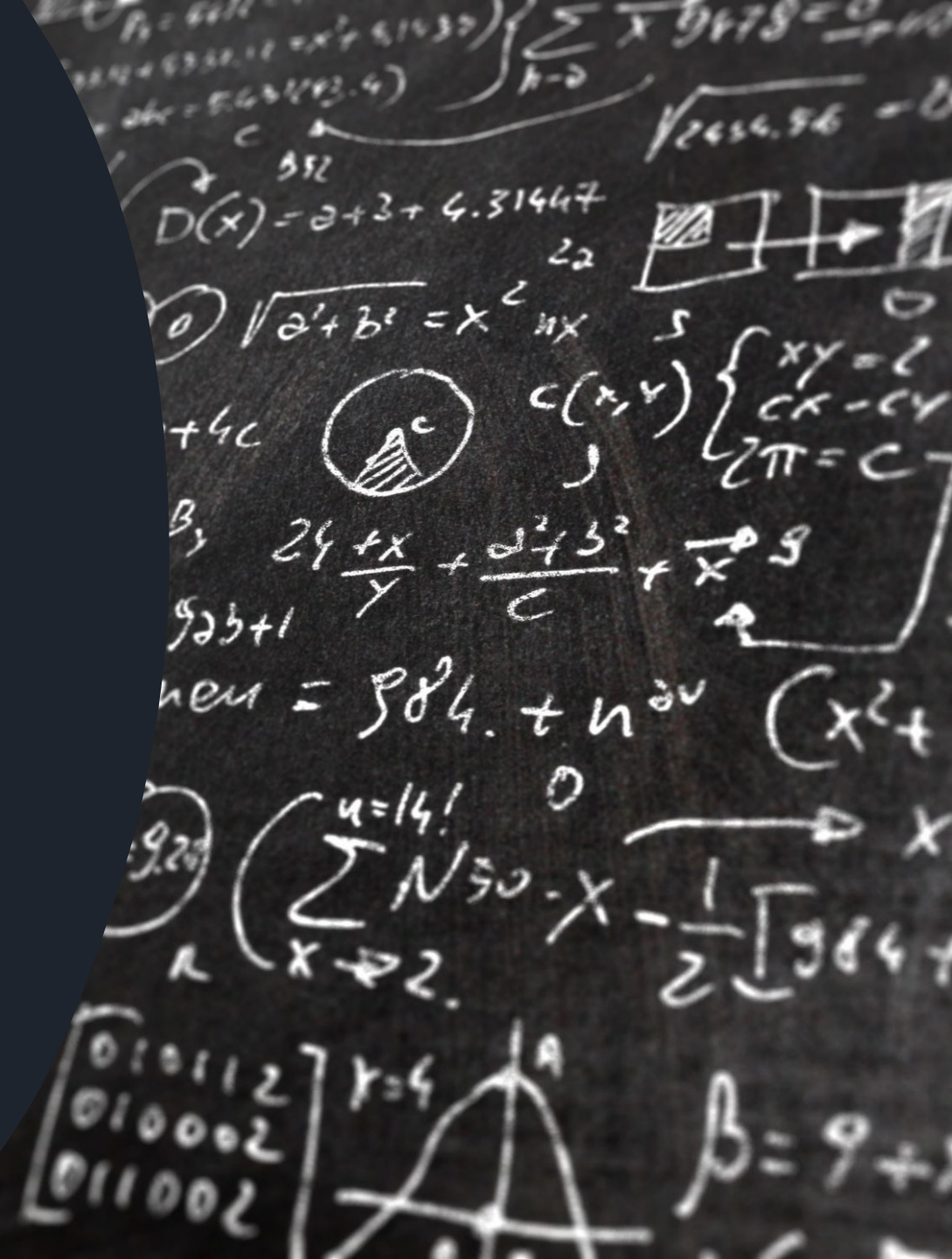


Elementary School Math Acceleration Program: Rationale and Student Challenge

Board of Education Meeting

June 20, 2023



Presentation Goals

Background and history of shifts required by the Illinois Learning Standards for Mathematics

Alignment of assessment practices to mathematics content for accelerated placement

