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| **Second Trimester** | Grade: 3 | | | | Unit Number: 4 | | |
| Unit Overview:  This unit focuses on multiplication and division. Students are expected to model and solve multiplication and division stories. They will also practice these facts, as well as explore the links between multiplication and division. | | | | | | |
| Essential Question: | | | | | | |
| Academic Vocabulary: multiplication factor product division dividend divisor quotient array commutative property associative property distributive property arithmetic pattern area unit square area model equation additive | | | | | | |
| Lesson | Standard | Guiding Questions | Differentiation | | Additional Resources | Student Learning Goals |
| 4.1 | **3.OA.1**  **3 OA.3**  **3 OA.4**  **3 OA .5**  **3 OA. 7**  **3 OA .8** | How do you decide which tools to use to solve a problem? |  | |  | I can…   * Find the quotients, with and without remainders, of whole number division problems with one-digit divisors and up to two-digit dividends. * Count forward and backward by 1s, 2s, 5s, 10s, and 100s from any given three-or four digit numbers * Explain that multiplication is repeated addition of the same number. * Interpret products of whole number in multiplication (e.g., 4 x 3 groups of 3 or 3 groups of 4; or, an array with 4 rows and 3 columns; or, the area of a 4-by-3 rectangle, or, 4 rows of 3 objects.). * Identify parts of a multiplication problem (factors and products). * Explain division as repeated subtraction of the same number or as a set of objects divided into an equal number of shares. * Interpret whole-number quotients of whole numbers (e.g., 80/4 is 4 groups with 20 in each group, or 20 groups with 4 in each group). * Identify parts of division equations (dividend, divisor, and quotient). * Use equal groups, arrays, measurement quantities and drawings to solve multiplication and division word problems within 100. * Use equations with a symbol for the unknown number to represent multiplication and division problems. * Determine the unknown whole number in multiplication and division problems. * Apply the properties of operation as strategies to multiply and divide (commutative, associative, and distributive property of multiplication). * Show the relationship between multiplication and division (e.g., turn a division problem into multiplication problems with an unknown factor). * Quickly multiply and divide within 100 using strategies such as the relationship between multiplication and division or properties of operation to find the answers. * Instantly recall the product of any two one-digit numbers * Identify arithmetic patterns in number charts, addition tables, and multiplication tables. * Explain arithmetic patterns using properties of operation. * Measure the area of a shape of flat surface by counting the number of unit squares it takes to cover it with no gaps or overlaps. * Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths. * Multiply side lengths of rectangles with whole number side lengths to solve word problems * Decompose an irregular figure into non-overlapping rectangles. * Explain area as additive and use this understanding to solve world problems. |
| 4.2 | **3 OA .1**  **3 OA .3**  **3 OA .4**  **3 OA .5**  **3 OA .7**  **3 OA .7 a**  **3 OA .7 b**  3 MD. 8 | How can diagrams help you organize information in number stories? |  | |  |
| 4.3 | **3. OA .1**  **3. OA .2**  **3. OA .3**  **3. OA .4**  **3. OA .6**  **3. OA .7** | How might sharing these solution strategies help you learn about mathematics? |  | |  |
| 4.4 | **3 .OA .2**  **3. OA .3**  **3. OA .4**  **3. OA .6**  **3. OA .7** | Why is it important to clearly explain  your thinking ? |  | |  |
| 4.5 | **3.OA.5**  **3. OA 7**  **3. OA .9**  3. NBT .2 | How might patterns help you solve multiplication problems? |  | |  |
| 4.6 | **3. OA .2**  **3. OA .4**  **3. OA .5**  **3. OA .6**  **3. OA .7**  **3. OA .9** | How might fact families help you build fact power? When might you use the Multiplication/Division Facts table?  Why? |  | |  |
| 4.7 | **3. OA .5**  **3. OA .7** | What other pitches use fact shortcuts? |  | |  |
| 4.8 | 3. OA .1  **3. OA .7**  3. OA .9  **3. MD .6**  **3. M .7 a** | What do problem solvers do before solving a problem? |  | |  |
| 4.9 | 3.MD.6  **3.MD.7b**  **3.MD.7d** | What other tools can help you estimate distances on maps using the scale? |  | |  |
| 4.10 | 3.MD.3 | What might we learn from the class data table that we cannot learn from your data table? |  | |  |
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