Ichabod Crane Central School District

K-12 Math Department

Presentation by:
Jennifer Beebe, Grades K-5
Margaret Warner, Grades 6-8
Linda Knight, Grades 9-12

November 12, 2024

Mission Statement:

To create classrooms that promote the mathematician in everyone

Grades K-5
New York State
Next Generation Mathematics
Learning Standards

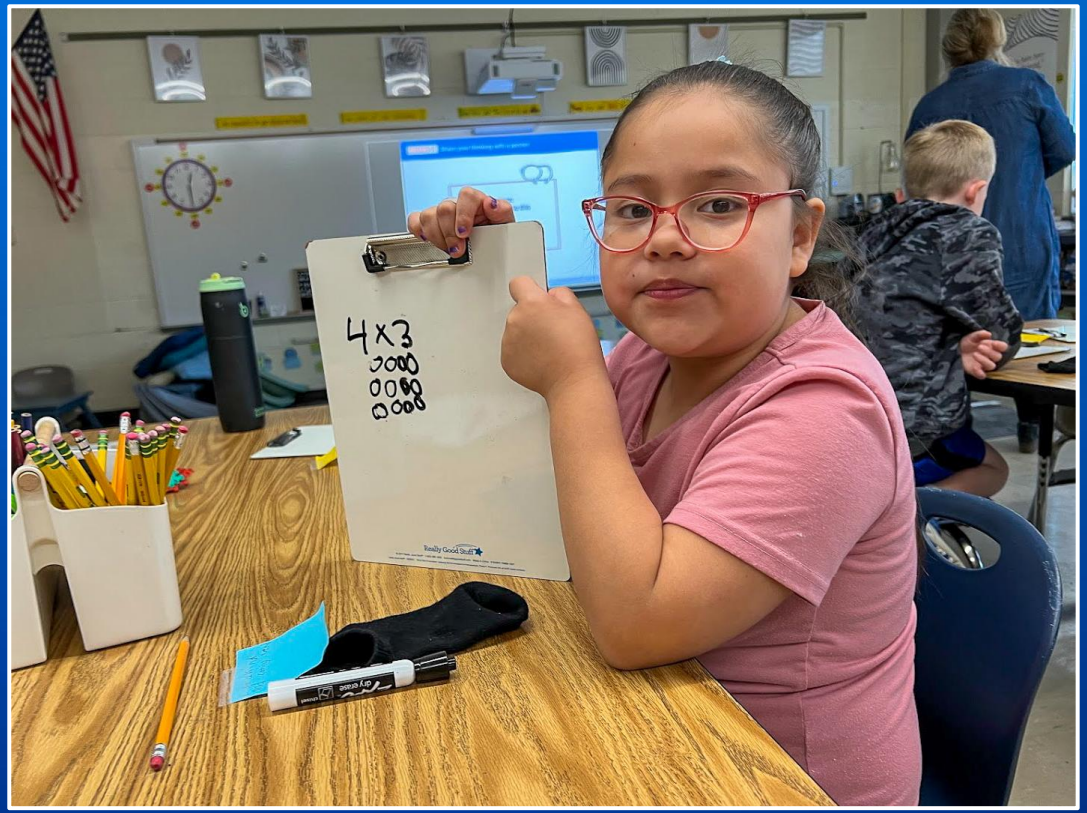
NGLS for Math

K-5 Math Committee Members:

Kate Turrin, Karen Seymourian, Kelly Hindes, Darcy Burns,
Kathy Bolstad, Jennifer Beebe & Danielle Hallenbeck

What is i-Ready Classroom Mathematics

i-Ready Classroom Mathematics 2024 is a math program that helps students develop critical thinking skills and become independent mathematical thinkers. The program uses a research-based structure with a focus on problem solving, reason, and student-to-student conversations.



