Mathematics (Grade 2)

Course Description:

The curriculum for this course is developed from the Common Core State Standards for Mathematics. In this course, instructional time will focus on four critical areas: (1) extending understanding of base-ten notation; (2) building fluency with addition and subtraction; (3) using standard units of measure; and (4) describing and analyzing shapes.

Mastery Standards:.

Operations and Algebraic Thinking
- Fluently add and subtract within 20 using mental strategies.2 By end of Grade 2, know from memory all sums of two one-digit numbers. (2.OA.B.2)

Number and Operations in Base Ten
- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. (2.NBT.1)
- Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2.NBT.3)
- Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. (2.NBT.A.4)
- Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (2.NBT.B.5)
- Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900. (2.NBT.B.8)

Measurement and Data
- Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. (2.MD.A.1)
- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. (2.MD.C.7)
- Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have? (2.MD.C.8)
- Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (2.MD.D.10)

Unit	Description of Unit and Learning Targets
Unit Title: Operations and Algebraic Thinking Essential Questions: ● What are helpful strategies you can use for addition and subtraction facts?	Students will use their understanding of addition to develop fluency with addition and subtraction within 100. They solve problems within 1000 by applying their understanding of models for addition and subtraction. They select and accurately apply methods that are appropriate for the context and the numbers involved to mentally add and subtract. Learning Targets: ● I can fluently add within 20. ● I can fluently subtract within 20.
Unit Title: Number and Operations in Base Ten	Students will extend their understanding of the base-ten system. They will understand multi-digit numbers (up to 1000) written in base-ten notation.

Essential Questions:	Learning Targets:
- How do you know the value of a digit? - How does place value help you compare numbers? - How can you use related facts to solve addition and subtraction problems within 100?	- I can understand 3-digit numbers represent hundreds, tens, and ones and can compare their values. - I can read and write numbers to 1,000 using numerals, words, and expanded form. - I can compare 3-digit numbers. - I can add and subtract 2-digit numbers based on place value. - I can mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.
Unit Title: Measurement and Data Essential Questions: - How is measurement used in the real world? - How does a graph help us show and interpret data?	Students will recognize the need for standard units of measure (cm and inch) and use rulers and other tools. They recognize that the smaller the unit, the more units they need to cover a given length. Learning Targets: - I can measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. - I can tell and write time to the nearest 5 minutes using a.m. and p.m. - I can solve word problems involving dollars and coins, using $ and ¢ symbols appropriately. - I can make and answer questions about data on a line plot, picture graph, or bar graph.