

# Grade 3--First Nine Weeks

<b>GEO &amp; MD</b>	<b>OA</b>	<b>OA</b>	<b>NBT</b>
Sorting & classifying 2D shapes "Get to know you" data collection— scale of 1	Equal grouping model for multiplication	Division as separating into equal groups	Number sense – Place value & number representations
8-10 days	10-15 days	5-7 days	10-13 days

**Developing A Growth Mindset-** During the first week of math, explore these resources to establish routines, teach students to express their thinking and defend their reasoning

- **Mindset Math book** - Building norms p17-18, Paper folding activity p.19-21
- <https://www.youcubed.org/weeks/week-4-grade-3-5/>

## GEO-Sorting & classifying 2D shapes MD-Data collection—scale of 1 (8-10 Days)

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>• Sort 2D shapes based on attributes. Foundation for M.3.24</li> <li>• Describe the attributes of the sorts. M.3.24</li> <li>• Get to know you graphs data collection— Pictographs and bar graphs. Foundation for M.3.18</li> </ul>	<ul style="list-style-type: none"> <li>• Describe groups based on attributes. M.3.24</li> <li>• Understand that shapes can belong to more than one group. M.3.24</li> <li>• Get to know you graphs- - Draw graphs and interpret data with scale of 1. Foundation for M.3.18</li> </ul>	<ul style="list-style-type: none"> <li>• Describe how shapes within a sort are the same and are different. M.3.24</li> <li>• Draw non-examples for a specified group. M.3.24</li> <li>• Get to know you graphs— Develop a need for scaled graphs. Draw scaled graphs and interpret. M.3.18</li> </ul>	<ul style="list-style-type: none"> <li>• Solve one- and two-step problems related to information presented on a get to know you scaled graph. M.3.18</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>• Review and solidify bar and pictographs with a scale of 1.</li> <li>• Understand the importance of scale when graphing.</li> <li>• Use graphical data to solve word problems.</li> </ul>			
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>• Risk-taking, defending thinking, critiquing the reasoning of others is encouraged and valued</li> </ul>			
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>• Quick images with shapes.</li> <li>• Quick images (mixed coins, base10 materials, multiple 10-frames, clock, etc). Can be used to assess comfort and familiarity with a variety of models.</li> <li>• Toward the end of this unit do quick images of domino dots, 5-frames, 10-frames, base 10 in which students must draw what they see. This will be used to organize work when they draw equal grouping pictures.</li> </ul>			
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li>• <a href="#">2D Shape Sort</a></li> <li>• Use think-pair-share to debrief. Have students think of questions they could ask about the graph if they were the teacher.</li> <li>• <b>My Math:</b> p.697-702,</li> <li>• <b>My Math:</b> p.839-844</li> <li>• <b>Math in practice:</b> 322-336</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Venn Diagram Sort</b></li> <li>• <b>My Math:</b> p.851-856</li> <li>• <b>Math in practice guide:</b> p.134 – sorting chart</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Display a graph</b> in which the data goes off of the graph. Ask, "How do we fit this data onto our graph?"</li> <li>• <b>My Math:</b> p.703- 714</li> <li>• <b>My Math:</b> p.859-864</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Birthday Money</a> TPT (Teacher Pay Teacher)</li> <li>• <a href="#">Classroom Supplies Task</a> on Illustrative Math</li> <li>• <b>Mindset Math:</b> Bar graph- Tongues, Tails and in between: p. 25-35</li> <li>• Numberless word problems –scroll down to problem bank <a href="https://bstockus.wordpress.com/numberless-word-problems/">https://bstockus.wordpress.com/numberless-word-problems/</a></li> </ul>

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### OA (10-15 days)

#### Equal grouping model for multiplication

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Introduce the equal grouping model for multiplication. M.3.1</li> <li>Ensure students think of and connect "x" to equal groups. M.3.1</li> </ul>	<ul style="list-style-type: none"> <li>Sort equal grouping drawings and describe sorts. If students sort by number of groups or number of dots introduce the term, "facts". If students sort by the answer (product) introduce the term "factor". Foundation for M.3.7</li> </ul>	<ul style="list-style-type: none"> <li>Have students draw 5 groups of zero cookies and zero groups of 5 cookies. Describe what they notice. Likewise, draw 1 group of 5 cookies and 5 groups of 1 cookie. Generalize the "rules" for zero and one. Foundation for M.3.5</li> <li>Students create stories with equal grouping contexts. Foundation for M.3.3</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Build the language of equal groups.</li> <li>Draw good pictures for equal groups. Organize drawings using domino dots or 5-frame images.</li> <li>Represent multiplication as repeated addition of equal groups.</li> <li>Introduce multiplication notation—read as "groups of".</li> <li>Generalize "rules" for 0 and 1.</li> <li>Notice that in some cases you may get the same product for different pictures. (e.g., 3 groups of 5 dots and 5 groups of 3 dots). Introduce the term "Commutative Property". Foundation for M.3.5</li> </ul>		
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>Graphs with a variety of scales.</li> <li>Shapes can be named in more than one way.</li> </ul>		
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>Tell students stories with equal grouping contexts. Have students draw math pictures for the story. Do not need to solve at this time. Foundation for M.3.3</li> </ul>		
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li><b>Circles and Dots</b>—Only write on front side of paper.</li> <li><b>Mindset Math:</b> Dozens of Dice p.85</li> </ul>	<ul style="list-style-type: none"> <li>Use circles and dots work. Cut into individual cards and have students sort in multiple ways. Ask students if they have them all and draw pictures for missing "facts".</li> </ul>	<ul style="list-style-type: none"> <li>Have students create their own x stories and illustrate.</li> <li>Have students demonstrate equal groups using manipulatives.</li> <li><b>My Math:</b> p.193-198</li> <li><b>Math in Practice:</b> p. 9-16, p.18-21</li> </ul>

