



MATH ROCKS

From the creators of



Setting the Stage

Nationwide, more than two-thirds of middle school students are behind in math.

Most kids don't think **math relates to their lives** – so they aren't motivated to master it.

Math is cumulative, so students cannot learn **higher-level math** until these skill gaps are closed.

Basic Skills for Big Kids

MATH ROCKS is a bold new curriculum booster that helps middle school students acquire **core math skills** they missed along the way so they can finally succeed.

Discouraged middle schoolers **need to be reengaged** if we expect them to learn. MATH ROCKS ties key math topics to a high-energy band-on-tour theme.

Show your students that math is **relevant to real life** – and it's **exhilarating**.

It's time to **rock out** with math.

Fractions, decimals and percentages

Students need to be “trilingual” in **fractions**, **decimals** and **percentages** to convert values fluidly in equations and word problems. Without this foundation, students cannot proceed to algebra.

Artist	Total Streams	Daily	Tracks
Drake	127,725,477,067	48,095,321	516
Taylor Swift	120,234,172,443	52,938,168	653
Bad Bunny	114,797,127,422	113,125,336	272
The Weeknd	90,199,757,062	35,525,295	320
Justin Bieber	71,271,526,272	31,050,836	332
Ariana Grande	68,842,425,000	23,971,766	351

Basic operations and place value

When students can't perform **addition, subtraction, multiplication and division** on multi-digit numbers, they cannot advance to solving word problems or acquiring more advanced skills.



Multiples of digits up to 100

Many students don't know **multiples of digits past 10 times**, or their multiples of 13, 17 and so on. When they attempt long division, homework that should be simple turns into hours of frustration.



Order of operations

When students do not understand the reasoning behind the order of operations, they cannot master word problems, often “pulling an operation out of a hat” instead of finding a rational approach. Mastering the reasoning **prepares students for algebraic thinking.**

How It Works

MATH ROCKS serves any student who is below proficiency, while still engaging students at or above grade level. Activities serve groups of 4 students, a proven effective size from high-dosage tutoring studies.

- 13 lessons solidify math skills **essential to cumulative learning**
 - ⚡ Fractions, decimals and percentages
 - ⚡ Place value
 - ⚡ Order of operations, multi-step word problems
 - ⚡ Math fact fluency
- Activities motivate students by showing the **real-life relevance** of skills
- Activities boost skills at key leverage points:
 - ⚡ First 2 weeks of the school year, especially 6th grade
 - ⚡ Closing the final weeks of 5th grade
 - ⚡ Summer school/enrichment

The Kit

As part of our nonprofit mission, Bedtime Math subsidizes the cost of MATH ROCKS.

We ask schools to make a **cost-share contribution of \$150 per 4-student small group**, plus shipping. Additional teacher binders are \$25 each, and additional sets of materials for 4 students are \$100 each.

Each kit includes:

- ⚡ Materials for 13 activities
- ⚡ Discussion prompts for small-group math talk
- ⚡ Printed teacher guides and digital display slides
- ⚡ Shared Google Drive access for all teacher and student materials
- ⚡ Professional development (optional, but strongly recommended)

Research-Backed Concepts

MATH ROCKS is built on years of research-backed math content developed by Bedtime Math. It unites math talk, relevant real-life application and small-group screen-free learning to engage students and bring them to grade level.



University of Chicago study published in *Science* found kids who did **Bedtime Math** **improved their math skills by 3 months** in one school year.



Johns Hopkins study showed **Crazy 8s Club** **significantly reduced math anxiety** for elementary-age kids.



New Jersey Tutoring Corps found stronger gains for students who **used hands-on materials** from **Fun Factor** (the precursor to MATH ROCKS) compared to the control group.

