FIRST GRADE MATHEMATICS CURRICULUM

Rochelle Park Mission Statement

We envision an educational community, which inspires and empowers all students to become self-sufficient and to thrive in a complex, global society.

Rochelle Park Vision Statement

❖ Establish and maintain a shared responsibility among home, school, and the greater community which fosters student learning, accountability, and citizenship.

❖ To provide curricula that enables all students to meet or exceed current national, state, and local standards.

❖ We will utilize a variety of formative and summative assessments in order to differentiate and guide instruction.

❖ The district, as a Professional Learning Community, will provide on-going professional development training and opportunities for collaboration among faculty and staff.

Mathematic Domains

Operations and Algebraic Thinking
- 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.

Number and Operations in Base Ten
- Extend the counting sequence.
- Understand place value.
- Use place value understanding and properties of operations to add and subtract.

Measurement and Data
- Measure lengths indirectly and by iterating length units.
- Tell and write time.
- Represent and interpret data.

Geometry
- Reason with shapes and their attributes.

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 1	Domain: Operations and Algebraic Thinking	Content Area: Mathematics
Topic: Addition Concepts	Time Frame: 11-13 days	Marking Period: 1
Standards 1.OA.A.1 1.OA.B.3 1.OA.C.6	**Mathematical Practices** MP.2 – Reason abstractly and quantitatively MP.4 – Model with mathematics MP.7 – Look for and make use of structure	

Essential Questions	Enduring Understandings
- How can numbers to 10 be counted, read, represented, and written? - How can you model adding to a group? - How do you model putting together? - Why can you add addends in any order? - Why is it important to know consecutive numbers? - How do you solve addition word problems by drawing a picture, making a model? - What happens when you add 0 to a number? - What are some addition facts easy to add?	- Use addition within 20 to solve word problems involving situations of adding to, putting together, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. - Classify objects into given categories; count the numbers of objects in each category and sort the categories by count. Limit category counts to be less than or equal to 10. - Add within 20, demonstrating fluency for addition within 10. Use strategies such as counting on; making ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: - Use illustrations to reinforce addition concepts. - Use pictures to "add to" and find sums. - Use concrete objects to solve "adding to" and "putting together" addition problems. - Solve adding to and putting together situations using the strategy make a model. - Model and recall all the ways to put together numbers within 10	**Students will know how to:** - Add or subtract whole numbers within 20 using strategies including making a 10 or decomposing a number leading to 20. - Apply properties of operations to add or subtract whole numbers within 20. - 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.

ROCHELLE PARK SCHOOL DISTRICT

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 1 Test	- GOMath Lessons 1.1-1.8 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	add addend sum join addition sentence order plus (+) equals (=) part whole double in all

Differentiated Instruction

RTI/ELL	Enrichment	Interdisciplinary Connections
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	Literacy: Math Storybook - My Animal Stories: students create a storybook where they fill in the missing numbers to complete each story. Science: Rocks - Have students examine different kinds of rocks and describe how they are the same and different. - Create number sentences using the different rocks they identify

ROCHELLE PARK SCHOOL DISTRICT

Grade: 1	Domain: Operations and Algebraic Thinking	Content Area: Mathematics
Topic: Subtraction Concepts	Time Frame: 12 days	Marking Period: 1
Standards 1.OA.A.1 1.OA.C.6 1.OA.D.8	Mathematical Practices MP.2 Reason abstractly and quantitatively MP.5 Use appropriate tools strategically	

Essential Questions	Enduring Understandings
● How can you show taking from with pictures? ● How can you model *taking from a group* or *taking apart*? ● How can you solve subtraction problems by making a model? ● How can you use pictures and models to compare and subtract? ● What happens when you subtract zero from a number? ● How can you show all the ways to take apart a number? ● Why are some subtraction facts easy to subtract?	● Use addition within 20 to solve word problems involving situations of adding to and putting together, with unknowns in all positions. ● Add within 20 showing fluency for addition within 10. Use Strategies such as counting on, making ten, and creating equivalent but easier and known sums. ● Determine the unknown whole number in an addition equation relating three whole numbers.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Use pictures to show taking from to find differences. ● Use concrete objects to solve *taking from* and *taking apart* subtraction problems. ● Solve taking from and taking apart subtraction problems using the strategy make a model. ● Compare pictorial groups to understand subtraction. ● Model and compare groups to show the meaning of subtraction. ● Identify how many are left when subtraction all or zero. ● Model and record all the ways to take apart numbers with in 10. ● Build fluency for subtraction within 10.	Students will know how to: ● Add or subtract whole numbers within 20 using strategies including making a 10 or decomposing a number leading to 20. ● Apply properties of operations to add or subtract whole numbers within 20. ● Solve addition or subtraction equations by finding the missing whole number in any position.

