Grade 2 Math: Instructional Focus and Fluency

Transitioning to the NYS Next Generation Math Learning Standards for Grades K-8, Effective September 2022

Instructional Focus	Developmental Focus	Instructional Consideration (via Standards)
Extend understanding of base-ten notation.	➤ Counting in fives, tens, and multiples of hundreds, tens, and ones ➤ Place value understanding up to 1000 *use base-ten numerals, number names, and expanded form*	**NY-2.NBT.2** Count within 1000; skip-count by 5s, 10s, and 100s **NY-2.NBT.1** Understand that the digits of a three-digit number represent amounts of hundreds, tens, and ones. **a**. Understand 100 can be thought of as a bundle of ten tens, called a "hundred." **b.** Understand the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
Build fluency with addition and subtraction.	➤ Add and subtract within 100 ➤ Solve problems within 1000 using models (e.g. place value chart)	**NY-2.NBT.5** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. **NY-2.NBT.6** Add up to four two-digit numbers using strategies based on place value and properties of operations. **NY-2.NBT.7a** Add and subtract within 1000, using • concrete models or drawings • strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written representation.

Instructional Focus	Developmental Focus	Instructional Consideration (via Standards)
Use standard units of measure.	➤ Use rulers in cm and inches for linear measurement	**NY-2.MD.1** Measure the length of an object to the nearest whole by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. **NY-2.MD.4** Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard "length unit".
Analyze and classify two-dimensional shapes as polygons or non-polygons.	➤ Classify polygons(non) ➤ Decompose/compose shapes, partition shapes(basis for fraction understanding)	**NY-2.G.1** Classify two-dimensional figures as polygons or non-polygons. **NY-2.G.2** Partition a rectangle into rows and columns of same-size squares and count to find the total number of them. **NY-2.G.1** Partition circles and rectangles into two, three, or four equal shares. Describe the shares using the words halves, thirds, half of, a third of, etc. Describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Fluency	Fluency development	Fluency Standard
Fluently add and subtract within 20 using mental strategies.	➤ Students can find sums and differences within 20 reasonably quickly, and say or write it. This involves a mixture of just knowing some answers, knowing some answers from patterns, and knowing some answers from the use of strategies.	**NY-2.OA.2a** Fluently add and subtract within 20 using mental strategies. Strategies could include: counting on, making ten, decomposing a number leading to a ten, using the relationship between addition and subtraction, creating equivalent but easier or known sums.

Fluency	Fluency development	Fluency Standard
Know from memory all sums within 20 of two one-digit numbers.	➤ Fluency from memory means students are fast, accurate, flexible, and have understanding. They use strategies efficiently.	**NY-2.OA.2b** Know from memory all sums within 20 of two one-digit numbers.
Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	➤ Students should be taught to use strategies based on place value, properties of operations, and the relationship between addition and subtraction; however, when solving any problem, students can choose any strategy.	**NY-2.NBT.5** Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

Note: Reaching fluency with standards NY-2.OA.2a and NY-2.OA.2b will take students much of the year.