BURCH CHARTER SCHOOL OF EXCELLENCE

2020-2021

Mathematics Grade 1

Approved by the Burch Charter School of Excellence Board of Trustees

August 2020

MISSION STATEMENT OF BURCH CHARTER SCHOOL OF EXCELLENCE:

Burch Charter School of Excellence (BCSE) was founded in September, 2008. Our primal mission is to enable students to reach their intellectual and personal potential. We strive to instill integrity and respect in our students' in partnership with families and the community. We maintain a blended learning environment that enhances positive character traits that ensures our students become productive 21st century world citizens. The Burch Charter School of Excellence, a public school, is committed to providing best practices for educating our students in an environment that enables them to develop into critical thinkers that evolve into digital, life-long learners. Our curriculum emphasizes literacy and mathematics infused with technology.

We believe:

- Our students will be effective communicators, quality producers, self-directed lifelong learners, community contributors, collaborative workers and complex thinkers;
- All students are entitled to opportunities to maximize their talents and abilities;
- Our ethnic and cultural diversity is our strength and prepares students for success in a global society;
- Setting high expectations for students, teachers and administrators ensures that our students successfully meet or exceed the New Jersey Student Learning Standards.
- Parents are essential partners in the education of their children;
- Maintaining a strong partnership with the Irvington community is integral to student success;
- Understanding, implementing and responding to current trends in technology is intrinsic to success in a 21st century world; In ensuring that the district has a well-trained, highly qualified and competent staff; In maintaining a safe and secure learning environment.

The underlying values and principles that drive our mission and vision are our personal responsibility, a strong work ethic, cooperation, respect for others, honesty, integrity and the firm belief that every child can learn.

Grade: 1st	Content: Math
Unit: 1	Time Frame: 43-45 days

New Jersey Learning Standards	Mathematical Practices	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, *e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.* *(benchmarked) **Essential Question(s):** • How do I solve addition problems within 20?	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.	• Symbol (unknowns) can be in any position. • Add, using objects and drawings, to solve word problems involving situations of adding to and putting together. • Subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart.
1.OA.B.3. Apply properties of operations as strategies to add and subtract. *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.)* *(Students need not use formal terms for these properties)* *(benchmarked) **Essential Question(s):** • How are addition and subtraction related? • When solving a problem, how do we know how to solve it?	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.	• 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. • add and subtract, within 10, using properties of operations as strategies (commutative property).
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*	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.	• Subtraction can be represented as an unknown-addend problem. • Finding 9 minus 3 means solving ? + 3 = 9 or 3 + ? = 9 (fact families). • Represent subtraction as an unknown

Essential Question(s): • When solving a problem, how do we know how to solve it?		addend problem. • Solve subtraction problems, <u>within 10</u>, using unknown addends.
1.OA.C.5. Relate counting to addition and subtraction (e.g., by counting 2 to add 2). **Essential Question(s):** • How are addition and subtraction related?	MP.2 Reason abstractly and quantitatively. MP.7 Look for and make use of structure.	• Counting can be used to add and subtract. • Count on to add. • Count back to subtract.
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.* **Essential Question(s):** • How can I determine if equations are true or false?	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others. MP.6 Attend to precisio MP.7 Look for and make use of structure.	• 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). • Determine if addition equations are true or false. • Determine if subtraction equations are true or false.
1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.* *(benchmarked) **Essential Question(s):** • How are addition and subtraction related? • How can I determine if equations are true or false?	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	• Determine the unknown number that makes an equation true. • Solve addition or subtraction equations by finding the missing whole number.

I Can Statements
• I can use a symbol (e.g. ?, x) to represent an unknown number in a problem.

