Implementation Guide

FOR EDUCATORS

Welcome to ST Math! This implementation guide provides information, next steps, and resources designed to support a successful implementation in your classroom.

Use the roadmap below to find your way.
Wishing you all the best on your journey!

What is ST Math?

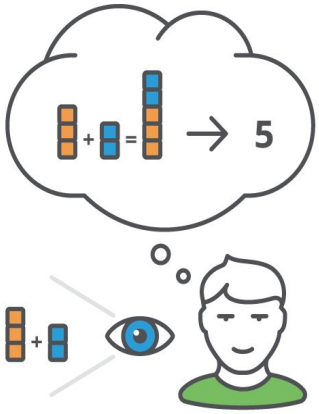
ST Math, developed by MIND Education, is a visual instructional program that leverages the brain's innate spatial-temporal reasoning ability to solve mathematical problems. It's unique, patented approach provides all students access to standards-aligned learning through challenging puzzles, non-routine problem solving, and formative feedback.

This visual learning approach helps students solve unfamiliar math problems, recognize patterns, and develop conceptual understanding, regardless of skill level or language background.

UNDERSTAND THE DESIGN

SPATIAL-TEMPORAL APPROACH

Through a spatial-temporal approach, students develop a visual understanding of math needed to solve complex, multi-step problems. Without language barriers, ST Math puzzles provide mathematical access to all students, regardless of skill level or language background.



DEEP CONCEPTUAL UNDERSTANDING

ST Math starts by teaching the foundational concepts visually, then connects the ideas to the symbols, language, and robust discourse. A mastery-based and self-paced journey ensures students build and demonstrate a strong conceptual foundation.

FORMATIVE FEEDBACK

Animated formative feedback offers an intrinsically motivating learning experience that shows students the mathematical consequences of each answer, helping to form and shape their understanding.

STANDARDS ALIGNED

ST Math is designed to build schemas, interconnected webs of knowledge, across concepts and grade levels. Students experience multiple interactive representations of math topics aligned to all state standards through learning objectives that target key grade-level concepts and skills.

NEXT STEPS:

- ❏ Experience ST Math games!
- ❏ Continue the learning: Foundations of ST Math course in MIND University

ST MATH JOURNEY

Students persevere in puzzle solving with JiJi, the mathematical penguin, from one objective island to the next. Each objective consists of a series of scaffolded games that move students from conceptual to symbolic understanding.

As students complete game levels, students collect puzzles pieces representing the problems they solved along the way.

Objective
Games
Levels
Puzzles

ST MATH PUZZLE TALKS

ST Math extends beyond independent play. Puzzle Talks are teacher-facilitated mini-lessons that use ST Math puzzles in whole or small group settings to engage students in rich mathematical discourse.

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MAKE A PLAN

ST MATH USAGE

Every minute of ST Math counts toward productive learning. While the way you schedule ST Math is flexible, consistency is key to a successful implementation. Both minutes and puzzles are tracked to measure usage and productivity as students play.

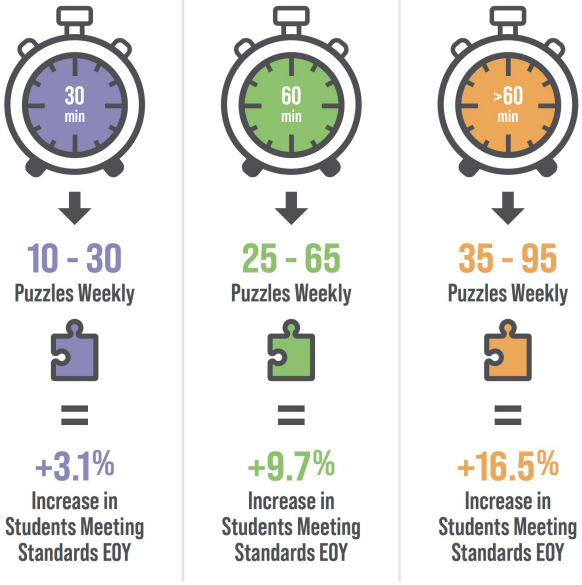
MINUTES = USAGE

PUZZLES = PRODUCTIVITY

Flexible structure and timing:

- 1:1 Play
- Small groups
- Whole class
- Stations
- Intervention
- Extension
- Transitions
- Warm-up

