Red Bank Charter School
Grade 1 Mathematics Curriculum

Recommended Pacing Guide	
Unit 1: Operations and Algebraic Thinking	65 Days
Unit 2: Number and Operations in Base Ten	55 Days
Unit 3: Measurement and Data	45 Days
Unit 4: Geometry	15 Days

Suggested Accommodations For All Units

English Language Learners:

- Pair ELL student with student who speaks English and understands/ able to communicate with student's native language
- Simplify content
- Google Translator
- Multi - language word wall
- Provide extended time
- Speak clearly and slowly, avoid slang and idiomatic expressions

Special Education/504 Plans/Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan

Gifted and Talented:

- Provide appropriate challenges for a wide ranging skills and development.
- Participate in inquiry and project-based learning units of study.
- Provide options, alternatives and choices to differentiate and broaden the curriculum

Students at Risk of Failure:

- Students Motivation
    - Interest
    - Build confidence
    - Independence
    - Enjoyment

Economically Disadvantaged:

- Build a safe and nurturing atmosphere
- Providing needed academic resources (paper, pencils, computer time,)
- Be flexible with assignments

Culturally Diverse:

- Involve families in student learning
- Provide immediate praise and feedback
- Respect cultural traditions
- Provided students with necessary academic resources and materials
- Provide visuals

Unit 1: Operations and Algebraic Thinking	Duration: 65 Days

Standards/Learning Targets

New Jersey Student Learning Focus Standards: Sums and Differences

Represent and solve problems involving addition and subtraction.

NJSLS.MATH.CONTENT.1.OA.A.1

- Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.1

NJSLS.MATH.CONTENT.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.

Understand and apply properties of operations and the relationship between addition and subtraction.

NJSLS.MATH.CONTENT.1.OA.B.3

- Apply properties of operations as strategies to add and subtract.2 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)

NJSLS.MATH.CONTENT.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.

Add and subtract within 20.

NJSLS.MATH.CONTENT.1.OA.C.5

- Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

NJSLS.MATH.CONTENT.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).

Work with addition and subtraction equations.

NJSLS.MATH.CONTENT.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.

NJSLS.MATH.CONTENT.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 = _.

Primary Interdisciplinary Connections:
ELA CONNECTIONS

- 3.9.K.3.NJSLSA.L6 Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking and listening at the college and career readiness level demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

- 3.7.K.1.NJSLSA.SL1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners building on others ideas and expressing their own clearly and persuasively.

- 3.7.K.2.NJSLSA.SL5 Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.

- 3.5.K.2.NJSLSA.W6 Use technology including the Internet to produce and publish writing and to interact and collaborate with others.

SCIENCE CONNECTIONS

- 1.1-3.1.2.DCI-1 Seasonal patterns of sunrise and sunset can be observed, described and predicted.
- 1.1-1.1.2.CC-1 Simple tests can be designed to gather evidence to support or refute student ideas about causes
- 1.2-4.2.1.DCI-2 Asking questions, making observations and gathering information are helpful in thinking about problems.

Technology Standards:

- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games museums).
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.1.2.B.1 Illustrate and communicate original ideas and stories using multiple digital tools and resources.

21st Century Themes/Career Readiness:
Career Awareness, Exploration, and Preparation

- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Career Ready Practices

- CPR2. Apply appropriate academic and technical skills CPR4. Communicate clearly and effectively and with reason CPR6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them

- CRP11. Use technology to enhance productivity.

Personal Financial Literacy

- 9.1.4.B.1 Differentiate between financial wants and needs.

Evidence of Student Learning

Formative Tasks:

- Teacher Observation
- Teacher Checklist
- Verbal question & answer
- Self-evaluation of performance and progress

Alternative Assessments:

- End of unit project

Summative Assessments:

- Student participation
- Rubric score
- Performance Test

Benchmark Assessments:

- Baseline SGO
- Mid-year SGO
- End of year SGO

Knowledge & Skills

Enduring Understandings:

- Change is fundamental to understanding functions.
- Numbers or objects that repeat in predictable ways can be described or generalized.
- An operation can be “undone” by its inverse.
- Rules of arithmetic and algebra can be used together with notions of equivalence to transform equations and inequalities so
- solutions can be found.

Essential Questions:

- How can change be described mathematically?
- How are patterns of change related to the behavior of functions?
- How do mathematical models/representations shape our understanding of mathematics?