- I can determine the operation to solve word problems with unknowns.
- I can solve word problems by adding 3 numbers in different ways.
- I can explain how properties of addition and subtraction work.
- I can use strategies to solve addition and subtraction problems.
- I can identify the unknown in a subtraction problem.
- I can solve subtraction problems to find the missing addend.
- I can explain the relationship of addition and subtraction
- I can count on from a given number.
- I can count back from a given number.
- I can explain how counting on relates to addition.
- I can explain how counting back relates to subtraction.
- I can explain how counting on relates to subtraction
- I can explain the meaning of an equal sign.
- I can compare the values on each side on an equal sign.
- I can determine if the equation is true or false.
- I can recognize part-part-whole relationships of three numbers.
- I can determine the missing value in an addition equation.
- I can determine the missing value in a subtraction problem.

| 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)

Essential Question(s):

- How can I use numbers to 120? | 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. | - Number names and the count sequence up to 100
- Count orally by ones up to 100.
- 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. |

I Can Statements
- I can write numerals up to 120.
- I can write a numeral to represent a number of objects.
- I can count to 120 starting with a given number.
- I can read the numerals up to 120.

Resources
https://sso.rumba.pk12ls.com/   *www.mobymax.com*   *www.iready.com*

EnvisionMath • Benchmarks Assessments • Fluency Practice • Vocabulary Review • Topic Assessments	www.abcya.com www.khanacedmy.com www.funbrain.com www.splashlearn.com

At Risk Students	English Language Learners
Modifications for Classroom Pair visual prompts with verbal presentations Use of lab or experiments to give visual representation of concept Ask students to restate information, directions, and assignments. Work within group or partners Repetition and practice Model skills / techniques to be mastered. Use metacognitive work Extended time to complete class work Provide copy of class notes Student may request to use a computer to complete assignments. Use manipulatives to examine concepts	**Modifications for Classroom** Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary) Preteach vocabulary Use graphic organizers or other visual models Use of manipulatives to visualize concept Highlight key vocabulary-chart or vocabulary bank Use of nonverbal responses (thumbs up/down) Use sentence frames Design questions for different proficiency levels Utilize partners and partner talk

Assign a peer helper in the class setting Provide oral reminders and check student work during independent work time	
Special Education	**Gifted and Talented**

Special Education	Gifted and Talented
Modifications for Classroom Pair visual prompts with verbal presentations Use of lab or experiments to give visual representation of concept Ask students to restate information, directions, and assignments. Preteach vocabulary Repetition and practice Model skills / techniques to be mastered. Use manipulatives and visual representation to examine Breakdown large assignments into smaller tasks Extended time to complete class work Provide copy of class notes Preferential seating to be mutually determined by the student and teacher Use of online component of book Extra textbooks for home. Student may request books on tape / CD / digital media, as available and appropriate.	**Extension Activities** Conduct research and provide presentation of cultural topics. Design surveys to generate and analyze data to be used in discussion. Use of Higher Level Questioning Techniques Provide assessments at a higher level of thinking Create alternative assessment which requires writing, research and presentation

Assign a peer helper in the class setting Provide oral reminders and check student work during independent work time Assist student with long and short term planning of assignments	

Grade: First		Content: Math
Unit: 2		Time Frame: 43-45 days

New Jersey Learning Standards	Mathematical Practices	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, *e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.* *(benchmarked) **Essential Question(s):** • How do I solve addition problems within 20?	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.	• Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in any position. • Add, using drawings and equations, to solve word problems involving situations of adding to and putting together. • Subtract, using drawings and equations, to solve world problems involving situations of taking from and taking apart..
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.* *(benchmarked) **Essential Question(s):** • How can I determine if equations are true or false?	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.	• Determine if addition equations are true or false • Determine if subtraction equations are true or false
1.OA.D.8. Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ - 3, 6 + 6 = _.* *(benchmarked) **Essential Question(s):**	MP.2 Reason abstractly and quantitatively. MP.6 Attend to precision. MP.7 Look for and make use of structure.	• Determine the unknown number that makes an equation true. • Solve addition or subtraction equations by finding the missing whole number.

