Little Egg Harbor School District
Curriculum Guide

Mathematics: Third Grade

BOE APPROVAL DATE: 08/19/2025

Original Adoption:	August 2024
Created by:	Ocean County Curriculum Consortium
Revised on:	August 2024
Revised by:	Dora Lupo and Elizabeth Bacskai

Little Egg Harbor School District Mathematics Curriculum	
Content Area: Mathematics	
Course Title: Elementary	**Grade Level: Third**
Operations and Algebraic Thinking	**40 days**
Number and Operations in Base Ten	**40 days**
Number and Operations- Fractions	**30 days**
Measurement	**30 days**
Data Literacy	**20 days**
Geometry	**20 days**

Introduction

Vision for Mathematics Education in New Jersey

A New Jersey education in Mathematics builds quantitatively and analytically literate citizens prepared to meet the demands of college and career, and to engage productively in an information-driven society. All students will have access to a high-quality mathematics education that fosters a population that:

- Leverages data in decision-making and as a lens for discussing, analyzing, and responding to practical questions.
- Persists to make sense of and model problems arising in everyday life, society, and the workplace.
- Thinks critically and strategically to assess quantitative relationships and to solutions to complex problems.
- Employs precise reasoning and constructs viable arguments to deduce conclusions, recognize false statements and assess peers' reasoning.
- Interprets, evaluates and critiques the mathematics embedded in social, scientific and commercial systems, as well as the claims made in the private and public sectors.

In Third Grade, instruction focuses broadly on four critical areas:

1. Developing understanding of multiplication and division and strategies for multiplication and division within 100;
2. Developing understanding of fractions, especially unit fractions (fractions with numerator 1);
3. Developing understanding of the structure of rectangular arrays and of area; and
4. Describing and analyzing two-dimensional shapes.

Critical Areas

1. Students develop an understanding of the meanings of multiplication and division of whole numbers through activities and problems involving equal-sized groups, arrays, and area models; multiplication is finding an unknown product, and division is

finding an unknown factor in these situations. For equal-sized group situations, division can require finding the unknown number of groups or the unknown group size. Students use properties of operations to calculate products of whole numbers, using increasingly sophisticated strategies based on these properties to solve multiplication and division problems involving single-digit factors. By comparing a variety of solution strategies, students learn the relationship between multiplication and division.

2. Students develop an understanding of fractions, beginning with unit fractions. Students view fractions in general as being built out of unit fractions, and they use fractions along with visual fraction models to represent parts of a whole. Students understand that the size of a fractional part is relative to the size of the whole. For example, ½ of the paint in a small bucket could be less paint than ⅓ of the paint in a larger bucket, but ⅓ of a ribbon is longer than ⅕ of the same ribbon because when the ribbon is divided into 3 equal parts, the parts are longer than when the ribbon is divided into 5 equal parts. Students are able to use fractions to represent numbers equal to, less than, and greater than one. They solve problems that involve comparing fractions by using visual fraction models and strategies based on noticing equal numerators or denominators.
3. Students recognize area as an attribute of two-dimensional regions. They measure the area of a shape by finding the total number of same size units of area required to cover the shape without gaps or overlaps, a square with sides of unit length being the standard unit for measuring area. Students understand that rectangular arrays can be decomposed into identical rows or into identical columns. By decomposing rectangles into rectangular arrays of squares, students connect area to multiplication, and justify using multiplication to determine the area of a rectangle.
4. Students describe, analyze, and compare properties of two-dimensional shapes. They compare and classify shapes by their sides and angles, and connect these with definitions of shapes. Students also relate their fraction work to geometry by expressing the area of part of a shape as a unit fraction of the whole.

Alignment with State Mandates:
The following colors are used throughout this document to indicate areas in which the curriculum is aligned with the following NJSA requirements: ● Holocaust and genocides (N.J.S.A. 18A:35-28) ● History and contributions of African-Americans (Amistad Law) (N.J.S.A. 18A:35-4.43) ● Highlight and promote diversity and inclusion (Diversity & Inclusion Law) (N.J.S.A. 18A:35-4.36a) ● Climate Change - to prepare students to understand how and why climate change happens, the impact it has on our local and global communities and to act in informed and sustainable ways. Please click here for specific examples (by subject).

Operations and Algebraic Thinking	**Duration: 40 Days**
Standards/Learning Targets	
Focus Standards (Major Standards)	
● **3.OA.A.** Represent and solve problems involving multiplication and division. ● **3.OA.A.1** Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each. For example, describe and/or represent a context in which a total number of objects can be expressed as 5 × 7. ● **3.OA.A.2** Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. For example, describe and/or represent a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.	

- **3.OA.A.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **3.OA.A.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = � \div 3$, $6 \times 6 = ?$.
- **3.OA.B.** Understand properties of multiplication and the relationship between multiplication and division.
- **3.OA.B.5** Apply properties of operations as strategies to multiply and divide.2 Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)
- **3.OA.B.6** Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.
- **3.OA.C.** Multiply and divide within 100.
- **3.OA.C.7** With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
- **3.OA.D.** Solve problems involving the four operations, and identify and explain patterns in arithmetic.
- **3.OA.D.8** Solve two-step word problems, including problems involving money, using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding. (Clarification: This standard is limited to problems posed with whole numbers and having whole numbers answers; students should know how to perform operations in the conventional order when there are no parentheses to specify a particular order) (Order of Operations)
- **3.OA.D.9** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.

Supporting and Additional Standards

- **3.NBT.1** Use place value understanding to round whole numbers to the nearest 10 or 100.
- **3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

● **3.NBT.A.3** Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.
Primary Interdisciplinary Connections
English Language Arts ● **RI.CR.3.1.** Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers. ● **W.IW.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. ● **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. ● **SL.UM.3.5.** Use multimedia to demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. **Science** ● **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
Computer Science and Design Thinking Standards
● **8.1.5.IC.1:** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes. ● **8.1.5.IC.2:** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users. ● **8.1.5.DA.1:** Collect, organize, and display data in order to highlight relationships or support a claim. ● **8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data. ● **8.1.5.DA.4:** Organize and present climate change data visually to highlight relationships or support a claim.
Career Readiness, Life Literacies, and Key Skills Standards

- **9.2.5.CAP.1:** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.3:** Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
- **9.4.5.CT.1:** Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
- **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems.

