

**Sussex Wantage School District
First Grade Mathematics**

Unit 1 First Grade		
Pacing: 45 days		
Unit 1 Add and Subtract within 10	1.OA.A.1 1.OA.B.3 1.OA.B.4 1.OA.C.5 1.OA.D.7 1.OA.D.8 1.NBT.A.1	- Represent and solve problems involving addition and subtraction - Understand and apply properties of operations and the relationship between addition and subtraction - Add and subtract within 10 - Work with addition and subtraction equations - Extend the counting sequence
Content Standards	Suggested Mathematical Practices	Critical Knowledge & Skills
1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i>	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): - Symbol (unknowns) can be in any position. Students are able to: - add, using objects and drawings, to solve word problems involving situations of adding to and putting together. - subtract, using objects and drawings, to solve word problems involving situations of taking from and taking apart. Learning Goal 1: Use addition and subtraction <u>within 10</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.
1.OA.B.3. Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</i> <i>(Students need not use formal terms for these properties)</i>	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): - Knowing $4 + 3$ means that $3 + 4$ is also known (commutative property/fact families). - When adding, the numbers need not be added in any particular order. Students are able to: - add and subtract, within 10, using properties of operations as strategies (commutative property). Learning Goal 2: Apply properties of operations (commutative property) as strategies to add or subtract <u>within 10</u> .

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1.OA.B.4. Understand subtraction as an unknown-addend problem. <i>For example, subtract 10 - 8 by finding the number that makes 10 when added to 8</i>	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): - Subtraction can be represented as an unknown-addend problem. - Finding 9 minus 3 means solving $? + 3 = 9$ or $3 + ? = 9$ (fact families). Students are able to: - represent subtraction as an unknown addend problem. - solve subtraction problems, <u>within 10</u>, using unknown addends. Learning Goal 3: Solve subtraction problems, <u>within 10</u>, by representing subtraction as an unknown added problem and finding the unknown addend
1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting 2 to add 2).	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	Concept(s): - Counting can be used to add and subtract. Students are able to: - count on to add. - count back to subtract. Learning Goal 4: Count on to add and count backwards to subtract to solve addition and subtraction problems <u>within 10</u>.
1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</i>	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): - The meaning of the equal sign - True and false statements - The expression can be on the right side of the equal sign (e.g. $7 = 8 - 1$). - Both the left and right side of the equal sign may contain expressions (e.g. $5 + 2 = 1 + 4$). Students are able to: - determine if addition equations are true or false. - determine if subtraction equations are true or false. Learning Goal 5: Determine if addition and subtraction equations, <u>within 10</u>, are true or false.
1.OA.D.8. Determine the unknown whole number in an addition or	MP.2 Reason abstractly and quantitatively.	Concept(s): No new concept(s) introduced



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subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.</i>	MP.6 Attend to precision. MP.7 Look for and make use of structure.	Students are able to: - determine the unknown number that makes an equation true. - solve addition or subtraction equations by finding the missing whole number. Learning Goal 6: Solve addition and subtraction equations, <u>within 10</u> , by finding the missing whole number in any position.
1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral	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): - Number names and the count sequence up to 100 Students are able to: - count orally by ones <u>up to 100</u>. - count up to 100 beginning at any number less than 100. - read numerals up to 100. - write numerals up to 100. - represent a number of objects up to 100 with a written number. Learning Goal 7: Count to 100 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 100</u>).

