Pacing Guide For Math Curriculum

Grade 1

Topic	**Marking Period**	**Number of Days**
Operations and Algebraic Thinking	MP 2	8 weeks
Number and Operations in Base Ten	MP 1	12 weeks
Measurement	MP 2	4 weeks
Data Literacy	MP 3	6 weeks
Geometry	MP 4	6 weeks

Alpha Public School
Math Curriculum Map

Grade: 1st grade

Unit: Operations and Algebraic Thinking	**Content Topic:** Represent and solve problems involving addition and subtraction

Standard	**Disciplinary Core Ideas / Essential Statement / Objective**
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, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.
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.

Practices / Skills & Lesson / Learning Activities

- Represent and solve problems involving addition and subtraction
- Understand and apply properties of operations and the relationship between addition and subtraction
- Solve addition problems using objects, drawings, a number line, and a number grid
- Explore the commutative and associative properties of addition
- Relate addition to combining two groups of objects.
- Understand that the equal sign is used to show two even groups
- Solve subtraction problems using objects, drawings, a number line, and a number grid
- Use patterns to help solve subtraction sentences and decompose a number leading to 10
- Learn fact families to help them find missing numbers
- 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 20
- Work with addition and subtraction equations

Whole Group:

- Big book topic story read aloud
- Doubles- memorization songs
- Doubles plus one- model with manipulatives
- Adding with 10 model with ten frame
- Adding 9 by turning into 10 fact
- Adding with ten frames
- Subtraction sentences
- Number stories
- Comparing groups
- Subtraction on a number line
- Subtraction on a number grid
- Subtraction zero
- Subtracting all
- Subtracting 1,2,3
- Subtracting ten
- Patterns with subtracting 10
- Fact families
- Mad minutes

- Missing number
- Using addition to subtract
- Make 10 to subtract
- Dice adding / dice subtracting
- Bingo
- Model using pictures and manipulatives
- Smartboard activities
- Memorization
- Class participation
- White boards
- Talk it out act it out
- Doubles plus two find the number in the middle and double it
- part/ part whole board
- Counting on / counting back

Individual:

- Draw pictures
- Represent addition / counting with manipulatives
- Subtraction with manipulatives
- Adding with 10-model with ten frame
- Subtraction sentences
- Adding 9 by turning into 10 fact
- Making ten
- Adding with ten frame
- Number stories
- Comparing groups
- Subtraction on a number line
- Subtraction on a number grid
- Subtraction zero
- Subtracting all
- Subtracting 1,2, 3 and counting back
- Subtracting 10
- Patterns when subtracting 10
- Fact families
- Missing number
- Related fact
- Using addition to subtract
- Dice addition / subtraction
- Model using pictures and manipulatives
- Memorization
- Doubles plus two find number in middle and double it
- Part / part/ whole board
- Counting on / counting back

Small Groups:

- Representing addition and subtraction with manipulatives
- Adding with 10-model with ten frame
- Adding 9 by turning into 10 fact
- Making ten
- Adding with ten frames
- Fact families
- Dice adding / dice subtracting
- Model using pictures and manipulatives
- Memorization
- Talk it out /act it out
- Doubles plus two find the number in middle and double it
- Part / part / whole board
- Counting on / counting back
- Subtraction on a number line
- Subtraction sentences

- Subtraction on a number grid
- Subtraction zero
- Subtracting all
- Subtracting 1,2,3
- Subtracting ten
- Patterns when subtracting 10

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Formative: ● Teacher observation / anecdotal notes ● Student classwork ● Center work ● Homework ● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work Summative: ● Assessments ● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task	● Beginning of Year Assessment ● Mid Year Assessment ● End of year assessment ● Unit Assessment ● IXL Diagnostic	● IXL ● Prodigy ● Part / part / whole ● 120 chart ● Number line ● Manipulatives ● Dice ● Two of Everything ● More, Fewer, Less by Tana Hoban

Unit: Operations and Algebraic Thinking	**Content Topic:** Understand and apply properties of operations and the relationship between addition and subtraction

Standard	Disciplinary Core Ideas / Essential Statement / Objective
1.OA.B.3	Apply properties of operations as strategies to add and subtract. Examples: 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). (Clarification:

	Students need not use formal terms for these properties).
1.OA.B.4	Understand subtraction as an unknown-addend problem. For example, subtract 10 - 8 by finding the number that makes 10 when added to 8.

