ROCHELLE PARK SCHOOL DISTRICT

SECOND 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.

ROCHELLE PARK SCHOOL DISTRICT

PACING CHART

Chapter	Time Frame
Ch. 1: Number Concepts	12 days
Ch. 2: Numbers to 1,000	15 days
Ch. 3: Basic Facts and Relationships	14 days
Ch. 4: 2-Digit Addition	15 days
Ch. 5: 2-Digit Subtraction	14 days
Ch. 6: 3-Digit Addition and Subtraction	13 days
Ch. 7: Money and Time	14 days
Ch. 8: Length in Customary Units	12 days
Ch. 9: Length in Metric Units	10 days
Ch. 10: Data	10 days
Ch. 11: Geometry and Fraction Concepts	15 days

ROCHELLE PARK SCHOOL DISTRICT

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

8.1 Educational Technology

All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

8.2 Technology Education, Engineering, Design, and Computational Thinking-Programming

All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.

Educational Technology
Indicators: 8.1.5.A.1, 8.1.5.A.4, 8.1.5.D.3, 8.2.5.C.4, 8.2.5.E.4
• Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. • Graph data using a spreadsheet, analyze and produce a report that explains the analysis of data. • Demonstrate an understanding of the need to practice cyber safety, cyber security, and cyber ethics when using technologies and social media. • Collect and brainstorm with peers to solve a problem evaluating all solutions to provide the best results with supporting sketches or models. • Use appropriate terms in conversation (e.g. algorithm, program, debug, loop, events, procedures, memory, storage, processing, software, coding, procedure, and data).

ROCHELLE PARK SCHOOL DISTRICT

21st Century Life and Careers Skills

Indicators: 9.1.4.A.1, 9.1.4.B.2, 9.1.4.B.5, 9.1.4.D.1, 9.2.4.A.1, 9.2.4.A.2, 9.2.4.A.4

- Explain the difference between a career and a job, and identify various jobs in the community and the related earnings.
- Identify age-appropriate financial goals.
- Identify ways to earn and save.
- Determine various ways to save.
- Identify reasons why people work, different types of work, and how work can help a person achieve personal and professional goals.
- Identify various life roles and civic and work-related activities in the school, home, and community.
- Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Career Ready Practices

Indicators: CRP2, CRP4, CRP6, CRP8, CRP11, CRP12

- Apply appropriate academic technical skills
- Communicate clearly and effectively and with reason
- Demonstrate creativity and innovation
- Utilize critical thinking to make sense of problems and persevere in solving them.
- Use technology to enhance productivity.
- Work productively in teams while using cultural global competence.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Operations and Algebraic Thinking, Number and Operations in Base Ten	**Content Area:** Mathematics
Topic: Number Concepts	**Time Frame:** 11-13 days	**Marking Period:** 1
Standards 2.OA.C.3 2.NBT.A.2 2.NBT.A.3	**Mathematical Practices** MP.3 – Construct viable arguments and critique the reasoning of others. MP.7 – Look for and make use of structure.	

Essential Questions	Enduring Understandings
• How do you use place value to find the values of numbers and describe numbers in different ways? • How are even and odd numbers shown as a sum of two equal addends and different? • How do you know the value of a digit? • How do you describe and write a two-digit number as tens and ones? • How does finding a pattern help you find all the ways to show a number with tens and ones? • How do you count by ones, fives, and tens with numbers less than 1000?	• Compare two two-digit numbers based on meanings of tens and ones digits, recording the results of the comparisons with the symbols >, =, or <. • Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. • Count within 1000. • Skip-count by 5s, 10s, and 100s. • Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Classify numbers up to 20 as even or odd. • Write equations with equal addends to represent even numbers. • Apply, use, and write place value concepts to find equal representations of numbers. • Solve problems by finding different combinations of tens and ones to represent two-digit numbers using the strategy *find the pattern*. • Extend counting sequences within 1000 counting by 1s, 5s, 10s, and 100s.	**Students will know how to:** • Skip count by 5s and 10s up to 100 • Read numbers to 1000 using base-ten numerals, number names, and expanded form. • Write numbers to 1000 using base-ten numerals, number names, and expanded form. • Recognize that in groups of even numbers objects can be counted by 2s and that in groups of odd numbers objects will not pair up evenly. • Write an equation to illustrate that all even numbers can be formed from the addition of two equal addends. • Count within 1000 by ones, 5s, 10, and 100s beginning at any multiple of 1, 5, 10 or 100. • Orally count within 1000 including skip-counting by 5s, 10s, and 100s.