Six Facts about i-Ready Classroom 2024

This robust mathematics program helps our students become **strong, independent mathematical thinkers**

The program uses an enhanced, strategic approach to math instruction, focusing on **reason, problem solving, and student-to-student conversations about conceptual mastery**

Students tackle **complex concepts**, and **hone their critical thinking skills** about mathematics

Students engage in understanding mathematical concepts and academic vocabulary **through modeling and explicit examples**

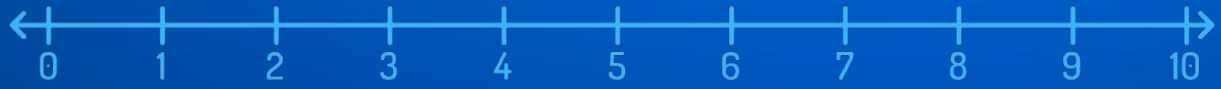
Small group instruction and individualized learning plans provide students with the opportunity for practice and independent learning

In addition to student math notebooks & printed instructional resources, **students are also given opportunities to develop their skills with online lessons, checkpoints and interactive games**

Curriculum Resources

- **Grade K-5:** iReady Classroom Mathematics 2024
- **iReady:** Diagnostic Exams three times per year

(included but not used exclusively)



Note: All programs have interactive/computer based components. Grade levels have made modifications based on the components that suit the student needs best

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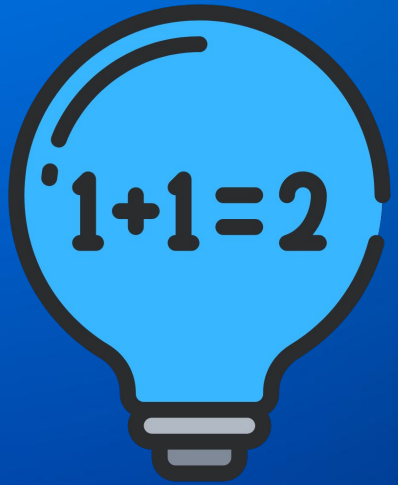
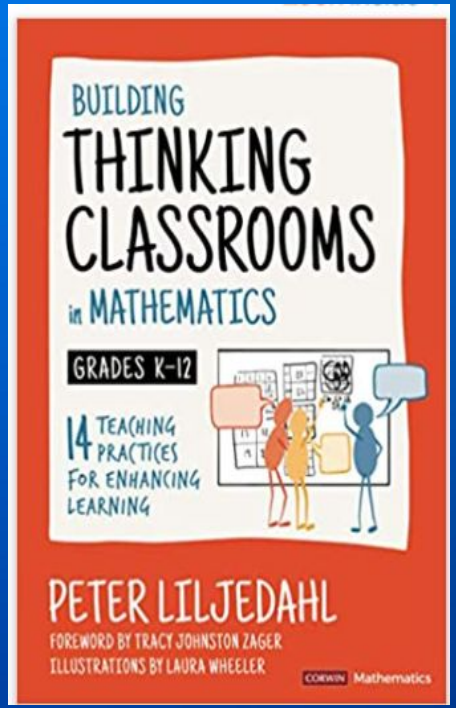
How is i-Ready Classroom Mathematics different from other curriculum?

- A tight alignment to the NGLS for Math for NYS
- Greater balanced rigor in the types of questions students practice, such as: procedural, conceptual and application
- Incorporation of data-driven diagnostic reports supports data – driven instruction, to include individualized learning plans
- Greater student engagement around **mathematical discourse** which involves critical thinking, talking and processing which leads to greater learning
- The structure of the program gives teachers the ability to address unfinished learning and prerequisite skills and concepts (small group instruction, tiered intervention, extended learning)
- Teachers have the ability to personalize instruction with the student's individualized instruction path, digital lessons are customized to specific student needs for support and enrichment



Building Thinking Classrooms in Mathematics

Sparked by observing teachers struggle to implement rich mathematics tasks to engage students in deep thinking, **Peter Liljedahl has translated his 15 years of research into a set of 14 optimal practices for thinking that create an ideal setting for deep mathematics learning to occur.** When combined, these unique research-based practices create the optimal conditions for learner-centered, student-owned deep mathematical thinking and learning, and have the power to transform mathematics classrooms like never before.



