

# Play to **LEARN** math. Learn to **LOVE** math.

## Can a game change how you feel about math?

At MIND Education, we believe every student has the potential to deeply understand, and truly love math. This belief drives all of us - researchers, educators, mathematicians, game designers - to make ST Math the best program it can be.

## ST Math is different.

It's a PreK-8 visual instructional program that leverages the brain's innate spatial-temporal reasoning ability to solve mathematical problems. ST Math's unique, patented approach provides students with equitable access to learning through challenging puzzles, non-routine problem solving, and informative feedback.

With ST Math, students build deep conceptual understanding and repair conceptual foundations, and schools see proven, repeatable results.

## **ST MATH MIDDLE SCHOOL** Personalized Intervention

ST Math allows students to toggle between personalized intervention content and on-grade-level class content, as determined by the teacher and a built-in diagnostic assessment. The program measures the learning needs of each student and poses challenges that extend students' schema toward mastery of grade-level concepts and beyond.



## **Assessments & Reports**

Each learning objective contains pre- and post-quizzes available in English and Spanish, ideal for progress monitoring, standardized test prep, and results tracking. Teachers and administrators can monitor student progress, time on task, and standards mastery.

## Middle School Curriculum Enhancement



### Implementation

Schools can design rich, blended learning experiences using the individualized visual software in a variety of ways



#### **Content Mapping**

Learning objectives can easily be aligned to match classroom pacing and differentiate what students play



#### **Digital Manipulatives**

Teachers have access to all of the visual models to supplement classroom lessons for preview or review of math standards

## What makes ST Math so powerful?

### A patented spatial-temporal approach

ST Math starts by teaching the foundational concepts visually, then connects the ideas to the symbols, language, and robust discourse. Why does this approach work so well? Because with visual learning, students are better equipped to tackle unfamiliar math problems, recognize patterns, and build conceptual understanding. Without language barriers, the problem is accessible to all students, regardless of skill level or language background.

#### Deep conceptual understanding for a strong math foundation

ST Math is mastery based, which means students must pass each level with a score of 100% (all puzzles correctly solved) before the next level in a sequence becomes available to them. Each student has their own personalized journey and takes as long as they need to achieve mastery. This ensures that students are building a strong conceptual foundation, or are able to repair cracks and gaps in that foundation - correcting misconceptions so their future math learning can snap into place.

### But why was I wrong?

In ST Math, action is critical and mistakes are the perfect opportunity for learning. Animated informative feedback offers an intrinsically motivating learning experience that shows students the mathematical consequences of each answer. Students don't just guess at multiple choices, or worse, get a question wrong and wonder why.

#### And with over 100 efficacy studies, it's proven to work

Across the country, ST Math schools are living proof that an effective digital learning program can make a real impact. Schools using ST Math have repeatedly proven to double or triple their growth in math proficiency. ST Math meets What Works Clearinghouse (WWC)



quasi-experiment and ESSA Tier 2 requirements. And the evidence-based impact of ST Math has been shown through independent, third-party validations as well as annual, transparent evaluations of results of all ST Math school cohorts well over 100 efficacy studies and counting.

## **Standards Alignment**

#### ST Math offers students self-paced mastery of select on-grade-level middle school standards.

#### Grade 6

- Fraction and Decimal Concepts
- Factorization
- Fraction Division
- Proportional Reasoning
- Applying Rules and Ratios
- Whole Number Division
- Decimal Addition and Subtraction
- **Decimal Multiplication**
- Decimal Division
- Coordinates and Distances
- Negative Numbers
- **Properties of Operations**
- Using parentheses
- Exponents
- Unknowns and Algebraic Expressions
- Linear Relationships
- Percents
- Mean, Median, Mode and Range
- Visual Fraction Concepts
- Fractions on the Number Line
- Comparing and Equivalent Fractions
- Fraction Addition and Subtraction
- Fraction Multiplication
- Decimal Place Value

#### Grade 7

- **Proportional Reasoning**
- Applying Rates and Ratios
- Proportional Relationships
- Negative Numbers
- Expressions and the Coordinate Plane
- Adding and Subtracting Integers
- Adding and Subtracting Rational Numbers
- Multiplying and Dividing Integers
- Multiplying and Dividing Rational Numbers
- Solving Two-Step Equations
- Geometric Shapes
- Exponents
- Unknowns and Algebraic Expressions
- Linear Relationships

#### Grade 8

- Adding and Subtracting Integers
- Adding and Subtracting Rational Numbers
- Multiplying and Dividing Integers
- Multiplying and Dividing Rational Numbers
- Geometric Shapes
- Exponents, Squares and Roots

- Intro to Systems
- Transformations
- Interpreting Data
- Graphing Quadratic Functions
- Factoring Quadratic Functions



## Learn more at stmath.com/middleschool

- Functional Relationships
  - **Graphing Linear Functions**

  - Solving Linear Equations