Practices / Skills & Lesson / Learning Activities

- Represent and solve problems involving addition and subtraction
- Understand and apply properties of operations and the relationship between addition and subtraction
- Solve addition problems using objects, drawings, a number line, and a number grid
- Explore the commutative and associative properties of addition
- Relate addition to combining two groups of objects.
- Understand that the equal sign is used to show two even groups
- Solve subtraction problems using objects, drawings, a number line, and a number grid
- Use patterns to help solve subtraction sentences and decompose a number leading to 10
- Learn fact families to help them find missing numbers
- 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 20
- Work with addition and subtraction equations

Whole Group:

- Big book topic story read aloud
- Doubles- memorization songs
- Doubles plus one- model with manipulatives
- Adding with 10 model with ten frame
- Adding 9 by turning into 10 fact
- Adding with ten frames
- Subtraction sentences
- Number stories
- Comparing groups
- Subtraction on a number line
- Subtraction on a number grid
- Subtraction zero
- Subtracting all
- Subtracting 1,2,3
- Subtracting ten
- Patterns with subtracting 10
- Fact families
- Mad minutes
- Missing number
- Using addition to subtract
- Make 10 to subtract
- Dice adding / dice subtracting
- Bingo
- Model using pictures and manipulatives
- Smartboard activities
- Memorization
- Class participation
- White boards
- Talk it out act it out
- Doubles plus two find the number in the middle and double it
- part/ part whole board
- Counting on / counting back

Individual:

- Draw pictures

- Represent addition / counting with manipulatives
- Subtraction with manipulatives
- Adding with 10-model with ten frame
- Subtraction sentences
- Adding 9 by turning into 10 fact
- Making ten
- Adding with ten frame
- Number stories
- Comparing groups
- Subtraction on a number line
- Subtraction on a number grid
- Subtraction zero
- Subtracting all
- Subtracting 1,2, 3 and counting back
- Subtracting 10
- Patterns when subtracting 10
- Fact families
- Missing number
- Related fact
- Using addition to subtract
- Dice addition / subtraction
- Model using pictures and manipulatives
- Memorization
- Doubles plus two find number in middle and double it
- Part / part/ whole board
- Counting on / counting back

Small Groups:

- Representing addition and subtraction with manipulatives
- Adding with 10-model with ten frame
- Adding 9 by turning into 10 fact
- Making ten
- Adding with ten frames
- Fact families
- Dice adding / dice subtracting
- Model using pictures and manipulatives
- Memorization
- Talk it out /act it out
- Doubles plus two find the number in middle and double it
- Part / part / whole board
- Counting on / counting back
- Subtraction on a number line
- Subtraction sentences
- Subtraction on a number grid
- Subtraction zero
- Subtracting all
- Subtracting 1,2,3
- Subtracting ten
- Patterns when subtracting 10

Formative, Summative and Alternative Assessments	**Benchmark Assessments**	**Core Instructional and Supplemental Materials (including various texts at each grade level)**
Formative:		• IXL

● Teacher observation / anecdotal notes ● Student classwork ● Center work ● Homework ● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work Summative: ● Assessments ● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task	● Beginning of Year Assessment ● Mid Year Assessment ● End of year assessment ● Unit Assessment ● IXL Diagnostic	● Prodigy ● Part / part / whole ● 120 chart ● Number line ● Manipulatives ● Dice ● Two of Everything ● More, Fewer, Less by Tana Hoban

Unit: Operations and Algebraic Thinking	**Content Topic:** Add and subtract within 20

Standard	Disciplinary Core Ideas / Essential Statement / Objective
1.OA.C.5	Relate counting to addition and subtraction (e.g., by counting on 2 to add 2)
1.OA.C.6	Add and subtract within 20, demonstrating accuracy and efficiency 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)

Practices / Skills & Lesson / Learning Activities
● Represent and solve problems involving addition and subtraction ● Understand and apply properties of operations and the relationship between addition and subtraction ● Solve addition problems using objects, drawings, a number line, and a number grid ● Explore the commutative and associative properties of addition ● Relate addition to combining two groups of objects. ● Understand that the equal sign is used to show two even groups ● Solve subtraction problems using objects, drawings, a number line, and a number grid ● Use patterns to help solve subtraction sentences and decompose a number leading to 10 ● Learn fact families to help them find missing numbers

- 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 20
- Work with addition and subtraction equations
- Utilize number bonding strategies.

