Mathematics

Faculty Expectations K-8



General Expectations

Daily Math instruction will take place in all K-8 classrooms through the implementation of the NYS Math Modules Eureka Curriculum & grade level pacing guides. It is grounded in the Singapore Math Philosophy (Concrete → Pictorial → Abstract) and includes vocabulary instruction. All teachers are responsible for knowing their grade level learning expectations and levels of mastery as outlined here.

Fluency:

- **K–3:** Five/Ten frames, subitizing, number recognition, rekenrek, math fact practice.
- **Grades 4–5:** Math fact practice, sprints, fact games, standard algorithms for whole-number operations.
- **Grades 6–8:** Procedural fluency with rational numbers (fractions, decimals, integers), percent, and algebraic operations (expressions and equations).
- **Math Talks (K–8):** Short (10-minute) routines to promote multiple strategies, reasoning, and numerical connections.

Daily Lesson Outline

- **Mini-Lesson:** (10-15 min) (I do)
- **Guided Practice:** (We Do) Guided practice using aligned practice and resources such as manipulatives, Modules, Eureka etc while providing targeted and specific feedback to students.
- **Independent Practice:** (You Do) Aligned independent/group practice to assess understanding of the lesson using module resources.
- **Share:** Students share solutions, discuss strategies, and reflect on key learning at the end of class.
- **Technology Resource**: IXL

Assessments

- **Formative:** Use quizzes, exit tickets, or conferences to monitor ongoing skill progress.
- **Summative:** Design tests based on classroom instruction, guided/independent practice, and formative results. There should be problem-solving / application tasks included in the assessment.
    - Question Sources: Incorporate module content, Singapore math-based manipulatives, visual pictorial models & released state test questions
- **Small Groups & Conferences:** Teachers should maintain notes on student progress.
- **Additional Focus:** Include fluency growth tracking (sprints/math facts)

Benchmarking & Progress Monitoring Requirements

All students in Grades K-8 will be benchmarked a minimum of three times a year using NWEA MAP Mathematics. For K-5, teachers will also use district approved mCLASS Math assessment system three times per year. Special Education and RTI teachers will also use the mCLASS Math assessment system for progress monitoring.

Homework

Grades K-3 (~15-20 min)

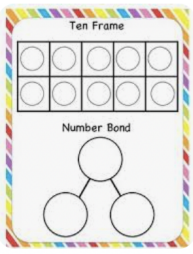
- Math Facts: Daily practice is key to developing math fact fluency.
- Monday-Thursday

Grades 3-6 (~20-30 min)

- IXL weekly assignments
- Monday-Thursday

Grades 7-8 (~20-30 min)

- Monday-Thursday





Classroom Environment: A classroom environment that is organized, engaging, and aligned with the curriculum helps students practice skills consistently and supports continuous learning. The following elements are expected in every classroom to ensure alignment and provide a consistent, supportive learning space for all students.

- **All Grades:**
    - Anchor charts and strategies displayed for current unit of study
    - Math manipulatives stored neatly together in a designated area in the classroom.
- **K:** Hundreds chart to 100, Shapes, Numbers to 20 (Digit, Word, Ten Frame), Rekenrek visible & utilized
- **Grades 1-2:** Hundreds chart to 120, Numbers to 20 (Digit, Word, Ten Frame), Rekenrek visible & utilized
- **Grade 3:** Hundreds chart to 120, multiplication chart posters
- **Grades 4-8:** Vocabulary wall

There are other programs/ resources that individual teachers or grade level teams may use occasionally

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