K-5 Mathematics At A Glance

Eliminating the Gap - 2011-2012 End of the Year Transition

What can I do at the end of the 2011-2012 school year to help my students with the transition to the new curriculum?

Kindergarten	1st Grade	2nd Grade
1.OA.1 states that First Grade students will be able to solve particular addition and subtraction problem types. It is possible that First Grade students will need to learn problem types stated in the CCSS for Kindergarten as well as the Compare problem-types for First Grade. **Therefore, particular attention may need to be spent on the following types of problems** prior to the introduction of Compare problems for First Grade: **Result Unknown (Add To, Take From); Total Unknown (Put Together/Take Apart); and Addend Unknown (Put Together/Take Apart).**	**2.OA.1** states that Second Grade students will be able to solve all 12 types of addition and subtraction problem types. It is possible that Second Grade students will need to learn problem types stated in the CCSS for Kindergarten and First Grade, as well as the 4 types mentioned for Second Grade. **Therefore, particular attention may need to be spent on these types of problems** prior to the new problem types for Second Grade: **Add To (Result Unknown, Change Unknown); Take From (Result Unknown, Change Unknown); Put Together/Take Apart (Total Unknown, Both Addends Unknown); Compare (Difference Unknown, Bigger Unknown- More Version, Smaller Unknown- Fewer Version).**	No major shifts in 2nd grade content that should affect the first year of implementation of CCSS for 3rd grade standards.
3rd Grade	**4th Grade**	**5th Grade**
4.MD.3 calls for students to generalize their **understanding of area and perimeter** by connecting the concepts to mathematical formulas. These concepts should be developed through conceptual experiences in the classroom not just memorization. **Foundations of these concepts are built in the 3rd Grade Common Core: 3.MD.5, 3.MD.6, 3.MD.7, 3.MD.8.**	**4.NF.4** Develop a fundamental **understanding that the multiplication of a fraction by a whole number** could be presented as repeated addition of a unit fraction**.**	

Reference: Math Unpacking Documents: http://www.ncpublicschools.org/acre/standards/common-core-tools/#unmath

K-5 Mathematics At A Glance

A snapshot of new and moved concepts including considerations for first year implementation

Kindergarten

New to Kindergarten:

- Fluently add and subtract within 5 (K.CC.5)
- Compose and decompose numbers from 11 to 19 into ten ones and some further ones (K.NBT.1)
- Identify and describe shapes (NEW: squares, hexagons, cones, cylinders) (K.G)
- Identify shapes as two-dimensional or three-dimensional (K.G.3)
- Compose simple shapes to form larger shapes (K.G.6)

Moved from Kindergarten:

- Ordinals (1.01e)
- Equal Shares (1.02)
- Calendar Concepts & Time (2.02)
- Data Collection (4.01, 4.02)
- Repeating Patterns (5.02)

Notes:

Topics may appear to be similar between the CCSS and the 2003 NCSCOS; however, the CCSS may be presented at a higher cognitive demand.

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1st Grade

New to 1st Grade:

- Use of a symbol for the unknown number in an equation (1.OA.1)
- Properties of Operations – Commutative and Associative (1.0A.3)
- Counting sequence to 120; writing numerals to 120 (1.NBT.1)
- Unitizing a ten (10 can be though of as a bundle of ten ones, called a "ten") (1.NBT.2.a)
- Comparison Symbols (<, >) (1.NBT.3)
- Defining and non-defining attributes of shapes (1.G.1)
- Half-circles, quarter-circles, cubes (1.G.2)
- Partitioning circles and squares; Relationships among halves, fourths and quarters (1.G.3)

Moved from 1st Grade:

- Estimation (1.01f)
- Groupings of 2's, 5's, and 10's to count collections (1.02)
- Fair Shares (1.04)
- Specified types of data displays (4.01)
- Certain, impossible, more likely or less likely to occur (4.02)
- Venn Diagrams (5.02)
- Extending patterns (5.03)

Notes:

Topics may appear to be similar between the CCSS and the 2003 NCSCOS; however, the CCSS may be presented at a higher cognitive demand.

Instructional considerations for CCSS implementation in 2012-2013

1.OA.1 states that First Grade students will be able to solve particular addition and subtraction problem types. It is possible that First Grade students will need to learn problem types stated in the CCSS for Kindergarten as well as the Compare problem-types for First Grade. Therefore, particular attention may need to be spent on the following types of problems prior to the introduction of Compare problems for First Grade: Result Unknown (Add To, Take From); Total Unknown (Put Together/Take Apart); and Addend Unknown (Put Together/Take Apart).