Committee Goals for 2024-25 (ongoing discussion)

- **How do we use student data to inform instructional practices and professional learning?**
  - Using the prerequisite reports from the i-Ready Diagnostic testing to inform our instruction
  - Professional learning, in this area, could be by meeting/discussing prerequisite reports with Questar III specialists Jessica Decker and Stephanie Carbone

- **How do educators learn and implement current research and best practices to improve student learning?**
  - Book studies on Building Thinking Classrooms/Tasks/Different Settings
  - Using the professional learning videos/demos from i-Ready to help make the transition smooth

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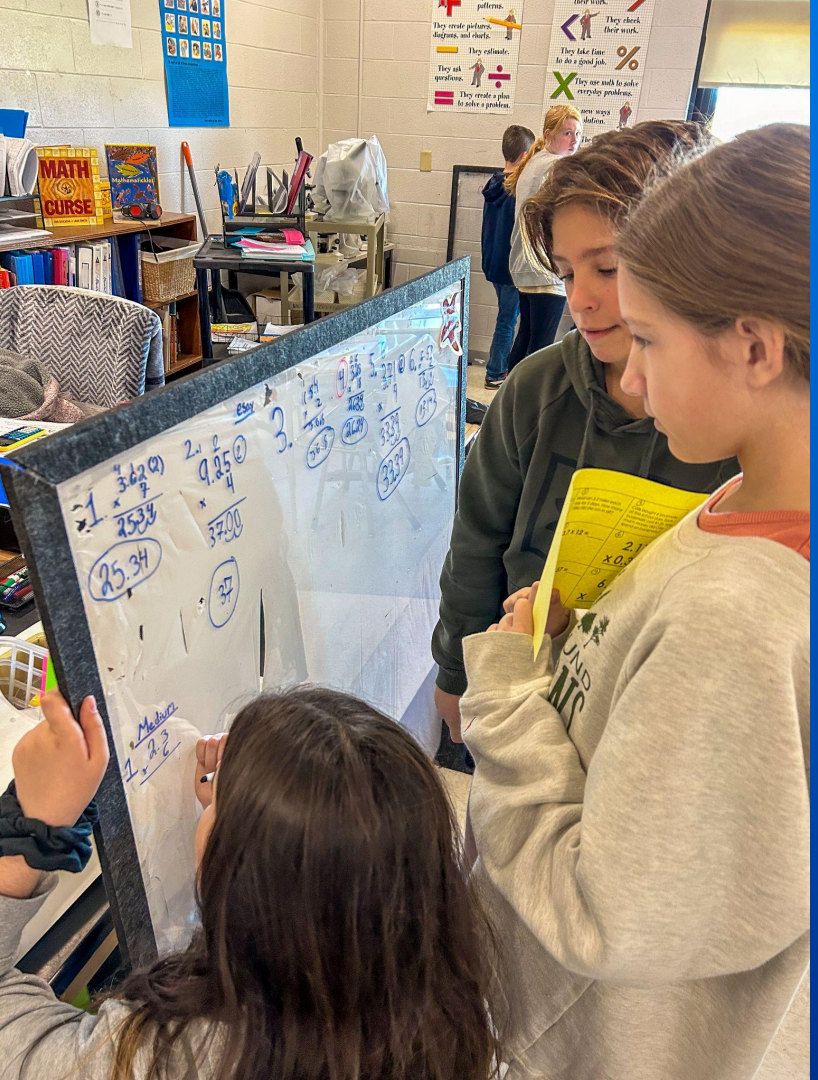
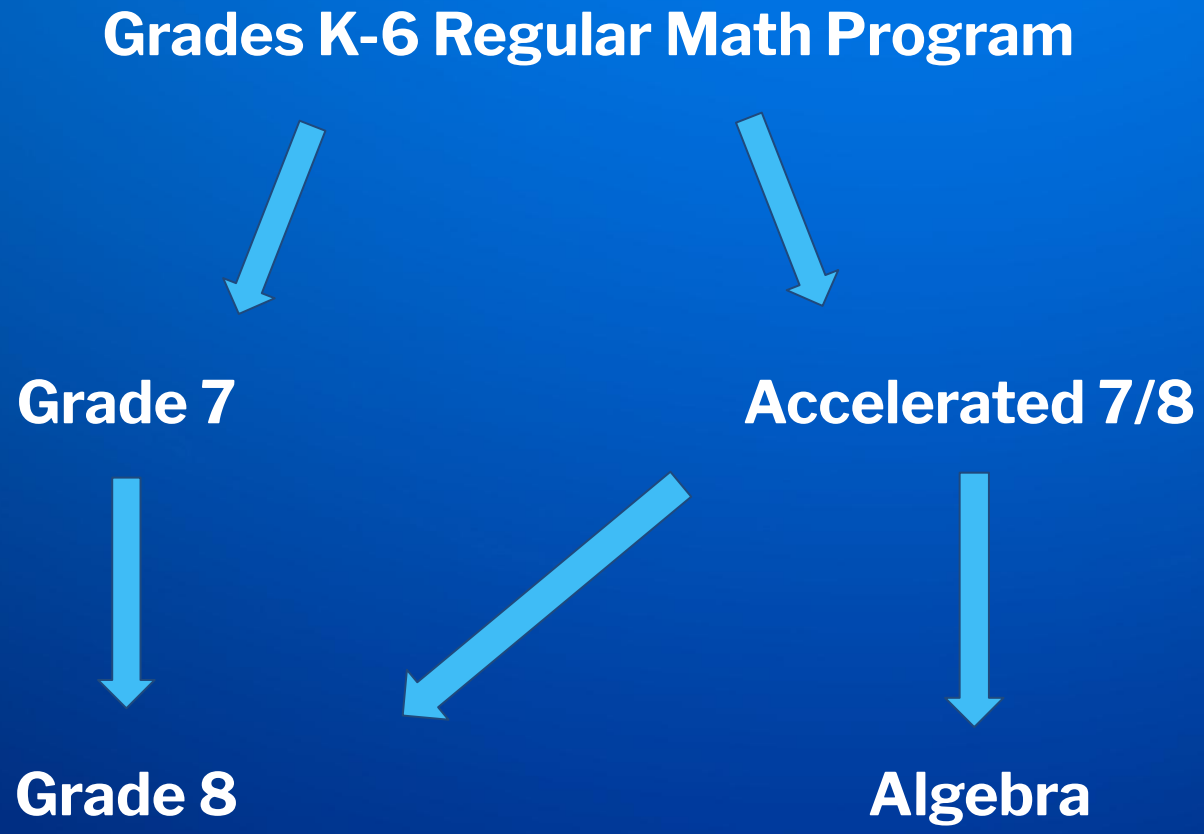


