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**

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 11, 2016</td>
<td>Launch Committee work; Review IMET</td>
</tr>
<tr>
<td>June 28th, 2016</td>
<td>Develop and agree on Quality Rubric</td>
</tr>
<tr>
<td></td>
<td>Review Content and Practice Standards</td>
</tr>
<tr>
<td>September and October</td>
<td>In small groups, analyze programs using rubric</td>
</tr>
<tr>
<td>November</td>
<td>Review rankings and compare programs</td>
</tr>
<tr>
<td>Month Range</td>
<td>Description</td>
</tr>
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<td>----------------------</td>
<td>--------------------------------------------------</td>
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<tr>
<td>December to January</td>
<td>Site visits to other districts</td>
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<tr>
<td>February and March</td>
<td>Discussion/feedback, possible Unit trials</td>
</tr>
<tr>
<td>Early April</td>
<td>Make recommendations</td>
</tr>
<tr>
<td>May and June</td>
<td>PD for Elementary Coaches to prepare for FY18</td>
</tr>
</tbody>
</table>

**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-shifts-in-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**

<table>
<thead>
<tr>
<th>Program</th>
<th>Publisher</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnVision</td>
<td>Pearson</td>
</tr>
<tr>
<td>Eureka</td>
<td>Great Minds</td>
</tr>
<tr>
<td>Everyday Math 4</td>
<td>McGraw Hill</td>
</tr>
<tr>
<td>Math Expressions</td>
<td>Houghton Mifflin</td>
</tr>
<tr>
<td>Go Math</td>
<td>Houghton Mifflin</td>
</tr>
<tr>
<td>Bridges</td>
<td>The Learning Center</td>
</tr>
</tbody>
</table>

Newton Public Schools  
Office of Teaching and Learning  
Elementary Mathematics Report to School Committee  
May 2017
Investigations- Pearson  Trailblazers- Kendall Hunt  
Math in Focus- Houghton Mifflin  Jump Math- Canadian Registered Charity  
Stepping Stones- Origoq  My Math- McGraw Hill

Final IMET Analysis:

<table>
<thead>
<tr>
<th>Meets IMET Criteria</th>
<th>Does Not Meet IMET Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridges to Mathematics</td>
<td>Go Math</td>
</tr>
<tr>
<td>EnVision</td>
<td>Jump Math</td>
</tr>
<tr>
<td>Eureka</td>
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<td>My Math</td>
</tr>
<tr>
<td></td>
<td>Trailblazers</td>
</tr>
</tbody>
</table>

Committee evaluation of five programs

• Apply our Quality Rubric to evaluate
• Determine two programs meet our criteria:
  o *Everyday Math 4*
  o *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*. 