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A snapshot of new and moved concepts including considerations for first year implementation

2nd Grade

New to 2nd Grade:

- Addition with rectangular array (2.OA.4)
- Count within 1,000 by 5s, 10s, 100s (2.NBT.2)
- Mentally add and subtract by 10 & 100 (2.NBT.8)
- Measurement concepts (2.MD.2, 2.MD.4, 2.MD.5, 2.MD.6,)
- Money (2.MD.8)
- Line Plots, Picture graphs, bar graphs (2.MD.9, 2.MD.10)

Moved from 2nd Grade:

- Estimation while computing (1.01e, 1.04b)
- Temperature (2.01b)
- Cut and rearrange 2-D and 3-D figures (3.02)
- Symmetric and congruent figures (3.03a, 3.03b)
- Venn diagrams and pictographs (4.01)
- Probability (4.02)
- Repeating and growing patterns (5.01)

Notes:

Topics may appear to be similar between the CCSS and the 2003 NCSCOS; however, the CCSS may be presented at a higher cognitive demand.

Instructional considerations for CCSS implementation in 2012-2013

2.OA.1 states that Second Grade students will be able to solve all 12 types of addition and subtraction problem types. It is possible that Second Grade students will need to learn problem types stated in the CCSS for Kindergarten and First Grade, as well as the 4 types mentioned for Second Grade. Therefore, particular attention may need to be spent on these types of problems prior to the new problem types for Second Grade: Add To (Result Unknown, Change Unknown); Take From (Result Unknown, Change Unknown); Put Together/Take Apart (Total Unknown, Both Addends Unknown); Compare (Difference Unknown, Bigger Unknown- More Version, Smaller Unknown- Fewer Version).

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A snapshot of new and moved concepts including considerations for first year implementation

3rd Grade

New to 3rd Grade:

• Area and perimeter (3.MD.5, 3.MD.6, 3.MD.7, 3.MD.8)

Moved from 3rd Grade:

• Permutation and combinations (4.02, 4.03)
• Rectangular Coordinate System (3.02)
• Circle graphs (4.01)

Notes:

Topics may appear to be similar between the CCSS and the 2003 NCSCOS; however, the CCSS may be presented at a higher cognitive demand.

Instructional considerations for CCSS implementation in 2012-2013

No major shifts in 2nd grade content that should affect the first year of implementation of CCSS for 3rd grade standards.

Reference: Math Unpacking Documents: http://www.ncpublicschools.org/acre/standards/common-core-tools/#unmath

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A snapshot of new and moved concepts including considerations for first year implementation

4th Grade

New to 4th Grade:

- Factors and multiples (4.OA.4)
- Multiply a fraction by a whole number (4.NF.4)
- Conversions of measurements within the same system (4.MD.1, 4.MD.2)
- Angles and angle measurements (4.MD.5 4.MD.6, 4.MD.7)
- Lines of symmetry (4.G.3)

Moved from 4th Grade:

- Coordinate system (3.01)
- Transformations (3.03)
- Line graphs and bar graphs (4.01)
- Data - median, range, mode, comparing sets data (4.03)
- Probability (4.04)
- Number relationships (5.02, 5.03)

Notes:

Topics may appear to be similar between the CCSS and the 2003 NCSCOS; however, the CCSS may be presented at a higher cognitive demand.

Instructional considerations for CCSS implementation in 2012-2013

4.MD.3 calls for students to generalize their understanding of area and perimeter by connecting the concepts to mathematical formulas. These concepts should be developed through conceptual experiences in the classroom not just memorization. Foundation of this concept will be built in third grade the following year.

Reference: Math Unpacking Documents: http://www.ncpublicschools.org/acre/standards/common-core-tools/#unmath

K-5 Mathematics At A Glance

A snapshot of new and moved concepts including considerations for first year implementation

5th Grade

New to 5th Grade:

- Patterns in zeros when multiplying (5.NBT.2)
- Extend understandings of multiplication and division of fractions (5.NF.3, 5.NF.45.NF.5, 5.NF.7)
- Conversions of measurements within the same system (5.MD.1)
- Volume (5.MD.3, 5.MD.4, 5.MD.5)
- Coordinate System (5.G.1, 5.02)
- Two-dimensional figures – hierarchy (5.G.3, 5.G.4)
- Line plot to display measurements (5.MD.2)

Moved from 5th Grade:

- Estimate measure of objects from on system to another system (2.01)
- Measure of angles (2.01)
- Describe triangles and quadrilaterals (3.01)
- Angles, diagonals, parallelism and perpendicularity (3.02, 3.04)
- Symmetry - line and rotational (3.03)
- Data - stem-and-leaf plots, different representations, median, range and mode (4.01, 4.02, 4.03)
- Constant and carrying rates of change (5.03)

Notes:

Topics may appear to be similar between the CCSS and the 2003 NCSCOS; however, the CCSS may be presented at a higher cognitive demand.

Instructional considerations for CCSS implementation in 2012-2013

Develop a fundamental understanding that the multiplication of a fraction by a whole number could be presented as repeated addition of a unit fraction before working with the concept of a fraction times a fraction. This concept will be taught in fourth grade next year.

Reference: Math Unpacking Documents: http://www.ncpublicschools.org/acre/standards/common-core-tools/#unmath