• How are addition and subtraction related? • How can I determine if equations are true or false?		
1.OA.B.3. Apply properties of operations as strategies to add and subtract. *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.)* (Students need not use formal terms for these properties) *(benchmarked) **Essential Question(s):** • How are addition and subtraction related? • When solving a problem, how do we know how to solve it?	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.	• 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) • Add and subtract, within 20, using properties of operations as strategies. (Associative Property)

1.OA.C.6. Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. 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 = 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).
    *(benchmarked)
 	
Essential Question(s):
• How do I solve addition problems within 20?
• How do I solve subtraction problems within 20?
• How can I determine the unknown whole number in an addition or subtraction problem?
• How are addition and subtraction related?
	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.
		• Different strategies can be used to add and subtract.
		• 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.
		• Fluently add or subtract whole numbers <u>within 20.</u>

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* **Essential Question(s):** • How do I solve addition problems within 20?	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.	• Symbols can be used to represent unknown numbers. • The symbol (unknowns) can be in • Use *objects and drawings* to represent word problems that call for less than or equal to 20.

I Can Statements
- I can use a symbol (e.g. ?, x) to represent an unknown number in a problem.
- I can determine the operation to solve word problems with unknowns.
- I can solve word problems by adding 3 numbers in different ways.
- I can explain the meaning of an equal sign.
- I can compare the values on each side on an equal sign.
- I can determine if the equation is true or false.
- I can recognize part-part-whole relationships of three numbers,
- I can determine the missing value in an addition equation.
- I can determine the missing value in a subtraction problem.
- I can explain how properties of addition and subtraction work.
- I can use strategies to solve addition and subtraction problems
- I can add within 20.
- I can subtract within 20.
- I can use strategies to add and subtract within 20.
- I can add fluently within 10.
- I can subtract fluently within 10.
- I can add 3 numbers.
- I can identify parts/addends in a word problem.
- I can show how to solve word problems

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. **Essential Question(s):**	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.	• Numbers can be organized to represent data. • 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:

• How do I organize and interpret data?	MP.6 Attend to precision.	o the total number of data points; o the number of data points in each category, and o how many more or less are in one category than in another.

I Can Statements
- I can identify different methods to organize data (e.g. tally chart, sorting, classifying, categorizing).
- I can identify different methods to represent data (e.g. tally chart, sorting, classifying, categorizing).
- I can organize data with up to three categories.
- I can interpret data representation by asking and answering questions about the data.
- I can represent data with up to 3 categories (e.g. tally chart, bar graph, pictograph, 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. 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. **Essential Question(s):** • How do we determine the number of tens and ones in a 2-digit number?	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.	• Two digits represent amounts of tens and ones. • 10 can be thought of as a bundle of ten ones — called a *ten*. • Compose numbers to 20. • Decompose numbers to 20. • Identify the value of the number in the tens or 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. **Essential Question(s):** • How, do we use comparison signs (>,<, =) to compare numbers?	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.	• Use place value understanding to compare two digit numbers. • Comparing numbers using symbols. • Use the meaning of tens and ones digits to compare 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 *(benchmarked)	MP.2 Reason abstractly and quantitatively.	• Number names and the count sequence up to 120.
	MP.7 Look for and make use of structure.	• Count orally by ones <u>up to 120.</u>
Essential Question(s):	MP.8 Look for and express regularity in repeated reasoning.	• Count up to 120 beginning at any number less than 120.
• How can I use numbers to 120?		• Read numerals up to 120.
		• Write numerals up to 120.
		• Represent a number of objects up to 120 with a written number.

I Can Statements:
- I can write numerals up to 120.
- I can write a numeral to represent a number of objects.
- I can count to 120 starting with a given number.
- I can read the numerals up to 120.
- I can explain what each digit of a two-digit number represents.
- I can identify a bundle of 10 ones as a "ten".
- I can represent numbers 11 to 19 as a 10 and ones.
- I can represent numbers 20 to 90 as tens and zero ones.
- I can identify the value of each digit in a two-digit number.
- I can explain what each symbol means ()
- I can compare two 2 digit numbers.
- I can use >,<,= symbols to compare 2 digit numbers.