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 2 Test	- GOMath Lessons 2.1-2.9 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://xtramath.org	compare difference fewer minus more subtract subtraction sentence

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection:** - The Class Party: Students will learn to read addition and subtraction sentences. - Milk For Sale: Students practice subtraction facts through 10. **Science Connection:** - Animal Homes: Tell subtraction stories about baby animals.

Grade: 1	**Domain:** Operations and Algebraic Thinking	**Content Area:** Mathematics
Topic: Addition Strategies	**Time Frame:** 15-18 days	**Marking Period:** 1
Standards 1.OA.A.2 1.OA.C.5 1.OA.B.3 1.OA.C.6	**Mathematical Practices** MP.6 – Attend to precision MP.8 – Look for and express regularity in repeated reasoning	

Essential Questions	Enduring Understandings
- How do you solve addition problems? - What happens if you change the order of the addends when you add? - How do you count on 1, 2, or 3? - What are double facts, and how can you use them to help you add and to find other sums? - What strategies can you use to solve addition problems? - How can you use a ten frame to add 10 and some more? - How can you use a ten strategy to help you add? - How can you group numbers to add three addends? - How do you solve addition word problems by drawing a picture?	- Solve word problems that call or addition of three whole numbers whose sum in less than or equal to 20. - Relate counting to addition and subtraction. - Add and subtract within 20, demonstrating fluency for addition and subtraction within 10.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: - Understand and apply the Commutative Property of Addition. - Use count on 1, 2, or 3 as a strategy to find sums within 20. - Use doubles as a strategy to solve addition facts and create equivalent but easier sums with facts within 20. - Use the strategies count on, doubles, doubles plus 1, and doubles minus 1 to practice addition facts within 20. - Use *make a ten* as a strategy to find a sum within 20. - Understand and apply the Associative Property or Commutative Property of Addition to add three addends. - Solve *adding to* and *putting together* situations using the strategy draw a picture.	Students will know how to: - Count forward or backwards from any number within 20 to solve addition and subtraction problems. - Apply properties of operations to add or subtract whole numbers within 20. - Solve addition word problems with three whole numbers with sums less that or equal to 20. - Add or subtract whole numbers within 20.

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 3 Test	- GOMath Lessons 3.1-3.12 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://xtramath.org	count on doubles doubles plus 1 doubles minus 1 make a ten

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Doubles-Fun on the Farm: counting legs on animals. - Funny Bunny Hats: Adding bunny hats. **Social Studies Connection** - Count of the flag stars and stripes and make number sentences.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 1	Domain: Operations and Algebraic Thinking	Content Area: Mathematics
Topic: Subtraction Strategies	Time Frame: 9-11 days	Marking Period: 2
Standards 1.OA.A.1 1.OA.B.4 1.OA.C.5 1.OA.C.6	Mathematical Practices MP.2 – Reason abstractly and quantitatively MP.4 – Model with mathematics MP.8 – Look for and express regularity in repeated reasoning	

Essential Questions	Enduring Understandings
- How do you solve subtraction problems? - How can you count back 1, 2, or 3? - How can you use an addition fact to find the answer to a subtraction fact? - How can you make a ten to help you subtract? - How do you break apart a number to subtract? - How can acting out a problem help you solve the problem?	- Use addition and subtraction within 20 to solve word problems. - Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. - Relate counting to addition and subtraction.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: - Recall addition facts or count back 1, 2, or 3 to subtract numbers within 20. - Subtract by breaking apart to make ten. - Solve subtraction problem situations using the strategy *acting out*.	Students will know how to: - Count forward and backwards from any number within 20 to solve addition and subtraction problems. - Add or subtract whole numbers within 20 using strategies including making 10 or decomposing a number leading to 20. - Solve subtraction problems using unknown addends (within 20). - Use addition and subtraction within 20 to solve word problems involving situations or adding to, taking from, putting together, taking apart, and comparing unknowns in all positions.

