



TPS Mathematics Program

Virtual Parent / Family Meeting
March 11, 2025

Presented by Amelia Bowers, District Supervisor of Mathematics

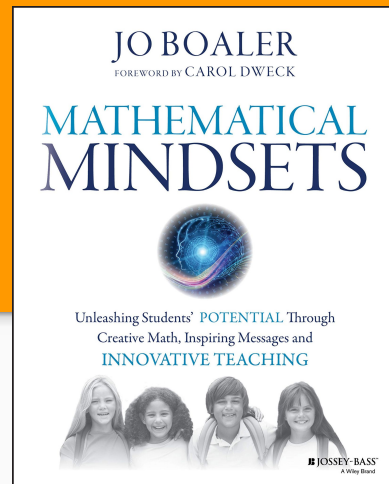
Our Math Philosophy

All students can grow their abilities and find joy and success in mathematics.

We believe and understand that it is critical to balance conceptual with procedural understandings.

Conceptual understandings are developed through concrete, pictorial, abstract progressions.

Procedural understandings are secured through fluency work, automaticity, and connections to prior knowledge.



Elementary, Grades K-5

Graham Fletcher Progression Videos (<https://gfletchy.com/progression-videos/>)

Progression of Division

3rd grade $12 \div 4$

12 candies
4 in each bag
Measurement
OR
repeated subtraction
of groups unknown

12 candies
Shared with 4 friends
fair share
OR
partitioning
size unknown

$54 \div 6$

efficient thinkers

Quotients > 10 $72 \div 3$

4th grade
4 digit dividend: 1 digit divisor
models/representations
written expression

$144 \div 9$

$3672 \div 9$

5th grade
4 digit dividend
2 digit divisor
- whole # quotient ONLY!!

6th
Standard Algorithm

The whiteboard contains the following content:

- 3rd grade:** $12 \div 4$. Models include a grid of 12 dots and a question mark. Text: "12 candies, 4 in each bag, Measurement OR repeated subtraction, # of groups unknown".
- Efficient thinkers:** $54 \div 6$. Shows a grid of 54 dots and a table with 54 divided into 6 groups of 9. Text: "12 candies shared with 4 friends, fair share OR partitioning, size unknown".
- Quotients > 10 $72 \div 3$:** Shows a number line from 0 to 72 and a table with 72 divided into 3 groups of 24. Text: "72 = (3x24) + (3x4)".
- 4th grade:** "4 digit dividend: 1 digit divisor, models/representations, written expression". Shows $144 \div 9$ with a lightbulb icon and "ah-ha!".
- 5th grade:** "4 digit dividend, 2 digit divisor, - whole # quotient ONLY!!". Shows $3672 \div 9$ with a long division problem and an area model. Text: "My Products of 32, $32 \times 1 = 32$, $32 \times 2 = 64$, $32 \times 3 = 96$, $32 \times 10 = 320$ ".
- 6th grade:** "Standard Algorithm". Shows $32 \overline{) 9425}$ with a long division problem.

Middle School, Grades 6-8

Grade-level mathematics

Math 6*, Math 7, Math 8

Differentiated by groups of students or individual students

****First opportunity for entry into accelerated math begins in grade 6:***

Students by-pass Math 6 and enter Math 7 Advanced as sixth graders.

**H-S Connection:
HOW TO LEARN
MATH**

Middle School

→ High School Projections

**H-S Connection:
WHAT MATH TO
LEARN**

Math 8 in Grade 8

→ Precalculus or Statistics in Grade 12

Algebra in Grade 8

→ Calculus in Grade 12

Algebra in Grade 7

→ Calculus in Grade 11

Pathways to Accelerated Sequences

1. Enter Math 7 Advanced as a *sixth grader*
2. Enter Algebra 7 as a *seventh grader*
3. Enroll in summer/outside course for Geometry (as early as summer prior to *ninth grade*)
4. Double math enrollment in Geometry and Algebra 2 (with successful completion of Algebra 1, *HS students only*)



Pathways to Accelerated Sequences

Teacher recommendation

Current/prior course performance

Benchmark assessments

- NJSLA-M
- i-Ready Diagnostics

Placements are revisited annually.

If it is observed that a student is misplaced, we revisit the placement and revise when necessary.

Please see our 25-26 Programs of Study for additional detail.

Note: Placement exams are administered only to students new-to-district. Outside courses and coursework cannot be used for placement.

