CATHOLIC SCHOOLS

Communities of Faith, Knowledge and Service

Math

2nd Grade

DIOCESE OF ALEXANDRIA

As the Diocese of Alexandria seeks to provide a comprehensive learning environment, we are charged to "Teach More" by showing how all learning flows from and relates to our Creator. In this way, we will give our teaching a deeper meaning and purpose than simply the content itself. With this as our goal, the Catholic Schools Office has intertwined our selected curricular standards with the Catholic Standards developed by the Cardinal Newman Society. Through the merging of these two curricula, English Language Arts, Mathematics, Science, and Social Studies, teachers will be provided a roadmap to guide student's understanding and recognition of the relationship between learning and the connection to our God.

Thomas E. Roque, Sr.
Superintendent of Catholic Schools

Through comprehensive review of curricula from high performing districts throughout the United States in combination with parochial schools and Newman Cardinal Standards, the Curriculum Team for the Diocese of Alexandria has generated curricula for English Language Arts, Mathematics, Science, and Social Studies. The development of this framework is designed to guide the instructional path of teachers as they focus on the formation of their students in the areas of faith, academic excellence, responsible citizenry, and effective communication and collaboration. This process is a continuous improvement process with no defined beginning or end.

Barbara Forest, M.A..

Courtney Gistorb, M.Ed.

Denese Carter, M.Ed.

Tracy Bock, Ed.S.

Frameworks

HOW TO USE

The frameworks are guides to instruction. The frameworks assist teachers in planning and pacing instruction. Specific dates or weeks that may be included in this document are for reference. Each school and teacher must consider the make-up of their students, focusing on the needs and strengths of each child when pacing and planning instruction.

The cycles for the year help pace instruction and ensure students have consistent coverage of the content. The duration (the suggested amount of time to spend on each cycle) does not accommodate for the scheduling of special events, inclement weather or school events. Teachers, with principal guidance, should adjust pacing as needed to accommodate for these events.

RESEARCH-BASED HIGH-YIELD PRACTICES FOR INSTRUCTION

These strategies have proven effective in affecting student learning and achievement gains. As you plan daily instruction, consider how and where to integrate these strategies into the instructional sequence. Effect size is in parentheses. Please refer to the works of John Hattie for a complete description of instructional effect size.

- Classroom Discussion/Discourse (.82)
- Teacher Clarity/making the learning visible with expectations for learning (.75)
- Reciprocal Teaching (.74)
- Feedback (.73)
- Metacognitive Strategies (.69)

Student focusAreas

- *How does mathematics help us understand God's creation?*
- *How does the use of math help us to understand the importance of clarity, reality and goodness?*
- *How do we solve addition and subtraction sentences to solve real world problems with and without concrete objects?*
- *What are the ethical, moral, and legal implications of Internet use?*
- *How does the study of mathematics enable us to understand, communicate, and live Gospel values?*

Catholic School – Math Standards (CS.GS)

CS.M.K6.GS.1	Demonstrate the mental habits of precise, determined, careful and accurate questioning, inquiry, and reasoning.
CS.M.K6.GS.2	Develop lines of inquiry (as developmentally appropriate) to understand why things are true and why they are false.
CS.M.K6.GS.3	Recognize the power of the human mind as both a gift from God and a reflection of Him in whose image and likeness we were made.
CS.M.K6.GS.4	Survey the truths about mathematical objects that are interesting in their own right and independent of human opinions.

2ⁿᵈ Grade - Mathematics

THE DIOCESE of ALEXANDRIA

Unit 1

Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.OA.A.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • count on and put together to add to solve one- and two-step word problems. • take from or take apart to subtract to solve one- and two-step word problems. • use drawings and equations to represent the problem. Learning Goal 1: Add and subtract within 20 to solve 1- and 2-step word problems with unknowns in any position.
• 2.OA.B.2. Fluently add and subtract within 20 using mental strategies. *By end of Grade 2, know from memory all sums of two one-digit numbers.*	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • add within 10 using mental strategies with accuracy and efficiency. • subtract within 10 using mental strategies with accuracy and efficiency. Learning Goal 2: Fluently add and subtract within 10 using mental strategies.

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.NBT.A.1. 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. Understand the following as special cases: 2.NBT.A.1.a. 100 can be thought of as a bundle of ten tens — called a "hundred." 2.NBT.A.1.b. 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).	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • 100 can be thought of as a bundle of ten tens — called a *hundred.* • 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*). Students are able to: • represent 100 as a bundle of ten *tens.* • represent the number of *hundreds*, *tens*, and *ones* in a 3-digit number. Learning Goal 3: Represent a 3-digit number as specific amounts of *hundreds*, *tens*, and *ones.* Learning Goal 4: Identify ten *tens* as 100 and represent two hundred, three hundred, … nine hundred with 2, 3, …, 9 hundred bundles (with zero *tens* and zero *ones*).
• 2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • count by fives within 1000. • count by tens within 1000. • count by hundreds within 1000. Learning Goal 5: Skip count by 5s and 10s up to 100…beginning at any multiple of 5.