Every Minute Counts Toward Productive Learning



*30 weeks of consistent use

SAMPLE SCHEDULES

Within the math block:

	Mon	Tues	Wed	Thurs	Fri
Warm-up	1:1 Play (15 min)		1:1 Play (15 min)		1:1 Play (15 min)
Mini-lesson	Puzzle Talk (15 min)				
Practice		1:1 Play (15 min)		1:1 Play (15 min)	
Reflection		Journal or Exit Ticket		Journal or Exit Ticket	

Outside the math block:

Stations	Small Group 1:1 Play (15 min per day)		Small Group Support (15 min)
Intervention & Extension	Whole Class Puzzle Talk (15 min)	ST Math Assignment (20 min per day)	Small Group Puzzle Talk (15 min)
Differentiated Learning Block	Playlist or Choice Board with ST Math options Small Groups, as needed (30 min - 3x/week)		

NEXT STEPS:

- ❑ View more schedule ideas
- ❑ Build your schedule

LAUNCH IN THE CLASSROOM

GET READY TO LAUNCH!

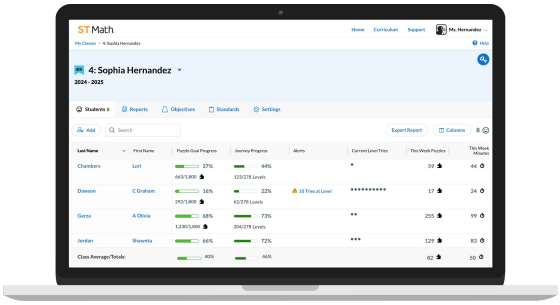
A strong start makes all the difference. By following the steps below, students will develop their problem-solving skills and grow as mathematicians in no time.

Let the countdown begin!

3 Ensure devices and accounts are ready.

Connect with your principal, math coach, or technology support to confirm your login method.

Once logged in, you will see your classes listed. Select a class to view all your students. The data columns on the right will help you keep track of student progress during your launch week.

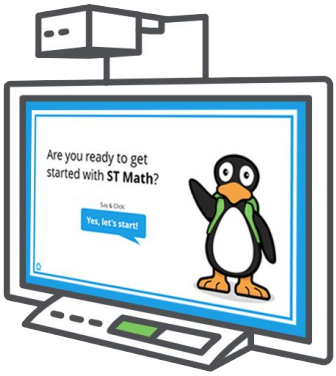


2 Use the Guided Introduction to prepare students.

It's helpful to let students know that ST Math is a little different from other games they've played.

Project and walk through the Guided Introduction as a class to help students:

- Learn how ST Math works
- Understand how to persevere through puzzles using the Problem Solving Process
- Experience a Puzzle Talk as a whole class to model thinking and mathematical discourse



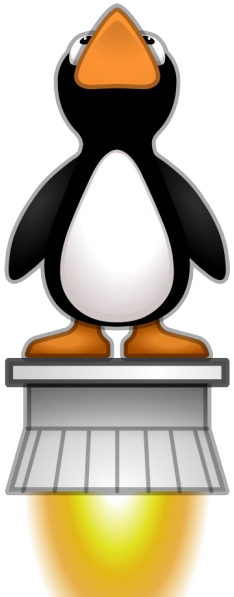
1 Make your launch motivational and memorable!

- Set a minute or puzzle goal for your class and have students track their data, or host a school wide usage challenge.
- Build a bulletin board to showcase your progress.
- Incorporate fun activities!

NEXT STEPS:

- ❏ Set a date for your ST Math Launch
- ❏ Preview the Guided Introduction

... BLAST OFF!



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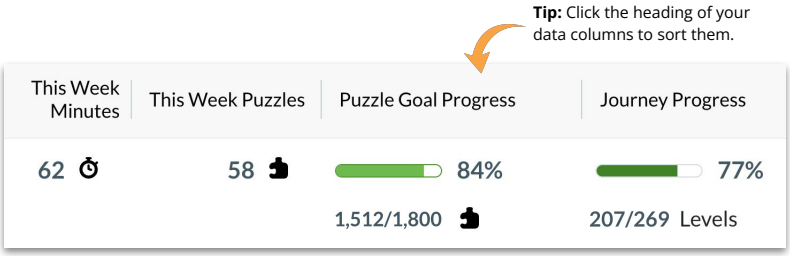
MONITOR DATA

EDUCATOR CONSOLE

The ST Math educator console is designed to help you quickly and easily see student progress in ST Math and determine what actions you might take.