Supporting rigorous elementary math classroom practices

Addressing unique math learner needs

District 90 Acceleration Placement Process

Roosevelt mathematics learning progressions

Common Core Mathematics Alignment: History and Background



Partnered with University of Illinois's Metro Chicago Math Initiative (MCMI)



Established the Math Leadership Team



Enhanced the alignment to the Illinois Learning Standards for Mathematics



Conducted materials review to adopt core mathematics program



Provided training for all K-5 mathematics teachers to support the transition to new pedagogical and instructional standards

Illinois Learning Standards for Mathematics



Reflect the Common Core
Standards for Mathematics



Require a balance between content
standards and practice standards



Integrate student collaboration and
discourse



Support the five strands of
mathematical proficiency

Five Strands of Mathematics Proficiency

- **Conceptual Understanding:** comprehension of mathematical concepts, operations, and relations
- **Procedural Fluency:** skill in carrying out procedures flexibly, accurately, efficiently, and appropriately
- **Strategic Competence:** ability to formulate, represent, and solve math problems
- **Adaptive Reasoning:** capacity for logical thought, reflection, explanation, and justification
- **Productive Disposition:** habitual inclination to see math as sensible, useful, and worthwhile coupled with a belief in one's own self-efficacy

Source: *Adding it Up: Helping Children Learn Mathematics*, National Academies Press (2001)

Shifting from Cognitive Abilities Test (CogAT) to Silicon Valley Math Initiative (SVMi) Assessment for Accelerated Math Placement

COGAT

- Standardized multiple choice assessment
- Assesses verbal, quantitative, and non-verbal skills
- Measures general thinking skills that develop over time
- Highly correlated with fluid reasoning and success in school

SVMi

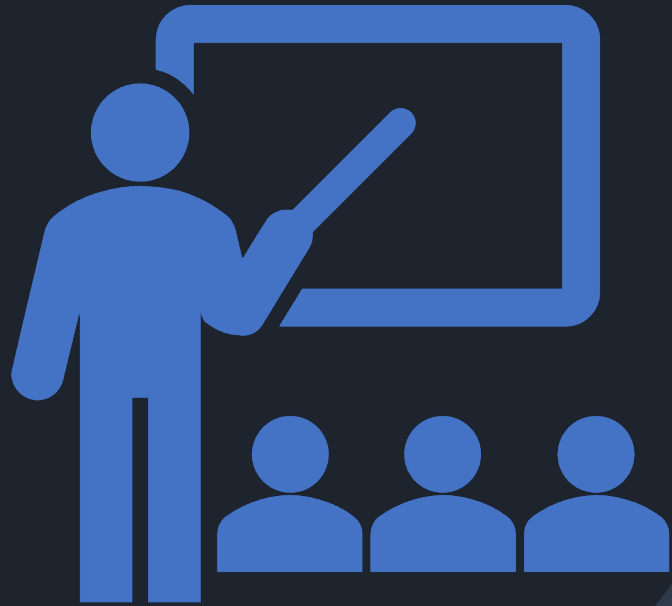
- Provides problem-solving tasks that reflect the five "big ideas" of each grade level
- Assesses grade-level proficiency with concepts, use of multiple strategies, creative problem-solving, and the ability to explain math reasoning
- Scored by the University of Illinois at Chicago's Metro Chicago Math Initiative
- Proficiency levels are determined by norms established annually by SVMi
- Tasks are released annually



Elementary Mathematics Classroom Practices

- Class placement with thought partner or partners (professional colleagues)
- Collaborative planning between classroom teachers, math specialists, and instructional specialists to differentiate instruction
- Implementation of additional math challenge during in-class instruction
- Regular opportunities for students to receive feedback