Evidence of Student Learning

Performance Tasks/Use of Technology	**Assessments**

• i-Ready Math in Action
• i-Ready MyPath
• i-Ready Fluency Flight
• IXL
• Standards-based activities and tasks
  ○ Illustrative Math Tasks - Third Grade
  ○ Math Milestones Tasks- Third Grade
  ○ Math Is Visual videos & Tasks
• Google Slides & Forms
• Digital Review Platforms - Kahoot / Blooket
• Flipgrid
• NCTM Illuminations
• Splash Learn - Games for Kids
• ABCya! - Games for Kids
• Multiplication.com - Games
	Formative
	• Exit slips
	• Teacher observations/anecdotal/checklists
	• i-Ready games
	• Performance Assessments
	• Oral Assessments/Conferencing
	• Portfolio/Math Journals
	• Daily Classwork
	• Pre-assessments
	Summative
	• i-Ready Mid-Unit Assessments
	• i-Ready Unit Assessments
	• Digital Comprehension Checks
	• Unit & Cumulative Reviews
	• LinkIt Progress Monitoring Standard Assessments
	Benchmark
	• i-Ready Assessments (Fall, Winter, Spring)
	• District-wide Common Benchmark Assessments
	Alternative
	• Performance Tasks
	• Extension Projects
	• Written/verbal explanations

	- Peer assessment - Self-assessment - Untimed Fact Practice Assessment - Project Based Assessments with Scoring Rubric
Knowledge and Skills	
Content	**Skills**
Unit Essential Questions: - What are the Commutative, Associative, and Distributive Properties that can be used as strategies to add and multiply whole numbers? - When and why do you solve division of whole numbers by representing the problem as an unknown factor problem? - How do you multiply and divide within 40 using strategies such as the relationship between multiplication and division? - How do you use multiplication within 100 to solve word problems using measurement quantities by using drawings? - How do you solve word problems modeled as equal groups or arrays by writing equations to represent equal groups or arrays? - What are the arithmetic patterns in addition or multiplication tables and explain the pattern using the properties of operations? - How do you fluently multiply and divide within 50, using the relationship between multiplication and division (e.g., if 44 ÷ 2 equals 22, then 22 × 2 must equal 44)?	**Students will be able to:** - Apply properties of multiplication. - Connect the relationship between multiplication and division. - Multiply and divide within 100, using various strategies of two one-digit numbers. - Represent and solve problems involving multiplication and division. - Solve problems involving the four operations, and identify and explain patterns in arithmetic. - Recognize and apply the commutative property of multiplication. - Use multiplication to solve real-world problems involving making equal groups. - Use basic facts and apply place-value patterns to find products when one factor is a multiple of 10. - Reason with patterns and known facts to compute unknown multiplication facts. - Grouped three or more numbers to multiply factors in any order. - Connect repeated subtraction to separating equal groups as one way to think about division.

• How do we find the value of an unknown (expressed as a letter) in an equation that is a representation of a two-step word problem (with any four operations) and assess the reasonableness of the value? • How can we solve problems involving the four operations, and identify and explain the patterns seen? **Enduring Understandings** *Students will know: "I can…"* • Understand properties of multiplication and the relationship between multiplication and division. • Multiply and divide within 100. • Represent and solve problems involving multiplication and division. • Solve problems involving the four operations, and identify and explain patterns in arithmetic. • Apply the Commutative, Associative and Distributive properties. • Solve real-world problems involving joining or separating equal groups or comparison using multiplication. • Use basic facts and place-value patterns to find products when one factor is a multiple of 10. • Apply patterns and known facts to solve unknown multiplication facts. • Connect repeated subtraction as one way to think about division by breaking down into equal groups.	• Solve two-step word problems, including problems involving money, using the four operations. • Identify arithmetic patterns in the addition table or multiplication table, and explain them using properties of operations.
Instructional Plan	
Suggested Activities	**Resources**

• Multiplication War Card Game
• Multiplication Bingo
• Read or Listen to: The Dragon Kite by: Nancy Luenn
    ○ After reading the book, discuss with partners the reasons that we must have rules and laws to help us live and work together in peace and harmony. Discuss with the whole group that not all rules and laws are good and discover how we must work together to make them better.
    ○ Have students measure equal parts of a large 12 x 18 paper to make a kite. Then decorate their kite with four different images from the story.
    ○ Discuss the importance African Americans have had on America's history, particularly in mathematics or engineering.
    ○ Make a list of the famous African Americans.
    ○ Play a trivia game in which students answer math problems as well as questions about the contributions of famous African Americans.
• *Zero* by Kathryn Otoshi
• *One Grain of Rice: A Mathematical Folktale* by Demi
• *Usha and the Big Digger* By Amitha Jagannath Knight
• *Seven Golden Rings: A Tale of Music and Math* by Rajani Larocca
• *My Rows and Piles of Coins* by Tololwa M. Mollel
	• Ready Mathematics Program
	• i-Ready MyPath
	• IXL
	• Seesaw
	• Class Dojo
	• NJSLS and iRCL 2024 Padlet
	• Manipulatives by iReady Lessons
	• Achieve the Core Coherence Map
	• Multiples Charts
	• Number Lines
	• Word Walls
	• Anchor Charts
	
	As appropriate:
	○ Boom Cards
	○ VB-Mapp
	○ ABLLS-R
	○ Connecting Math Concepts
	○ Prodigy
	○ SplashLearn
	Differentiate according to formative assessments and i-Ready Diagnostic individualized path
	• Resources for **on-grade** students:
	    ○ Log into i-Ready and then follow these steps:
	        ■ Click assess and teach
	        ■ Click Teacher Toolbox Math
	        ■ Click Grade Level
	        ■ Click REINFORCE and use the resources shown
	• Resources for students **approaching** grade level expectations:
	    ○ Log into i-Ready and then follow these steps:

	- Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click RETEACH and use the resources shown ● Resources for students **exceeding** grade level expectations: ○ Log into i-Ready and then follow these steps: - Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click EXTEND and use the resources shown Useful links / online resources ● Identify the Unknown ● Word Problems: Arrays ● Missing Numbers: Division ● Turn Your Array ● Division Squares ● Roll a Rule ● Odd and Even Sums ● Odd and Even Products

Suggested Options for Differentiation

Multilingual Learners

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow ML students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language

- Pre-teach as often as possible- share videos, articles, vocabulary etc. with ML students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding
- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps

Special Education/504 Plans

- Follow specific students accommodations and modifications as listed in individual student IEPs
- Preferential seating.
- Provide special lighting or acoustics.
- Provide a space with minimal distractions.
- Administer a test in a small group setting.
- Behavior management support.
- Adjusted class schedules or grading.
- Extended time on tests and assignments.
- Verbal, visual, or technology aids