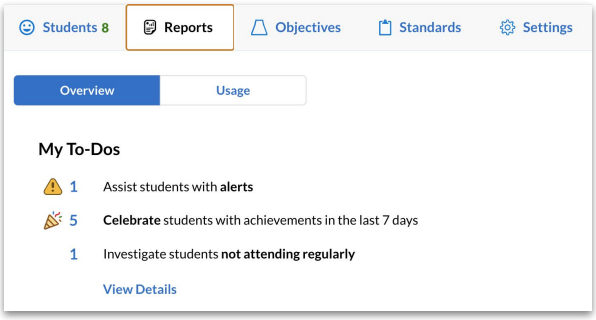
✓ **Plan to check these metrics at least once per week.**

Weekly or average **Usage**

Weekly or average **Productivity**

Progress toward a **fixed number of puzzles** - all new puzzles count

Progress toward **Journey content completion** - only puzzles in grade level count



REPORTS OVERVIEW

The Reports tab provides a snapshot of your class and an aggregate a list of "To-Dos" that you can quickly act upon.

Alerts appear when students have had to start a level over 10 or more times due to unsuccessful attempts.

Celebrate notifications allow you to see who has completed an objective or overcome a hurdle within the last 7 days.

DATA FROM THE STUDENT CONSOLE

Encourage agency and accountability in the classroom by equipping students to track their own progress.

Students can see their minute, puzzle, and progress data by clicking on their initials in the top left corner, then selecting Progress.

Tip: Work with students to set weekly puzzle or progress goals, and guide them in using a data tracker to monitor their growth over time.

NEXT STEPS:

- ❑ Understand ST Math data metrics
- ❑ Continue the learning:
  Monitoring & Supporting Students course in MIND University

Keep an eye on the progress bar:

The dots on the right indicate how many times students have restarted the level, which occurs after two unsuccessful attempts.

The two JiJi heads indicate the number of tries remaining at the level.

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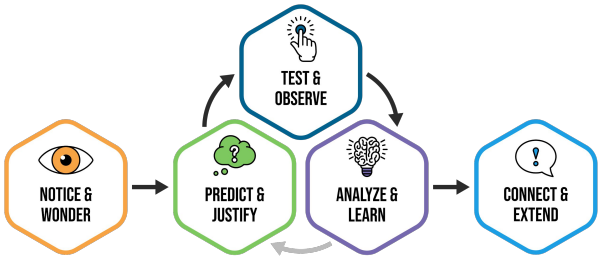
RESPOND TO DATA

PROVIDE SUPPORT

Students with Alerts, and those who are frustrated or just seem to be stuck, may need additional support.

The most effective way to help is by asking thoughtful questions that guide them to discover the puzzle and underlying math for themselves, rather than simply telling them what to do. The Problem Solving Process Teacher Facilitation Bookmark offers helpful questions to use throughout the process.

The Problem Solving Process:

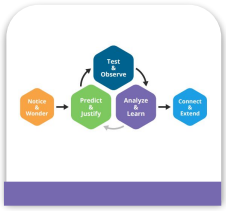


PRODUCTIVE STRUGGLE

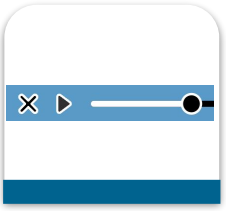
It may take multiple attempts to answer the puzzle successfully—even for teachers. That's okay! Our brains are primed for learning when they encounter challenges.

The key is to help students persevere and engage in productive struggle. The progression of support strategies below can guide students to notice feedback, reflect on their thinking, and unlock understanding.