Unit 1 First Grade	
Formative, Alternate, Benchmark and Summative Assessments Big Ideas, IXL, Brain Pop, Kahn Academy, Socrative Student, Kahoot, Sumdog, Prodigy Quizzes Math Fluency Assessments Tests Pair and Share Benchmarks Performance Assessments Big Ideas Math Post Assessments Observations Exit and Entrance Tickets Self Evaluations	
Accommodations & modifications for special education, ELL,G&T, 504 plans and At Risk Learners	Integration of NJSLs 21 st Century Skills, Life and Career Standards 9.1 CRP, 9.2 Financial Literacy, and 9.3 Career Awareness
SW Modifications and Accommodations for IEP, 504, At Risk, G&T and LEP Student	iPads Google Classroom SW CRP, Career Awareness and Preparation
Interdisciplinary Connections ELA, STEM, Science, Visual and Performing Arts	Core instructional and supplemental materials

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NSLS Technology: SW Technology 8.1 and 8.2	Big Ideas Math IXL 1.OA.A.1 Sharing Markers 1.OA.B.3 Domino Addition 1.OA.B.4 Cave Game Subtraction 1.OA.D.7 Equality Number Sentences 1.OA.D.8 Kiri's Mathematics Match Game 1.NBT.A.1 Hundred Chart Digit Game
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Unit 2 First Grade		
Pacing: 45 days		
<u>Unit 2</u> Add and Subtract within 20	 1.OA.A.1 1.OA.D.7 1.OA.D.8 1.OA.B.3 1.OA.C.6 1.OA.A.2 1.MD.C.4 1.NBT.B.2a-b 1.NBT.B.3 1.NBT.A.1	• Represent and solve problems involving addition and subtraction • Work with addition and subtraction equations • Understand and apply properties of operations and the relationship between addition and subtraction • Add and subtract within 20 • Represent and interpret data • Understand place value • Extend the counting sequence
Content Standards	Suggested Mathematical Practices	Critical Knowledge & Skills
1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i>	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): • Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. Students are able to: • add, using drawings and equations, to solve word problems involving situations of adding to and putting together. • subtract, using drawings and equations, to solve word problems involving situations of taking from and taking apart. Learning Goal 1: Use addition and subtraction <u>within 20</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.
1.OA.D.7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>For example, which of the following equations are true and which are</i>	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. 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: • determine if addition equations are true or false • determine if subtraction equations are true or false

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<i>false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</i>		Learning Goal 2: Determine if addition and subtraction equations, <u>within 20</u>, are true or false.
1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = _ - 3$, $6 + 6 = _$.</i>	MP.2 Reason abstractly and quantitatively. 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: - determine the unknown number that makes an equation true. - solve addition or subtraction equations by finding the missing whole number. Learning Goal 3: Solve addition and subtraction equations, <u>within 20</u>, by finding the missing whole number in any position.
1.OA.B.3. Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known. (Commutative property of addition.) To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$. (Associative property of addition.)</i> <i>(Students need not use formal terms for these properties)</i>	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): - When adding, the numbers need not be added in order. - To add $2 + 6 + 4$, the second two numbers can be added first to make a ten. [e.g., $2 + 6 + 4 = 2 + 10 = 12$ (Associative Property)] Students are able to: - add and subtract, within 20, using properties of operations as strategies. (Associative Property) Learning Goal 4: Apply properties of operations as strategies (Associative Property) to add or subtract <u>within 20</u>.
1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. <i>Use strategies such as <u>counting on</u>; <u>making ten</u> (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); <u>decomposing a number leading to a ten</u> (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); <u>using the relationship between addition and subtraction</u> (e.g., knowing that $8 + 4$</i>	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): - Different strategies can be used to add and subtract. Students will be able to: - add and subtract <u>within 20</u>, using the following strategies: - counting on; - making ten; - composing numbers; - decomposing numbers leading to a ten; - relationship between addition and subtraction, and - creating equivalent but easier or known sums.