Gifted and Talented

- Differentiated assignments/projects/assessments
- Differentiate learning pace using curriculum acceleration
- Curriculum compacting
- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication
- Student developed extension activities

- Plan self directed inquiry
- Opportunities to push assessment/activity boundaries
- Self centered curriculum allowing for student choice

Students In Need of Academic Support:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

Economically Disadvantaged:

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

Culturally Diverse:

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments

- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

Core Instructional and Supplemental Materials
• Ready Mathematics Program (Teacher / Student Editions) • i-Ready MyPath and digital resources • Manipulatives • District Approved Online Programs • Workstations with open-ended tasks As appropriate: • Boom Cards • VB-Mapp • ABLLS-R • Connecting Math Concepts • Prodigy • SplashLearn **Varied Levels of Text:** • Multiplication Read Alouds • Marilyn Burns Math Library List • EPIC

- [Social Justice Book List for Mathematics]
- *Safari Park* by Stuart Murphy
- *One Hundred Hungry Ants* by Elinor Pinczes
- *A Remainder of One* by Elinor Pinczes
- *Best of Times* by Greg Tang
- *Math for All Seasons* by Greg Tang
- *Mathterpieces* by Greg Tang
- *The Doorbell Rang* by Pat Hutchings
- *Divide and Ride* by Stuart J. Murphy
- *Hershey's Kisses* by Jerry Pallotta
- *Best of Times* by Greg Tang

Teacher Notes / Reflections

Number and Operations in Base Ten	**Duration: 40 days**
Standards/Learning Targets	
Focus Standards (Major Standards)	

- **3.NBT.A.** Use place value understanding and properties of operations to perform multi-digit arithmetic.
- **3.NBT.1** Use place value understanding to round whole numbers to the nearest 10 or 100.
- **3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- **3.NBT.A.3** Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9 × 80, 5 × 60) using strategies based on place value and properties of operations.

Supporting and Additional Standards

- **3.OA.D.9** Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations.

Primary Interdisciplinary Connections

English Language Arts

- **RI.CR.3.1.** Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers.
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- **SL.UM.3.5.** Use multimedia to demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

Science

- **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

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- **8.1.5.IC.2:** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users.
- **8.1.5.DA.1:** Collect, organize, and display data in order to highlight relationships or support a claim.
- **8.1.5.DA.2:** Compare the amount of storage space required for different types of data.
- **8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data.
- **8.1.5.DA.4:** Organize and present climate change data visually to highlight relationships or support a claim.
- **8.1.5.AP.4:** Break down problems into smaller, manageable sub-problems to facilitate program development.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.2.5.CAP.1:** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.3:** Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
- **9.2.5.CAP.4:** Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
- **9.4.5.CT.1:** Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
- **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems.

Evidence of Student Learning

Performance Tasks/Use of Technology	Assessments

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• i-Ready MyPath
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• IXL
• Standards-based activities and tasks
  ○ Illustrative Math Tasks - Third Grade
  ○ Math Milestones Tasks- Third Grade
  ○ Math Is Visual videos & Tasks
• Google Slides & Forms
	Formative
	• Exit slips
	• Teacher observations/anecdotal/checklists
	• i-Ready games
	• Performance Assessments
	• Oral Assessments/Conferencing
	• Portfolio/Math Journals
	• Daily Classwork
	• Pre-assessments
	Summative

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- Digital Review Platforms - Kahoot / Blooket
- Flipgrid
- NCTM Illuminations
- Splash Learn - Games for Kids
- ABCya! - Games for Kids

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- i-Ready Mid-Unit Assessments
- i-Ready Unit Assessments
- Digital Comprehension Checks
- Unit & Cumulative Reviews
- LinkIt Progress Monitoring Standard Assessments

Benchmark

- i-Ready Assessments (Fall, Winter, Spring)
- District-wide Common Benchmark Assessments

Alternative

- Performance Tasks
- Extension Projects
- Written/verbal explanations
- Peer assessment
- Self-assessment
- Untimed Fact Practice Assessment
- Project Based Assessments with Scoring Rubric

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<tr><td colspan="2">Knowledge and Skills</td></tr>
<tr><td>Content</td><td>Skills</td></tr>
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Essential Questions:

- How do you interpret products of whole numbers as repeated addition or equal groups of objects up to 100?
- How do you round whole numbers to the nearest 10 or 100?
- What are the steps to fluently add and subtract (with regrouping) two 2-digit whole numbers within 1,000?
- How can sums and differences be found mentally?
- How can sums and differences be estimated?
- What are standard procedures for adding and subtracting whole numbers?

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Students will be able to:

- Interpret products.
- Round whole numbers.
- Add and subtract with regrouping.
- Recognize and apply the commutative, associative property, and identity property of addition.
- Compare values of expressions.
- Write equations to show a balance between what is on the right side and what is on the left side.
- Subtracting across zero using place value skills to regroup.

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• How can you multiply one-digit whole numbers by multiples of 10? • How does place value knowledge help when performing multi-digit operations? **Enduring Understandings Students will know: "I can…"** • Round whole numbers within 1,000 to the nearest 10 or 100. • Add and subtract (with regrouping) two 2-digit whole numbers within 1,000. • Apply strategies to mentally calculate sums and differences. • Estimate sums and differences. • Utilize place value knowledge to perform multi-digit operations. • Apply Commutative Property, Associative Property, Zero Property and Identity Property of additions. • Utilize an equal sign to show that an equation is a balance of equal value between the right side and the left side. • Apply place-value knowledge to help simplify subtracting across zero. • Multiply one-digit whole numbers by multiples of 10. • Interpret products of whole numbers as repeated addition or equal groups of objects.	• Estimate sums and differences.
Instructional Plan	
Suggested Activities	**Resources**