Grades 6-8 New York State Next Generation Mathematics Learning Standards

[Mathematics | New York State Education Department]

Grades K-8 Math Program



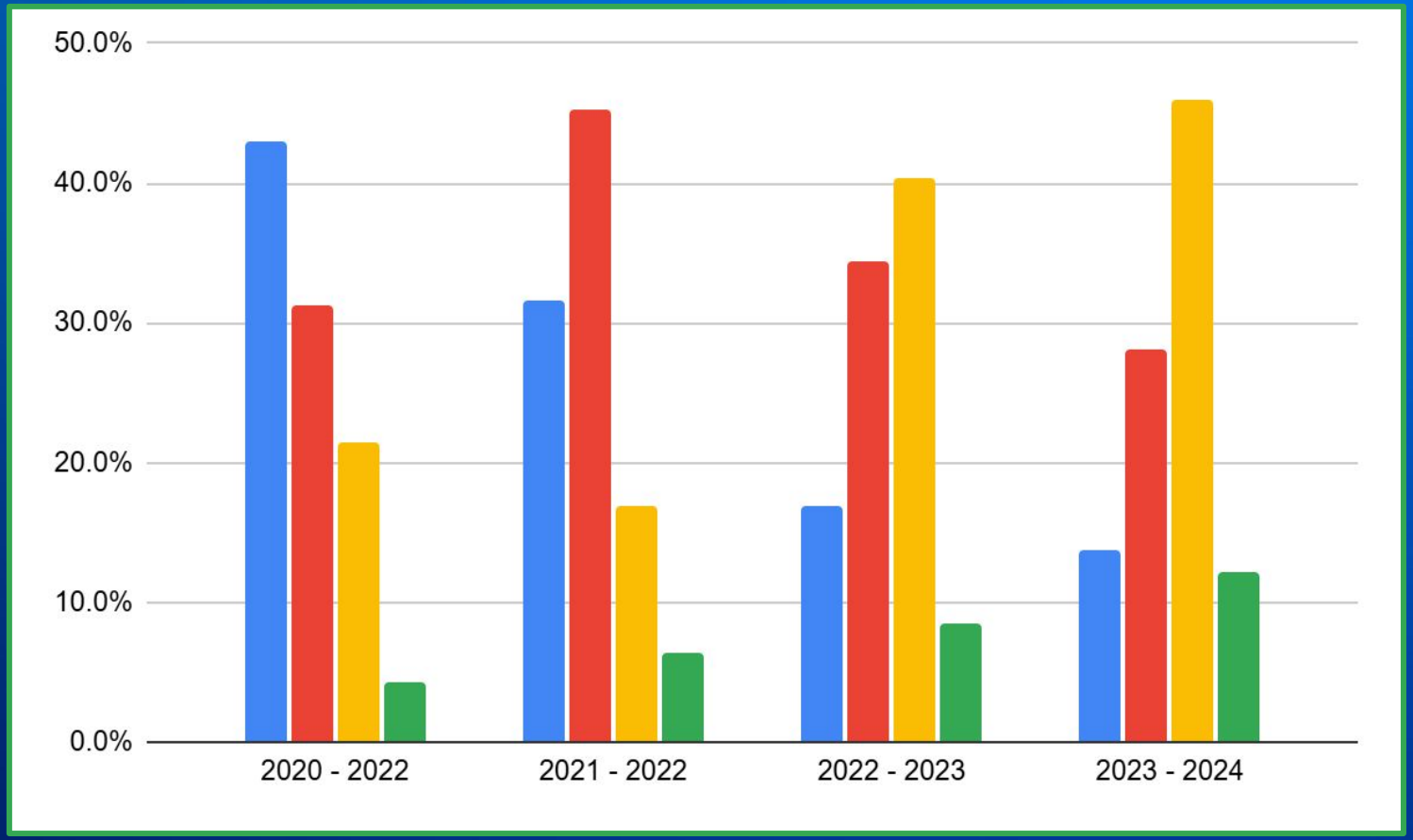
Grade 6 Teachers

- **Math 6/Math 6 SPED co-taught:** Melanie Moon, Christine Suchoski (Jackie Purificato), Molly Fryer
- **Math 6:** Margaret Warner
- **Grades 4-6 AIS Math:** Elisa McNeil and Jeffrey Montague

Grade 6 Changes

- **2021-22 (second semester)**
  - 4-6 AIS Math Teacher
- **2022-23**
  - 80min block/40min class schedule
  - Departmentalization
  - Curriculum & assessment improvement
- **2023-24**
  - Curriculum & assessment improvement
- **2024-25**
  - “Building Thinking Classrooms,” Peter Liljedahl, pedagogy trial

Grade 6 NYS Assessment Data Summary



Grades 7 & 8

Teachers:

- **Team 7:** Stefanie Driscoll
- **Team 7/8:** Victoria Boor
- **Team 8:** Kim Funk
- **Accelerated 7/8:** Jeffrey Montague

Curriculum:

- Teacher collaboration for differentiated instruction across Team 7/8 and Team 7, Team 7/8 and Team 8
  - Utilizing Glencoe online resources to supplement curriculum planning
- Aligned Units and Common Assessments

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Grades 6-8 Curriculum Resources

- ProblemAttic, Released NYS test questions (Datamate bank), eMathinstruction.com, Teacher Pay Teacher (TPT.com), ConnectEd (Glencoe Online Teacher resources), Superteacher.com, Education.com, iReady Lessons

- iReady (Diagnostic Exams 3 times per year)
  - District requirement time by grade level

(included but not limited to the above)

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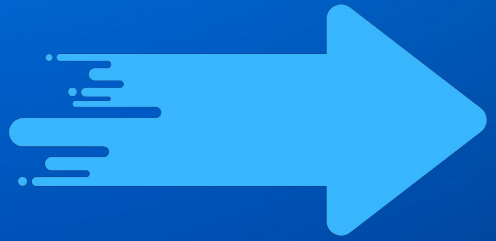
Moving Forward

- **Analyze assessments data to:**
  - measure curriculum effectiveness
  - further establish common assessments as reliable indicators of state test performance
- **Collaborate** to ensure equity across all classrooms such that all students receive the same high-quality curriculum and instruction regardless of teacher
- **Review and improve curriculum** using researched-based methods and pedagogy to deliver rich instruction of the NYS standards



Grades 4-8 Department Goals

- **Achieve the NYS assessment targets set in Riders' Pathway Subtarget 4**
  - Increase proficiency rates on the 3-8 NYS ELA and Math tests by 2% for grade levels scoring at or above the **regional median** and by 5% for grade levels scoring below the regional median when compared to the 2023-24 school year **OR** score in the top five districts in the Questar III BOCES.

