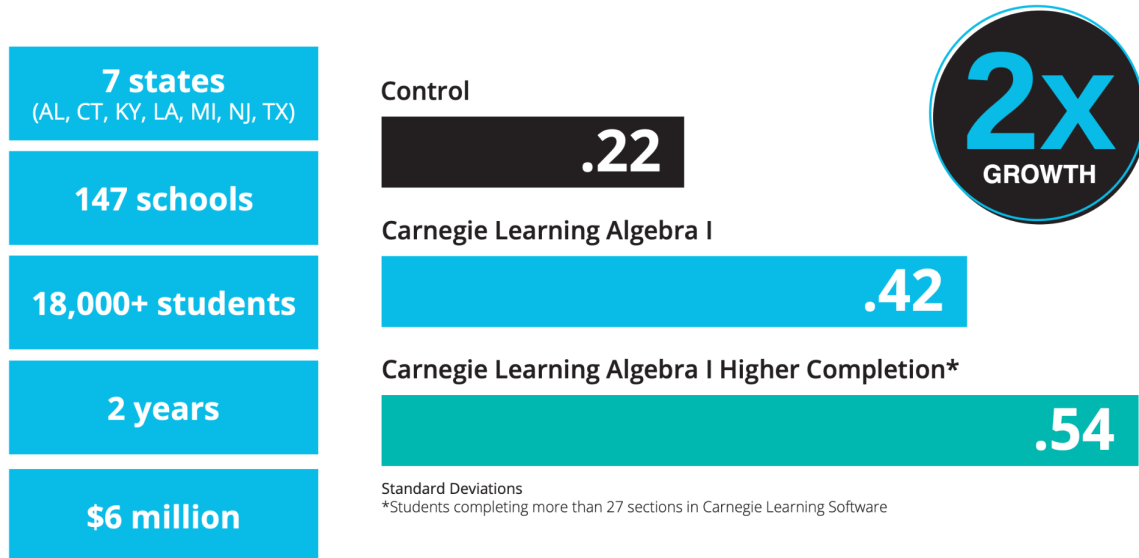
### Learning Together + Learning Individually

The Middle School and High School Math Solutions deliver a different brand of blended learning: one that combines collaborative group learning with focused individual learning. MATHbook and MATHia work in parallel to engage students with various learning experiences they need to understand the mathematics at each grade level, offered in both English and Spanish. MATHbook is a consumable text in which about 60% of instructional time is spent teaching whole-class activities for students to develop their mathematical knowledge. MATHia is intelligent software that provides just-in-time support and tracks student progress against fine-grained skills to deliver the right content they need to become proficient with the mathematics. Teachers will spend approximately 40% of their instructional time monitoring students as they work individually.

### The RAND Study

The RAND Study, a gold-standard Department of Education-funded randomized trial of more than 18,000 students at 147 middle and high schools in seven states, proved that the Carnegie Learning blended approach nearly doubled growth in performance on standardized tests in its second year of implementation relative to typical students. Studies of this scale are exceedingly rare, and this study is among the largest

and most rigorous trials ever done in a mathematics curriculum. A subsequent study found that students' gains were even larger for students who completed more curriculum in the Carnegie Learning software.



Below is a link for reviewers to view a brief of the study in its entirety:

[http://www.rand.org/content/dam/rand/pubs/research\\_briefs/RB9700/RB9746/RAND\\_RB9746.pdf](http://www.rand.org/content/dam/rand/pubs/research_briefs/RB9700/RB9746/RAND_RB9746.pdf)

For more information about our extensive research, visit [www.carnegielearning.com/why/research](http://www.carnegielearning.com/why/research).

## Evidence for ESSA

Carnegie Learning's Math Solutions meet U.S. Department of Education standards under the Every Student Succeeds Act (ESSA) as a Level 1 program demonstrating "Strong Evidence" of efficacy, the highest rating available.

## AWARDS

We're proud of these awards that MATHia and LiveLab, our real-time monitoring tool, were recently awarded:

- EdTech Awards: Best AI Solution (2019 and 2020)
- Artificial Intelligence + Adaptive Education (AIAED) AI Education Award (2019)
- EdTech Breakthrough Award: Best Use of AI in Education (2019)
- Tech Advocate Award: Best AI/ Machine Learning App or Tool (2019)

## Supplemental Services Provided to Support the Implementation

Carnegie Learning's professional learning services help teachers transform math learning. Through in-person visits and virtual support, our professional Learning team delivers practical strategies, first-hand insights, and smart training that help teachers shift their mindset, deepen content knowledge, and create student-centered learning environments where everyone thrives. Carnegie Learning's Education Services Department has provided professional learning in a wide range of settings, from large urban schools to small rural schools, with diverse student populations. Our instructional support team is experienced in a variety of delivery models, including one-on-one, job-embedded, in-classroom support as well as large district-wide institutes with diverse teaching needs. Our Managers of School Partnerships (MSPs) are full-time members of the Carnegie Learning team and are experts in curriculum, content and pedagogy. Carnegie Learning MSPs and our field staff work with building-level personnel to customize a professional development plan to meet the district's needs. Our professional learning can also be delivered without our products.

We also invite you to visit [www.carnegielearning.com/services](http://www.carnegielearning.com/services) to learn more and watch our professional development in action.