- Number Sense Building Activities using numbers through 1,000 - Number of the day activities - Greater than, less than (ex. Give a number greater than 197 and less than 205.) 1, 10, or 100 more, 1, 10, or 100 less - Place Value Game- Students will be participating in a game that demonstrates their knowledge of place value. In two teams, students will send one person at a time to come to the board, where they will place sentence strips over numbers identifying the correct place value. Students will work as a team to complete a 4+ digit number with correct place values. *Zero* by Kathryn Otoshi *One Grain of Rice: A Mathematical Folktale* by Demi *Usha and the Big Digger* By Amitha Jagannath Knight *Seven Golden Rings: A Tale of Music and Math* by Rajani Larocca *My Rows and Piles of Coins* by Tololwa M. Mollel	- Ready Mathematics Program - i-Ready MyPath - IXL - Seesaw - Class Dojo - NJSLS and iRCL 2024 Padlet - Manipulatives by iReady Lessons - Achieve the Core Coherence Map - Multiples Charts - Number Lines - Word Walls - Anchor Charts - Place Value chart - Numbers to 1,000 As appropriate: - Boom Cards - VB-Mapp - ABLLS-R - Connecting Math Concepts - Prodigy - SplashLearn Differentiate according to formative assessments and i-Ready Diagnostic individualized path - Resources for **on-grade** students: - Log into i-Ready and then follow these steps: - Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click RETEACH and use the resources shown - Resources for students **approaching** grade level

	expectations: ○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click RETEACH and use the resources shown ● Resources for students **exceeding** grade level expectations: ○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click EXTEND and use the resources shown Useful links / online resources ● Estimating Sums ● Estimating Differences

Suggested Options for Differentiation

Multilingual Learners:

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow Multilingual Learner students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with Multilingual Learner students prior to use in class
- Utilize visual charts/cues
- Highlight key words

- Provide manipulatives
- Frequently check for understanding

Special Education//Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

504 Plan:

- Behavior management support.
- Adjusted class schedules or grading.
- Extended time on tests and assignments.
- Verbal, visual, or technology aids.

Gifted and Talented:

- Differentiated assignments/projects/assessments
- Differentiate learning pace using curriculum acceleration
- Curriculum compacting
- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication
- Student developed extension activities
- Plan self directed inquiry
- Student created rubrics
- Opportunities to push assessment/activity boundaries
- Self centered curriculum allowing for student choice

Students In Need of Academic Support:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences

- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

Economically Disadvantaged:

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

Culturally Diverse:

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills
- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students

- Integrate the arts into learning activities

Climate Change:

- Students may solve two-step word problems involving a climate change related issue in their school, such as food waste, recycling, reusing and/or reducing the consumption of goods. They may add and subtract within 100 while using drawing or equations to represent the climate change related issue.

Core Instructional and Supplemental Materials

- Ready Mathematics Program (Teacher / Student Editions)
- i-Ready MyPath and digital resources
- Manipulatives
- District Approved Online Programs
- Workstations with open-ended tasks

As appropriate:

- Boom Cards
- VB-Mapp
- ABLLS-R
- Connecting Math Concepts
- Prodigy
- SplashLearn

Varied Levels of Text:

- Multiplication Read Alouds
- Marilyn Burns Math Library List
- EPIC
- Social Justice Book List for Mathematics
- *Annabelle Swift, Kindergartner* by Amy Schwartz
- *Bats on Parade* by Kathi Appelt
- *One Hundred Hungry Ants* by Elinor Pinczes
- *Grapes of Math* by Greg Tang

Teacher Notes / Reflections

Number and Operations-Fractions	Duration: 30 days

Standards/Learning Targets

- **3.NF.A** Develop understanding of fractions as numbers.
- **3.NF.A.1** Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by a parts of size 1/*b*. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is ⅓**.**Two of those parts would be ⅔.
- **3.NF.A.2a** Represent a fraction 1/*b* on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into *b* equal parts. Recognize that each part has size 1/*b* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line. For example, partition the number line from 0 to 1 into 3 equal parts, represent ⅓ on the number line and show that each part has a size ⅓ **.**
- **3.NF.A.2b** Represent a fraction *a*/*b* on a number line diagram by marking off *a* lengths 1/*b* from 0. Recognize that the resulting interval has size *a*/*b* and that its endpoint locates the number *a*/*b* on the number line.
- **3.NF.A.3a** Understand two fractions as equivalent (equal) if they are the same size**.** Understand two fractions as equivalent if they are located at the same point on a number line.
- **3.NF.A.3b** Recognize and generate simple equivalent fractions by reasoning about their size, (e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent, e.g., by using a visual fraction model**.**
- **3.NF.A.3c** Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point on a number line diagram.
- **3.NF.A.3d** Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions,with the support of a visual fraction model.

Supporting and Additional Standards
● **3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. ● **3.G.A.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.
Primary Interdisciplinary Connections
English Language Arts ● **RI.CR.3.1.** Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers. ● **W.IW.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. ● **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. ● **SL.UM.3.5.** Use multimedia to demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. **Science** ● **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
Computer Science and Design Thinking Standards
● **8.1.5.IC.1:** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes. ● **8.1.5.IC.2:** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users. ● **8.1.5.DA.1:** Collect, organize, and display data in order to highlight relationships or support a claim.

- **8.1.5.DA.2:** Compare the amount of storage space required for different types of data.
- **8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data.
- **8.1.5.DA.4:** Organize and present climate change data visually to highlight relationships or support a claim.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.2.5.CAP.1:** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.3:** Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
- **9.2.5.CAP.4:** Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
- **9.4.5.CT.1:** Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
- **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems.

Evidence of Student Learning

Performance Tasks/Use of Technology	Assessments

• i-Ready Math in Action
• i-Ready MyPath
• i-Ready Fluency Flight
• IXL
• Standards-based activities and tasks
  ○ Illustrative Math Tasks - Third Grade
  ○ Math Milestones Tasks- Third Grade
  ○ Math Is Visual videos & Tasks
• Google Slides & Forms
• Digital Review Platforms - Kahoot / Blooket
• Flipgrid
• NCTM Illuminations
• Splash Learn - Games for Kids
	Formative
	• Exit slips
	• Teacher observations/anecdotal/checklists
	• i-Ready games
	• Performance Assessments
	• Oral Assessments/Conferencing
	• Portfolio/Math Journals
	• Daily Classwork
	• Pre-assessments
	Summative
	• i-Ready Mid-Unit Assessments
	• i-Ready Unit Assessments
	• Digital Comprehension Checks
	• Unit & Cumulative Reviews