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= 12, one knows $12 - 8 = 4$); and <u>creating equivalent but easier or known sums</u> (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).		fluently add or subtract whole numbers <u>within 20</u>. Learning Goal 5: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.
1.OA.A.2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, 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): - Symbols can be used to represent unknown numbers. - The symbol (unknowns) can be in any position. Students are able to: - use <i>objects and drawings</i> to represent word problems that call for less than or equal to 20. Learning Goal 6: Solve addition word problems with three whole numbers with sums less than or equal to 20.
1.MD.C.4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.	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.6 Attend to precision.	Concept(s): - Numbers can be organized to represent data. Students are able to: - organize objects, representing data, in up to three categories. - represent data with objects, drawings, or numerals, in up to three categories. - ask and answer questions about: - the total number of data points; - the number of data points in each category, and - how many more or less are in one category than in another. Learning Goal 7: Organize, represent, and interpret data with up to three categories, compare the number of data points among the categories, and find the total number of data points.
1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:	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): - Two digits represent amounts of tens and ones. 10 can be thought of as a bundle of ten ones — called a ten. Students are able to:

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1.NBT.B.2. a. 10 can be thought of as a bundle of ten ones — called a "ten." 1.NBT.B.2. b. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.		● compose numbers to 20. ● decompose numbers to 20. ● identify the value of the number in the tens or ones place. Learning Goal 8: Compose and decompose numbers <u>to 20</u> to identify the value of the number in the tens and ones place.
1.NBT.B.3. Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.	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): ● Use place value understanding to compare two digit numbers. ● Comparing numbers using symbols. Students are able to: ● use the meaning of tens and ones digits to compare 2 two-digit numbers using $>$, $=$, and $<$ symbols. Learning Goal 9: Use the meaning of tens and ones digits to record comparisons of 2 two-digit numbers using $>$, $=$, and $<$ symbols.
1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral	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): ● Number names and the count sequence up to 120. Students are able to: ● count orally by ones <u>up to 120</u>. ● count up to 120 beginning at any number less than 120. ● read numerals up to 120. ● write numerals up to 120. ● represent a number of objects up to 120 with a written number. Learning Goal 10: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 120</u>).

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Unit 2 First Grade	
Formative, Alternate, Benchmark and Summative Assessments Big Ideas, IXL, Brain Pop, Kahn Academy, Socrative Student, Kahoot, Sumdog, Prodigy Quizzes Math Fluency Assessments Tests Pair and Share Benchmarks Performance Assessments Big Ideas Math Post Assessments Observations Exit and Entrance Tickets Self Evaluations	
Accommodations & modifications for special education, ELL,G&T, 504 plans and At Risk Learners	Integration of NJSLS 21st Century Skills, Life and Career Standards 9.1 CRP, 9.2 Financial Literacy, and 9.3 Career Awareness
<u>SW Modifications and Accommodations for IEP, 504, At Risk, G&T and LEP Student</u>	iPads Google Classroom <u>SW CRP, Career Awareness and Preparation</u>
Interdisciplinary Connections ELA, STEM, Science, Visual and Performing Arts	Core instructional and supplemental materials
NSLS Technology: <u>SW Technology 8.1 and 8.2</u>	Big Ideas Math IXL <u>1.OA.A.1 School Supplies</u> <u>1.OA.D.7 Valid Equalities?</u> <u>1.OA.D.8 Find the Missing Number</u> <u>1.OA.B.3 Doubles?</u> <u>1.OA.C.6 \$20 Dot Map</u> <u>1.OA.A.2 Daisies in vases</u> <u>1.NBT.B.2 Roll & Build</u> <u>1.NBT.B.3 Ordering Numbers</u> <u>1.NBT.A.1 Start/Stop Counting 2</u>

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Unit 3 First Grade		
Pacing: 45 days		
<u>Unit 3</u> Place Value, Measurement & Shapes	■ 1.NBT.B.2c ■ 1.NBT.C.4 ■ 1.NBT.C.5 ■ 1.NBT.C.6 ■ 1.MD.A.1 ■ 1.MD.A.2 ▣ 1.MD.B.3 ■ 1.OA.C.6	• Understand place value • Use place value understanding and properties of operations to add and subtract • Measure lengths indirectly by iterating length units • Tell and write time • Add and subtract within 20
Content Standards	Suggested Mathematical Practices	Critical Knowledge & Skills
1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.B.2.c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine 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): • Two digits represent amounts of tens and ones. • The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). Students are able to: • compose tens to make numbers up to 90. • decompose numbers up to 90, into tens. • identify the value of the number in the tens or ones place. Learning Goal 1: Compose and decompose numbers <u>to 90</u> into tens, identifying the value of the number in the tens and ones place.
1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g. base ten blocks) 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	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • In adding two-digit numbers, add tens with tens and ones with ones. • In adding two-digit numbers, sometimes it is necessary to compose a ten. Students are able to: • use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number. • use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number.