Resources

https://sso.rumba.pk12ls.com/

EnvisionMath
- Benchmarks Assessments
- Fluency Practice
- Vocabulary Review
- Topic Assessments

www.mobymax.com
www.iready.com
www.abcya.com
www.khanacedmy.com
www.funbrain.com
www.splashlearn.com

Differentiated Instruction
(content, process, product and learning environment)

At Risk Students	English Language Learners
Modifications for Classroom	**Modifications for Classroom**
Pair visual prompts with verbal presentations	Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
Use of lab or experiments to give visual representation of concept	Preteach vocabulary
Ask students to restate information, directions, and assignments.	Use graphic organizers or other visual models
Work within group or partners	Use of manipulatives to visualize concept
Repetition and practice	Highlight key vocabulary-chart or vocabulary bank
Model skills / techniques to be mastered.	
Use metacognitive work	Use of nonverbal responses (thumbs up/down)
Extended time to complete class work	Use sentence frames
Provide copy of class notes	Design questions for different proficiency levels
Student may request to use a computer to complete assignments.	Utilize partners and partner talk
Use manipulatives to examine concepts	
Assign a peer helper in the class setting	
Provide oral reminders and check student work during independent work time	

Special Education	Gifted and Talented
Modifications for Classroom	**Extension Activities** Conduct research and provide presentation of cultural topics.
Pair visual prompts with verbal presentations	Design surveys to generate and analyze data to be used in discussion.

Use of lab or experiments to give visual representation of concept	Use of Higher Level Questioning Techniques
Ask students to restate information, directions, and assignments.	Provide assessments at a higher level of thinking
Preteach vocabulary	Create alternative assessment which requires writing, research and presentation
Repetition and practice	
Model skills / techniques to be mastered.	
Use manipulatives and visual representation to examine Breakdown large assignments into smaller tasks	
Extended time to complete class work	
Provide copy of class notes	
Preferential seating to be mutually determined by the student and teacher	
Use of online component of book	
Extra textbooks for home. Student may request books on tape / CD / digital media, as available and appropriate.	
Assign a peer helper in the class setting	
Provide oral reminders and check student work during independent work time	
Assist student with long and short term planning of assignments	

Grade: First	Content: Math
Unit: 3	Time Frame: 43-45 days

New Jersey Learning Standards	Mathematical Practices	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). *(benchmarked) **Essential Question(s):** • How do we determine the number of tens and ones in a 2-digit number?	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). • Compose tens to make numbers up to 90. • Compose numbers up to 90, into tens. • Identify the value of the number in the tens or 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 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. *(benchmarked) **Essential Question(s):** • How can I mentally ding 10 more or 10 less than a number? • How can I use strategies to subtract multiples of 10?	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. • 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.
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. **Essential Question(s):** • How can I mentally ding 10 more or 10 less than a number?	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.	• 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.
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 **Essential Question(s):** • How can I use strategies to subtract multiples of 10?	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.	• 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.

I Can Statements
- I can explain what each digit of a two-digit number represents.
- I can identify a bundle of 10 ones as a "ten".
- I can represent numbers 11 to 19 as a 10 and ones.
- I can represent numbers 20 to 90 as tens and zero ones
- I can show that in adding 2 digit numbers, you add ones to ones and tens to tens.
- I can recognize when to regroup to compose (make) a ten.
- I can add a 2 digit number and a 1 digit number within 100.
- I can add a 2 digit number and 1 digit number with regrouping within 100.
- I can add a 2 digit number and a multiple of 10 within 100.
- I can relate the strategy to an equation.
- I can explain why I used a chosen strategy to solve a written equation.
- I can mentally add 10 to a given 2 digit number.
- I can mentally subtract 10 from a given 2 digit number.