● [ABCya! - Games for Kids]	● LinkIt Progress Monitoring Standard Assessments **Benchmark** ● i-Ready Assessments (Fall, Winter, Spring) ● District-wide Common Benchmark Assessments **Alternative** ● Performance Tasks ● Extension Projects ● Written/verbal explanations ● Peer assessment ● Self-assessment ● Untimed Fact Practice Assessment ● Project Based Assessments with Scoring Rubric
Knowledge and Skills	
Content	**Skills**
Essential Questions: ● How do you interpret the unit fraction *1/b* as the quantity formed by 1 of *b* equal parts of a whole and the fraction *a/b* as the quantity formed by *a* part *1/b;* e.g., 3 unit fractions of 1/4 add to the quantity ¾? ● What are the representations of the equal parts of shapes as a unit fraction ● How do you make a drawing of a number line depicting the position of *1/b*? ● How do you represent the unit fraction *1/4* on the number line? ● How do you generate and explain equivalent fractions using visual fraction models, e.g., interpret 1/4 of a group of 12 pennies as 3 pennies: ℗ ℗ ℗ ℗ ℗ ℗ ℗ ℗ ℗ ℗ ℗ ℗ (see the 4 equal sub-groups as fourths)?	**Students will be able to:** ● Interpret fractions. ● Represent fractions. ● Compare fractions. ● Develop understanding of fractions as numbers. ● Compare fractions with denominators.. ● Compare fractions with the same numerator. ● Find a unit-fractional part of a whole. ● Identify fractions or mixed numbers by determining the number of equal parts between two consecutive whole numbers. ● Find equivalent fractions with the same point on a number line.

• How do you generate and explain whole numbers as fractions, and locate them as fractions on a number line. • How do you compare two fractions with the same numerator or the same denominator using the symbols >, =, <? **Enduring Understandings** *Students will know: "I can…"* • Identify unit fractions. • Name fractions as part of a set and part of a whole. • Represent equal parts of shapes as a unit fraction. • Make a drawing of a number line depicting the position of unit fractions and fractions. • Generate and explain equivalent fractions using visual fraction models. • Generate and explain whole numbers as fractions, and locate them as fractions on a number line. • Compare two fractions with the same numerator or the same denominator using the symbols >, =, <.	

Instructional Plan	
Suggested Activities	**Resources**
• Fraction War - Players flip over one fraction card, create a model of their fraction using manipulatives and then compare who has the greater fraction. • Equivalent Fraction Strip Game- Use 5 strips of paper. Each strip represents 1 whole, halves, quarters, eighths, and sixteenths. Students play with a partner to roll a fraction dice to place the fraction represented on the dice	• Ready Mathematics Program • i-Ready MyPath • IXL • Seesaw • Class Dojo • NJSLS and iRCL 2024 Padlet • Manipulatives by iReady Lessons

onto the whole. First person to fill in their whole strip wins. • Recipe Fractions- Students follow a recipe and explore how fractions are used in the real world. Students will pretend to be a chef and present the recipe to a mock "menu," identifying how many people the recipe can feed. • *Zero* by Kathryn Otoshi • *One Grain of Rice: A Mathematical Folktale* by Demi • *Usha and the Big Digger* By Amitha Jagannath Knight • *Seven Golden Rings: A Tale of Music and Math* by Rajani Larocca • *My Rows and Piles of Coins* by Tololwa M. Mollel	• Achieve the Core Coherence Map • Multiples Charts • Number Lines • Word Walls • Anchor Charts As appropriate: ○ Boom Cards ○ VB-Mapp ○ ABLLS-R ○ Connecting Math Concepts ○ Prodigy ○ SplashLearn Differentiate according to formative assessments and i-Ready Diagnostic individualized path • Resources for **on-grade** students: ○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click REINFORCE and use the resources shown • Resources for students **approaching** grade level expectations: ○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click RETEACH and use the resources shown • Resources for students **exceeding** grade level expectations:

	○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click EXTEND and use the resources shown Useful links / online resources ● Fraction Games | Decimal Games | Math Playground ● Fractions Games Menu - Math Games ● Fractions on a Number Line ● Pizza For Dinner ● Equivalent Fractions on a Geoboard ● Make One Whole ● Compare Fractions of a Whole

Suggested Options for Differentiation

Multilingual Learners:

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow Multilingual Learner students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with Multilingual Learner students prior to use in class
- Utilize visual charts/cues
- Highlight key words

- Provide manipulatives
- Frequently check for understanding

Special Education//Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

504 Plan:

- Behavior management support.
- Adjusted class schedules or grading.
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Varied Levels of Text:

- Marilyn Burns Math Library List
- EPIC
- Social Justice Book List for Mathematics
- *Fraction Fun* by David Adler
- *Give Me Half!* By Stuart Murphy
- *Clean Sweep Campers* by Lucille Recht Penner
- *Hershey's Fractions Book* by Jerry Pallotta
- *Eating Fractions* by Bruce McMillan
- *Each Orange Had 8 Slices: A counting book* by Paul Giganti
- *Working with Fractions* by David Adler

- *The Wishing Club: A Story About Fractions* by Donna Jo Napoli - *Fraction Action* by Loreen Leedy - *Wholey Cow: Fractions Are Fun* by Taryn Souder
Teacher Notes / Reflections

Measurement	**Duration: 30 days**
Standards/Learning Targets	
- **3.M.A.** Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. - **3.M.A.1** Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram. - **3.M.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem. (Clarification: “Measure and estimate liquid volumes and masses” excludes compound units such as cm^3 and finding the geometric volume of a container. “Multiplying to solve one-step word problems” excludes multiplicative comparison problems (problems involving “times as much”; See Glossary, Tables 2a–2d)) - **3.M.B.** Geometric measurement: understand concepts of area and relate area to multiplication and to addition. - **3.M.B.3** Recognize area as an attribute of plane figures and understand concepts of area measurement. - **3.M.B.3a** A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area. - **3.M.B.3b** A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units. - **3.M.B.4** Measure areas by counting unit squares (square cm, square m, square in, square ft, and nonstandard units).	

- **3.M.B.5** Relate area to the operations of multiplication and addition.
- **3.M.B.5a** Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
- **3.M.B.5b** Multiply side lengths to find areas of rectangles with whole number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
- **3.M.B.5c** Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.
- **3.M.B.5d** Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.
- **3.M.C.** Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.
- **3.M.C.6** Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Supporting and Additional Standards

- **3.OA.A.3** Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
- **3.OA.C.7** With accuracy and efficiency, multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
- **3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
- **3.NF.A.1** Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a part of size 1/b.

Primary Interdisciplinary Connections

English Language Arts

- **RI.CR.3.1.** Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers.
- **W.IW.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
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- **SL.UM.3.5.** Use multimedia to demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

Science

- **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

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- **8.1.5.IC.1:** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes.
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- **8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data.
- **8.1.5.DA.4:** Organize and present climate change data visually to highlight relationships or support a claim.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.2.5.CAP.1:** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
- **9.2.5.CAP.2:** Identify how you might like to earn an income
- **9.2.5.CAP.3:** Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
- **9.2.5.CAP.4:** Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.