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<table>
<tr><th>Vocabulary</th><th>Resources</th><th>Assessment/Project</th></tr>
<tr>
<td>compare
=, is equal to
>, is greater than
<, is less than
hundred
thousand</td>
<td>

GOMath Lessons 1.1-1.9
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

</td>
<td>

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

</td>
</tr>
<tr><th colspan="2">Differentiated Instruction</th><th>Interdisciplinary Connections</th></tr>
<tr><th>RTI/ELL</th><th>Enrichment</th><td rowspan="2">Literature Connection: Whales. Students will read story and solve problems involving place value concepts.

Social Studies Connection: Students will learn about fun facts of geography and whales.</td></tr>
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Number line, counting tape
Grab and GO Kits
Anchor charts, word wall
Manipulatives
Multiple Response

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Math Journals, DO NOWs
White boards
Chromebook
Accountable Talk, Critical Thinking

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ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: Numbers to 1,000	**Time Frame:** 14-16 days	**Marking Period:** 1
Standards 2.NBT.A.1 2.NBT.A.3 2.NBT.A.1a 2.NBT.A.4 2.NBT.A.1b 2.NBT.B.8	**Mathematical Practices** MP.7 – Look for and make use of structure MP.8 – Look for and express regularity in repeated reasoning	

Essential Questions	Enduring Understandings
• How can you use place value to model, write, and compare three-digit numbers? • How do you group tens as hundreds? • How do you show and write a three-digit number for a group of tens using blocks? • How do you know the values of the digits in numbers? • What are three ways to write a three-digit number? • How can you use blocks or quick pictures to show the value of a number in different ways? • How does place value help you identify and extend counting patterns? • How do you compare three-digit numbers?	• Understand that the three digits of a three- digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. • Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. • Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. • Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Understand that multiples of 100 are multiples of groups of 10 tens. • Write 3-digit numbers in standard form, expanded form, and word form. • Describe 3-digit numbers using place value concepts and find equivalent representation of 3-digit numbers. • Find 10 more or 10 less than a given 3-digit number; find a 100 more or a 100 less than a given 3-digit number. • Compare two 3-digit numbers using symbols	**Students will know how to:** • Represent a 3-digit number as specific amounts of 100s, 10s, and 1s. • Identify ten tens as 100 and represent two hundred, three hundred,…., nine hundred with 2, 3,…., 9 hundred bundles. • Read numbers to 1000 using base-ten numerals, number names, and expanded form. • Write numbers to 1000 using base-ten numerals, number names, and expanded form. • Use symbols >, =, < to record the results of comparing two 3-digit numbers by decomposing the number into a number of 100s, 10s, and 1s. • Write an addition equation with repeated equal addends from a rectangular array with up to 5 rows and 5 columns and solve to find the total number.

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>, is greater than
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hundred
thousand</td>
<td>

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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

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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

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</tr>
<tr><th colspan="2">Differentiated Instruction</th><th>Interdisciplinary Connections</th></tr>
<tr><th>RTI/ELL</th><th>Enrichment</th><td rowspan="2">Social Studies Connection: Students will discuss the height of monuments in Washington, D.C. and describe the value of the digits.

Literature Connection: The Number Machine. Students will read about the value of each number.</td></tr>
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Number line, counting tape
Grab and GO Kits
Anchor charts, word wall
Manipulatives
Multiple Response

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<td>

Math Journals, DO NOWs
White boards
Chromebook
Accountable Talk, Critical Thinking

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ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Operations and Algebraic Thinking	**Content Area:** Mathematics
Topic: Basic Facts and Relationships	**Time Frame:** 13-15 days	**Marking Period:** 1
Standards 2.OA.A.1 2.OA.C.4 2.OA.B.2 2.NBT.A.2	**Mathematical Practices** MP.2 – Reason abstractly and quantitatively MP.3 – Construct viable arguments and critique the reasoning of others.	