Whole Group:

- Big book topic story read aloud
- Doubles- memorization songs
- Doubles plus one- model with manipulatives
- Adding with 10 model with ten frame
- Adding 9 by turning into 10 fact
- Adding with ten frames
- Subtraction sentences
- Number stories
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- Patterns with subtracting 10
- Fact families
- Mad minutes
- Missing number
- Using addition to subtract
- Make 10 to subtract
- Dice adding / dice subtracting
- Bingo
- Model using pictures and manipulatives
- Smartboard activities
- Memorization
- Class participation
- White boards
- Talk it out act it out
- Doubles plus two find the number in the middle and double it
- part/ part whole board
- Counting on / counting back

Individual:

- Draw pictures
- Represent addition / counting with manipulatives
- Subtraction with manipulatives
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- Related fact
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- Model using pictures and manipulatives
- Memorization
- Doubles plus two find number in middle and double it
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Small Groups:

- Representing addition and subtraction with manipulatives
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• Choice boards • Projects • Skit • Demonstration • Journaling • Conferencing • Performance task		

Unit: Operations and Algebraic Thinking	**Content Topic:** Work with addition and subtraction equations

Standard	Disciplinary Core Ideas / Essential Statement / Objective
1.OA.D.7	Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. 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
1.OA.D.8	Determine the unknown whole numbers in an addition or subtraction equation relating to three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = x -3, 6 + 6 = ?

Practices / Skills & Lesson / Learning Activities

- Represent and solve problems involving addition and subtraction
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- 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 20
- Work with addition and subtraction equations

Whole Group:

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- Mad minutes
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Individual:

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Small Groups:

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- Doubles plus two find the number in middle and double it
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- Counting on / counting back
- Subtraction on a number line
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- Subtracting 1,2,3
- Subtracting ten
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Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1 must be in ELA)
8.1.2.CS.1- Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences 8.1.2.DA.1- Collect and present data in various visual formats	ELA-RI.IT.1.3-Describe relationships among pieces of information (e.g., sequence of events, steps in a process, cause-effect and compare-contrast relationships) within a text Science-***K-2-ETS1-1-***before beginning to design a solution, it is important to clearly understand the problem (ETS1.A)

8.1.2.DA.3- Identify and describe patterns in data visualizations 8.1.2.DA.4- Make predictions based on data using charts or graphs	

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
● Refer to IEPS for more specific accommodations and modifications for special education students ● Refer to 504 plans for more specific accommodations and modifications ● Printed copy of board work / notes provided ● Additional time for skill mastery ● Assistive technology ● Center-based instruction ● Check work frequently for understanding ● Computer or electronic divide utilization ● Extended time on tests / quizzes ● Have student repeat directions to check for understanding ● Modified assignment format ● Modified test format ● Modified test length ● Multiple test sessions ● Multi-sensory presentation ● Preferential seating ● Preview of content, concepts, and vocabulary ● Reduced / shortened written assignments ● Secure attention before giving ● Instruction / directions ● Shortened assignments ● Student working with an assigned partner ● Teacher initiated weekly assignment sheet ● Choice of activities ● Exploration by interest ● Flexible grouping ● Goal setting with students ● Mini-workshops to reteach or extend skills ● Open ended activities	● Allow students to correct errors (looking for understanding) ● Teaching key aspects of a topic, eliminate nonessential information using videos, illustrations, pictures, and drawings to explain or clarify ● Allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slideshows, videos, etc) to demonstrate students learning ● Decreasing the amount of work presented or required ● Modifying tests to reflect selected objectives ● Reducing the number of answer choices on a multiple choice test ● Tutoring by peers ● Using true / false, matching, or fill in the blank tests in lieu of essay tests	● Alternative formatives and summative assessments ● Choice boards ● Games and tournaments ● Group investigations ● Independent research and projects interest groups ● Learning contracts ● Leveled rubrics ● Multiple intelligence options ● Personal agendas ● Project-based learning ● Problem-based learning ● Stations / centers ● Think-tac-toes ● Tiered activities / assignments ● Tiered products ● Varying organizers for instructions