- **9.2.5.CAP.8:** Identify risks that individuals and households face.
- **9.4.5.CT.1:** Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2).
- **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems.

Evidence of Student Learning

Performance Tasks/Use of Technology	**Assessments**

• i-Ready Math in Action
• i-Ready MyPath
• i-Ready Fluency Flight
• IXL
• Standards-based activities and tasks
  ○ Illustrative Math Tasks - Third Grade
  ○ Math Milestones Tasks- Third Grade
  ○ Math Is Visual videos & Tasks
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• Flipgrid
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	• Exit slips
	• Teacher observations/anecdotal/checklists
	• i-Ready games
	• Performance Assessments
	• Oral Assessments/Conferencing
	• Portfolio/Math Journals
	• Daily Classwork
	• Pre-assessments
	Summative
	• i-Ready Mid-Unit Assessments
	• i-Ready Unit Assessments
	• Digital Comprehension Checks
	• Unit & Cumulative Reviews
	• LinkIt Progress Monitoring Standard Assessments
	Benchmark
	• i-Ready Assessments (Fall, Winter, Spring)
	• District-wide Common Benchmark Assessments
	Alternative
	• Performance Tasks
	• Extension Projects
	• Written/verbal explanations
	• Peer assessment

	• Self-assessment • Untimed Fact Practice Assessment • Project Based Assessments with Scoring Rubric
Knowledge and Skills	
Content	**Skills**
Essential Questions: • How do analog and digital clocks represent time? • How can you solve one-step word problems by estimating, measuring, and comparing liquid volumes and masses using appropriate tools and units? • What are the customary units for measuring capacity and weight? • What are the metric units for measuring capacity and mass? **Enduring Understandings** *Students will know: "I can…"* • Tell and write time to the nearest minute on digital and analog clocks. • Solve one-step word problems by estimating, measuring, and comparing liquid volumes and masses using appropriate tools and units. • Measure capacity and weight using customary units. • Measure capacity and mass using metric units.	**Students will be able to:** • Tell time to the minute on an analog clock. • Solve problems with elapsed time. • Use measurement and estimation to solve problems involving intervals of time, liquid volumes, and masses of objects. • Measure capacity, mass, and weight. • Relate area to addition and multiplication. • Recognize the difference between perimeter and area. • Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. • Understand concepts of area and relate area to addition and multiplication. • Recognize perimeter as an attribute of plane figures and distinguish between linear and area measurements.
Instructional Plan	

Suggested Activities	Resources
- Activities with rulers and other measurement tools - Geoboard tasks involving creation of lines/shapes and measurement *Zero* by Kathryn Otoshi *One Grain of Rice: A Mathematical Folktale* by Demi *Usha and the Big Digger* By Amitha Jagannath Knight *Seven Golden Rings: A Tale of Music and Math* by Rajani Larocca *My Rows and Piles of Coins* by Tololwa M. Mollel	- Ready Mathematics Program - i-Ready MyPath - IXL - Seesaw - Class Dojo - NJSLS and iRCL 2024 Padlet - Manipulatives by iReady Lessons - Achieve the Core Coherence Map - Multiples Charts - Number Lines - Word Walls - Anchor Charts As appropriate: - Boom Cards - VB-Mapp - ABLLS-R - Connecting Math Concepts - Prodigy - SplashLearn Differentiate according to formative assessments and i-Ready Diagnostic individualized path - Resources for **on-grade** students: - Log into i-Ready and then follow these steps: - Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click REINFORCE and use the resources shown - Resources for students **approaching** grade level

	expectations: ○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click RETEACH and use the resources shown ● Resources for students **exceeding** grade level expectations: ○ Log into i-Ready and then follow these steps: ■ Click assess and teach ■ Click Teacher Toolbox Math ■ Click Grade Level ■ Click EXTEND and use the resources shown Useful links / online resources ● Word Problems: Time Intervals ● Estimating Weight ● More or Less Than a Liter? ● Square Units ● Find the Area ● Grid Paper Animals ● Cover Your Notebook ● Find the Area of a Rectangle ● Jack's Rectangles ● Turn Your Array ● Squares on a Geoboard ● Rectangular Robot
Suggested Options for Differentiation	

Multilingual Learners:
- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible
- Build in more group work to allow Multilingual Learner students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with Multilingual Learner students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

Special Education//Students with Disabilities:
- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

504 Plan:
- Behavior management support.
- Adjusted class schedules or grading.
- Extended time on tests and assignments.
- Verbal, visual, or technology aids.

Gifted and Talented:
- Differentiated assignments/projects/assessments
- Differentiate learning pace using curriculum acceleration
- Curriculum compacting
- Open ended/abstract questions to activate higher level thinking
- Alternative modes of communication

- Student developed extension activities
- Plan self directed inquiry
- Student created rubrics
- Opportunities to push assessment/activity boundaries
- Self centered curriculum allowing for student choice

Students In Need of Academic Support:

- Ensure child has access to all appropriate academic resources both in school and at home
- Provide structure and adhere to a consistent daily routine with clear and concise rules
- Facilitate successful experiences
- Provide tutoring if needed
- Allow students to complete assignments in school
- Do not penalize for late or missing assignments/materials
- Offer encouragement and understanding
- Allow students to have personal possessions and property in school
- Give choice to provide a sense of control

Economically Disadvantaged:

- Provide clear, achievable expectations, do not lower academic requirements for them.
- Build a safe and nurturing atmosphere
- Be flexible with assignments
- Offer several alternatives from which all students can choose.
- Allow students to finish assignments independently, or give them the opportunity to complete tasks at their own pace.
- Use real-world examples and create mental models for abstract idea
- Provide increased knowledge base and vocabulary use about real world experiences.
- Share the decision making in class.
- Maintain expectations while offering choice and soliciting input

Culturally Diverse:

- Involve families in student learning
- Provide social/emotional support
- Respect cultural traditions
- Build in more group work to encourage interaction with peers
- Show photos, videos, and definitions when possible for culturally unique vocabulary
- Teach study skills

- Provided students with necessary academic resources and materials
- Allow for alternative assignments
- Provide visuals
- Assign peer tutor
- Support verbal explanations with non verbal cues: Gestures/ facial expressions Props, realia, manipulatives, concrete materials Visuals, graphs, pictures, maps
- Provide positive praise to increase motivation
- Provide real world connections and emphasize the value of education
- Communicate high expectations for the success of all students
- Integrate the arts into learning activities

Climate Change:

- Students may solve two-step word problems involving a climate change related issue in their school, such as food waste, recycling, reusing and/or reducing the consumption of goods. They may add and subtract within 100 while using drawing or equations to represent the climate change related issue.