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and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.		• use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10. • use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10. • explain or show how the model relates to the strategy. Learning Goal 2: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100). Learning Goal 3: Add a 2-digit number and a multiple of 10, using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).
1.NBT.C.5. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.	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.	Concept(s): No new concept(s) introduced Students are able to: • given a two-digit number, find 10 more than the number without counting. • given a two-digit number, find 10 less than the number without counting. • explain, given a two-digit number, how to find 10 more or ten less than the number without counting. Learning Goal 4: Explain, given a two-digit number, how to find 10 more or ten less than the number without having to count.
1.NBT.C.6. Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), 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 and explain the reasoning used.	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.	Concept(s): No new concept(s) introduced Students are able to: • use concrete models and drawings with a strategy based on place value to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90). • use concrete models and drawings with properties of operations to subtract a multiple of 10 from a multiple of 10 (both within the range 10-90). • explain or show how the model relates to the strategy.



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		Learning Goal 5: Subtract a multiple of 10 from a multiple of 10 (both within the range 10-90) using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).
1.MD.A.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object	MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • Objects can be compared and ordered based on length. Students will be able to: • compare the length of two objects. • compare the length of two objects by using a third object as a measuring tool. • order three objects by length. Learning Goal 6: Order three objects by length and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than the pencil).
1.MD.A.2. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i>	MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • The length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. Students will be able to: • lay multiple copies of a shorter object (the length unit) end to end. • use a shorter object to express the length of a longer object. Learning Goal 7: Order three objects by length and compare the lengths of two objects by using the third object (e.g., if the crayon is shorter than the marker and the marker is shorter than the pencil then the crayon is shorter than the pencil).
1.MD.B.3. Tell and write time in hours and half-hours using analog and digital clocks	MP.6 Attend to precision. MP.7 Look for and make use of structure.	Concept(s): • Time is represented on analog and on digital clocks. • Analog clocks have <i>hands</i> that indicate the time in hours and minutes. Students are able to: • tell and write time in hours using analog and digital clocks. • tell and write time in half-hours using analog and digital clocks.



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		• use the term <i>o'clock</i> in reporting time to the hour. Learning Goal 8: Tell and write time to the half-hour using the term <i>o'clock</i> and using digital notation (include both analog and digital clocks).
1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). *(benchmarked)	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): • Different strategies can be used to add and subtract . Students will be able to: • add and subtract <u>within 20</u>, using the following strategies: • counting on; • making ten; • composing numbers; • decomposing numbers; • relationship between addition and subtraction, and • creating equivalent but easier or known sums. • fluently add or subtract whole numbers <u>within 20</u>. Learning Goal 9: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc
1.NBT.B.2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 1.NBT.B.2.c. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine 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): • Two digits represent amounts of tens and ones. • The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). Students are able to: • compose tens to make numbers up to 90 • decompose numbers up to 90, into tens. • identify the value of the number in the tens or ones place. Learning Goal 1: Compose and decompose numbers <u>to 90</u> into tens, identifying the value of the number in the tens and ones place.