Essential Questions	Enduring Understandings
• How can you use patterns and strategies to find sums and differences for basic facts? • How can you use double facts to find sums for near double facts? • What are some ways to remember sums and/or differences? • How is the make a ten strategy used to find sums? • How do you add three numbers? • How are addition and subtraction related? • How does getting to 10 in subtraction help in finding differences? • How are bar models and number sentences used to show addition and subtraction problems? • How can acting it out help when solving a problem about equal groups? • How can you write an addition sentence for problems with equal groups?	• Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. • Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns • Write an equation to express the total as a sum of equal addends. • Fluently add and subtract within 20 using mental strategies. • By end of Grade 2, know from memory all sums of two one-digit numbers.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Apply mental strategies to find sums and differences for basic facts, including the application of the inverse relationship of addition and subtraction. • Apply the Commutative and Associative Properties of Addition to find sums for three one-digit addends. • Use various representations of addition and subtraction situations, including equations with a symbol for the unknown number. • Write equations to represent the addition of equal groups.	**Students will know how to:** • Add and subtract within 20 to solve 1- and 2-step word problems with unknowns in any position. • Add fluently within 20 using mental strategies, such as decomposing and composing numbers using the ten as a benchmark number. • Add and subtract within 100 to solve 1- or 2-step word problems with unknowns in any position. • Add and subtract fluently within 20 using mental strategies, such decomposing and composing numbers using the benchmark of ten. • Fluently add and subtract within 20 using mental strategies.

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Vocabulary	Resources	Assessment/Project
addends bar model count back count on differences doubles number sentence related facts row sums	• GOMath Lessons 3.1-3.11 • 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	• 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

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	Enrichment	
• Number line, counting tape • Grab and GO Kits • Anchor charts, word wall • Manipulatives • Multiple Response	• Math Journals, DO NOWs • White boards • Chromebook • Accountable Talk, Critical Thinking	**Literature Connection:** All About Animals. Students will read a story to review addition concepts. **Social Studies Connection:** Discuss with students the importance of rules. Create a list for classroom rules and a list for school rules.

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Grade: 2	**Domain:** Operations and Algebraic Thinking, Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: 2-Digit Addition	**Time Frame:** 14-16 days	**Marking Period:** 2
Standards 2.OA.A.1 2.NBT.B.6 2.NBT.B.5 2.NBT.B.9	**Mathematical Practices** MP.2 – Reason abstractly and quantitatively MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
• How do you use place value to add 2-digit numbers, and what are some different ways to add 2-digit numbers? • How does breaking apart a number make it easier to add? • How can you make an addend a ten to help solve an addition problem? • How do you break apart addends to add tens and then add ones? • When do you regroup in addition? • How do you record 2-digit addition, and what are the steps when adding 2-digit numbers? • What are two different ways to write addition problems? • How can drawing a diagram help when solving addition problems? • How do you write a number sentence to represent a problem? • What are some ways to add three and four numbers?	• Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Add up to four two-digit numbers using strategies based on place value and properties of operations. • Explain why addition and subtraction strategies work, using place value and the properties of operations.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Apply mental strategies to find sums of two 2-digit numbers. • Use the standard algorithm to find sums of two 2-digit numbers, with and without regrouping. • Use various representations of 2-digit addition situations, including equations with a symbol for the unknown number. • Find sums of three 2-digit numbers; find sums of four 2-digit numbers.	**Students will be know how to:** • Use a variety of strategies to add and subtract within 50. • Choose a strategy to add and subtract within 100. • Apply addition and subtraction strategies based on place value and the properties of operations and explain why these strategies work using drawing or objects. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or relationship between addition and subtraction.