Supporting Elementary Math Classroom Practices



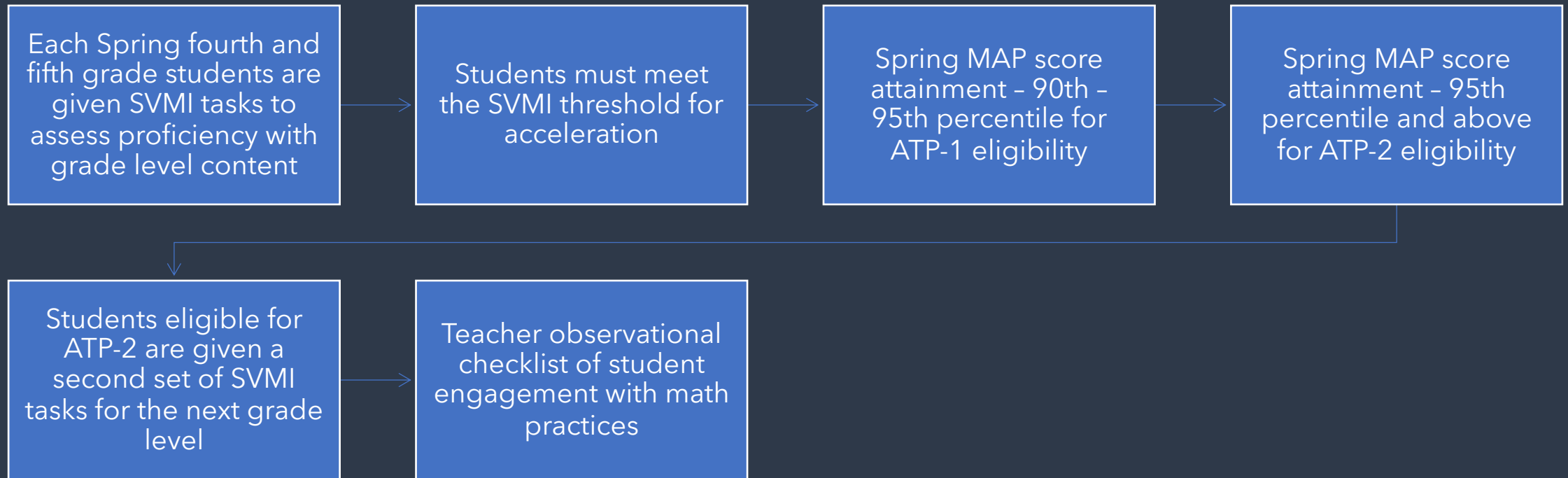
- Elementary Math Leadership Team supports consistency and alignment of resources and practices across grade levels and schools
- Instructional specialists provide ongoing differentiation support for individual teachers and grade level teams
- Grade level teams review of student work to identify challenge needs for student
- Routine review of resources to ensure multiple entry points for students needing "high ceiling challenge"



Addressing Unique Math Learner Needs

- Target appropriate placement for all students through use of multiple data points
- Provide alternative evaluation opportunities through the Acceleration Placement Process policy, as appropriate
- Collaborate during summer months to review resources, practices, and grade-level scope and sequence.

Accelerated Math Placement Process



Roosevelt Middle School Mathematics Learning Progressions

Instructional Progressions	Grade 5	Grade 6	Grade 7	Grade 8
Instructional Math	Content: Grade 5 with modifications	Content: Grade 6 with modifications	Content: Grade 7 with modifications	Content: Grade 8 with modifications
	Materials: Aligned to IEP goals	Materials: Aligned to IEP goals	Materials: Aligned to IEP goals	Materials: Aligned to IEP goals
Grade-level	Content: Grade 5 standards	Content: Grade 6 standards	Content: Grade 7 standards	Content: Grade 8 standards
	Materials: Investigations	Materials: CMP	Materials: CMP	Materials: CMP
ATP-1	Content: Grade 5/6	Content: Grade 6/7	Content: Grade 7/8	Content: Algebra
	Materials: Investigations/CMP	Materials: CMP, Desmos	Materials: CMP, Desmos	Materials: Desmos
ATP-2	Content: Grade 6/7	Content: Grade 7/8	Content: Algebra	Content: Geometry
	Materials: CMP, Desmos	Materials: CMP, Desmos	Materials: Desmos	Materials: Discovering Geometry

Investigations in Number, Data, and Space 3 developed by TERC, Cambridge, MA (revised 2016)

Connected Math Project 3 and 4 developed by Michigan State University (2014, pre-print pilot)

Desmos, Amplify Learning (2022)

Discovering Geometry, Kendall Hunt (2015)



Questions?