Resources on the TPS Website

Math Curriculum Page

The screenshot shows the Tenafly Public Schools website. At the top, there is a navigation bar with a search icon, 'Staff', 'Students', 'Quick Links', 'REGISTRATION', and 'CLASSLINK'. Below this is the school logo and a secondary navigation menu with 'Our District', 'Academics', 'Parents', 'Registration', and 'Community'. The main content area is titled 'Mathematics' and includes a 'General Information' section with sub-links for 'Introduction', 'Staff', and 'Links & Resources'. A quote by Albert Einstein is featured: "Pure mathematics is, in its way, the poetry of logical ideas." A sidebar on the left lists various academic departments.

HOME > ACADEMICS > ACADEMIC DEPARTMENTS > MATHEMATICS

Mathematics

General Information

Introduction | Staff | Links & Resources

Tenafly's philosophy for math education is rooted in the belief that all students can grow their abilities and find joy and success in mathematics.

We believe and understand that it is critical to balance conceptual with procedural understandings.

"Pure mathematics is, in its way, the poetry of logical ideas."
Albert Einstein

- Academic Departments
 - Business
 - English Language Arts
 - Gifted and Talented
 - Health & Physical Education
 - Mathematics
 - Multilingual Learners
 - Performing Arts
 - Science
 - Social Studies
 - Special Services
 - Visual Arts
 - World Language

FAQ

Tenafly Public Schools Math Placement FAQ - 2025

When do we first offer leveled math courses?

In grade 6, students are placed into either Math 6 or Math 7 Advanced.

How many students are placed into Math 7 Advanced as sixth graders?

Each year, approximately 85% of 6th grade students are placed in Math 6 and 15% are placed in Math 7 Advanced.

Is there limited enrollment for Math 7 Advanced as a sixth grader? Are any core math classes capped for size?

No, enrollment is based on student readiness, not class size limitations. Exceptions to this are certain elective courses at THS.

How are students placed into Math 7 Advanced as a sixth grader?

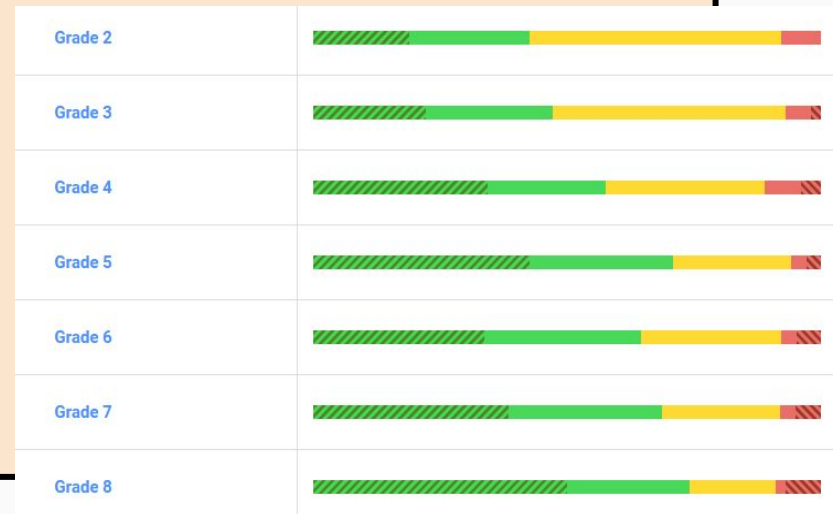
Placement is based on NJSLA scores, report card scores, benchmark assessment scores, and teacher recommendations. For all other placements beyond 6th grade, placement is based solely on grade criteria (course average) and teacher recommendation.

Is there a placement exam for entry into Math 7 Advanced as a sixth grader?

No. Placement exams are only administered to students new to Tenafly High School who are not transferring from a public school in New Jersey.

Student Performance Results

- **NJSLA (Grades 3-10)**
 - Exceeded state results in every grade level/course by average of 40%
- **i-Ready (Grades 2-8)**
 - Proficiency increases each* year
- **AP Exams (Math / CS Grades 10-12)**
 - Highest averages since 2020
- **NJGPA (Grade 11)**
 - 91% THS pass rate vs. 54.7% state



New for 24-25

Assessment & Philosophies: K-5 Assessment & Math Mindset

No placement exam 5th to 6th

Professional Development: Conquer Math

Building Thinking Classrooms, 6-12 Book Study

Curriculum Changes: Data Literacy standards

Statistics standards

Current Events

Smith School Faculty Meeting

Contests: Computer Science Olympiad, AIME, MathCon - TMS Awarded 1st Place!

AI PD Summit

On-Going i-Ready Training for K-5 Staff

- Tracking growth and targeting skills for intervention
- Supplemental support through grant funding (all 4 elementary schools, TMS)

Thank you

**Contact me for
additional questions or
details:**

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