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<table>
<tr><th>Vocabulary</th><th>Resources</th><th>Assessment/Project</th></tr>
<tr><td>regroup</td><td>

GOMath Lessons 4.1-4.12
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

</td><td>

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

</td></tr>
<tr><th colspan="2">Differentiated Instruction</th><th>Interdisciplinary Connections</th></tr>
<tr><th>RTI/ELL</th><th>Enrichment</th><td rowspan="2">Literature/Science Connection: Nature’s Numbers. Students will add various objects and animals as they read a poem about seasons.</td></tr>
<tr><td>

Number line, counting tape
Grab and GO Kits
Anchor charts, word wall
Manipulatives
Multiple Response

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Math Journals, DO NOWs
White boards
Chromebook
Accountable Talk, Critical Thinking

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ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Operations and Algebraic Thinking, Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: 2-Digit Subtraction	**Time Frame:** 13-15 days	**Marking Period:** 2
Standards 2.OA.A.1 2.NBT.B.5 2.NBT.B.9	**Mathematical Practices** MP.5 – Use appropriate tools strategically MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
• How do you use place value to subtract 2-digit numbers with and without regrouping? • How does breaking apart a number make subtracting easier? • When do you regroup in subtraction? • How do you record 2-digit subtraction? • How do you record the steps when subtracting 2-digit numbers? • What are two different ways to write subtraction problems? • How can you use addition to solve subtraction problems? • How can drawing a diagram help when solving subtraction problems? • How do you write a number to represent a problem? • How do you decide what steps to do to solve a problem?	• Use subtraction within 100 to solve one- and two-step word problems involving situations of taking from, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem. • Fluently subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • Explain why subtraction strategies work, using place value and the properties of operations.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Apply mental strategies to find differences of two 2-digit numbers. • Use the standard algorithm to find differences of two 2-digit numbers, with and without regrouping. • Use various representations of 2-digit subtraction situations, including equations with a symbol for the unknown number.	**Students will know how to:** • Apply addition and subtraction strategies based on place value and the properties of operations and explain why these strategies work using drawings or objects. • Add and subtract within 100 to solve 1- or 2-step word problems with unknowns in any position. • Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

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<table>
<tr><th>Vocabulary</th><th>Resources</th><th>Assessment/Project</th></tr>
<tr><td></td><td>

- GOMath Lessons 5.1-5.11
- 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

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- 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

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<tr><th colspan="2">Differentiated Instruction</th><th>Interdisciplinary Connections</th></tr>
<tr><th>RTI/ELL</th><th>Enrichment</th><td rowspan="2"></td></tr>
<tr><td>

- Number line, counting tape
- Grab and GO Kits
- Anchor charts, word wall
- Manipulatives
- Multiple Response

</td><td>

- Math Journals, DO NOWs
- White boards
- Chromebook
- Accountable Talk, Critical Thinking

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<tr><td colspan="3">

Literature Connection: Comic Books for Sale. Students will read book and model 2- digit subtraction to show how many comic books are sold.

Science Connection: Show students pictures of different types of centipedes and explain "centi" means one hundred.

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ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Numbers and Operations in Base Ten	**Content Area:** Mathematics
Topic: 3-Digit Addition and Subtraction	**Time Frame:** 12-14 days	**Marking Period:** 2
Standards 2.NBT.B.7 2.NBT.B.9	**Mathematical Practices** MP.5 – Use appropriate tools strategically MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
• What are some strategies for adding and subtracting 3-digit numbers? • How do you draw quick pictures to show adding 3-digit numbers? • How do you break apart addends to add 100s, 10s, and then 1s? • When do you regroup ones in addition? • When do you regroup tens in addition? • How do you know when to regroup in addition? • How can making a model help when solving subtraction problems? • When do you regroup tens in subtraction? • When do you regroup hundreds in subtraction? • How do you know when to regroup in subtraction? • How do you regroup when there are zeros in the number you start with?	• Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. • Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. • Explain why addition and subtraction strategies work, using place value and the properties of operations.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Use concrete and pictorial representations to add and subtract 3-digit numbers. • Use the standard algorithm to find sums and differences of 3-digit numbers with and without regrouping.	**Students will know how to:** • Apply addition and subtraction strategies based on place value and the properties of operations and explain why these strategies work using drawings or objects. • Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.

