# Correlation to the 2016 Mathematics Standards of Learning and Curriculum Framework – Grade 4

**Text/Instructional Material Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Publisher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Committee Member: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_**

**NOTE: The rating cells in the tables below are empty in order for division-level review teams to utilize this form.**

## Section I. Correlation with the Mathematics 2016 SOL and Curriculum Framework

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| **4.1** |  |  |  |
| **4.2** |  |  |  |
| **4.3** |  |  |  |
| **4.4** |  |  |  |
| **4.5** |  |  |  |
| **4.6** |  |  |  |
| **4.7** |  |  |  |
| **4.8** |  |  |  |
| **4.9** |  |  |  |
| **4.10** |  |  |  |
| **4.11** |  |  |  |
| **4.12** |  |  |  |
| **4.13** |  |  |  |
| **4.14** |  |  |  |
| **4.15** |  |  |  |
| **4.16** |  |  |  |

## Section II. Additional Criteria: Instructional Planning and Support

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| **Criteria** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| **1.** Materials emphasize the use of effective instructional practices and learning theory. |  |  |  |
| * 1. Students are guided through critical thinking and problem-solving approaches.
 |  |  |  |
| * 1. Concepts are introduced through concrete experiences that use manipulatives and other technologies.
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| * 1. Multiple opportunities are provided for students to develop and apply concepts through the use of calculators, hand held devices, computers, and other technologies.
 |  |  |  |
| * 1. Students use the language of mathematics including specialized vocabulary and symbols.
 |  |  |  |
| * 1. Students use a variety of representations (graphical, numerical, symbolic, verbal, and physical) to connect mathematical concepts.
 |  |  |  |
| 1. The mathematics content is significant and accurate.
 |  |  |  |
| * 1. Materials are presented in an organized, logical manner which represents the current thinking on how students learn mathematics.
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| * 1. Materials are organized appropriately within and among units of study.
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| * 1. Format design includes titles, subheadings, and appropriate cross-referencing for ease of use.
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| * 1. Writing style, length of sentences, vocabulary, graphics, and illustrations are appropriate.
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| * 1. Level of abstraction is appropriate, and practical examples, including careers, are provided.
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| * 1. Sufficient applications are provided to promote depth of application.
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| 1. Materials present content in an accurate, unbiased manner.
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.1 The student will  |  |  |  |
| a ) read, write, and identify the place and value of each digit in a nine-digit whole number; |  |  |  |
| b) compare and order whole numbers expressed through millions; and |  |  |  |
| c) round whole numbers expressed through millions to the nearest thousand, ten thousand, and hundred thousand. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.2 The student will  |  |  |  |
| 1. compare and order fractions and mixed numbers, with and without models;
 |  |  |  |
| b) represent equivalent fractions; and |  |  |  |
| c) identify the division statement that represents a fraction, with models and in context. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.3 The student will |  |  |  |
| 1. read, write, represent, and identify decimals expressed through thousandths;
 |  |  |  |
| 1. round decimals to the nearest whole number;
 |  |  |  |
| 1. compare and order decimals; and
 |  |  |  |
| 1. given a model, write the decimal and fraction equivalents.
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.4 The student will  |  |  |  |
| a) demonstrate fluency with multiplication facts through 12 x 12, and the corresponding division facts; |  |  |  |
| b) estimate and determine sums, differences, and products of whole numbers; |  |  |  |
| 1. estimate and determine quotients of whole numbers, with and without remainders; and
 |  |  |  |
| 1. create and solve single-step and multistep practical problems involving addition, subtraction, and multiplication, and single-step practical problems involving division with whole numbers.
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.5 The student will  |  |  |  |
| 1. determine common multiples and factors, including least common multiple and greatest common factor;
 |  |  |  |
| 1. add and subtract fractions and mixed numbers having like and unlike denominators; and
 |  |  |  |
| 1. solve single-step practical problems involving addition and subtraction with fractions and mixed numbers.
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.6 The student will  |  |  |  |
| a) add and subtract with decimals; and |  |  |  |
| b) solve single-step and multistep practical problems involving addition and subtraction with decimals.  |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.7 The student will solve practical problems that involve determining perimeter and area in U.S. Customary and metric units. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.8 The student will  |  |  |  |
| 1. estimate and measure length and describe the result in U.S. Customary and metric units;
 |  |  |  |
| 1. estimate and measure weight/mass and describe the result in U.S. Customary and metric units;
 |  |  |  |
| 1. given the equivalent measure of one unit, identify equivalent measures of length, weight/mass, and liquid volume between units within the U.S. Customary system; and
 |  |  |  |
| 1. solve practical problems that involve length, weight/mass, and liquid volume in U.S. Customary units.
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.9 The student will solve practical problems related to elapsed time in hours and minutes within a 12-hour period. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.10 The student will  |  |  |  |
| a) identify and describe points, lines, line segments, rays, and angles, including endpoints and vertices; and |   |  |  |
| b) identify and describe intersecting, parallel, and perpendicular lines. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.11 The student will identify, describe, compare, and contrast plane and solid figures according to their characteristics (number of angles, vertices, edges, and the number and shape of faces) using concrete models and pictorial representations. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.12 The student will classify quadrilaterals as parallelograms, rectangles, squares, rhombi, and/or trapezoids.  |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.13 The student will  |  |  |  |
| 1. determine the likelihood of an outcome of a simple event;
 |  |  |  |
| 1. represent probability as a number between 0 and 1, inclusive; and
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| 1. create a model or practical problem to represent a given probability.
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.14 The student will  |   |  |  |
| * 1. collect, organize, and represent data in bar graphs and line graphs;
 |  |  |  |
| * 1. interpret data represented in bar graphs and line graphs; and
 |  |  |  |
| * 1. compare two different representations of the same data (e.g., a set of data displayed on a chart and a bar graph, a chart and a line graph, or a pictograph and a bar graph).
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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.15 The student will identify, describe, create, and extend patterns found in objects, pictures, numbers, and tables. |  |  |  |

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| **Mathematics Standard of Learning** | **Adequate****Rating** | **Limited****Rating** | **No Evidence Rating** |
| 4.16 The student will recognize and demonstrate the meaning of equality in an equation. |  |  |  |

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