● Think-pair-share ● Varied supplemental materials ● Allowing students to correct errors (looking for understanding) ● Teaching key aspects of a topic eliminates nonessential information allowing products (projects, timelines, demonstrations, models, drawings, diorama, poster boards, charts, graphs, slideshows, videos, etc). To demonstrate students learning ● Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test ● decreasing the amount of work presented or required ● Making students' correct and acceptable work, not the mistakes		

Unit: Number and Operation in Base Ten	**Content Topic:** Extend the counting sequence

Standard	**Disciplinary Core Ideas / Essential Statement / Objective**	**Practices / Skills & Lesson**
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 within a written numeral.	● Participate in daily routines that involve math ● Extend the counting sequence ● Understand place value ● Use place value understanding and properties of operations to add and subtract ● Compare two given numbers between 0-100 ● Count to 120 ● Mentally find 10 more or less than a given number

Formative, Summative and Alternative Assessments	**Benchmark Assessments**	**Core Instructional and Supplemental Materials (including various texts at each grade level)**

Formative: ● Teacher observation / anecdotal notes ● Student classwork ● Center work ● Homework ● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work Summative: ● Assessments ● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task	● Beginning of Year Assessment ● Mid Year Assessment ● End of year assessment ● Unit Assessment ● IXL Diagnostic	● IXL ● Prodigy ● Part / part / whole ● 120 chart ● Number line ● Manipulatives ● Dice ● How Many Feet? How Many Tails? By Marilyn Burns ● Arctic Fives Arrive by Elinor Pinczes ● Spunky Monkey on Parade by Stuart J. Murphy ● Domino Addition by Lynette Long ● How Many Snails? A counting Book by Paul Giganti ● Counting in the City ● My counting Trip to the Zoo

Unit: Number and Operation in Base Ten	**Content Topic:** Understanding place value

Standard	Disciplinary Core Ideas / Essential Statement / Objective
1.NBT.B.2.a	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases: 10 can be thought of as a bundle of ten ones- called a “ten.”
1.NBT.B.2.b	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understanding the following as a special case: The numbers from 11 to 10 are composed of a ten and one, two, three, four, five, six, seven, eight or nine ones.
1.NBT.B.2.c	Understand that the two digits of a two-digit number represent amounts of tens and ones. Understanding the following as a special case: 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).
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 <.

Practices / Skills & Lesson / Learning Activities
● Distinguish between the tens and ones place value ● Compare two digit numbers according to their value ● Understand place value ● Use place value understanding and properties of operations to add and subtract Whole group: ● Big book topic story read aloud ● Counting groups of 10 and leftovers ● Numbers made with tens ● Tens and ones ● Expanded form ● Ways to make numbers ● Base 10 blocks ● Abacus primer ● Comparing lab Individual: ● Counting groups of 10 and leftovers ● Numbers made with tens ● Tens and ones ● Expanded form ● Ways to make numbers ● Base 10 blocks ● Abacus primer ● Comparing lab Small Group: ● Counting groups of 10 and leftovers ● Numbers made with tens ● Tens and ones ● Expanded form ● Ways to make numbers ● Base 10 blocks ● Abacus primer ● Comparing lab

Formative, Summative and Alternative Assessments	**Benchmark Assessments**	**Core Instructional and Supplemental Materials (including various texts at each grade level)**
Formative: ● Teacher observation / anecdotal notes ● Student classwork ● Center work ● Homework ● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work Summative: ● Assessments	● Beginning of Year Assessment ● Mid Year Assessment ● End of year assessment ● Unit Assessment ● IXL Diagnostic	● IXL ● Prodigy ● Place value books ● 120 chart ● Number line ● Manipulatives ● Dice ● Dominoes ● Monster Musical Chairs By Stuart J. Murphy ● Ten Little Ladybugs by Melanie Gerth ● A Fair Bear Sare by Stuart J. Murphy

● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task		● Earth Day Hooray! by Stuart J. Murphy ● Zero the Hero by Joan Holub and Tom Lichtenheld

Unit: Numbers and Operations in Base Ten	**Content Topic:** Use place value understanding and properties of operations to add and subtract

Standard	Disciplinary Core Ideas / Essential Statement / Objective
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.
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.
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 difference), 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.