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**OA (7-10 days)**

**Division as separating into equal groups**

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Connect division to equal grouping multiplication. Division as separating into equal groups. Foundation for M.3.2</li> <li>Build the language of division:                             <ul style="list-style-type: none"> <li>“separated into equal groups”,</li> <li>“partitioned”.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Students create stories in which things are separated into equal groups. Foundation for M.3.3</li> </ul>	<ul style="list-style-type: none"> <li>Think of division in terms of multiplication (missing factor). M.3.6</li> </ul>	<ul style="list-style-type: none"> <li>Determine the unknown in a multiplication or division problem. M.3.4</li> <li>Solve one- and two-step word problems involving the equal grouping model for multiplication and division. M.3.3 &amp; M.3.8</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Develop an understanding of division as separating into equal groups.</li> <li>Begin to develop the inverse relationship between multiplication and division.</li> </ul>			
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>Multiplication as groups of ____, equal groups, expressed through commutative property.</li> <li>There are multiple ways to solve the same problem (warm-ups).</li> </ul>			
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>Tell students stories contexts involving separating into equal groups. Have students draw math pictures for the story. Do not need to solve at this time. Foundation for M.3.3</li> <li>Periodically ask students to draw pictures involving zero groups of ____ or ____ groups of zero AND 1 group of ____ or ____ groups of 1. Designed to build fluency with 0 and 1 facts and related visual representations. Foundation for M.3.7</li> </ul>			
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li>Students can begin with an equal grouping multiplication picture and then turn the picture around.</li> <li>Division Brain Pop</li> <li><a href="#">3 Act Task – Knotty Rope</a></li> <li><b>My Math:</b> p.245-256</li> <li><b>Math in Practice:</b> p. 31-34</li> </ul>	<ul style="list-style-type: none"> <li>Students create number/picture stories showing things separated into equal groups.</li> <li>Given a bag of manipulatives students will divide into equal groups.</li> </ul>	<ul style="list-style-type: none"> <li>15 ÷ 3 Think of “15 separated into 3 groups” also as “3 groups of how many dots is 15?” 3 x ____ = 15</li> <li><b>My Math:</b> p.265-276</li> </ul>	<ul style="list-style-type: none"> <li>Better lesson division worksheet</li> </ul>

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### NBT (8-10 days) Number sense-Place value & number representations

<b>Conceptual Flow</b>	<ul style="list-style-type: none"> <li>Review and solidify representations for 1s, 10s, and 100s. Foundation for M.3.10 &amp; 11</li> <li>Introduce representations for 1000. Foundation for M.3.10 &amp; M.3.11</li> </ul>	<ul style="list-style-type: none"> <li>Review and solidify standard form and expanded form for number. Foundation for M.3.11</li> </ul>	<ul style="list-style-type: none"> <li>Students represent 2- and 3-digit numbers in a variety of ways using hundreds, tens, and ones. (e.g., 62 can be 6 tens and 2 ones or 4 tens and 24 ones). Foundation for M.3.11</li> </ul>	<ul style="list-style-type: none"> <li>Decompose decades into 2 parts and draw related pictures. Foundation for M.3.11</li> </ul>	<ul style="list-style-type: none"> <li>Decompose hundreds into decades (2 parts) and draw related pictures. Foundation for M.3.11</li> </ul>
<b>Essential Goals</b>	<ul style="list-style-type: none"> <li>Review and solidify various representations for number (standard form, expanded form, concrete models, good drawings).</li> <li>Review and solidify representations of numbers in a variety of ways using multiples of tens and ones.</li> <li>Review and solidify the relative size of numbers and the relative position of numbers.</li> </ul>				
<b>Ongoing Ideas</b>	<ul style="list-style-type: none"> <li>Examine patterns, including missing parts of a hundred grid/chart. M.3.9</li> <li>Solve one- and two-step word problems involving equal grouping contexts and graphical data. M.3.8</li> <li>Division as separating into equal groups.</li> </ul>				
<b>Daily Math Warm-Ups (Number Talk Style)</b>	<ul style="list-style-type: none"> <li>Quick images—equal groups (similar to drawings in previous units).</li> <li>Quick images of filled ten frames to begin to build the foundation for “10s facts”.</li> <li>Quick images—mixed base ten materials.</li> <li>Students locate numbers on an open number line.</li> <li>Given a 2- or 3-digit number, students represent in a variety of ways.</li> <li>Patterns—describe, extend, find the missing part of a number pattern. M.3.9</li> </ul>				
<b>Activity suggestions</b>	<ul style="list-style-type: none"> <li>Students draw pictures for 1-, 2- and 3-digit numbers.</li> <li>Construct a hundred grid/chart</li> <li><b>Fundamentals(Green)</b> Make 100 p.8</li> <li><b>Fundamentals (Purple)</b> Count Down p.36</li> </ul>	<ul style="list-style-type: none"> <li>Four-part charts</li> <li><b>My Math:</b> p.9-14</li> </ul>	<ul style="list-style-type: none"> <li>Equivalency charts</li> </ul>	<ul style="list-style-type: none"> <li>Students make concrete representations of 10 and draw them.</li> </ul>	<ul style="list-style-type: none"> <li>Students make concrete representations of 100 and draw them.</li> <li><b>Math in Practice:</b> p.152-170</li> </ul>