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Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 4 Test	- GOMath Lessons 4.1-4.6 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	count back

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Miss Bumble's Garden: students will practice addition and subtraction strategies. **Science Connection** - Discuss insects with more than two legs.

Grade: 1	Domain: Operations and Algebraic Thinking	Content Area: Mathematics
Topic: Addition and Subtraction Strategies	Time Frame: 13-15 days	Marking Period: 2
Standards 1.OA.A.1　　　1.OA.D.7 1.OA.C.6　　　1.OA.D.8	Mathematical Practices MP.3 – Construct viable arguments and critique the reasoning of others MP.4 – Model with mathematics MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
● How can relating addition and subtraction help you to learn and understand facts within 20? ● How can making a model help you solve a problem? ● How can you use a related fact to find a missing number? ● How do you if addition and subtractions facts are related? ● How can you use addition to check subtraction? ● How to choose when to add or subtract to solve a problem? ● How can you add and subtract in different ways to make the same number? ● How can you decide if a number sentence is true or false? ● How can addition and subtraction strategies help you find sums and differences?	● Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. ● Understand the meaning of equal sign, and determine if equations involving addition and subtraction are true or false. ● Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Solve addition and subtraction problem situations using the strategy *make a model.* ● Identify and record related facts within 20. ● Apply the inverse relationship of addition and subtraction. ● Use related facts to subtract and determine unknown numbers. ● Choose an operation and strategy to solve an addition or subtraction word problem. ● Represent equivalent forms of numbers using sums and differences within 20.	Students will know how to: ● Add or subtract whole numbers within 20 using strategies including making 10 or decomposing a number leading to 20. ● Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking part, and comparing with unknowns in all positions. ● Demonstrate understanding of the equal sign by determining if an equation is true or false. ● Solve addition or subtraction equations by finding the missing whole number in any position.

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Skills	
● Determine if an equation is true or false. ● Add and subtract facts within 20 and demonstrate fluency for addition and subtraction within 10.	

Assessment/Project	Resources/Materials	Vocabulary
● Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) ● Workbook pages ● Center Work and activities ● Mixed Practice and Cumulative Review ● Math Journals ● Do Now's ● Topic/Unit 5 Test	● GOMath Lessons 5.1-5.10 ● GOMath iTools and eGlossary (Think Central) ● GOMath! Animated Math Models ● Corresponding Go Math! Grab and Go for Activities/Literature/Games ● HMH Mega Math ● Corresponding GOMath! Daily Routines ● https://www-k6.thinkcentral.com/ePC/start.do ● http://www.corestandards.org/Math ● http://www.xtramath.org	related facts

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
● Number line ● Multiple Response Strategies ● Extra time for assigned tasks ● Adjust length of assignment ● Repeat, clarify, or reword directions ● Provide a warning for transitions ● Mini-breaks between tasks ● Precise step-by-step directions ● Small group instruction ● Read directions aloud ● Consistent routine ● Frequent feedback	● Math Journals ● Chromebook ● Open ended activities ● Supplemental materials ● Learning Centers ● Tiered/Multi-level activities ● Independent Student Options	**Literature Connection** ● Picture Puzzles: addition and subtraction facts through 12 ● Juggling: Fact families **Science Connection** ● Sorting rocks by properties **Social Studies Connection** ● Map symbols
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ROCHELLE PARK SCHOOL
DISTRICT

Grade: 1	**Domain:** Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: Count and Model Numbers	**Time Frame:** 13-15 days	**Marking Period:** 2
Standards 1.NBT.A.1 1.NBT.B.2, 2a, 2b, 2c 1.NBT.B.3	**Mathematical Practices** MP.5 – Use appropriate tools strategically MP.7 – Look for and make use of structure	

Essential Questions	**Enduring Understandings**
● How do you use place value to model, read, and write numbers to 120? ● How can knowing a number pattern help you count to 120? ● How do numbers change when you count by tens to 120? ● How can you show a number up to 100 as tens and ones? ● How can you model and name group of ten? ● How can you group cubes to show a number as tens and ones? ● How can you model, read, and write numbers from 100-120?	● Count to 120, starting at any number less that 120. ● Understand that the two digits of a two-digit number represent amounts of tens and ones. ● Compare two two-digit numbers based on meanings of the tens and ones digits.

