Grade Two Mathematics
2016-2017 Year at a Glance for Families

Teachers work very hard to pace their teaching in a way that matches their students’ needs. Because of this, not every teacher will teach the same lesson on the same day as other teachers in their grade. For consistency, however, the grade level topics are taught and assessed in the same sequence, as described below. We invite you to visit our website for additional resources and upcoming events.

Order of Topics:
- Unit 1: Place Value (Chapter 1)
- Unit 2: Addition (Chapters 2)
- Unit 3: Subtraction (Chapters 3) and Using Bar Models (Chapter 4)
- Unit 4: Geometry & Fractions (Chapters 18, 19 and 12)
- Unit 5: Measuring Length (Chapters 7, 13)
- Unit 6: Time and Money (Chapters 11, 14)
- Unit 7: Graphing (Chapter 17)
- Unit 8: Measuring Mass and Volume (Chapters 8 & 9)
- Unit 9: Arrays & Repeated Addition (Common Core OHES Unit Materials)

Problem Solving:
In Second grade students are expected to:
- Continue to use problem structures from earlier grades to solve one step word problems
- Solve simple multi-step word problems
- Use a variety of strategies to solve open-ended, non-routine problems
- Work accurately and communicate clearly in problem solving situations

Mathematics Progression through the Years:

<table>
<thead>
<tr>
<th></th>
<th>Kindergarten</th>
<th>First Grade</th>
<th>Second Grade</th>
<th>Third Grade</th>
<th>Fourth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operations</strong></td>
<td>Addition &amp; Subtraction</td>
<td>Addition &amp; Subtraction</td>
<td>Addition &amp; Subtraction</td>
<td>Addition, Subtraction, Multiplication &amp; Division</td>
<td>Addition, Subtraction, Multiplication &amp; Division</td>
</tr>
<tr>
<td><strong>Problem Structures</strong></td>
<td>Join and separate</td>
<td>Join, separate, part-part-whole, and comparison</td>
<td>Join, separate, part-part-whole, comparison, and equal groups (as repeated addition)</td>
<td>Join, separate, part-part-whole, comparison, equal groups, array and area</td>
<td>Join, separate, part-part-whole, comparison, equal groups, array/area, and multiplicative comparison</td>
</tr>
<tr>
<td><strong>Complexity</strong></td>
<td>One step with unknown result</td>
<td>One step with unknown in any place and non-routine</td>
<td>One step with unknown in any place, multi-step, and non-routine</td>
<td>One step with unknown in any place, multi-step, and non-routine</td>
<td>One step with unknown in any place, multi-step, and non-routine</td>
</tr>
<tr>
<td><strong>Non-Routine Problem Solving Strategy Focus</strong></td>
<td>Look for Patterns, Act it Out</td>
<td>Act it Out, Draw a Picture</td>
<td>Draw a Picture, Try a Simpler Problem</td>
<td>Make a Table, Use Logic</td>
<td>Make an Organized List, Work Backwards</td>
</tr>
</tbody>
</table>
Fact Fluency:
In Second grade students are expected to:
- Maintain mastery of addition and subtraction facts within 10
- Master addition and subtraction facts within 20

Fact Fluency Progression through the Years:

<table>
<thead>
<tr>
<th>Assessments</th>
<th>Kindergarten</th>
<th>First Grade</th>
<th>Second Grade</th>
<th>Third Grade</th>
<th>Fourth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Problems</td>
<td>Addition &amp; Subtraction within 5</td>
<td>Addition &amp; Subtraction within 10</td>
<td>Addition &amp; Subtraction within 20</td>
<td>Multiplication within 100</td>
<td>Division within 100</td>
</tr>
<tr>
<td>Number of Problems</td>
<td>assessed through observation &amp; conferencing</td>
<td>30</td>
<td>30</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Time Given</td>
<td>assessed through observation &amp; conferencing</td>
<td>2 minutes</td>
<td>2 minutes</td>
<td>2 minutes</td>
<td>2 minutes</td>
</tr>
</tbody>
</table>

Report Card Indicators for fact fluency:
- **PROFICIENT:** 90%-100% accuracy in classwork and on timed assessments
- **PARTIALLY PROFICIENT:** 50%-89% accuracy in classwork and on timed assessments
- **NOT CURRENTLY DEMONSTRATING:** 0%-49% accuracy in classwork and on timed assessments

Grade Level Common Assessments:
- Pre-Assessments and Formative Assessments throughout the year
- Problem Solving work samples collected throughout the year
- Fact Fluency Benchmarks: October and June
- Content & Skills Benchmark Assessments: November, January and May
- Word Problem Structures & Modeling Assessment: April
- Measures of Academic Achievement (MAP) Math Section: June

Online Textbook Access:
As requested by families, our district is continuing to provide home access to the student math workbooks and informational videos. In order to access the *Math in Focus* materials, you need to log into the Think Central Website at [www-k6.thinkcentral.com](http://www-k6.thinkcentral.com). **User Name:** Student ID (the student's Lunch Number) followed by a period and the school initials (example: 123456.VES). **Password:** Student ID (the Student's Lunch Number)

You can also access additional resources posted on our school website, including a more complete manual for using Think Central, by following this link: [http://www.mtsd.k12.nj.us/Page/3897](http://www.mtsd.k12.nj.us/Page/3897).