**Unit A: Place Value**

Grade Level: **3rd Grade**

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| **MA.3.A.6.1\*** | Represent, compute, estimate, and solve problems using numbers through hundred thousands. |
| **MACC.3.NBT.1.1** | Use place value understanding to round whole numbers to the nearest 10 or 100. |
| **MACC.3.NBT.1.2** | Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. |

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**Resources:**

<http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/unpacking/math/3rd.pdf>

<http://www.azed.gov/azcommoncore/mathstandards/3-5math/>

<http://www.tncore.org/math.aspx>

<http://elemmath.jordandistrict.org/mathematical-practices-by-standard/>

**Unit B: Data Analysis**

Grade Level: **3rd Grade**

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| **MA.3.S.7.1\*** | Construct, and analyze frequency tables, bar graphs, pictographs, and line plots from data, including data collected through observations, surveys, and experiments. |
| **MACC.3.MD.2.3** | Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one-and two-step “how many more” and “how many less” problems using information presented in school bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.* |
| **MACC.3.MD.2.4** | Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units-whole numbers, halves, or quarters. |
| **MA.3.A.4.1\*** | Create, analyze and represent patterns and relationships using words, variables, tables and graphs. |

**\*NGSSS**

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**Unit C -1: Understanding Multiplication and Division**

Grade Level: **3rd Grade**

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| **MACC.3.OA.1.1** | Interpret products of whole numbers, e.g., interpret 5 x 7 as the total number of objects in 5 groups of 7 objects each. *For example, describe a context in which a total number of objects can be expressed as 5 x 7.* |
| **MACC.3.OA.1.2** | Interpret whole-number quotients of whole numbers, e.g., interpret 56 divided by 8 as the number of objects in each share when 56 objects are partitioned equally into shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 divided by 8.* |
| **MA.3.A.1.3\*** | Identify and apply the use of inverse operations (multiplication and division). |
|  | **Unit C- 2: Multiplication and Division Properties**Grade Level: **3rd Grade** |
| **MACC.3.OA.2.5** | Apply properties of operations as strategies to multiply ~~and divide~~. *Examples: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known. (Commutative property of multiplication.) 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30. (Associative property of multiplication.) Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56. (Distributive property.)* |
| **MACC.3.OA.4.9** | Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. *For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.* |
| **MACC.3.NBT.1.3** | Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations. |

**\*NGSSS *\*\*Please make sure that by the end of third grade your students are fluent in multiplication and division within 100.***

**Resources:**

<http://www.ncpublicschools.org/docs/acre/standards/common-core-tools/unpacking/math/3rd.pdf>

<http://www.azed.gov/azcommoncore/mathstandards/3-5math/>

<http://www.tncore.org/math.aspx>

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 **Unit D: Application of Multiplication and Division**

Grade Level: **3rd Grade**

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| **MACC.3.OA.1.3** | Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. |
| **MACC.3.OA.1.4** | Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations* 8 × ? = 48, 5 = [] ÷ 3, 6 × 6 = ?. |
| **MACC.3.OA.2.6** | Understand division as an unknown-factor problem. *For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.* |
| **MACC.3.OA.3.7** | Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers. |
| **MACC.3.OA.4.8** | Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. |

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