Core Instructional & Supplemental Materials

Suggested Activities/Resources:

- Vocabulary Cards
- Blackline masters
- Addition/Subtraction Bingo
- www.gonoodle.com

Varied Levels of Text/Resources:

- Big Ideas Math www.bigideasmath.com
- Student Edition
- Teaching Edition
- Family Letter
- Warm-ups
- Extra Practice
- Reteach
- Big Ideas Math math manipulatives kit
- Literature kits
- Math Musicals
- Big Ideas Math Center Calendar Math
- Enrichment and extension

	● Prerequisite Skills ● Practice Pre-and Post-Course Tests ● Course Benchmarks Tests ● Chapter Tests

Unit 2: Number and Operations in Base Ten	Duration: 55 Days

Standards/Learning Targets

New Jersey Student Learning Focus Standards: Extend the counting sequence.

NJSLS.MATH.CONTENT.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. Understand place value.

NJSLS.MATH.CONTENT.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.

NJSLS.MATH.CONTENT.1.NBT.B.2.A

- 10 can be thought of as a bundle of ten ones — called a “ten.”

NJSLS.MATH.CONTENT.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.

NJSLS.MATH.CONTENT.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).

NJSLS.MATH.CONTENT.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 <;. Use place value understanding and properties of operations to add and subtract.

NJSLS.MATH.CONTENT.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.

NJSLS.MATH.CONTENT.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**.**

NJSLS.MATH.CONTENT.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.

Primary Interdisciplinary Connections:

ELA CONNECTIONS

- 3.9.K.3.NJSLSA.L6 Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking and listening at the college and career readiness level, demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

- 3.7.K.1. NJSLSA.SL1Prepare for and participate effectively in a range of conversations and collaborations with diverse partners building on others ideas and expressing their own clearly and persuasively.
- 3.7.K.2. NJSLSA.SL5 Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
- 3.5.K.2.NJSLSA.W6 Use technology including the Internet to produce and publish writing and to interact and collaborate with others.

SCIENCE CONNECTIONS

- 1.1-3.1.2.DCI-1 Seasonal patterns of sunrise and sunset can be observed, described and predicted.
- 1.1-1.1.2.CC-1 Simple tests can be designed to gather evidence to support or refute student ideas about causes.
- 1.2-4.2.1.DCI-2 Asking questions, making observations and gathering information are helpful in thinking about problems.

Technology Standards:

- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games museums).
- 8.1.2.E.1 Use digital tools and online resources to explore a problem or issue.
- 8.1.2.B.1 Illustrate and communicate original ideas and stories using multiple digital tools and resources.

21st Century Themes/Career Readiness:

Career Awareness, Exploration, and Preparation

- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Career Ready Practices

- CPR2. Apply appropriate academic and technical skills CPR4. Communicate clearly and effectively and with reason CPR6. Demonstrate creativity and innovation.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP11. Use technology to enhance productivity.

Personal Financial Literacy

- 9.1.4.B.1 Differentiate between financial wants and needs.

Evidence of Student Learning

Formative Tasks: ● Teacher Observation ● Teacher Checklist ● Verbal question & answer ● Self-evaluation of performance and progress	**Alternative Assessments:** ● End of unit project
Summative Assessments: ● Student participation ● Rubric score ● Performance Test	**Benchmark Assessments:** ● Baseline SGO ● Mid-year SGO ● End of year SGO
Knowledge & Skills	
Enduring Understandings: ● Numbers can be represented in multiple ways. ● The same operations can be applied in problem situations that seem quite different from another. ● Being able to compute fluently means making smart choices about which tools to use and when to use them. ● Knowing the reasonableness of an answer comes from using good number sense and estimation strategies.	**Essential Questions:** ● What makes an estimate reasonable? ● What makes an answer exact? ● What makes a strategy both effective and efficient? ● What makes a solution optimal?
Core Instructional & Supplemental Materials	
Suggested Activities/Resources: ● Vocabulary Cards ● Blackline masters ● Literature kits ● Math Musicals ● Calendar Math ● Addition/Subtraction Bingo ● www.gonoodle.com	**Varied Levels of Text/Resources:** ● Big Ideas Math ● www.bigideasmath.com ● Student Edition ● Teaching Edition ● Family Letter ● Warm-ups ● Extra Practice ● Reteach ● Enrichment and extension ● Big Ideas Math Center ● Big Ideas Math math manipulatives kit ● Prerequisite Skills Practice ● Pre-and Post-Course Tests ● Course Benchmarks Tests ● Chapter Tests

Domain 3: Measurement and Data	Duration: 45 Days

Standards/Learning Targets

New Jersey Student Learning Focus Standards: Measure lengths indirectly and by iterating length units.

NJSLS.MATH.CONTENT.1.MD.A.1

- Order three objects by length; compare the lengths of two objects indirectly by using a third object.

NJSLS.MATH.CONTENT.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. Tell and write time.

NJSLS.MATH.CONTENT.1.MD.B.3

- Tell and write time in hours and half-hours using analog and digital clocks. Represent and interpret data.

NJSLS.MATH.CONTENT.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.