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<tr><th>Vocabulary</th><th>Resources</th><th>Assessment/Project</th></tr>
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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

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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

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<tr><th colspan="2">Differentiated Instruction</th><th>Interdisciplinary Connections</th></tr>
<tr><th>RTI/ELL</th><th>Enrichment</th><td rowspan="2">Literature/Science Connection: The Bug Boys. Students will read a book about bug collections and learn about subtracting with 3-digit numbers.</td></tr>
<tr><td>

Number line, counting tape
Grab and GO Kits
Anchor charts, word wall
Manipulatives
Multiple Response

</td><td>

Math Journals, DO NOWs
White boards
Chromebook
Accountable Talk, Critical Thinking

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</table>

ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Measurement and Data	**Content Area:** Mathematics
Topic: Money and Time	**Time Frame:** 13-15 days	**Marking Period:** 3
Standards 2.MD.C.7 2.MD.C.8	**Mathematical Practices** MP.1 – Make sense of problems and persevere in solving them. MP.8 – Look for and express irregularity in repeated reasoning	

Essential Questions	Enduring Understandings
• How do you use the values of coins and bills to find the total value of a group of money and how do you read times shown on analog and digital clocks? • How do you find the total value of a group of coins to show a money amount in different ways? • How do you order coins to help find the total value of a group of coins? • How can you show the value of one dollar with coins? • How do you show money amounts greater than one dollar? • How does acting it out help when solving problems about money? • What are the different ways you can read and show time to the nearest five minutes, half hour, and to the hour on a clock? • How do you use A.M. and P.M. to describe times?	• Tell and write time from analog and digital clocks to the nearest five minutes, using A.M. and P.M. • Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Order coins, and find the total values of collections of quarters, dimes, nickels, and pennies. • Represent money amounts less than a dollar using two different combinations of coins. • Find and record the total value for money amounts greater than one dollar in a variety of ways. • Solve word problems involving money by using the strategy *acted out*. • Practice telling time to the nearest five minutes, half hour, and hour. • Tell and write time using A.M. and P.M.	**Students will know how to:** • Tell and write time using analog and digital clocks to the nearest five minutes using AM and PM. • Identify, recognize, and solve word problems with dollar bills, quarters, dimes, nickels, and pennies using the $ and ¢ symbols appropriately.

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Vocabulary	Resources	Assessment/Project
A.M. cent sign ¢ decimal point dime dollar dollar sign $ midnight noon nickel penny P.M. quarter quarter past	• GOMath Lessons 7.1-7.11 • 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	• 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

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	**Enrichment**	
• Number line, counting tape • Grab and GO Kits • Anchor charts, word wall • Manipulatives • Multiple Response	• Math Journals, DO NOWs • White boards • Chromebook • Accountable Talk, Critical Thinking	**Literature/Science Connection:** Make a Kite. Students will read a story a to review measurement concepts and learn fun facts to answer science questions about kites. **Literature/Social Studies Connection:** Time to Go Shopping. Students will read about counting coins to buy all the items on a shopping list.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Measurement and Data	**Content Area:** Mathematics
Topic: Length in Customary Units	**Time Frame:** 11-13 days	**Marking Period:** 3
Standards 2.MD.A.1 2.MD.B.5 2.MD.A.2 2.MD.B.6 2.MD.A.3 2.MD.D.9	**Mathematical Practices** MP.5 – Use appropriate tools strategically MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
● What are some of the methods and tools that can be used to estimate and measure length? ● How can you use inch models such as rows of color tiles to measure length? ● How do you estimate the lengths of objects in inches and feet? ● How do you use an inch ruler to measure lengths? ● How can drawing a diagram help when solving problems about length? ● Why is measuring in feet different from measuring in inches? ● How do you choose a measuring tool to use when measuring lengths? ● How can a line plot be used to show measurement data?	● Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, and measuring tapes. ● Measure the length of an object twice, using length units of different lengths for the two measurements. ● Describe how the two measurements relate to the size of the unit chosen. ● Estimate lengths using units of inches and feet. ● Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. ● Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole- number sums and differences within 100 on a number line diagram. ● Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. ● Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

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Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Make an inch ruler and use a concrete model to measure length of objects in inches. ● Estimate the lengths of objects by mentally partitioning the lengths into inches and feet. ● Measure the length of objects using an inch ruler in both inches and feet to explore the inverse relationship between size and number of units. ● Solve addition and subtraction problems involving the lengths of objects by using the strategy *draw a diagram*. ● Select appropriate tools for measuring different lengths. ● Measure the lengths of objects and use a line plot to display the measurement data.	**Students will know how to:** ● Estimate or measure lengths of objects using appropriate tools. ● Compare measurements of an object taken with two different units of measure and explain that the difference is related to the size of unit chosen. ● Add and subtract within 100 in word problems involving lengths using a symbol to represent the unknown number. ● Use a number line to represent the solution of whoel number sums and differences related to length within 100 by using equally spaced points. ● Use tools of measurement to measure lengths of several objects to the nearest whole unit and represent the data on a line plot with appropriate whole number units on the horizontal scale.