Core Instructional and Supplemental Materials

- Ready Mathematics Program (Teacher / Student Editions)
- i-Ready MyPath and digital resources
- Manipulatives
- District Approved Online Programs
- Workstations with open-ended tasks

As appropriate:

- Boom Cards
- VB-Mapp
- ABLLS-R
- Connecting Math Concepts
- Prodigy
- SplashLearn

Varied Levels of Text:

- Multiplication Read Alouds

• [Marilyn Burns Math Library List] • [EPIC] • [Social Justice Book List for Mathematics] • *Inch by Inch* by Leo Lionni • *Just a Little Bit* by Ann Tompert
Teacher Notes / Reflections

Data Literacy	**Duration: 20 days**
Standards/Learning Targets	
• **3.DL.A.** Understand data-based questions and data collection. • **3.DL.A.1** Develop data-based questions and decide what data will answer the question. (e.g., "What size shoe does a 3rd grader wear?", "How many books does a 3rd grader read?") • **3.DL.A.2** Collect student-centered data (e.g. collect data on students' favorite ice cream flavor) or use existing data to answer data-based questions. • **3.DL.B.** Represent and interpret data.	

- **3.DL.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- **3.DL.B.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.

Supporting and Additional Standards

- **3.NF.A.2b** Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
- **3.NBT.A.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

Primary Interdisciplinary Connections

English Language Arts

- **RI.CR.3.1.** Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers.
- **W.IW.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.UM.3.5.** Use multimedia to demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

Science

- **3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

Computer Science and Design Thinking Standards
● **8.1.5.IC.1:** Identify computing technologies that have impacted how individuals live and work and describe the factors that influenced the changes. ● **8.1.5.IC.2:** Identify possible ways to improve the accessibility and usability of computing technologies to address the diverse needs and wants of users. ● **8.1.5.DA.1:** Collect, organize, and display data in order to highlight relationships or support a claim. ● **8.1.5.DA.2:** Compare the amount of storage space required for different types of data. ● **8.1.5.DA.3:** Organize and present collected data visually to communicate insights gained from different views of the data. ● **8.1.5.DA.4:** Organize and present climate change data visually to highlight relationships or support a claim.
Career Readiness, Life Literacies, and Key Skills Standards
● **9.2.5.CAP.1:** Evaluate personal likes and dislikes and identify careers that might be suited to personal likes. ● **9.4.5.CT.1:** Identify and gather relevant data that will aid in the problem-solving process (e.g., 2.1.5.EH.4, 4-ESS3-1, 6.3.5.CivicsPD.2). ● **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems. ● **9.4.5.IML.2:** Create a visual representation to organize information about a problem or issue (e.g., 4.MD.B.4, 8.1.5.DA.3). ● **9.4.5.IML.3:** Represent the same data in multiple visual formats in order to tell a story about the data.

Evidence of Student Learning	
Performance Tasks/Use of Technology ● i-Ready Math in Action ● i-Ready MyPath ● i-Ready Fluency Flight ● IXL ● Standards-based activities and tasks ○ Illustrative Math Tasks - Third Grade ○ Math Milestones Tasks- Third Grade ○ Math Is Visual videos & Tasks	**Assessments** **Formative** ● Exit slips ● Teacher observations/anecdotal/checklists ● i-Ready games ● Performance Assessments ● Oral Assessments/Conferencing ● Portfolio/Math Journals ● Daily Classwork ● Pre-assessments

• Google Slides & Forms • Digital Review Platforms - Kahoot / Blooket • Flipgrid • NCTM Illuminations • Splash Learn - Games for Kids • ABCya! - Games for Kids • multiplication.com - Games	**Summative** • i-Ready Mid-Unit Assessments • i-Ready Unit Assessments • Digital Comprehension Checks • Unit & Cumulative Reviews • LinkIt Progress Monitoring Standard Assessments **Benchmark** • i-Ready Assessments (Fall, Winter, Spring) • District-wide Common Benchmark Assessments **Alternative** • Performance Tasks • Extension Projects • Written/verbal explanations • Peer assessment • Self-assessment • Untimed Fact Practice Assessment • Project Based Assessments with Scoring Rubric
Knowledge and Skills	
Content	**Skills**
Essential Questions: • How do line plots allow data to be compared more easily than in a list or a table? • How do line plots can be used to organize and represent data generated by measuring lengths? • How can data be represented, interpreted, and analyzed? **Enduring Understandings**	**Students will be able to:** • Understand data-based questions and data collection. • Represent and interpret data. • Identify the data amount represented in each bar for a given data set in a bar graph. • Interpret the key for a pictograph to determine how many pictures are needed to represent each number in a set of data. • Create graphs from data.

Students will know: "I can…" ● Use line plots to compare data. ● Use bar graphs to represent data. ● Represent, interpret, and analyze data.	● Interpret graphs based on key and scale.
Instructional Plan	
Suggested Activities	**Resources**
● Create survey questions and tally student responses to display. ● Create pictograph where key = 2 or more ● Use rulers to measure to the nearest whole and half. Then graph results. ● Gummy Bear Math ● *Zero* by Kathryn Otoshi ● *One Grain of Rice: A Mathematical Folktale* by Demi ● *Usha and the Big Digger* By Amitha Jagannath Knight ● *Seven Golden Rings: A Tale of Music and Math* by Rajani Larocca ● *My Rows and Piles of Coins* by Tololwa M. Mollel	● Ready Mathematics Program ● i-Ready MyPath ● IXL ● Seesaw ● Class Dojo ● **NJSLS and iRCL 2024 Padlet** ● Manipulatives by iReady Lessons ● Multiples Charts ● Word Walls ● Anchor Charts As appropriate: ○ Boom Cards ○ VB-Mapp ○ ABLLS-R ○ Connecting Math Concepts ○ Prodigy ○ SplashLearn Differentiate according to formative assessments and i-Ready Diagnostic individualized path ● Resources for **on-grade** students: ○ Log into i-Ready and then follow these steps:

	- Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click REINFORCE and use the resources shown • Resources for students **approaching** grade level expectations: ○ Log into i-Ready and then follow these steps: - Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click RETEACH and use the resources shown • Resources for students **exceeding** grade level expectations: ○ Log into i-Ready and then follow these steps: - Click assess and teach - Click Teacher Toolbox Math - Click Grade Level - Click EXTEND and use the resources shown Useful links / online resources • Gummy Bear Graph • Paper Ball Throw