- **Prepare students for the next grade level by consistent use of vocabulary, sharing strategies, and helpful memory recall "tricks," by allocating department meeting time to collaborate across grades 4-8**

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Grades 9-12

Shifting from Common Core to ...

- **Next Generation Algebra**
- **Next Generation Geometry**
- **Next Generation Algebra 2**

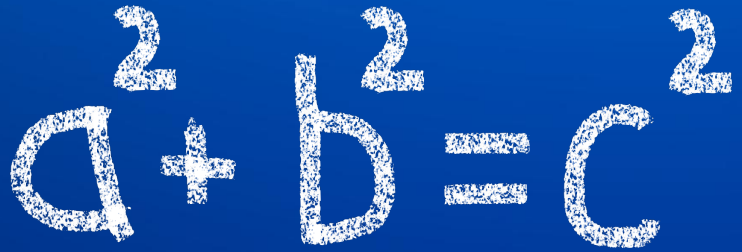
NYS Next Generation Timeline for Implementation

- **June 2024** First administration of Algebra I Regents Exam, aligned to the NYS Next Generation Mathematics Learning Standard
- **June 2025** First administration of Geometry Regents Exam, aligned to the NYS Next Generation Mathematics Learning Standards.
- **June 2026** First administration of Algebra II Regents Exam, aligned to the NYS Next Generation Mathematics Learning Standards. ** Last administration of Geometry CC Regents Exam
- **June 2027** *** Last administration of Algebra II CC Regents Exam

Implementing the Changes

The Department will:

- continue to review changes as NYSED continues to send out information
- analyze Regents data to improve instruction
- address curriculum changes as they develop



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Grades 9-12 Course Offerings

- **Algebra – 1 and 2 year** – Regents Level, Honors
- **Intermediate Algebra**
- **Geometry** – Regents, Honors
- **Algebra 2** – Regents, Honors
- **Applied Math**
- **Precalculus** – Regents, Honors
- **AP Calculus**

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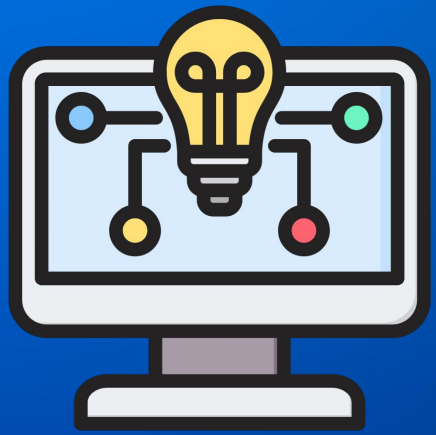
Grades 9-12 Course Offerings

- **Stats** (Columbia-Greene Community College, CGCC)
- **College Algebra** (CGCC)
- **College Algebra with Trigonometry** (CGCC)
- **Pre-Calculus** (CGCC)
- **Sports Statistics**
- **App Design - Block Based Programming**
- **Computer Programming - C++**
- **Intro to Computer Science - Python** (Siena)
- **Software Development - Java** (Siena)



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Grades 9-12 Department Goals

- Increase percent of students graduating with at least 4 Math Credits
- Increase the percent of students earning Mastery on each of the Regent Exams
- Increase the number of students taking college-level courses in Math

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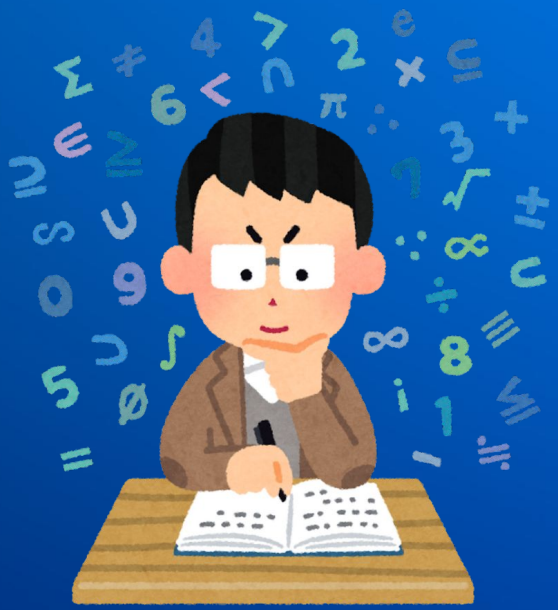

Thank you!

