Comprehensive Math Framework
An Educator’s Guide to Planning Equitable Instruction in Seattle Public Schools

Seattle Public Schools Comprehensive Math Framework grounds classroom instruction in math content and 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
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

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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

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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

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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

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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

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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