

Newton Public Schools Elementary Mathematics Program Search and Implementation 2017

Beginning in September 2017, Newton third and fourth grade teachers will be teaching their students mathematics using a new program: *Investigations 3*.

Why now?

- 2004- Newton Public Schools adopted Everyday Math 2 district wide
- 2011- Massachusetts Curriculum Framework for Mathematics Incorporating Common Core State Standards released
- 2012 – 2014 - Math Coaches reworked Everyday Math to align to the Common Core, posting changes and supplements for teachers on an electronic platform
- Publishers began a thorough rewriting process
- Fall 2015- most programs released rewrites

Instructional shifts

With the new frameworks, what we value in math instruction and learning has shifted:

- Math class is about learning not performing
- Mistakes are valuable
- Questions are important
- Depth is more important than speed

Achieved through interesting and engaging mathematical problems that encourage connections, conversations and modeling.

Search Process:

- Invitation to all elementary educators
- Over 40 interested educators responded
- Created a committee of 27 educators, balancing schools, grades and roles
- Eight meetings: May 11, 2016 to May 3, 2017

Charge to the Committee:

Using a fair process, consider all programs that are currently available and aligned to the new curriculum frameworks and recommend two elementary mathematics programs to the Office of Teaching and Learning.

Calendar

May 11, 2016	Launch Committee work; Review IMET
June 28th, 2016	Develop and agree on Quality Rubric Review Content and Practice Standards
September and October	In small groups, analyze programs using rubric
November	Review rankings and compare programs

December to January	Site visits to other districts
February and March	Discussion/feedback, possible Unit trials
Early April	Make recommendations
May and June	PD for Elementary Coaches to prepare for FY18

IMET- Instructional Materials Evaluation Tool From Achieve the Core

This Math IMET is designed to help educators determine whether instructional materials are aligned to the Shifts and major features of the Common Core State Standards (CCSS). The substantial instructional Shifts (www.corestandards.org/other-resources/key-shiftsin-mathematics/) at the heart of the Common Core State Standards are:

- *Focus strongly where the Standards focus.*
- *Coherence: Think across grades and link to major topics within the grade.*
- *Rigor: In major topics, pursue conceptual understanding, procedural skill and fluency, and application with equal intensity.*

IMET Four steps:

Step 1: Non-Negotiables

- Non-Negotiable 1: Materials must reflect the content architecture of the Standards by not assessing the specific topics named in Metric 1A before the grade level where they first appear in the Standards.
- Non-Negotiable 2: Materials must focus coherently on the Major Work of the grade in a way that is consistent with the progressions in the Standards.

Step 2: Alignment Criteria

- Alignment Criterion 1: Materials must reflect the balances in the Standards and help students meet the Standards' rigorous expectations.
- Alignment Criterion 2: Materials must authentically connect content standards and practice standards.
- Alignment Criterion 3: Materials must provide supports for English Language Learners and other special populations.

Step 3: Evaluation Summary

- Compile all of the results from Sections 1 and 2 to determine if the instructional materials are aligned to the shifts and major features of the CCSS.

Step 4: Develop our rubric

Essential elements of a school mathematics program:

1. Effective Teaching and Learning
2. Curriculum
3. Access and Equity
4. Tools and Technology
5. Assessment

Programs evaluated by math coaches using IMET

EnVision- Pearson

Math Expressions- Houghton Mifflin

Eureka- Great Minds

Go Math- Houghton Mifflin

Everyday Math 4- McGraw Hill

Bridges- The Learning Center

Investigations- Pearson
Math in Focus- Houghton Mifflin
Stepping Stones- Origoq

Trailblazers- Kendall Hunt
Jump Math- Canadian Registered Charity
My Math- McGraw Hill

Final IMET Analysis:

Meets IMET Criteria	Does Not Meet IMET Criteria
Bridges to Mathematics	Go Math
EnVision	Jump Math
Eureka	Stepping Stones
Everyday Math 4	Math Expressions
Investigations 3	My Math
	Trailblazers

Committee evaluation of five programs

- Apply our Quality Rubric to evaluate
- Determine two programs meet our criteria:
 - *Everyday Math 4*
 - *Investigations 3*

Next Evaluation Steps:

Site Visits:

- Carlisle - 11 committee members observed Everyday Mathematics 4 in Grades 1, 2, 3, 5
- Natick - 6 committee members observed Investigations 3 in Grades 3 and 4
- Arlington - 6 committee members observed Investigations 3 in Grades K and 1
- Feedback from Site Visits was recorded and reported back to the committee

Unit Pilots:

- Everyday Math 4- grade 3 co-taught Countryside - teachers reported student understanding of fractions was greater than in past years. They did, however, feel uncomfortable with the increased amount of teacher talk time.
- Investigations 3- grade 3 Memorial-Spaulding - teacher also reported student understanding of fractions was greater than in past years. She really liked students' ability to explore fractional concepts and make connections.

Recommendations:

At the April meeting, the committee reviewed all the data, heard from pilot teachers and those who went on site visits. The feedback was overwhelmingly positive for *Investigations 3*.