Practices / Skills & Lesson / Learning Activities
● Use place value understanding and properties of operations to add and subtract ● Add multiples of ten mentally ● Add two digit numbers with and without regrouping ● Subtract tens from multiples of 10 ● Mentally subtract 10 from two digit numbers ● Subtract multiples of 10 from multiples of 10 ● Subtract 1 and 2 digit numbers from 2 digit numbers without regrouping Whole Group: ● Adding / subtracting groups of 10 ● Adding / subtracting tens on a hundred chart ● Adding / subtracting tens to two-digit numbers ● Using mental math to add / subtract tens ● Adding to / subtracting from a two-digit number

- Adding / subtracting multiples of ten to a 2 digit number with blocks
- Patterns when adding ten 2-digit plus one digit
- Two digit minus one digit
- Two digit minus two digit
- Regroup with blocks
- Regrouping without blocks
- Addition blocks

Individual:

- Adding / subtracting groups of 10
- Adding / subtracting tens on a hundred chart
- Adding / subtracting tens to two-digit numbers
- Using mental math to add / subtract tens
- Adding to / subtracting from a two-digit number
- Adding / subtracting multiples of ten to a 2 digit number with blocks
- Patterns when adding ten 2-digit plus one digit
- Regroup with blocks
- Regrouping without blocks
- Two digit minus one digit
- Two digit minus two digit
- Adding dice
- Draw pictures tens and ones

Small Groups:

- Adding / subtracting groups of 10
- Adding / subtracting tens on a hundred chart
- Adding / subtracting tens to two-digit numbers
- Using mental math to add / subtract tens
- Adding to / subtracting from a two-digit number
- Adding / subtracting multiples of ten to a 2 digit number with blocks
- Patterns when adding ten 2-digit plus one digit
- Regroup with blocks
- Regrouping without blocks
- Addition dice
- Draw pictures tens and ones

Formative, Summative and Alternative Assessments	**Benchmark Assessments**	**Core Instructional and Supplemental Materials (including various texts at each grade level)**
Formative: ● Teacher observation / anecdotal notes ● Student classwork ● Center work ● Homework ● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work	● Beginning of Year Assessment ● Mid Year Assessment ● End of year assessment ● Unit Assessment ● IXL Diagnostic	● IXL ● Prodigy ● Base ten blocks ● Manipulatives ● Dice ● Elevator Mice by Stuart J. Murphy ● Animals on board by Stuart J. Murphy

Summative: ● Assessments ● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task		

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1 must be in ELA)
8.1.2.CS.1- Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences 8.1.2.DA.1- Collect and present data in various visual formats 8.1.2.DA.3- Identify and describe patterns in data visualizations 8.1.2.DA.4- Make predictions based on data using charts or graphs	ELA-RI.IT.1.3-Describe relationships among pieces of information (e.g., sequence of events, steps in a process, cause-effect and compare-contrast relationships) within a text Science-***K-2-ETS1-1-***before beginning to design a solution, it is important to clearly understand the problem (ETS1.A)

Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
● Refer to IEPS for more specific accommodations and modifications for special education students ● Refer to 504 plans for more specific accommodations and modifications ● Printed copy of board work / notes provided ● Additional time for skill mastery ● Assistive technology ● Center-based instruction ● Check work frequently for understanding ● Computer or electronic divide utilization ● Extended time on tests / quizzes ● Have student repeat	● Allow students to correct errors (looking for understanding) ● Teaching key aspects of a topic, eliminate nonessential information using videos, illustrations, pictures, and drawings to explain or clarify ● Allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slideshows, videos, etc) to demonstrate students learning ● Decreasing the amount of work presented or required ● Modifying tests to reflect selected objectives	● Alternative formatives and summative assessments ● Choice boards ● Games and tournaments ● Group investigations ● Independent research and projects interest groups ● Learning contracts ● Leveled rubrics ● Multiple intelligence options ● Personal agendas ● Project-based learning ● Problem-based learning ● Stations / centers ● Think-tac-toes ● Tiered activities / assignments ● Tiered products ● Varying organizers for