Skills	**NJDOE Model Curriculum (Student Learning Objectives)**
Students will be able to: ● Count by ones or tens from any number to extent a counting sequence up to 120. ● Use models, objects, pictures, and numbers to represent equivalent forms of tens and ones. ● Group objects to show numbers to 100 as tens and ones. ● Solve a problem using the strategy *make a model.* ● Read and write numerals to represent a number of 100 to 120 objects.	**Students will know how to:** ● Count utilizing written or verbal numerals starting at any umber less than 100. ● Compose and decompose numbers to 20 to identify the value of the number in the tens and ones place. ● Count to 120, starting at any number less than 120. ● Read and write numerals to 120 including representing a number of objects with a written numeral. ● Decompose two-digit numbers as the sum of tens and ones for numbers less than 100. ● Compare two-digit numbers using <, >, and = symbols.

ROCHELLE PARK SCHOOL DISTRICT

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 6 Test	- GOMath Lessons 6.1-6.10 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	digit hundred ones tens

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Strawberries: Place Value **Science Connection** - Students will use calculators to look for patterns in data **Social Studies Connection** - Use pictures to show patterns in pottery with designs

ROCHELLE PARK SCHOOL DISTRICT

Grade: 1	**Domain:** Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: Compare Numbers	**Time Frame:** 8-11 days	**Marking Period:** 3
Standards 1.NBT.B.3 1.NBT.C.5	**Mathematical Practices** MP.6 – Attend to precision MP.8 – Look for and express regularity in repeated reasoning	

Essential Questions	Enduring Understandings
● How do you use place value to compare numbers? ● How can you compare two numbers to find which is greater and which is less? ● How can you use symbols to show how numbers compare? ● How can making a model help you compare numbers? ● How can you identify numbers that are 10 less or 10 more than a number?	● Compare two two-digit numbers based on meanings of the tens and ones digits. ● Given a two-digit number, mentally find 10 more or 10 less than the number.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● To model and compare two-digit numbers to determine which is greater and which is less. ● Use symbols for is less than "<", is greater than ">", and is equal to "=" to compare numbers. ● Solve problems using the strategy *make a model*. ● Identify numbers that are 10 more or 10 less than a given number.	Students will know how to: ● Compare two digit numbers using <, >, and = symbols. ● Mentally find ten more or ten less than a number without having to count and explain the reason used

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Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 7 Test	- GOMath Lessons 7.1-7.5 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	Is greater than ">" Is less than "<"

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Name That Number: comparing numbers **Science Connection** - Students will collect leaves and sort by color and shape **Social Studies Connection** - Students will discuss fruits and vegetables at a farmer's market and use problem solving skills

ROCHELLE PARK SCHOOL DISTRICT

Grade: 1	**Domain:** Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: Two-Digit Addition and Subtraction	**Time Frame:** 12-15 days	**Marking Period:** 3
Standards 1.OA.C.6 1.NBT.C.6 1.NBT.C.4	**Mathematical Practices** MP.1 – Make sense of problems and persevere in solving them MP.3 – Construct viable arguments and critique the reasoning of others	

Essential Questions	Enduring Understandings
- Add and subtract within 20. - Draw a model to add and subtract tens. - Use place value, understanding of properties of operations to add and subtract using a 100 chart. - Use concrete models or make a ten to add two-digit number and a one-digit number. - Use tens and ones to add two-digit numbers. - How can drawing a picture help you explain how to solve an addition problem. - Add and subtract within 100 including continued practice with facts within 20.	- 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. - Subtract multiples of 10 in the range of 10-90 from multiples of 10 in the range 10-90.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: - Add and subtract within 20. - Draw a model to add and subtract tens. - Use place value, understanding of properties of operations to add and subtract using a 100 chart. - Use concrete models or make a ten to add two-digit number and a one-digit number. - Use tens and ones to add two-digit numbers. - How can drawing a picture help you explain how to solve an addition problem? - Add and subtract within 100 including continued practice with facts within 20.	**Students will know how to:** - Add or subtract whole numbers within 20 using strategies including making 10 or decomposing a number leading to 20. - Subtract multiples of ten from multiples of ten and explain the reasoning used. - Add within 100, including adding a two-digit and a one-digit number, and adding a two-digit number and a multiple of 10; using concrete models, or drawings and strategies based on place value, properties of operations and/or the relationship between addition and subtraction; and relate the strategy to a written method and explain the reasoning used.