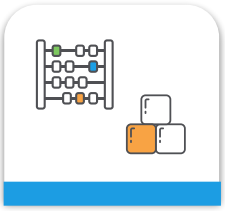
Strategies to keep the struggle productive:



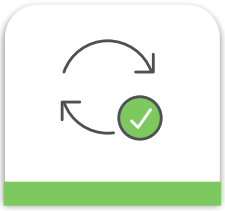
Facilitate with the Problem Solving Process



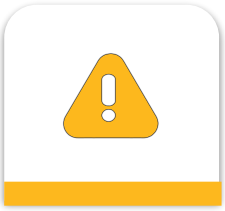
Use the animation controls to pause the screen and process the feedback



Model the puzzle with manipulatives, math mats or game mats



Review previous levels and make connections to the current level



Turn on unlimited tries from Alerts

NEXT STEPS:

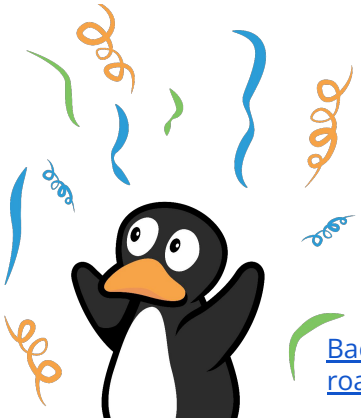
- ❑ Review support strategies
- ❑ Celebrate student successes
- ❑ Equip families to provide support at home

CELEBRATE STUDENT SUCCESSES

Whether students are reaching their goals, completing objectives, or persevering and overcoming hurdles, it's important to celebrate the milestones along the way!

Celebration resources:

- Certificates
- Progress Postcards
- Encouragement notes and brilliance stickers



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BLEND WITH INSTRUCTION

ST MATH CURRICULUM

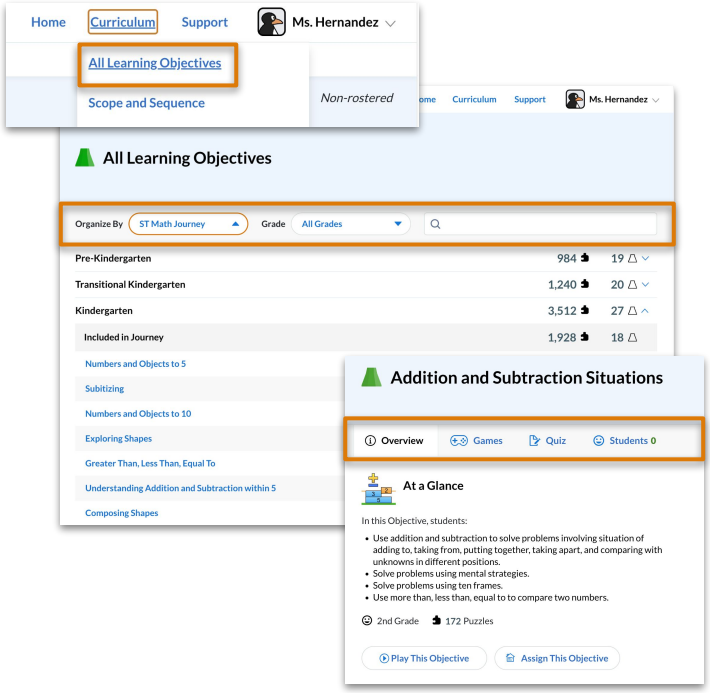
Want to explore all the content students encounter on their ST Math Journeys?

Select Curriculum, then All Learning Objectives. From there, you can organize content by ST Math Journey or Standards, or use the grade and search filters to find specific objectives.

When you open an objective, you'll find an overview, the option to assign it, access to games, and pre- and post-quiz questions for grades 2–8. You can also track student progress on each objective.

Connect to your core curriculum:

Use our textbook correlations to see how ST Math objectives align with your district's core curriculum.

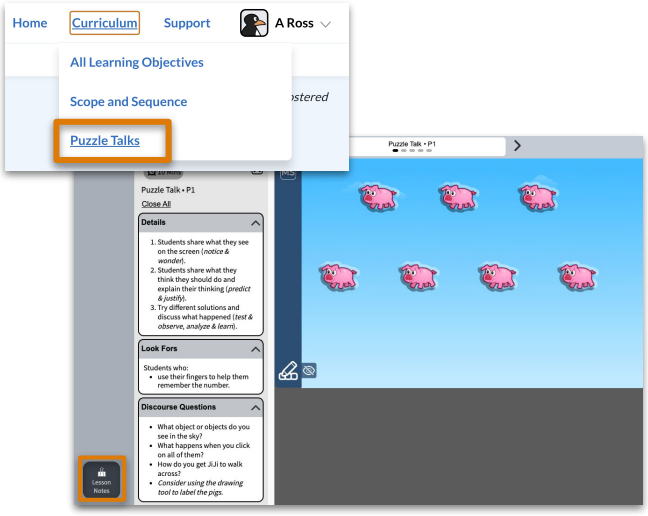


PUZZLE TALKS

Use ST Math Puzzle Talks in whole or small groups to engage students in rich mathematical discourse.