directions to check for understanding ● Modified assignment format ● Modified test format ● Modified test length ● Multiple test sessions ● Multi-sensory presentation ● Preferential seating ● Preview of content, concepts, and vocabulary ● Reduced / shortened written assignments ● Secure attention before giving ● Instruction / directions ● Shortened assignments ● Student working with an assigned partner ● Teacher initiated weekly assignment sheet ● Choice of activities ● Exploration by interest ● Flexible grouping ● Goal setting with students ● Mini-workshops to reteach or extend skills ● Open ended activities ● Think-pair-share ● Varied supplemental materials ● Allowing students to correct errors (looking for understanding) ● Teaching key aspects of a topic eliminates nonessential information allowing products (projects, timelines, demonstrations, models, drawings, diorama, poster boards, charts, graphs, slideshows, videos, etc). To demonstrate students learning ● Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test ● decreasing the amount of work presented or required ● Making students' correct and acceptable work, not the mistakes	● Reducing the number of answer choices on a multiple choice test ● Tutoring by peers ● Using true / false, matching, or fill in the blank tests in lieu of essay tests	instructions

Unit: Measurement	**Content Topic:** Measure lengths indirectly and by iterating length

Standard	**Disciplinary Core Ideas / Essential Statement / Objective**
1.M.A.1	Order three objects by length; compare the lengths of two objects indirectly by using a third object
1.M.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. Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.

Practices / Skills & Lesson / Learning Activities

- Measure lengths indirectly and by iterating length units
- Use blocks, their bodies and other non-standard objects to measure items by placing them end to end
- Compare the length of two and three objects
- Order items based on their length

Whole group:

- Comparing objects
- Using blocks to measure
- Measuring with nonstandard unit
- Indirect measurement
- Estimate and measure length

Individual:

- Comparing objects
- Using blocks to measure
- Measuring with nonstandard unit
- Indirect measurement
- Estimate and measure length

Small Group:

- Comparing objects
- Using blocks to measure
- Measuring with nonstandard unit
- Indirect measurement
- Estimate and measure length

Formative, Summative and Alternative Assessments	**Benchmark Assessments**	**Core Instructional and Supplemental Materials (including various texts at each grade level)**
Formative: ● Teacher observation / anecdotal notes	● Beginning of Year Assessment	● IXL ● Prodigy ● Cubes

● Student classwork ● Center work ● Homework ● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work Summative: ● Assessments ● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task	● Mid Year Assessment ● End of year assessment ● Unit Assessment ● IXL Diagnostic	● Paper clips ● Manipulatives ● Just enough carrots by Stuart J. Murphy ● More, fewer, Less by Tana Hoban

Unit: Measurement	**Content Topic:** Tell and write time

Standard	Disciplinary Core Ideas / Essential Statement / Objective	Practices / Skills & Lesson
1.M.B.3	Tell and write time in hours and half-hours using analog and digital clocks.	● Tell and write time ● Read and write time to the hour and half hour on an analog clock ● Read and write time to the hour and half hour on a digital clock ● Distinguish between the minute hand and the hour hand Whole group: ● Number and hands of a clock ● Time to the hour ● Time to the half hour Small group ● Number and hands of clock ● Time to the hour ● Time to the half hour Individual: ● Number and hands of a clock ● Time to the hour ● Time to the half hour

Alpha Public School
Math Curriculum Map

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
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Unit: Measurement	**Content Topic:** Work with Money

Standard	Disciplinary Core Ideas / Essential Statement / Objective
1.M.C.4	Know the comparative values of coins and all dollar bills (e.g., a dime is of greater value than a nickel). Use appropriate notation (e.g., 69 cents, $10).
1.M.C.5	Use dollars in the solutions of problems up to $20. Find equivalent monetary values (e.g,., a nickel is equivalent in value to five pennies). Show monetary values in multiple ways. For example, show 25 cents as two dimes and one nickel, and as five nickels. Show $20 as two tens and as 20 ones.

