Math Rocks!

Plano ISD
School Board Presentation
April 6, 2010

Does everything we do empower our students?

Program Goal

Identify and serve ***mathematically high performing*** students

with ***rich tasks*** based on classic mathematical topics

that require ***thinking*** far ***beyond*** their ***grade level***.

Overview

- Second year of a pilot program

- Multi-age program

- Serves students at:
    - Andrews
    - Mathews
    - Skaggs
    - Wyatt
    - Rice MS

Program Entry Criteria

- Measures of Academic Progress (MAP) - Average of Winter & Spring Test

- Averaged MAP score > 2 standard deviations above the District mean

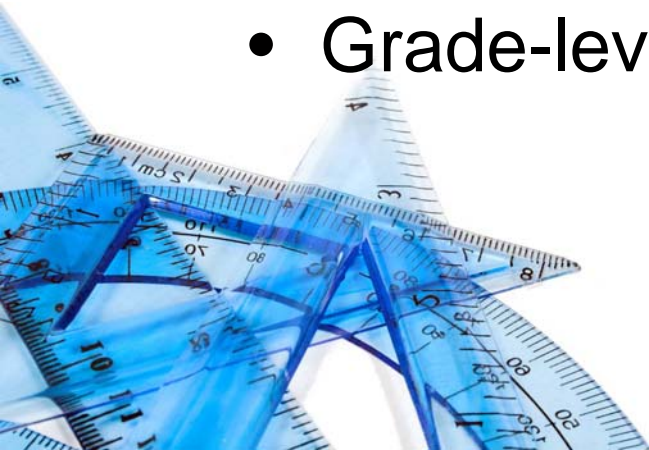- 3rd Graders: > 3 standard deviations above the mean

Student Identification

- Qualify to enter in grades 4, 5, or 6

- No need to re-qualify each year

- Students new to PISD are evaluated upon entry
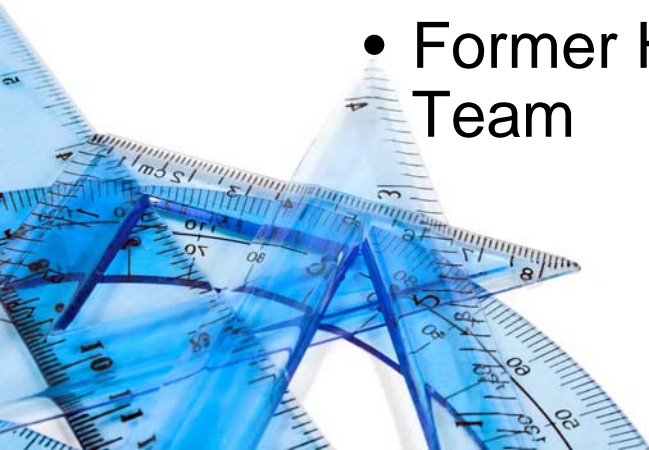
Math Rocks Curriculum

- Problem-based curriculum organized by mathematical strand

  - Simple sums
  - Consecutive numbers
  - Equilateral and equiangular figures

- American Mathematics Competition
  - AMC 8, AMC 10/12

- Grade-level TEKS where necessary

Math Rocks Curriculum

Dr. Titu Andreescu

- Associate Professor of Mathematics at The University of Texas at Dallas

- Director of the Awesome Math Program at UTD

- Former Director of the American Mathematics Competitions

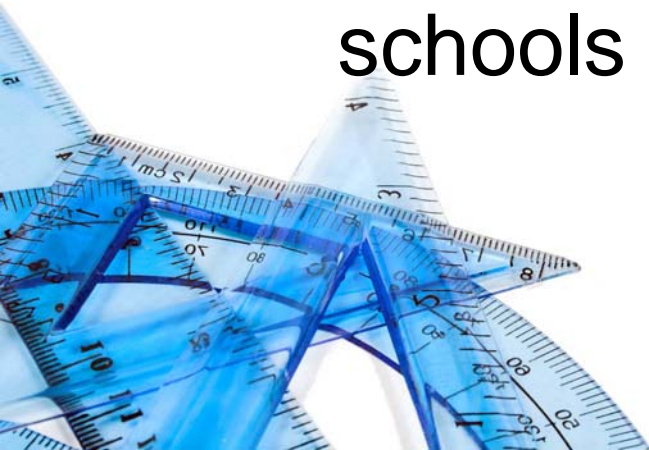- Former Head Coach of the USA Math Olympiad Team

Professional Development

- Monthly curriculum training with Dr. Andreescu

- Math Rocks Summer Institute
  - Content development
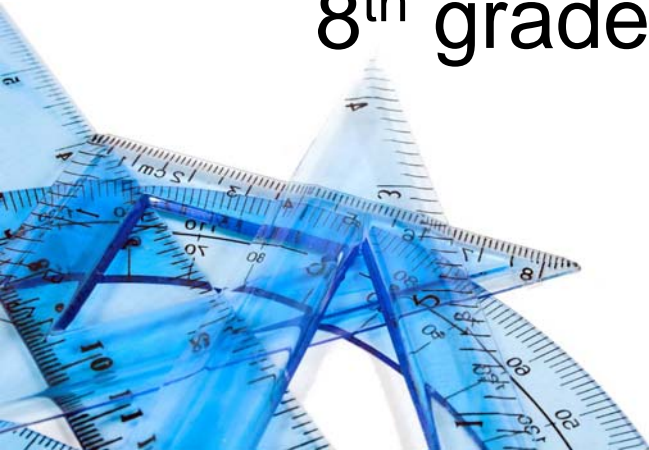 - Lesson planning
  - Team-building

Next Steps - Elementary Math Rocks

- Cluster schools to serve all qualifying students

- Add new sites

- Transfer students to Math Rocks host schools

Next Steps - Secondary Math Rocks

- Expand Math Rocks to 7th grade at Rice

- Transfer students to Math Rocks host schools

- Develop Math Rocks curricula through 8th grade

Secondary Math Rocks

Grade	Course Content	HS Credit
Grade 6	Honors Math Rocks 6	
Grade 7	Honors Math Rocks 7 Honors Algebra I	HS Honors Algebra I
Grade 8	Honors Math Rocks 8 Honors Geometry	HS Honors Geometry

Possibilities - High School Math Rocks

- Compact Algebra II and Precalculus

- Explore partnership with UTD

- Possibility of earning credit for 6 college level mathematics courses

High School Math Rocks
Possible Course Sequence

Grade	Course Content	Credit
Grade 9	Math Rocks 9, Honors Algebra II, Honors Pre-Calculus	HS Honors Algebra II HS Honors Pre-Calculus
Grade 10	Calculus I Calculus II	College credit from UTD
Grade 11	Differential Equations Number Theory	College Credit from UTD
Grade 12	Abstract Algebra Multi-variable Calculus	College Credit from UTD

Are You **Smarter** Than A **5**th Grader **?**

MATH ROCKs