Any questions?

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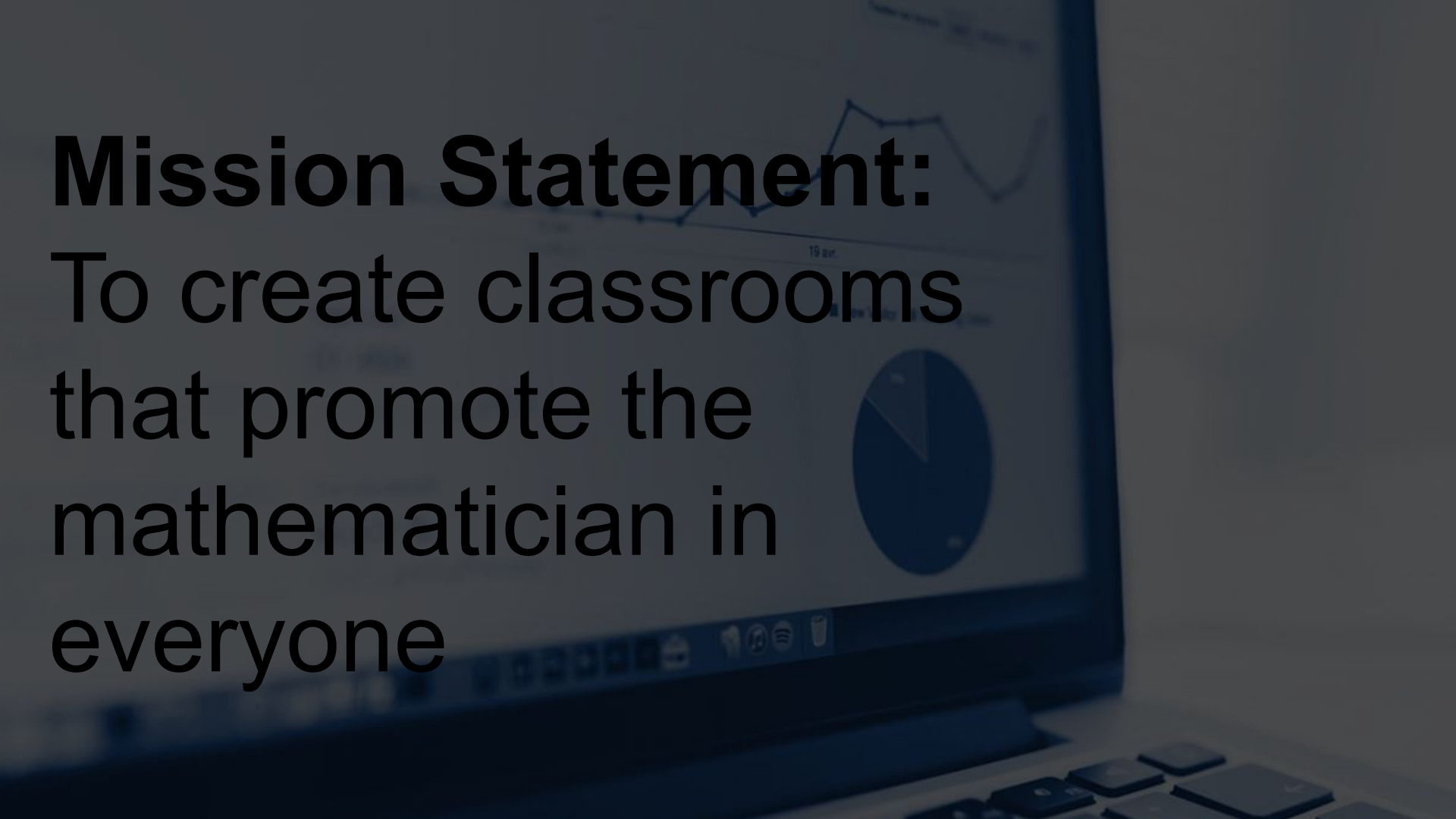

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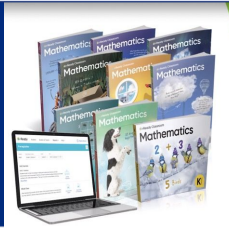

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