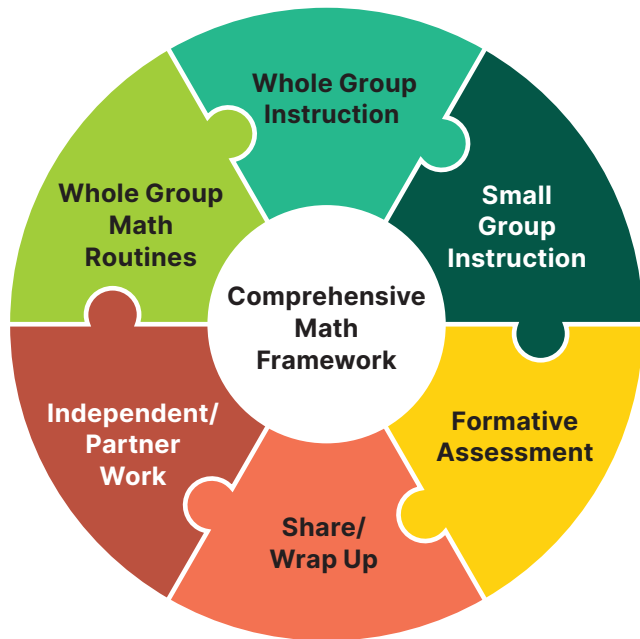


Seattle Public Schools Comprehensive Math Framework grounds classroom instruction in math content and math practice College and Career Readiness Standards (Common Core) and equitable teaching practices by providing opportunities for students to engage in rigorous mathematics, participate in mathematical discourse, and solve meaningful mathematics problems. This framework details the key components of the math block that will support all students in developing conceptual understanding and procedural fluency and provide opportunities for application.



Seattle Public Schools Comprehensive Math Framework provides PreK – 5 Teachers with guidance about how to structure the math block in ways that promote student agency, mathematical identity, and academic rigor. Effective planning includes the six components of the Comprehensive Math Framework during a unit of math instruction. Some components are provided each day while other components should be planned at strategic points during the unit.

How to Build an All-Inclusive Math Community

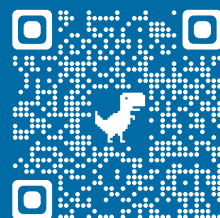
- ▶ Regard students from a **strength-based** perspective
- ▶ Foster a **safe atmosphere** in which students feel comfortable sharing
- ▶ Encourage exploration of a variety of meaningful **problem-solving strategies**
- ▶ Offer hands-on teaching using **math manipulatives** in all grades
- ▶ View mistakes as **opportunities to learn**
- ▶ Allow ample time for **productive struggle**
- ▶ Teach the value of **student discourse**



These titles are available at nctm.org
 Catalyzing Change in Early Childhood and Elementary Mathematics (2020)
 The Impact of Identity in K-8 Mathematics (2013)

Common Core State Standards for Mathematics

Additional information available at:



corestandards.org/Math

nctm.org

achievethecore.org

mysps.seattleschools.org



Comprehensive Math Framework

PreK-5

An Educator's Guide to Planning Equitable Instruction in Seattle Public Schools



SEATTLE EXCELLENCE
 Educate, Engage, Empower.

Whole Group Math Routines

Daily • 10-20 Minutes

Strategy Provide routines and instructional activities inviting students to make sense of math concepts and to develop and share their own thinking. Use multiple entry points to build number sense, fluency, and a collaborative classroom culture.

Result Students engage in mathematical discourse using predictable structures. Opportunities for discourse develop math identity, classroom community, and shared math authority.

Examples Quick image, true/false equations, choral count



Independent / Partner Work

Daily • 10-20 Minutes

Strategy Set aside time for students to work independently or strategically with partners on the content from the whole group instruction or routine, or to review and practice familiar content. Teachers may use this time to confer with individual students and/or for small group instruction.

Result Students deepen their conceptual understanding and develop computational fluency by continuing to work on content launched during whole group instruction and by discussing mathematical thinking with partners.

Examples Differentiated practice or choice options from instructional materials, math games, counting collections, centers or stations model

Whole Group Instruction

Daily • 10-20 Minutes

Strategy Deliver lesson content to the whole class based on grade level standards and practices. The structure of a lesson may be built around exploration or a gradual release of responsibility.

Result Students engage in learning new content or continue to develop and practice appropriate grade-level content.

Examples Lesson from instructional materials, 3-act-task

Small Group Instruction

2-4x per Week • 10-20 Minutes

Strategy Form fluid and flexible small groups based on results of formative assessment. Meet regularly for targeted instruction during Independent/Partner work.

Result Students are provided with differentiated instruction designed to meet individual student needs while remaining focused on the day's learning target.

Examples Number sense routine, game, bridge task to address foundational content, additional activity to further address the day's learning target

Share/Wrap Up

Daily • 5-10 Minutes

Strategy Facilitate a whole-class share-out and discussion of the lesson to revisit and reinforce the key concept and to allow for reflection.

Result Students develop metacognition—seeing themselves as mathematicians—as they reflect on their learning process, share new understandings, and ask questions about their math learning.

Examples Select, sequence, and connect student work, student gallery walk, student reflection in journal

Formative Assessment

1-3x per Week • 5-20 Minutes or ongoing

Strategy Collect, record, and organize either formal or observational data about what students currently know and understand as well as learning still in progress.

Result Teachers use data to inform future whole group instruction and to determine flexible groups for small group instruction.

Examples Observations, interviews, exit tickets student work