See Appendix

The Line-Up: 13 Activities

Activity	Description	Skills
Band on Tour: Addition & Subtraction	Teams tour US cities, performing calculations with decimals along the way to determine their band's earnings.	Adding and subtracting decimals
VIP Parking	The stadium is filling fast! Break it down with prime factors to see how many vehicles fit and how many fans that adds up to.	Order of operations, fluency with prime factors
Roadie Load-in Challenge: Area	Calculate how to load up the gear efficiently from one venue to the next.	Units of measure and area
Roadie Load-in Challenge: Volume	Calculate how to load up the gear efficiently from one venue to the next.	Units of measure and volume
Spotify Me	How popular is the band? Compare Spotify streaming stats with the most popular artists to understand powers of 10.	Multi-digit numbers, powers of 10
Party in the Green Room: Slice by Slice	You just played a sold-out show! Compare fractions to figure out how many ways you can slice the cake to celebrate!	Equivalent fractions
Party in the Green Room: Mix & Match	You just played a sold-out show! Compare fractions to figure out how many ways you can slice the cake to celebrate!	Adding and subtracting fractions
Party in the Green Room: Share & Share Alike	You just played a sold-out show! Compare fractions to figure out how many ways you can slice the cake to celebrate!	Multiplying and dividing fractions
Setlist Showdown	Evaluate expressions and tweak the setlist to hit a target show length.	Order of operations, decimals, converting units of time
Amp It Up	Calculate how much electricity is needed to power up the band's lighting and sound system.	Place value, decimals, unit conversion, order of operations

The Line-Up: 13 Activities (cont'd)

Activity	Description	Skills
Band on Tour: Multiplication & Division	Teams tour US cities, performing calculations with decimals along the way to determine their band's earnings.	Multiplying and dividing decimals
Show Me the Money	It's expensive to produce a concert! Crunch the numbers to see how many tickets you need to sell to break even.	Decimals, fractions, percentages, order of operations
Optional Bonus Activity: Fuel Up	Plan the band's pre-show meal to hit a perfect ratio of carbs, protein and fat by using nutritional labels.	Order of operations, fractions, percentages

Next Steps

Are you ready to amp up your students' math skills?
Schedule a call to discuss.

Contact:

Joy Kalfus

Chief Program Officer

908-444-4539

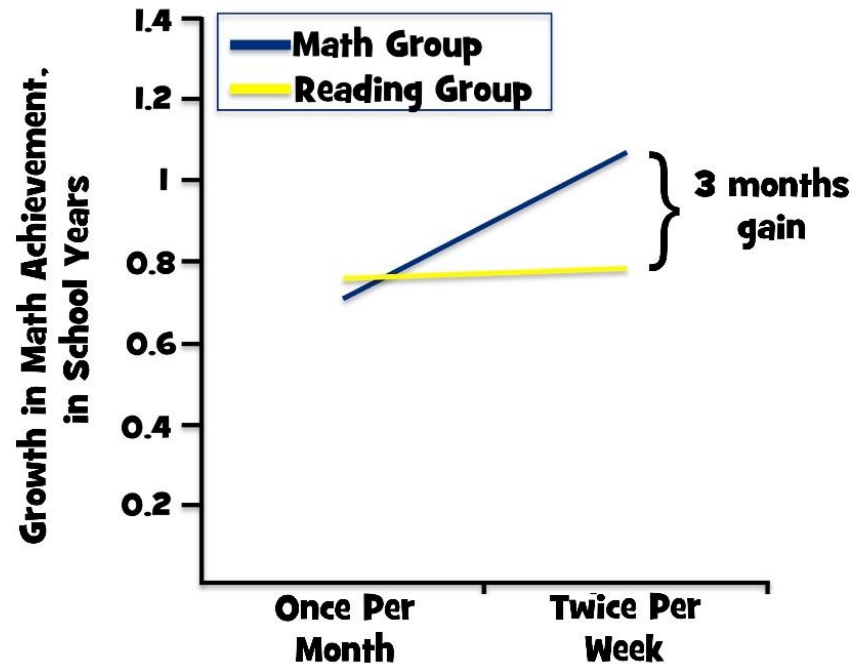
joy@math-rocks.org

Appendix A

Research Base - Bedtime Math

Proven concept: Math talk builds skills, reduces math anxiety

Details: University of Chicago found that kids who did Bedtime Math with their parents as little as once a week improved their math skills on average by **three months** more than kids who didn't use it. Kids were still ahead **two years later**.