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.NBT.A.3. Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Expanded form Students are able to: • read numbers to 1000 written using base-ten numerals. • read number names to 1000. • read numbers to 1000 written in expanded form. • write numbers to 1000 using base-ten numerals, number names, and expanded form. Learning Goal 6: Read numbers to 1000 using base-ten numerals, number names, and expanded form. Learning Goal 7: Write numbers to 1000 using base-ten numerals, number names, and expanded form.
• 2.NBT.A.4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	MP 2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Place value Students are able to: • use the number of the hundreds, tens and/or ones digits to compare two three-digit numbers. • write the results of the comparison using >, =, or <. Learning Goal 8: Use symbols >, =, < to record the results of comparing two 3-digit numbers by decomposing the number into a number (100s, 10s, and 1s).

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.NBT.B.8. Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Place value Students are able to: • Mentally add 10 or 100 from any given number between 100 and 900. • Mentally subtract 10 or 100 from any given number between 100 and 900. Learning Goal 9: Mentally add or subtract 10 or 100 from any given number between 100 and 900.

District/School Formative Assessment Plan	District/School Summative Assessment Plan
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards.	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.*

2ⁿᵈ Grade - Mathematics

Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.OA.A.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • count on and put together to add to solve one- and two-step word problems. • take from or take apart to subtract to solve one- and two-step word problems. • use drawings and equations to represent the problem. Learning Goal 1: Add and subtract within 100 to solve 1- and 2-step word problems with unknowns in any position.
• 2.OA.B.2. Fluently add and subtract within 20 using mental strategies. *By end of Grade 2, know from memory all sums of two one-digit numbers.*	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • add within 10 using mental strategies with accuracy and efficiency. • subtract within 10 using mental strategies with accuracy and efficiency. Learning Goal 2: Fluently add and subtract within 10 using mental strategies.

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.OA.C.3. Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning	Concept(s): • Even: groups having even numbers of objects will pair up evenly. • Odd: groups having odd numbers of objects will not pair up evenly. Students are able to: • pair up to 20 object, count by 2s and determine whether the group contains an even or odd number of objects. • write an equation to express an even number as a sum of two equal addends. Learning Goal 3: Write an equation to express an even number as a sum of two equal addends.
• 2.OA.C.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Arrays as arrangements of objects. Students are able to: • with objects arranged in an array, use repeated addition to find the total. • with objects arranged in an array, write an equation to express repeated addition. Learning Goal 4: Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.G.A.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	MP 2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • partition a rectangle into rows and columns of same-size squares and count to find the total number. Learning Goal 5: Partition a rectangle into rows and columns of same-size squares and count to find the total number.
• 2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • with accuracy and efficiency, add and subtract within 50 using strategies based on place value. • with accuracy and efficiency, add and subtract within 50 using strategies based on properties of operations. • with accuracy and efficiency, add and subtract within 50 using strategies based on the relationship between addition and subtraction. Learning Goal 6: Use a variety of strategies (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 50.

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.NBT.B.6. Add up to four two-digit numbers using strategies based on place value and properties of operations.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • add three two-digit numbers using place value strategies and properties of operations. • add four two-digit numbers using place value strategies and properties of operations. Learning Goal 7: Add up to four two -digit numbers using strategies based on place value and properties of operations.
• 2.NBT.B.7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • In adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones. • Sometimes it is necessary to compose or decompose tens or hundreds. Students are able to: • add and subtract within 1000, using concrete models or drawings. • add and subtract within 1000 using strategies based on place value. • add and subtract within 1000 using properties of operations or the relationship between addition and subtraction. • relate the strategies to a written method. Learning Goal 8: Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

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Content Standards	Suggested Standards for Mathematical Practice	Critical Knowledge & Skills
• 2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations.	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • Explain, using objects and drawings, why addition and subtraction strategies based on place value work. • Explain, using objects and drawings, why addition and subtraction strategies based on properties of operations work. Learning Goal 9: After applying addition and subtraction strategies based on place value and the properties of operations, explain why these strategies work using drawings or objects [for example, 37 + 12 equals 30 + 7 + 10 + 2 (place value) which equals 30 + 10 + 7 + 2 (property of operations)].
• 2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • count within 1000 by ones. • count within 1000 by fives, tens, and hundreds beginning at any multiple of 5, 10, or 100. Learning Goal 10: Count within 1000 by ones, fives, tens, and hundreds beginning at any multiple of 1, 5, 10, or 100 (e.g. begin at 505 and skip count by 5 up to 605, or begin at 600 and skip count by 100 up to 1000).