Vocabulary	Resources	Assessment/Project
foot inch line plot measuring tape yardstick	● 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	● 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

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	**Enrichment**	
● Number line, counting tape ● Grab and GO Kits ● Anchor charts, word wall ● Manipulatives ● Multiple Response	● Math Journals, DO NOWs ● White boards ● Chromebook ● Accountable Talk, Critical Thinking	**Literature Connection:** Nature Walk. Students will read about a walk in the woods and measuring the lengths of various things. **Social Studies Connection**: Students will go on a "scavenger hunt" to find things in their classroom that are various lengths.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Measurement and Data	**Content Area:** Mathematics
Topic: Length in Metric Units	**Time Frame:** 10-12 days	**Marking Period:** 3
Standards 2.MD.A.1 2.MD.A.4 2.MD.A.2 2.MD.B.5 2.MD.A.3 2.MD.B.6	**Mathematical Practices** MP.4 – Model with mathematics MP.7 – Look for and make use of structure	

Essential Questions	Enduring Understandings
● What are some of the methods and tools that can be used to estimate and measure length in metric units? ● How do you use a centimeter model or known lengths to estimate or measure lengths of objects? ● How do you use a centimeter ruler to measure lengths? ● How do you solve problems including adding and subtracting lengths by using the strategy draw a diagram? ● How do you estimate the length of objects in meters and how does it differ from measuring in centimeters? ● How do you find the difference between the length of two objects?	● Measure the length of an object by selecting and using appropriate tools such as rulers, meter sticks, and measuring tapes. ● Measure the length of an object twice, using length units of different lengths for the two measurements. ● Describe how the two measurements relate to the size of the unit chosen. ● Estimate lengths using units of centimeters and meters. ● Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit. ● Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. ● Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole- number sums and differences within 100 on a number line diagram.

ROCHELLE PARK SCHOOL DISTRICT

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Use concrete models and a centimeter ruler to measure the lengths of objects. ● Estimate the lengths of objects in centimeters and meters by comparing them to known lengths. ● Solve problems involving adding and subtracting lengths by using the strategy draw a diagram. ● Measure the lengths of objects in both centimeters and meters to explore the inverse relationship between size and number of units. ● Measure and then find the difference in the lengths of two objects.	**Students will know how to:** ● Estimate or measure lengths of objects using appropriate tools. ● Compare measurements of an object taken with two different units of measure and explain that the difference is related to the size of unit chosen. ● Compare lengths of two objects and determine how much longer one object is than another using the same standard of measure. ● Add and subtract within 100 in word problems involving lengths using a symbol to represent the unknown number. ● Use a number line to represent the solution of whole number sums and differences related to length within 100 by using equally spaced points.

Vocabulary	Resources	Assessment/Project
centimeter meter	● GOMath Lessons 9.1-9.7 ● 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	● 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

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	**Enrichment**	
● Number line, counting tape ● Grab and GO Kits ● Anchor charts, word wall ● Manipulatives ● Multiple Response	● Math Journals, DO NOWs ● White boards ● Chromebook ● Accountable Talk, Critical Thinking	**Literature/Science Connection:** A Trip to the Pond. Students will read a story about using metric units to measure and identify insects. **Social Studies Connection:** Students will go on a scavenger hunt to measure similar objects and find the difference in the lengths.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Measurement and Data	**Content Area:** Mathematics
Topic: Data	**Time Frame:** 10-12 days	**Marking Period:** 4
Standards 2.MD.D.10	**Mathematical Practices** MP.4 – Model with mathematics MP.6 – Attend to precision	

Essential Questions	Enduring Understandings
• How do tally charts, picture graphs, and bar graphs help you solve problems? • How do you use a tally chart to record data from a survey? • How do you use a picture graph to show data? • How do you make a picture graph to show data in a tally chart? • How do you make a bar graph to show data and help when solving problems about data?	• Draw a picture graph and a bar graph (with single unit scale) to represent a data set with up to four categories. • Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: • Collect data in a survey and record that data in a tally chart. • Make picture graphs, interpret data, and use that information to solve problems. • Make bar graphs, interpret data, and use that information to solve problems. • Solve problems involving data by using the strategy *make a graph*.	**Students will know how to:** • Draw a picture graph and a bar graph to represent a data set with up to four categories. Solve simpler put-together, take-apart, and compare problems using information presented in the graph.

