

Elementary Mathematics

The goal of the mathematics program in the Newton Public Schools is for all students

- to understand mathematical concepts and procedures;
- to be able to apply procedures, concepts, and processes to the solution of challenging problems in a variety of school, home and work settings; and
- to prepare students for continued study of mathematics and fields that require the use of mathematics.

Transition to the 2011 Massachusetts Frameworks incorporating the Common Core State Standards

- In the 2011-2012 school year, the Newton Public Schools begins the transition to the 2011 *Massachusetts Mathematics Curriculum Frameworks, incorporating the Common Core State Standards*.
- The new standards, developed by education officials from 48 states, address the ongoing concerns at the national level about the focus and coherence of mathematics education, and about the depth of understanding of mathematics among students in the United States.

Purpose of Common Core State Standards

*“The Common Core State Standards define the **rigorous skills and knowledge** in English Language Arts and Mathematics that need to be effectively taught and learned for students to be ready to succeed academically in credit-bearing, college-entry courses and in workforce training programs.”*

Standards for Mathematical Practice

“The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and expertise throughout the elementary, middle and high school years.”

2011 Massachusetts Curriculum Framework for Mathematics

Mathematical Practices

Expertise for students at all grade levels:

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

Key Features of the New Mathematics Framework

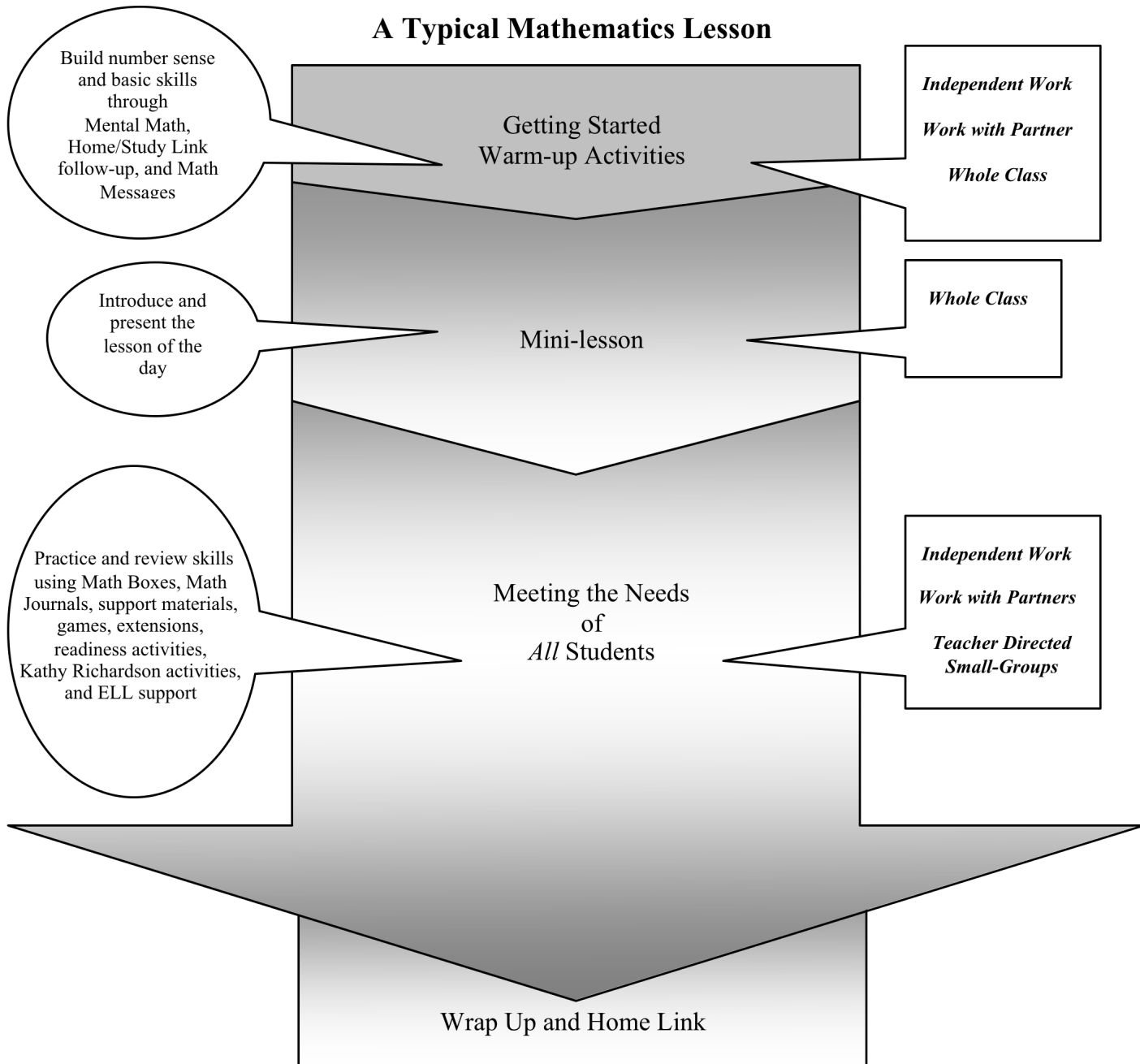
The new standards support improved curriculum and instruction due to increased:

- **FOCUS**, via critical areas at each grade level
- **COHERENCE**, through carefully developed connections within and across grades
- **CLARITY**, with precisely worded standards that cannot be treated as a checklist
- **RIGOR**, including a focus on college and career readiness and Standards for Mathematical Practice PreK-12

Core Text, New Units

- We have two years to complete the transition to the new frameworks.
- We will be realigning mathematical content and changing our mathematical practice simultaneously.
- During the transition, we will continue to use *Everyday Mathematics* as our core text, eliminating topics that are no longer content expectations in a grade, and adding units of study from *Context for Learning* and *Understanding Numbers* that deepen the instruction on topics defined as critical areas for each grade.

A Typical Mathematics Lesson



Looking Ahead

- September 2013 - Curriculum and instruction will be *fully* aligned to the new frameworks
- Spring 2014 - MCAS in Grades 3-8 based exclusively on the new frameworks.
- Spring 2015 - Massachusetts will transition to the Common Core assessment - PARCC - for English Language Arts and Math
- Similar standards development process for science and engineering, with standards expected in mid-2012 and a transition period to follow.