District/School Formative Assessment Plan	District/School Summative Assessment Plan
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards.	Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.

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Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.MD.A.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: • measure lengths of objects using rules, yardsticks, meter sticks and measuring tapes. Leaning Goal 1: Estimate lengths of objects and measure lengths of objects using appropriate tools.
• 2.MD.A.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	MP 2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: • measure the length of an object using different units of measure. • compare the measurements and explain how they relate to each unit. Learning Goal 2: Compare measurements of an object taken with two different units of measure and describe how the two measurements relate to the size of the unit chosen.
• 2.MD.A.3. Estimate lengths using units of inches, feet, centimeters, and meters	MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): No new concept(s) introduced Students are able to: • estimate lengths of objects. Leaning Goal 1: Estimate lengths of objects and measure lengths of objects using appropriate tools.

Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.MD.A.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard-length unit.	MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): No new concept(s) introduced Students are able to: • Measure objects, comparing to determine how much longer one object is than another. • Express the difference in length in terms of a standard unit of measure. Learning Goal 3: Compare lengths of two objects and determine how much longer one object is than the other using a standard unit of measure.
• 2.MD.B.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem *For example, if Angela needs 30 feet of ribbon for gifts, but she only has 17 feet, number sentences 17 + ☐ = 30 and 30 - ☐ = 17 both represent the situation and ☐ represents the number of feet of ribbon that she still needs.*	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students are able to: • add and subtract, within 100, to solve word problems involving lengths (lengths are given in the same units). • use drawings to represent the problem. • use number sentences with a symbol for the unknown to represent the problem. Learning Goal 4: Add and subtract within 100 to solve word problems involving lengths using a symbol to represent the unknown number.

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Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.MD.B.6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, …, and represent whole-number sums and differences within 100 on a number line diagram.	MP.4 Model with mathematics. MP 2 Reason abstractly and quantitatively. MP.5 Use appropriate tools strategically.	Concept(s): No new concept(s) introduced Students are able to: • use equally spaced points of a number line to represent whole numbers as lengths from 0. • represent whole number sums within 100 on a number line diagram. • represent whole number differences within 100 on a number line diagram. Learning Goal 5: Use a number line to represent the solution of whole number sums and differences related to length within 100.
• 2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	MP.5 Use appropriate tools strategically. MP.6 Attend to precision.	Concept(s): No new concept(s) introduced Students are able to: • use analog and digital clocks, tell time to the nearest five minutes using a.m. and p.m. • use analog and digital clocks, write time to the nearest five minutes using a.m. and p.m. Learning Goal 6: Tell and write time using analog and digital clocks to the nearest five minutes using a.m. and p.m.
• 2.NBT.A.2. Count within 1000; skip-count by 5s, 10s, and 100s.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • count within 1000 by ones. • count within 1000 by fives, tens, and hundreds beginning at any multiple of 5, 10, or 100. Learning Goal 7: Orally count within 1000 including skip-counting by 5s, 10s, and 100s

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Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Place value • Relationship between addition and subtraction • Properties of Operations Students are able to: • add and subtract within 100 using place value strategies. • add and subtract within 100 using properties of operations and the relationship between addition and subtraction. Learning Goal 8: Select and use a strategy (place value, properties of operation, and/or the relationship between addition and subtraction) to add and subtract within 100.
District/School Formative Assessment Plan		**District/School Summative Assessment Plan**
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards.		*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.*

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Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.G.A.1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	MP 2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • draw shapes having specified attributes (e.g. number of equal faces, number of angles) • identify triangles, quadrilaterals, pentagons, hexagons, and cubes. Learning Goal 1: Draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
• 2.G.A.3. 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., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): • Equal shares of identical wholes need not have the same shape. Students are able to: • partition rectangles into two, three, or four equal shares. • partition two same-sized rectangles to show that equal shares of identical wholes need not have the same shape. • describe the shares using the words halves, thirds, fourths, half of, a third of, a fourth of, etc. • recognize and then describe the whole as two halves, three thirds, four fourths. Learning Goal 2: 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. and describe the whole as two halves, three thirds, and four fourths.

Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.MD.C.8. 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?*	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Know the value of dollar bills, quarters, dimes, nickels, and pennies. Students are able to: • identify dollar bills, quarters, dimes, nickels, and pennies. • using dollar bills, quarters, dimes, nickels, and pennies, count to determine the total amount of money. • solve word problems involving dollar bills, quarters, dimes, nickels, and pennies. Learning Goal 3: Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using the $ and ¢ symbols appropriately.
• 2.MD.D.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • Generate data. Students are able to: • generate measurement data by measuring lengths, to the nearest whole unit, of several objects or by making repeated measurements of the same object. • record the measurements in a line plot having a horizontal scale in whole number units. Learning Goal 4: Use tools of measurement to measure lengths of several objects to the nearest whole unit and represent the data on a line plot with appropriate whole number units on the horizontal scale.

Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.MD.D.10. 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.	MP.1 Make sense of problems and persevere in solving them. MP 2 Reason abstractly and quantitatively. MP.4 Model with mathematics. MP.5 Use appropriate tools strategically. MP.6 Attend to precision. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • draw a picture graph to represent a data set with up to four categories. • draw a bar graph to represent a data set with up to four categories. • use information in a bar graph to solve simple put together, take apart, and compare problems. Learning Goal 5: 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 the graph.
• 2.OA.B.2. Fluently add and subtract within 20 using mental strategies. *By end of Grade 2, know from memory all sums of two one-digit numbers.*	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • add within 20 using mental strategies with accuracy and efficiency. • subtract within 20 using mental strategies with accuracy and efficiency. Learning Goal 6: Fluently add and subtract within 20 using mental strategies.

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Content Standards	Suggested Standards for Mathematical Practices	Critical Knowledge & Skills
• 2.NBT.B.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	MP 2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): No new concept(s) introduced Students are able to: • with accuracy and efficiency, add and subtract within 100 using place value strategies, properties of operations and/or the relationship between addition and subtraction. Learning Goal 7: Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

District/ School Formative Assessment Plan	District/School Summative Assessment Plan
Formative assessment informs instruction and is ongoing throughout a unit to determine how students are progressing against the standards.	*Summative assessment is an opportunity for students to demonstrate mastery of the skills taught during a particular unit.*

Operations and Algebraic Thinking (DOA.2.OA)

	STANDARDS	ASSESSMENT & NOTES
Represent and solve problems involving addition and subtraction	
DOA.2.OA.A.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	
Add and subtract within 20	
DOA.2.OA.B.2	Fluently add and subtract within 20 using mental strategies.[1] By the end of Grade 2, know from memory all sums of two one-digit numbers.	
Work with addition and subtraction equations.	
DOA.2.OA.C.3	Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	
DOA.2.OA.C.4	Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	

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[1] See standard DOA.2.OA.6 for a list of mental strategies.

Number and Operations in Base Ten (DOA.2.NBT)

STANDARDS		ASSESSMENT & NOTES
Understand place value		
DOA.2.NBT.A.1	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. Understand the following as special cases:	
DOA.2.NBT.A.1a	100 can be thought of as a bundle of ten tens—called a "hundred."	
DOA.2.NBT.A.1b	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 ons).	
DOA.2.NBT.A.2	Count within 1000; skip-count by 5s, 10s, and 100s.	
DOA.2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	
DOA.2.NBT.A.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	
Use place value understanding and properties of operations to add and subtract		
DOA.2.NBT.B.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	
DOA.2.NBT.B.6	Add up to four two-digit numbers using strategies based on place value and properties of operations.	
DOA.2.NBT.B.7	Add and subtract within 1000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; justify the reasoning used with a written explanation. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	
DOA.2.NBT.B.8	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100– 900.	
DOA.2.NBT.B.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.[2]	

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[2] Explanation may be supported by drawings or objects

Measurement and Data (DOA.2.MD)

STANDARDS		ASSESSMENT & NOTES
Measure lengths indirectly and by iterating length units.		
DOA.2.MD.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	
DOA.2.MD.A.2	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	
DOA.2.MD.A.3	Estimate lengths using units of inches, feet, centimeters, and meters.	
Represent and interpret data		
DOA.2.MD.A.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard-length unit.	
Relate addition and subtraction to length		
DOA.2.MD.B.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.	
DOA.2.MD.B.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, …, and represent whole-number sums and differences within 100 on a number line diagram.	
Work with time and money		
DOA.2.MD.C.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	
DOA.2.MD.C8	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?*	
Represent and interpret data		
DOA.2.MD.D.9	Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	
DOA.2.MD.D.10	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[4] using information presented in a bar graph.	

Geometry (DOA.2.G)

	STANDARDS	ASSESSMENT & NOTES
	Reason with shapes and their attributes	
DOA.2.G.A.1	Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.[5] Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	
DOA.2.G.A.2	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	
DOA.2.G.A.3	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., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	