Practices / Skills & Lesson / Learning Activities
● Distinguish between penny, nickels and dimes Whole Group: ● Calendar ● Read Aloud ● Morning Meeting ● Think Pair Share

- Whole Group Discussion
- Modeling with Manipulatives
- Total Participation- White Boards / Communicators
- Vocabulary
- Connecting numbers to real life situations
- Math Journals
- Act it out / talk it out/ draw it out (Students act out / talk / draw specific math concepts

Individual:

- Math centers
- Math journals
- Independent Practice
- 100th day projects

Small Groups:

- Guide group practice
- Paired activities
- Manipulatives

Instructional Activities:

- Count sequence
- Writing numbers 0-20
- Comparing numbers one to one
- Comparing numbers- more, less, same, least, etc
- Skip Counting

Formative, Summative and Alternative Assessments	**Benchmark Assessments**	**Core Instructional and Supplemental Materials (including various texts at each grade level)**
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● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task		

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1 must be in ELA)
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Differentiation (IEPs / 504s)	Differentiation (ELL)	Differentiation (G &T)
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concepts, and vocabulary ● Reduced / shortened written assignments ● Secure attention before giving ● Instruction / directions ● Shortened assignments ● Student working with an assigned partner ● Teacher initiated weekly assignment sheet ● Choice of activities ● Exploration by interest ● Flexible grouping ● Goal setting with students ● Mini-workshops to reteach or extend skills ● Open ended activities ● Think-pair-share ● Varied supplemental materials ● Allowing students to correct errors (looking for understanding) ● Teaching key aspects of a topic eliminate nonessential information allowing products (projects, timelines, demonstrations, models, drawings, diorama, poster boards, charts, graphs, slideshows, videos, etc). To demonstrate students learning ● Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test ● decreasing the amount of work presented or required ● Making students' correct and acceptable work, not the mistakes		

Unit: Data Literacy	**Content Topic:** Represent and interpret data

Standard	**Disciplinary Core Ideas / Essential**	**Practices / Skills & Lesson**

	Statement / Objective	
1.DL.A.1	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 that in another.	● Represent and interpret data ● Draw and interpret picture graphs ● Draw and interpret bar graphs ● Read and write tally marks ● Use venn diagrams to compare two or more objects Whole group: ● Using data from real graphs ● Using data from bar graphs ● Collecting data using tally marks ● Making real graphs ● Making picture graphs ● Tally marks tally chart ● How many more, how many less? ● Subtracting to compare ● Venn diagrams Individual: ● Using data from real graphs ● Using data from bar graphs ● Collecting data using tally marks ● Making real graphs ● Making picture graphs ● Tally marks tally chart ● How many more, how many less? ● Subtracting to compare ● Venn diagrams Small group: ● Using data from real graphs ● Using data from bar graphs ● Collecting data using tally marks ● Making real graphs ● Making picture graphs ● Tally marks tally chart ● How many more, how many less? ● Subtracting to compare ● Venn diagrams

Formative, Summative and Alternative Assessments	Benchmark Assessments	Core Instructional and Supplemental Materials (including various texts at each grade level)
Formative: ● Teacher observation / anecdotal notes ● Student classwork ● Center work ● Homework	● Beginning of Year Assessment ● Mid Year Assessment ● End of year assessment ● Unit Assessment	● IXL ● Prodigy ● graphs ● Manipulatives ● Safari Park by Stuart J. Murphy

● Response questions throughout the unit ● Quizzes ● Exit ticket ● IXL Modules ● Fluency work Summative: ● Assessments ● Topic tests ● IXL Quizzes Alternative: ● Teacher created ● Place numbers on a 100 grid ● Choice boards ● Projects ● Skit ● Demonstration ● Journaling ● Conferencing ● Performance task	● IXL Diagnostic	● One is a Snail, Ten is a Crab by April Pulley Sayre ● Tables and graphs

Technology	Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1 must be in ELA)
8.1.2.CS.1- Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences 8.1.2.DA.1- Collect and present data in various visual formats 8.1.2.DA.3- Identify and describe patterns in data visualizations 8.1.2.DA.4- Make predictions based on data using charts or graphs	ELA-RI.IT.1.3-Describe relationships among pieces of information (e.g., sequence of events, steps in a process, cause-effect and compare-contrast relationships) within a text Science-***K-2-ETS1-1-***before beginning to design a solution, it is important to clearly understand the problem (ETS1.A) ELA-W.SE.1.6-With guidance and support from adults, gather and select information from multiple sources to answer a question or write about a topic