- I can explain how to find 10 more than a given 2 digit number.
- I can explain how to find 10 less than a given 2 digit number.
- I can subtract multiples of 10 up to 90.
- I can choose a strategy to solve subtraction problems with multiples of 10.
- I can relate the strategy to an equation. • I can explain why I used the chosen strategy to solve a written equation.

1.MD.A.1. Order three objects by length; compare the lengths of two objects indirectly by using a third object **Essential Question(s):** • How can I measure objects? • How can I compare the measurements of objects?	MP.6 Attend to precision. MP.7 Look for and make use of structure.	• Objects can be compared and ordered based on length. : • 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.
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. *Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.* **Essential Question(s):** • How can I measure objects? • How can I represent the measurements of objects?	MP.6 Attend to precision. MP.7 Look for and make use of structure.	• The length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. • 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.
1.MD.B.3. Tell and write time in hours and half-hours using analog and digital clocks **Essential Question(s):** • How does time influence events? • How is time represented? • How can I tell time to the hour and half-hour on most digital and dial clocks. • How can I use time order to sequence events.	MP.6 Attend to precision. MP.7 Look for and make use of structure.	• Time is represented on analog and on digital clocks. • Analog clocks have *hands* that indicate the time in hours and minutes. • Tell and write time in hours using analog and digital clocks. • Tell and write time in half-hours using analog and digital clocks. • Use the term *o'clock* in reporting time to the hour.

I Can Statements
- I can put 3 objects in order by length.
- I can compare the length of three objects.
- I can compare the lengths of two objects by using a third object to compare them.
- I can use the same size non-standard objects as repeating units.
- I can measure length using a variety of non-standard units.
- I can express the length of the measured object as a number.
- I can show how to measure the length of an object using non-standard units.
- I can recognize that analog and digital clocks are objects that measure time.
- I can identify hour hand and minute hand and distinguish between the two.
- I can identify analog and digital clocks.
- I can determine where the minute hand must be when the time is to the hour (o'clock).
- I can determine where the minute hand must be when the time is to half hour (thirty).
- I can tell time to the hour using analog and digital clocks.
- I can tell time to the half-hour using analog and digital clocks.
- I can write time to the hour using analog and digital clocks.
- I can write time to the half hour using analog and digital clocks.
- I can show time to the hour and half-hour correctly using an analog clock.

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)
 	
Essential Question(s):
• How do I solve addition problems within 20?
• How do I solve subtraction problems within 20?
• How can I determine the unknown whole number in an addition or subtraction problem?
• How are addition and subtraction related?
	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.
		• Different strategies can be used to add and subtract .
		• 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>

I Can Statements
- I can add within 20.

- I can subtract within 20.
- I can use strategies to add and subtract within 20.
- I can add fluently within 10.
- I can subtract fluently within 10.

Resources	
https://sso.rumba.pk12ls.com/ EnvisionMath • Benchmarks Assessments • Fluency Practice • Vocabulary Review • Topic Assessments	www.mobymax.com www.iready.com www.abcya.com www.khanacedmy.com www.funbrain.com www.splashlearn.com

Differentiated Instruction
(content, process, product and learning environment)

At Risk Students	English Language Learners
Modifications for Classroom Pair visual prompts with verbal presentations Use of lab or experiments to give visual representation of concept Ask students to restate information, directions, and assignments. Work within group or partners Repetition and practice Model skills / techniques to be mastered. Use metacognitive work Extended time to complete class work	**Modifications for Classroom** Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary) Preteach vocabulary Use graphic organizers or other visual models Use of manipulatives to visualize concept Highlight key vocabulary-chart or vocabulary bank Use of nonverbal responses (thumbs up/down)