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Vocabulary	Resources	Assessment/Project
bar graph data key picture graph survey	• GOMath Lessons 10.1-10.6 • 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	• 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

Differentiated Instruction		Interdisciplinary Connections
RTI/ELL	**Enrichment**	
• Number line, counting tape • Grab and GO Kits • Anchor charts, word wall • Manipulatives • Multiple Response	• Math Journals, DO NOWs • White boards • Chromebook • Accountable Talk, Critical Thinking	**Literature Connection:** What Do You Like? Students will read about collecting and displaying data to plan a party. **Science/Social Studies Connection**: Students will conduct a survey and display the results in a graph.

ROCHELLE PARK SCHOOL DISTRICT

Grade: 2	**Domain:** Geometry	**Content Area:** Mathematics
Topic: Geometry and Fraction Concepts	**Time Frame:** 15-17 days	**Marking Period:** 4
Standards 2.G.A.1 2.G.A.2 2.G.A.3	**Mathematical Practices** MP.1 – Make sense of problems and persevere in solving them. MP.4 – Model with mathematics	

Essential Questions	Enduring Understandings
• What are some two-dimensional shapes and three-dimensional shapes and how can you show equal parts of shapes? • What objects match three-dimensional shapes? • How would you describe the faces of a rectangular prism and the faces of a cube? • How can you build a rectangular prism? • What shapes can you name just by knowing the number of sides and vertices? • How do you find and count the number of sides and angles to sort two-dimensional shapes? • How do you find the total number of same-sized squares that will cover a rectangle? • How do you identify and show if a shape shows halves, thirds, or fourths of a whole? • How can drawing a diagram help when solving problems about equal shares?	• Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. • Identify triangles, quadrilaterals, pentagons, hexagons, and cubes. • Partition a rectangle into rows and columns of same-sized squares and count to find the total number of them. • Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. • Recognize that equal shares of identical wholes need not have the same shape.

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Skills	NJDOE Model Curriculum (Student Learning Objectives)
Students will be able to: ● Identify and describe three-dimensional shapes, 3-4-5-6 sided shapes, according to the number of faces, edges, sides, and vertices. ● Discuss and model with cubes how you can build a rectangular prism. ● Identify angles and sort two-dimensional shapes according to their attributes. ● Partition rectangles into equal size squares and find the total number of these squares. ● Identify name and partition shapes of circles and rectangles to show halves, thirds, and fourths. ● Identify and describe one equal part as a half of, a third of, or a fourth of a whole. ● Solve problems involving wholes divided into equal shares by using the strategy *draw a diagram*.	**Students will know how to:** ● Recognize and draw shapes having specific attributes, such as a given number of angles or a given number of equal faces. ● Partition a rectangle into rows and columns of same-size squares and count to find the total number. ● Partition circles and rectangles into two, three, or four equal shares, describe the shares using words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.

Vocabulary	Resources	Assessment/Project
angle cone cube cylinder edge face fourths halves hexagon pentagon quadrilateral rectangular prism side thirds vertex	● GOMath Lessons 11.1-11.11 ● 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	● 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

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<table>
<tr><th colspan="2">Differentiated Instruction</th><th>Interdisciplinary Connections</th></tr>
<tr><th>RTI/ELL</th><th>Enrichment</th><td rowspan="2">Literature Connection: A Farmer's Job. Students will read a story to review and reinforce geometry concepts.

Social Studies Connection: Students will go on a nature walk and create new shapes or find new uses for recycled materials, such as cans, rectangular prisms, etc.</td></tr>
<tr><td>• Number line, counting tape
• Grab and GO Kits
• Anchor charts, word wall
• Manipulatives
• Multiple Response</td><td>• Math Journals, DO NOWs
• White boards
• Chromebook
• Accountable Talk, Critical Thinking</td></tr>
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