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understanding ● Computer or electronic divide utilization ● Extended time on tests / quizzes ● Have student repeat directions to check for understanding ● Modified assignment format ● Modified test format ● Modified test length ● Multiple test sessions ● Multi-sensory presentation ● Preferential seating ● Preview of content, concepts, and vocabulary ● Reduced / shortened written assignments ● Secure attention before giving ● Instruction / directions ● Shortened assignments ● Student working with an assigned partner ● Teacher initiated weekly assignment sheet ● Choice of activities ● Exploration by interest ● Flexible grouping ● Goal setting with students ● Mini-workshops to reteach or extend skills ● Open ended activities ● Think-pair-share ● Varied supplemental materials ● Allowing students to correct errors (looking for understanding) ● Teaching key aspects of a topic eliminates nonessential information allowing products (projects, timelines, demonstrations, models, drawings, diorama, poster boards, charts, graphs, slideshows, videos, etc). To demonstrate students learning ● Collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to	etc) to demonstrate students learning ● Decreasing the amount of work presented or required ● Modifying tests to reflect selected objectives ● Reducing the number of answer choices on a multiple choice test ● Tutoring by peers ● Using true / false, matching, or fill in the blank tests in lieu of essay tests	● Stations / centers ● Think-tac-toes ● Tiered activities / assignments ● Tiered products ● Varying organizers for instructions

giving the test ● decreasing the amount of work presented or required ● Making students' correct and acceptable work, not the mistakes		

Unit: Geometry	**Content Topic:** Reason with shapes and their attributes

Standard	Disciplinary Core Ideas / Essential Statement / Objective
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
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. (Clarification: Students do not need to learn formal names such as "right rectangular prism"
1.G.A.3	Partition circles and rectangles into two and four equal shapes, 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.

Practices / Skills & Lesson / Learning Activities

- Reason with shapes and their attributes
- Describe 2D and 3D shapes by their attributes
- Compose 2D and 3D shapes
- Divide shapes into equal shares

Whole group:

- Identifying plane shapes
- Properties of plane shapes
- Building with shapes
- Making new shapes from shapes
- Identifying solid figures
- Flat surfaces and vertices
- Sorting solid figures
- Building with solid figures
- Attributes of shapes
- Fractions halves and quarters
- Equal parts

Individual:

- Identifying plane shapes
- Properties of plane shapes
- Building with shapes
- Making new shapes from shapes
- Identifying solid figures
- Flat surfaces and vertices

- Sorting solid figures
- Building with solid figures
- Attributes of shapes
- Fractions halves and quarters
- Equal parts

Small group:

- Identifying plane shapes
- Properties of plane shapes
- Building with shapes
- Making new shapes from shapes
- Identifying solid figures
- Flat surfaces and vertices
- Sorting solid figures
- Building with solid figures
- Attributes of shapes
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Technology	**Crosscutting Concepts / Interdisciplinary Connections across grade levels and content areas (at least 1 must be in ELA)**

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For all Math units:

21st Century Education (NJSLS Standard 9)	**Career Education**
<u>THEMES:</u> Global Awareness Financial, Economic, Business and Entrepreneurial Literacy Critical Thinking Problem Solving Communication Collaboration Information Literacy ICT (Information, Communication and Technology) Literacy	-Business Management & Administration -Education & Training -Finance -Information Technology -Manufacturing -Marketing -Science, Technology, Engineering & Mathematics (STEM) -Transportation, Distribution & Logistics

SKILLS: CRP2. Apply appropriate academic and technical skills CRP3. Attend to personal health and financial well-being CRP4. Communicate clearly and effectively with reason CRP7. Employ valid and reliable research strategies CRP8. Utilize critical thinking to make sense of problems and persevere in solving them. CRP9. Model integrity, ethical leadership and effective management. CRP11. Use technology to enhance productivity CRP12. Work productively in teams while using cultural global competence	