Provide copy of class notes Student may request to use a computer to complete assignments. Use manipulatives to examine concepts Assign a peer helper in the class setting Provide oral reminders and check student work during independent work time	Use sentence frames Design questions for different proficiency levels Utilize partners and partner talk
Special Education	**Gifted and Talented**
Modifications for Classroom Pair visual prompts with verbal presentations Use of lab or experiments to give visual representation of concept Ask students to restate information, directions, and assignments. Preteach vocabulary Repetition and practice Model skills / techniques to be mastered. Use manipulatives and visual representation to examine Breakdown large assignments into smaller tasks Extended time to complete class work Provide copy of class notes	**Extension Activities** Conduct research and provide presentation of cultural topics. Design surveys to generate and analyze data to be used in discussion. Use of Higher Level Questioning Techniques Provide assessments at a higher level of thinking Create alternative assessment which requires writing, research and presentation

Preferential seating to be mutually determined by the student and teacher Use of online component of book Extra textbooks for home. Student may request books on tape / CD / digital media, as available and appropriate. Assign a peer helper in the class setting Provide oral reminders and check student work during independent work time Assist student with long and short term planning of assignments	

Grade: First		**Content:** Math
Unit: 4		**Time Frame:** 43-45 days

New Jersey Learning Standards	**Mathematical Practices**	**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.	• Defining attributes versus non defining attributes. • Name attributes that define two-dimensional shapes (square, triangle, rectangle, regular hexagon). • Same attributes that do not two-dimensional shapes. • 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. **Essential Question(s):** • Why are these shapes congruent? • Why aren't these shapes congruent? • How is a sphere different from a circle? • How is a cube different from a square? • What solid shapes have 6 faces? What solid shapes have curved parts? • What solid shapes have 8 corners? • What solid shapes have no corners?	MP.4 Model with mathematics. MP.7 Look for and make use of structure.	• Shapes can be composed from other shapes (e.g. trapezoids can be composed from triangles). • New shapes can be composed from composite shapes. • Create a composite shape using two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles). • 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.
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	MP.2 Reason abstractly and quantitatively. MP.3 Construct viable arguments and critique the reasoning of others.	• 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.

<table>
<tr>
<td>

of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares

Essential Question(s):
- Can you find one half or one fourth of a geometric figure of a set?
- How many halves are there in a whole?
- How are doubles and halves alike?
- What does it mean when you have equal shares?
- What does the top number in one fourth tell us?
- What does the bottom number in one fourth tell us?

</td>
<td>

MP.6 Attend to precision.

MP.4 Model with mathematics.

MP.7 Look for and make use of structure.

</td>
<td>

halves, fourths, quarters).
- Shares can be described based on their relation to the whole (e.g *half of*, *fourth of*, *quarter of*).
- The whole can be described based on the number of shares.
- Decomposing a whole into more equal shares creates smaller shares.
- 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 *half of*, *fourth of*, and *quarter of.*
- Describe the whole as *two of*, or *four of* the shares.
- Decompose a whole into a greater number of equal shares and identify the new shares as smaller.

</td>
</tr>
</table>

I Can Statements
- I can recognize that shapes can be composed and decomposed to make new shapes.
- I can describe attributes of original and composite shapes (combined shapes).
- I can determine how the original and created composite shapes (combined shapes) are alike and different.
- I can create composite shapes • I can compose new shapes from a composite shape
- I can identify when shares (parts) are equal.
- I can identify two and four equal shares (parts).
- I can describe equal shares (parts) using vocabulary; halves, fourths, and quarters, half of, fourth of, and quarter of.
- I can describe the whole as two of two or four of four equal shares (parts).
- I can justify why dividing (decomposing) a circle or rectangle into more equal shares (parts) creates smaller pieces

<table>
<tr>
<td>

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*

</td>
<td>

MP.1 Make sense of problems and persevere in solving them.

MP.2 Reason abstractly and quantitatively.

</td>
<td>

- Symbols can be used to represent unknown numbers.
- The symbol (unknowns) can be in any position.
- Add, using objects and drawings, to solve

</td>
</tr>
</table>

number to represent the problem. *(benchmarked)* **Essential Question(s):** • How do I solve addition problems within 20? • How do I solve subtraction problems within 20?	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.	word problems involving situations of adding to and putting together. • Subtract, using objects and drawings, to solve world problems involving situations of taking from and taking apart.