ROCHELLE PARK SCHOOL
DISTRICT

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 8 Test	- GOMath Lessons 8.1-8.9 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - It's A Home Run: Students will read a story about adding baseball cards. **Science Connection** - Use base ten blocks to model different groups of birds. **Social Studies Connection** - Solve problems about saving money.

Grade: 1	Domain: Measurement and Data	Content Area: Mathematics
Topic: Measurement	Time Frame: 12-15 days	Marking Period: 3
Standards 1.MD.A.1 1.MD.A.2 1.MD.B.3	**Mathematical Practices** MP.2 – Reason abstractly and quantitatively MP.8 – Look for and express regularity in repeated reasoning	

Essential Questions	Enduring Understandings
● How can you measure length and tell time? ● How can you compare lengths of 2 or 3 objects and put them in order? ● How do you use a non-standard measuring tool to measure length? ● How can acting it out help you solve measuring problems? ● How do you tell time to the hour on a clock that only has the hour hand? ● How do you tell time to the half hour on a clock that only has the hour hand? ● How are the minute hand and hour hand different for time to the hour and time to the half hour? ● How do you know whether to write and draw time to the hour or half hour?	● Order three objects by length. ● Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object end to end. ● Tell and write time in hours and half-hours using analog and digital clocks.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Order objects by length. ● Use the Transitivity Principle to measure indirectly. ● Measure length using non-standard units. ● Solve measurement problems using the strategy *act it out*. ● Write times to the hour and half hour on analog clocks. ● Tell times to the hour and half hour using analog and digital clocks. ● Use the hour hand to draw and write times on analog and digital clocks.	Students will know how to: ● Order three objects by lengths and compare the lengths of two objects by using the third object ● Use an object to measure another object's length by laying multiple copies end to end with no overlaps giving measurements in whole number units. ● Tell and write time to the half-hour using "o'clock" and digital notation.

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 9 Test	- GOMath Lessons 9.1-9.9 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	half hour hour hour hand longest minute minute hand shortest

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Dog Show: read a story and measure with nonstandard units. **Science Connection** - Students observe and measure plants.

Grade: 1	Domain: Measurement and Data	Content Area: Mathematics
Topic: Represent Data	Time Frame: 10-12 days	Marking Period: 4
Standards 1.MD.C.4	Mathematical Practices MP.3 – Construct viable arguments and critique the reasoning of others MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
● How can graphs and charts help you organize, represent, and interpret data? ● How do you make a picture graph to represent data and answer questions? ● How can you read a bar graph to help you compare information? ● How do you count the tallies on a tally chart? ● Why is a tally chart a good way to show information that you have collected? ● How can showing information in a graph help you solve problems?	● Organize, represent, and interpret data with up to three categories.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Analyze, interpret and compare data shown in a picture graph where each symbol represents one. ● Make a bar graph, analyze and compare data to interpret the information. ● Make a tally chart, analyze and compare data to interpret the information. ● Use the problem solving strategy *make a graph*.	Students will know how to: ● Organize, represent, and interpret data with up to three categories, and compare the number of counts of data points among the categories.

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 10 Test	- GOMath Lessons 10.1-10.7 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	bar graph picture graph tally chart tally mark

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Miss B's Class: Make tables and charts and gather and compare data. **Science Connection** - Show a forest scene and make a tall chart of living and non-living things **Social Studies Connection** - Class picture graph of future occupations of the class

Grade: 1	**Domain:** Geometry	**Content Area:** Mathematics
Topic: Three-Dimensional Geometry	**Time Frame:** 8-10 days	**Marking Period:** 4
Standards 1.G.A.1 1.G.A.2	**Mathematical Practices** MP.1 – Make sense of problems and persevere in solving them MP.7 – Look for and make use of structure	

Essential Questions	**Enduring Understandings**
● How do you identify and describe three-dimensional shapes? ● How can you identify, describe and combine three-dimensional shapes to build new shapes? ● How can acting it out help you take apart combined shapes? ● What two-dimensional shapes do you see on the flat surfaces of three-dimensional shapes?	● Distinguish between defining attributes versus non-defining attributes. ● Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape.