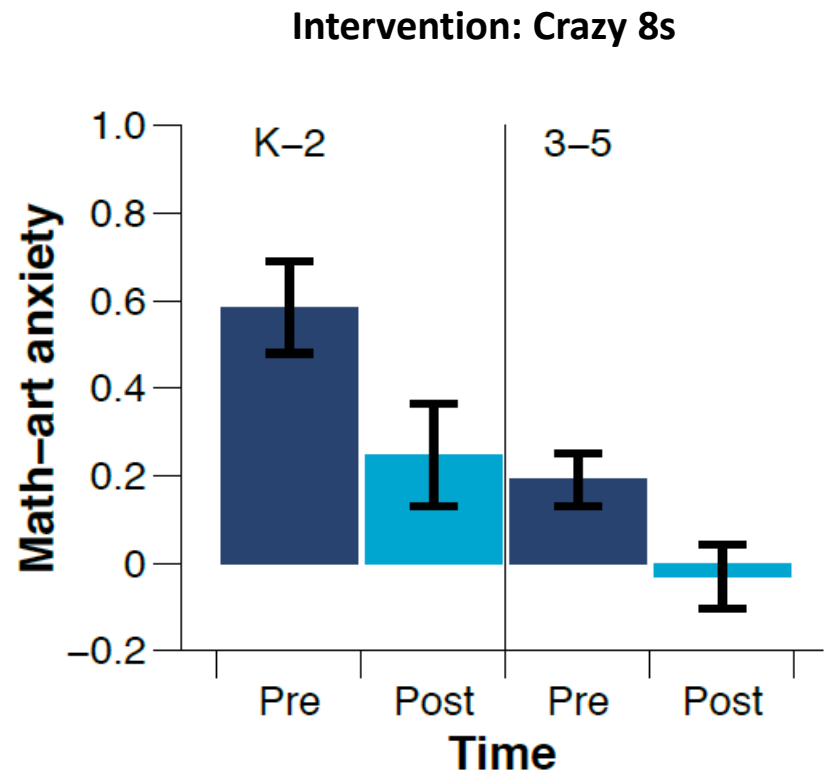
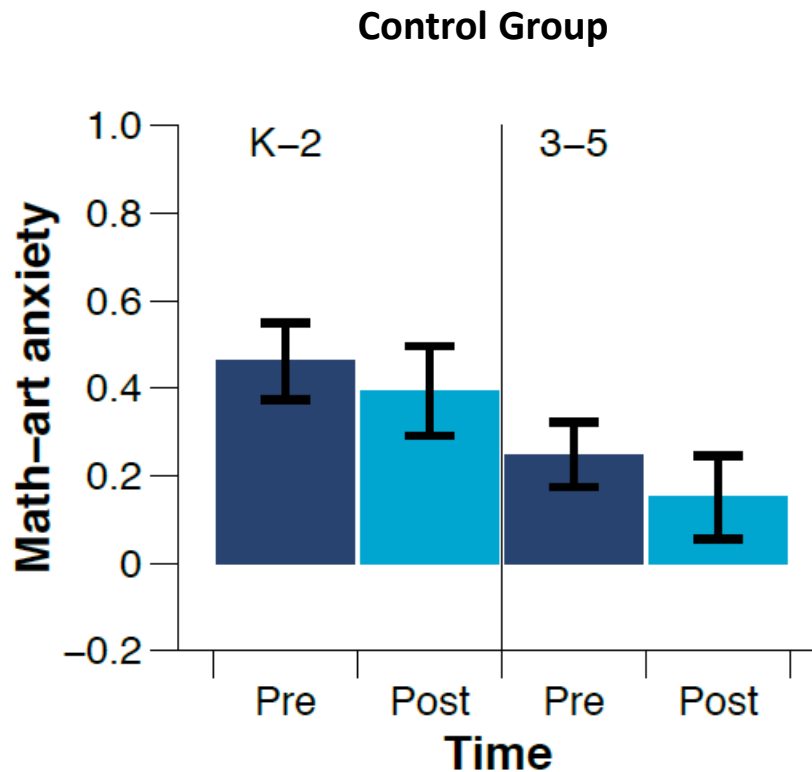
Sources: [Science](#), [Journal of Experimental Psychology](#)

Appendix B

Research Base - Crazy 8s Club

Proven concept: Benefits of moving off screens and on to hands-on content

Details: A study conducted by Johns Hopkins University showed that Crazy 8s significantly **reduces students' math anxiety** after just eight weeks.



Appendix C

Research Base - Fun Factor

Proven concept: Small-group, high-dosage interventions

Details: After 6 weeks of tutoring and using Fun Factor, the number of students who **tested at or above grade level almost doubled**, rising from 27% to 48%. Those exposed only to the tutoring curriculum over the same time period rose only from 22% at/above grade level to 29%.