Suggested Options for Differentiation

Multilingual Learners:

- Simplify written and verbal instructions
- Provide written directions with models and diagrams when possible

- Build in more group work to allow Multilingual Learner students to interact and communicate with peers
- Provide vocabulary ahead of time
- Use sentence frames to give students practice with academic language
- Pre-teach as often as possible- share videos, articles, vocabulary etc. with Multilingual Learner students prior to use in class
- Utilize visual charts/cues
- Highlight key words
- Provide manipulatives
- Frequently check for understanding

Special Education//Students with Disabilities:

- Follow specific students accommodations and modifications as listed in individual student IEP or 504 plan
- Provide opportunities for movement
- Have manipulatives and other math resources available for student use
- Incorporate small group instruction
- Utilize visual charts/cues
- Facilitate successful experiences
- Provide tutoring if needed
- Provide positive praise to increase motivation

504 Plan:

- Behavior management support.
- Adjusted class schedules or grading.
- Extended time on tests and assignments.
- Verbal, visual, or technology aids.

Gifted and Talented:

- Differentiated assignments/projects/assessments
- Differentiate learning pace using curriculum acceleration
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Climate Change

- Students may ask and answer questions about objects that may be reused, objects that may be recycled, and objects that must be placed in the trash. Students may organize used objects into those categories, and ask and answer questions about the total number of objects, how many are in each category, and how many more or fewer are in one category than in another.

Core Instructional and Supplemental Materials

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Varied Levels of Text:

- Marilyn Burns Math Library List
- EPIC
- Social Justice Book List for Mathematics

• [K5 Measurement Read Alouds] • *Strega Nona* by Tomie dePaola • *Life-Size Zoo: From Tiny Rodents to Gigantic Elephants, An Actual-Size Animal Encyclopedia* by Teruyuki Komiya
Teacher Notes / Reflections

Geometry	**Duration: 20 days**
Standards/Learning Targets	
• **3.G.A.** Reason with shapes and their attributes. • **3.G.A.1** Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories. • **3.G.A.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.	
Supporting and Additional Standards	

● **3.NF.A.1** Understand a fraction 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts; understand a fraction *a*/*b* as the quantity formed by a parts of size 1/*b*. For example: If a rectangle (i.e. the whole) is partitioned into 3 equal parts, each part is ⅓**.**Two of those parts would be ⅔.
Primary Interdisciplinary Connections
English Language Arts ● **RI.CR.3.1.** Ask and answer questions and make relevant connections to demonstrate understanding of an informational text, referring explicitly to textual evidence as the basis for the answers. ● **W.IW.3.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. ● **SL.PE.3.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on grade 3 topics and texts, building on others' ideas and expressing their own clearly. ● **SL.UM.3.5.** Use multimedia to demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details. **Science** ● **3-5-ETS1-1** Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● **3-5-ETS1-2** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
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create a new program.

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Essential Questions:

- How can you identify and know that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals)?
- How can you recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories?
- How can polygons be described and classified by their sides and angles?
- How can polygons be put together or taken apart to make other polygons?

Enduring Understandings

Students will know: "I can…"

- Classify and reason with shapes based upon attributes.
- Construct and deconstruct polygons to make other polygons.
- Calculate perimeter as an attribute of plane figures.
- Calculate area as an attribute of plane figures.

</td><td>

Students will be able to:

- Classify shapes based upon attributes.
- Calculate perimeter.
- Calculate area measures.
- Describe angles and polygons.
- Reason with shapes and their attributes.
- Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures
- Construct and deconstruct polygons to make other polygons.

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• Distinguish between linear and area measures.	
Instructional Plan	
Suggested Activities	**Resources**

Suggested Activities/Resources:
• Activities with creation and mapping of shapes and their attributes
• Sorting shapes by their characteristics
• Geoboard tasks involving creation of lines and shapes
• Shape "Hunt"
• Name that Shape!
    ○ Play a game guessing quadrilaterals from their attributes.
    ○ Materials: for each group 4: 4 index cards
    ○ Review quadrilaterals and their attributes with students. Then they break into small groups of 2 or 3. Have each group label each card with one shape (parallelogram, rectangle, rhombus, square) and place them face down in a pile. One member draws a card and looks at it, making sure none of the others see it. Another player asks whether the quadrilateral has a particular attribute, such as 4 right angles. After the student answers "yes" or "no", the player who asks the question can try to name the quadrilateral. Players take turns asking attributes until someone guesses the quadrilateral. Repeat until all the game cards are used.
 	
• Read *Shapesville*, by: Andy Mills & Becky Osborn
	• Ready Mathematics Program
	• i-Ready MyPath
	• IXL
	• Seesaw
	• Class Dojo
	• **NJSLS and iRCL 2024 Padlet**
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	    ○ Boom Cards
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	Differentiate according to formative assessments and i-Ready Diagnostic individualized path
	• Resources for **on-grade** students:
	    ○ Log into i-Ready and then follow these steps:
	        ■ Click assess and teach
	        ■ Click Teacher Toolbox Math

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- Answer the following discussion questions to encourage discussion:
  - Which character did you like best? Why?
  - Which character is most like you? How?
  - Are your friends and family members different shapes, sizes and colors? How are they different?
  - What can you do to take care of your body, and keep it strong and healthy?
- Read this quote from the story and discuss the questions below: "It’s not the size of your shape, or the shape of your size, but the size of your heart, and that deserves first prize. So be proud of your body, any size or shape will do. Be proud of your body because YOU are a STAR too!"
  - What makes you a special person on the inside?
  - What kinds of things might make you a star?

* Read *Anne Frank* by Inspired Inner Genius or *Bear and Fred: A World War II Story* by Iris Argaman
  - Read a book about the Holocaust and discuss what happened during the Holocaust.
  - Talk about different monuments and memorials that represent American History. Show pictures of the different monuments and memorials.
  - Students will use geometric shapes or forms to create a Holocaust monument. Students will share their monuments with a partner.
* *Zero* by Kathryn Otoshi
* *One Grain of Rice: A Mathematical Folktale* by Demi

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- Click Grade Level
- Click REINFORCE and use the resources shown

* Resources for students **approaching** grade level expectations:
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Useful links / online resources

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- *Seeing Symmetry* by Loreen Leedy
- *If You Were a Polygon* by Marcie Aboff

Teacher Notes / Reflections