Skills	**NJDOE Model Curriculum (Student Learning Objectives)**
Students will be able to: ● Identify and describe three-dimensional shapes according to defining attributes. ● Use composite three-dimensional shapes to build new shapes. ● Identify three-dimensional shapes used to build a composite shape using the problem solving strategy, *act it out*. ● Identify two-dimensional shapes on three-dimensional shapes.	Students will know how to: ● Name the attributes of a given two-dimensional shape distinguishing between defining and non-defining attributes. ● Draw and build shapes when given defining attributes ● Compose two-dimensional shapes or three-dimensional shapes to create a composite shape, and compose new shapes from the composite shape.

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 11 Test	- GOMath Lessons 11.1-11.5 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	cone cube curved surface cylinder flat surface rectangular prism sphere

Differentiated Instruction		Interdisciplinary Connections
ELL/RTI	**Enrichment**	
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - April's First Word: Read a story about three dimensional shapes. **Social Studies Connection** - Display objects that can be recycled and discuss the shapes on their flat surfaces.

Grade: 1	**Domain:** Geometry	**Content Area:** Mathematics
Topic: Two-Dimensional Geometry	**Time Frame:** 13-15 days	**Marking Period:** 4
Standards 1.G.A.1 1.G.A.2 1.G.A.3	**Mathematical Practices** MP.4 – Model with mathematics MP.7 – Look for and make use of structure	

Essential Questions	**Enduring Understandings**
● How do you sort and describe two-dimensional shapes? ● What attributes can you use to describe two-dimensional shapes? ● How can you put two-dimensional shapes together to make new two-dimensional shapes? ● How can acting it out help you make new shapes from combined shapes? ● How can you find shapes in other shapes? ● How can you take apart two-dimensional shapes? ● How can you identify equal and unequal parts in two-dimensional shapes? ● How can a shape be separated into two and four equal shares?	● Distinguish between defining attributes versus non-defining attributes ● Compose two-dimensional shapes or three-dimensional shapes to create a composite shape. ● Partition circles and rectangles into two and four equal shares.

Skills	**NJDOE Model Curriculum (Student Learning Objectives)**
Students will be able to: ● Describe attributes of two-dimensional shapes. ● Compose a new shape by combining two-dimensional shapes. ● Make new shapes from composite two-dimensional shapes using the strategy, *act it out*. ● Decompose two-dimensional shapes into parts. ● Identify equal and unequal parts (or shares) in two-dimensional shapes. ● Partition circles and rectangles into two and four equal shares.	Students will know how to: ● Name the attributes of a given two-dimensional shape distinguishing between defining and non-defining attributes. ● Draw and build shapes when given defining attributes ● Compose two-dimensional shapes or three-dimensional shapes to create a composite shape. ● Partition circles and rectangles into two or four equal shares, describing the shares using halves, fourths, and quarters. ● Describe the whole circle (or rectangle) partitioned into two or four equal shares as "two of" or "four of" the shares.

Assessment/Project	Resources/Materials	Vocabulary
- Ongoing teach observations (ie exit cards, think, pair share, or numbered heads together) - Workbook pages - Center Work and activities - Mixed Practice and Cumulative Review - Math Journals - Do Now's - Topic/Unit 12 Test	- GOMath Lessons 12.1-12.10 - GOMath iTools and eGlossary (Think Central) - GOMath! Animated Math Models - Corresponding Go Math! Grab and Go for Activities/Literature/Games - HMH Mega Math - Corresponding GOMath! Daily Routines - https://www-k6.thinkcentral.com/ePC/start.do - http://www.corestandards.org/Math - http://www.xtramath.org	equal parts trapezoid equal shares triangles fourth of unequal parts fourths unequal shares half of vertices halves hexagon quarter of quarters rectangles sides

Differentiated Instruction

ELL/RTI	Enrichment	Interdisciplinary Connections
- Number line - Multiple Response Strategies - Extra time for assigned tasks - Adjust length of assignment - Repeat, clarify, or reword directions - Provide a warning for transitions - Mini-breaks between tasks - Precise step-by-step directions - Small group instruction - Read directions aloud - Consistent routine - Frequent feedback	- Math Journals - Chromebook - Open ended activities - Supplemental materials - Learning Centers - Tiered/Multi-level activities - Independent Student Options	**Literature Connection** - Sign Shape Up: Read a story and identify shapes on signs. **Social Studies Connection** - Use pictures of traffic signs to identify shapes.