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)
 	
Essential Question(s):
• How can I determine the unknown whole number in an addition or subtraction problem?
• How are addition and subtraction related?
	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.
		• Different strategies can be used to add and subtract.
		• 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>

I Can Statements
- I can use a symbol (e.g. ?, x) to represent an unknown number in a problem.
- I can determine the operation to solve word problems with unknowns.
- I can solve word problems by adding 3 numbers in different ways.
- I can add within 20.
- I can subtract within 20. • I can use strategies to add and subtract within 20.
- I can add fluently within 10. • I can subtract fluently within 10.

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) **Essential Question(s):**	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.	• Number names and the count sequence up to 120. • 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.

• How do we use numbers to120?		• Write numerals up to 120. • Represent a number of objects up to 120 with a written number.
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 a 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. *(benchmarked) **Essential Question(s):** • How can I mentally ding 10 more or 10 less than a number?	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.	• 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. • 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.

I Can Statements

- I can write numerals up to 120. \
- I can write a numeral to represent a number of objects.
- I can count to 120 starting with a given number.
- I can read the numerals up to 120.
- I can show that in adding 2 digit numbers, you add ones to ones and tens to tens.
- I can recognize when to regroup to compose (make) a ten.
- I can add a 2 digit number and a 1 digit number within 100.
- I can add a 2 digit number and 1 digit number with regrouping within 100.
- I can add a 2 digit number and a multiple of 10 within 100.
- I can relate the strategy to an equation. • I can explain why I used a chosen strategy to solve a written equation.

Resources	
https://sso.rumba.pk12ls.com/ EnvisionMath • Benchmarks Assessments	www.mobymax.com www.iready.com www.abcya.com

- Fluency Practice
- Vocabulary Review
- Topic Assessments

www.khanacedmy.com
www.funbrain.com
www.splashlearn.com

Differentiated Instruction
(content, process, product and learning environment)

At Risk Students	English Language Learners
Modifications for Classroom	**Modifications for Classroom**
Pair visual prompts with verbal presentations	Native Language Translation (peer, online assistive technology, translation device, bilingual dictionary)
Use of lab or experiments to give visual representation of concept	Preteach vocabulary
Ask students to restate information, directions, and assignments.	Use graphic organizers or other visual models
Work within group or partners	Use of manipulatives to visualize concept
Repetition and practice	Highlight key vocabulary-chart or vocabulary bank
Model skills / techniques to be mastered.	Use of nonverbal responses (thumbs up/down)
Use metacognitive work	Use sentence frames
Extended time to complete class work	Design questions for different proficiency levels
Provide copy of class notes	Utilize partners and partner talk
Student may request to use a computer to complete assignments.	
Use manipulatives to examine concepts	
Assign a peer helper in the class setting	

Provide oral reminders and check student work during independent work time	

Special Education	Gifted and Talented
Modifications for Classroom	**Extension Activities**
	Conduct research and provide presentation of cultural topics.
Pair visual prompts with verbal presentations	
	Design surveys to generate and analyze data to be used in discussion.
Use of lab or experiments to give visual representation of concept	
	Use of Higher Level
Ask students to restate information, directions, and assignments.	Questioning Techniques
Preteach vocabulary	Provide assessments at a
	higher level of thinking
Repetition and practice	
	Create alternative assessment which requires writing,
Model skills / techniques to be mastered.	research and presentation
Use manipulatives and visual representation to examine Breakdown large assignments into smaller tasks	
Extended time to complete class work	
Provide copy of class notes	
Preferential seating to be mutually determined by the student and teacher	
Use of online component of book	
Extra textbooks for home. Student may request books on tape / CD / digital media, as available and appropriate.	

Assign a peer helper in the class setting Provide oral reminders and check student work during independent work time Assist student with long and short term planning of assignments	