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1.NBT.C.4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models (e.g. base ten blocks) 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 and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure. MP.8 Look for and express regularity in repeated reasoning.	Concept(s): • In adding two-digit numbers, add tens with tens and ones with ones. • In adding two-digit numbers, sometimes it is necessary to compose a ten. Students are able to: • use concrete models and drawings with a strategy based on place value to add a two-digit number and a one-digit number. • use concrete models and drawings with properties of operations to add a two-digit number and a one-digit number. • use concrete models and drawings with a strategy based on place value to add a two-digit number and a multiple of 10. • use concrete models and drawings with properties of operations to add a two-digit number and a multiple of 10. • explain or show how the model relates to the strategy. Learning Goal 2: Add a 2-digit and a 1-digit number using concrete models and drawings with a place value strategy or properties of operations; explain or show how the model relates to the strategy (sums within 100). Learning Goal 3: Add a 2-digit number and a multiple of 10, using concrete models and drawings with a place value strategy or properties of operations. Explain or show how the model relates to the strategy (sums within 100).
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Unit 3 First Grade	
Formative, Alternate, Benchmark and Summative Assessments Big Ideas, IXL, Brain Pop, Kahn Academy, Socrative Student, Kahoot, Sumdog, Prodigy Quizzes Math Fluency Assessments Tests Pair and Share Benchmarks Performance Assessments Big Ideas Math Post Assessments Observations Exit and Entrance Tickets Self Evaluations	
Accommodations & modifications for special education, ELL,G&T, 504 plans and At Risk Learners	Integration of NJSLs 21st Century Skills, Life and Career Standards 9.1 CRP, 9.2 Financial Literacy, and 9.3 Career Awareness
SW Modifications and Accommodations for IEP, 504, At Risk, G&T and LEP Student	iPads Google Classroom

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	SW CRP, Career Awareness and Preparation
Interdisciplinary Connections ELA, STEM, Science, Visual and Performing Arts	Core instructional and supplemental materials
NSLS Technology: SW Technology 8.1 and 8.2	Big Ideas Math IXL 1.NBT.C.4 Ford and Logan Add 45+36 1.NBT.C.5 Number Square 1.MD.A.2 Measure Me! 1.MD.A.2 Measuring Blocks 1.MD.A.2 Growing Bean Plants 1.MD.B Making a clock 1.OA.C.6 Making a ten

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Unit 4 First Grade		
Pacing: 45 days		
<u>Unit 4</u> Reason with Shapes and their Attributes	☐ 1.G.A.1 ☐ 1.G.A.2 ☐ 1.G.A.3 ■ 1.OA.A.1 ■ 1.OA.C.6 ■ 1.NBT.A.1 ■ 1.NBT.C.4	- Reason with shapes and their attributes - Represent and solve problems involving addition and subtraction. - Add and subtract within 20 - Extend the counting sequence - Use place value understanding and properties of operations to add and subtract
Content Standards	Suggested Mathematical Practices	Critical Knowledge & Skills
1.G.A.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.	MP.3 Construct viable arguments and critique the reasoning of others. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): - Defining attributes versus non defining attributes. Students are able to: - name attributes that define two-dimensional shapes (square, triangle, rectangle, regular hexagon). - name attributes that do not two-dimensional shapes. - build and draw shapes when given defining attributes. Learning Goal 1: Name the attributes of a given two-dimensional shape (square, triangle, rectangle, regular hexagon), distinguishing between defining and non-defining attributes. Learning Goal 2: Build and draw shapes when given defining attributes.
1.G.A.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.	MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): - Shapes can be composed from other shapes (e.g. trapezoids can be composed from triangles). - New shapes can be composed from composite shapes. Students are able to: - create a composite shape using two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles).