The Puzzle Talk platform is used to launch a projected lesson and guide students in discussion related to a series of scaffolded puzzles. Access Puzzle Talks from the Curriculum tab.

Teacher notes, guiding questions, and optional materials are provided to support meaningful dialogue every step of the way.



NEXT STEPS:

- ❑ Explore Textbook Correlations
- ❑ Learn more about Assignments
- ❑ Learn more about Puzzle Talks
- ❑ Try out your first Puzzle Talk using the Puzzle Talk Facilitation Guide for support!

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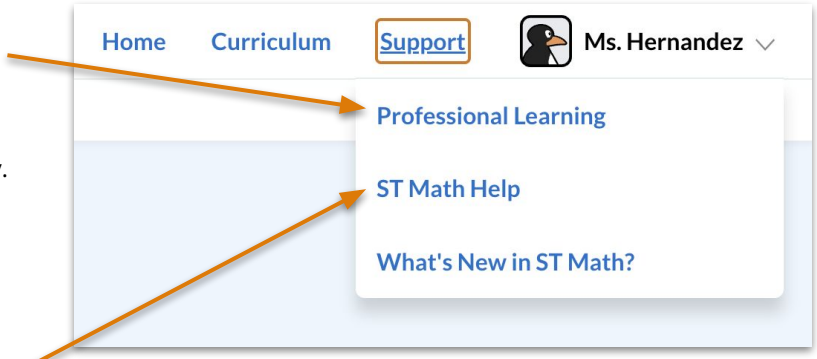
ADDITIONAL RESOURCES

MIND UNIVERSITY

Eager to learn more?

Select Professional Learning from the Support tab to access MIND University, where you'll find interactive courses designed to support your learning journey.



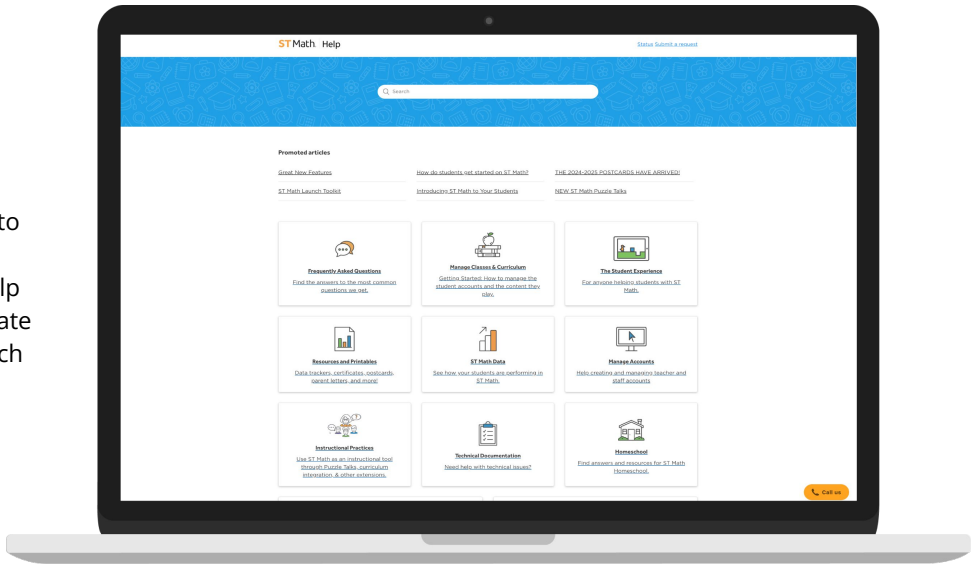
ST MATH HELP

Have questions?

Need a helpful poster or journal page for your classroom?

Our ST Math Help site is your go-to hub for answers and printable resources. Just select ST Math Help from the Support tab, then navigate to a specific topic or use the search field at the top.

Or visit: **help.stmath.com**



SUPPORT

Our support team is here to help!
Feel free to call or email us for assistance.

(888) 491-6603

support@mindeducation.org

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