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and persuasively.
- 3.7.K.2.NJSLSA.SL5 Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
- 3.5.K.2.NJSLSA.W6 Use technology including the Internet to produce and publish writing and to interact and collaborate with others.

SCIENCE CONNECTIONS
- 1.1-3.1.2.DCI-1 Seasonal patterns of sunrise and sunset can be observed, described and predicted.
- 1.1-1.1.2.CC-1 Simple tests can be designed to gather evidence to support or refute student ideas about causes.
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Technology Standards:
- 8.1.2.A.4 Demonstrate developmentally appropriate navigation skills in virtual environments (i.e. games museums).
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- 8.1.2.B.1 Illustrate and communicate original ideas and stories using multiple digital tools and resources.

21st Century Themes/Career Readiness:

Career Awareness, Exploration, and Preparation
- 9.2.4.A.4 Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

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Personal Financial Literacy
- 9.1.4.B.1 Differentiate between financial wants and needs.

Evidence of Student Learning

Formative Tasks: ● Teacher Observation ● Teacher Checklist ● Verbal question & answer ● Self-evaluation of performance and progress	**Alternative Assessments:** ● End of unit project
Summative Assessments: ● Student participation	**Benchmark Assessments:** ● Baseline SGO

● Rubric score ● Performance Test	● Mid-year SGO ● End of year SGO
Knowledge & Skills	
Enduring Understandings: ● Linear measure, area, and volume are fundamentally different but may be related to one another in ways that permit calculation of one given the other.	**Essential Questions:** ● How are measurement and counting related? ● How does what we measure affect how we measure? ● How can space be defined through numbers/measurement?
Core Instructional & Supplemental Materials	
Suggested Activities/Resources: ● Vocabulary Cards ● Math Addition/Subtraction Bingo ● www.gonoodle.com ● Literature kits ● Math Musicals	**Varied Levels of Text/Resources:** ● Big Ideas Math ● www.bigideasmath.com ● Student Edition Teaching ● Edition Family Letter ● Warm-ups ● Extra Practice ● Reteach ● Enrichment and extension ● Prerequisite Skills Practice ● Pre-and Post-Course Tests ● Course Benchmarks Tests ● Chapter Tests ● Blackline masters ● Big Ideas Math math manipulatives kit ● Big Ideas Math Center Calendar

Domain 4: Geometry	Duration: 15 Days

Standards/Learning Targets

New Jersey Student Learning Focus Standards: Reason with shapes and their attributes.

NJSLS.MATH.CONTENT.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.

NJSLS.MATH.CONTENT.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.

NJSLS.MATH.CONTENT.1.G.A.3

- Partition circles and rectangles into two and four equal shares, describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of. Describe the whole as two of, or four of the shares.
- Understand for these examples that decomposing into more equal shares creates smaller shares.

Primary Interdisciplinary Connections:

ELA CONNECTIONS

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21st Century Themes/Career Readiness:

Career Awareness, Exploration, and Preparation

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Career Ready Practices

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Demonstrate creativity and innovation

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- CRP11. Use technology to enhance productivity

Personal Financial Literacy

- 9.1.4.B.1 Differentiate between financial wants and needs.

Evidence of Student Learning

Formative Tasks:

- Teacher Observation
- Teacher Checklist
- Verbal question & answer
- Self-evaluation of performance and progress

Alternative Assessments:

- End of unit project

Summative Assessments:

- Student participation
- Rubric score
- Performance Test

Benchmark Assessments:

- Baseline SGO
- Mid-year SGO
- End of year SGO

Knowledge & Skills

Enduring Understandings:

- Two- and three-dimensional objects can be described, classified, and analyzed by their attributes.
- An object in a plane or in space can be oriented in an infinite number of ways while maintaining its size or shape.

Essential Questions:

- Why do we compare contrast and classify objects?
- How do decomposing and recomposing shapes help us build our understanding of mathematics?
- How can transformations be described mathematically?

● Object's location on a plane or in space can be described quantitatively. ● Clear measure, area, and volume are fundamentally different but may be related to one another in ways that permit calculation of one given the other	
Core Instructional & Supplemental Materials	
Suggested Activities/Resources: ● Vocabulary Cards ● Blackline masters ● Literature kits ● Math Musicals ● Calendar Math ● Addition/Subtraction Bingo ● www.gonoodle.com	**Varied Levels of Text/Resources:** ● www.bigideasmath.com ● Big Ideas Math ● Big Ideas Math math manipulatives kit ● Big Ideas Math Center ● Student Edition Teaching ● Edition Family Letter ● Warm-ups ● Extra Practice ● Reteach ● Enrichment and extension ● Prerequisite Skills Practice ● Pre-and Post-Course Tests ● Course Benchmarks Tests ● Chapter Tests