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		● create a composite shape using three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders). ● compose new shapes from the composite shapes. Learning Goal 3: Create a composite shape by composing two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles and quarter circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders), and compose new shapes from the composite shape.
1.G.A.3. Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precision. MP.4 Model with mathematics. MP.7 Look for and make use of structure.	Concept(s): ● Shapes can be partitioned into equal parts or shares. ● Equal shares are named based on the number of shares that make the whole (e.g. halves, fourths, quarters). ● Shares can be described based on their relation to the whole (e.g. <i>half of</i>, <i>fourth of</i>, <i>quarter of</i>). ● The whole can be described based on the number of shares. ● Decomposing a whole into more equal shares creates smaller shares. Students are able to: ● partition circles and rectangles into two or four equal shares. ● distinguish equal shares from those that are not equal. ● describe shares using the words halves, fourths, and quarters. ● describe the relationship between the whole and the share using the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. ● describe the whole as <i>two of</i>, or <i>four of</i> the shares. ● decompose a whole into a greater number of equal shares and identify the new shares as smaller. Learning Goal 4: Partition circles and rectangles into two or four equal shares, describing the shares using halves, fourths, and quarters and use the phrases <i>half of</i>, <i>fourth of</i>, and <i>quarter of</i>. Describe the whole circle (or rectangle) partitioned into two or four equal shares as <i>two of</i>, or <i>four of</i> the shares.
1.OA.A.1. Use addition and subtraction within 20 to solve word problems involving situations of adding to,	MP.1 Make sense of problems and persevere in solving them.	Concept(s): ● Symbols can be used to represent unknown numbers. ● The symbol (unknowns) can be in any position.



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taking from, putting together, taking apart, and comparing, with unknowns in all positions, <i>e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.</i>	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.	Students are able to: • add, using objects and drawings, to solve word problems involving situations of adding to and putting together • subtract, using objects and drawings, to solve word problems involving situations of taking from and taking apart. Learning Goal 5: Use addition and subtraction <u>within 20</u> to solve problems, including word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.
1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$); decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$); using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); and creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$)	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): • Different strategies can be used to add and subtract. Students will be able to: • add and subtract <u>within 20</u>, using the following strategies: • counting on; • making ten; • composing numbers; • decomposing numbers; • relationship between addition and subtraction, and • creating equivalent but easier or known sums. • fluently add or subtract whole numbers <u>within 20</u>. Learning Goal 6: Add and subtract whole numbers <u>within 20</u> using various strategies: counting on, making ten, composing, decomposing, relationship between addition and subtraction, creating equivalent but easier or known sums, etc.
1.NBT.A.1. Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral. *(benchmarked)	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): • Number names and the count sequence up to 120. Students are able to: • count orally by ones <u>up to 120</u>. • count up to 120 beginning at any number less than 120. • read numerals up to 120. • write numerals up to 120.



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		• represent a number of objects up to 120 with a written number. Learning Goal 7: Count to 120 orally, read and write numerals, and write numerals to represent the number of objects (<u>up to 120</u>).
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Unit 4 First Grade	
Formative, Alternate, Benchmark and Summative Assessments Big Ideas, IXL, Brain Pop, Kahn Academy, Socrative Student, Kahoot, Sumdog, Prodigy Quizzes Math Fluency Assessments Tests Pair and Share Benchmarks Performance Assessments Big Ideas Math Post Assessments Observations Exit and Entrance Tickets Self Evaluations	
Accommodations & modifications for special education, ELL,G&T, 504 plans and At Risk Learners	Integration of NJSLs 21st Century Skills, Life and Career Standards 9.1 CRP, 9.2 Financial Literacy, and 9.3 Career Awareness
<u>SW Modifications and Accommodations for IEP, 504, At Risk, G&T and LEP Student</u>	iPads Google Classroom <u>SW CRP, Career Awareness and Preparation</u>
Interdisciplinary Connections ELA, STEM, Science, Visual and Performing Arts	Core instructional and supplemental materials
NSLS Technology: <u>SW Technology 8.1 and 8.2</u>	Big Ideas Math IXL <u>1.G.A.1 All vs. Only some</u> <u>1.G.A.1 3-D Shape Sort</u> <u>1.G.A.2 Make Your Own Puzzle</u> <u>1.G.A.2 Overlapping Rectangles</u> <u>1.G.A.3 Equal Shares</u> <u>1.OA.A.1 Twenty Tickets</u> <u>1.NBT.A.1 Where Do I Go?</u>

