Little Egg Harbor School District
Curriculum Guide

Mathematics: Fourth 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: Fourth**
Operations and Algebraic Thinking	**30 days**
Number and Operations in Base Ten	**50 days**
Number and Operations - Fractions	**50 days**
Measurement	**15 days**
Data Literacy	**15 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 Fourth Grade, instruction focuses broadly on three critical areas:

1. Developing understanding and accuracy and efficiency, with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends;
2. Developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers;
3. Understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

Critical Areas

1. Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they

select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.

2. Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g.,), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.
3. Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

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: 30 days**

Standards/Learning Targets

Focus Standards (Major Standards)

New Jersey Student Learning Standards:

- **4.OA.A.** Use the four operations with whole numbers to solve problems.
- **4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.
- **4.OA.A.2** Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.
- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
- **4.OA.B.** Gain familiarity with factors and multiples.
- **4.OA.B.4** Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.
- **4.OA.C.** Generate and analyze patterns.
- **4.OA.C.5** Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule “Add 3” and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.

Supporting and Additional Standards

- **4.NBT.A.1** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right
- **4.NBT.A.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
- **4.NBT.B.4** With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.
- **4.NBT.B.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.NBT.B.6**. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Primary Interdisciplinary Connections

English Language Arts

- **RI.CR.4.1.** Refer to details and examples as textual evidence when explaining what an informational text says explicitly and make relevant connections when drawing inferences from the text.
- **W.SE.4.6.** Gather relevant information from multiple print and digital sources; take notes, prioritize and categorize information; provide a list of sources.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

Science

- **4-ESS2-2** Analyze and interpret data from maps to describe patterns of Earth's features.

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.
- **8.1.5.DA.5:** Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
- **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
- **8.1.5.AP.2:** Create programs that use clearly named variables to store and modify data.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.1.5.CR.1:** Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
- **9.1.5.EG.3:** Explain the impact of the economic system on one's personal financial goals.
- **9.1.5.EG.4:** Describe how an individual's financial decisions affect society and contribute to the overall economy.
- **9.1.5.FP.1:** Illustrate the impact of financial traits on financial decisions.
- **9.1.5.FP.3:** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.FP.4:** Explain the role of spending money and how it affects wellbeing and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).
- **9.1.5.PB.1:** Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.
- **9.1.5.PB.2:** Describe choices consumers have with money (e.g., save, spend, donate).

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 - Fourth Grade
  - Math Milestones Tasks- Fourth Grade
  - Math Is Visual videos & Tasks
- Google Slides & Forms
- Digital Review Platforms - Kahoot / Blooket
- Flipgrid

Assessments

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

• NCTM Illuminations • Splash Learn - Games for Kids • ABCya! - Games for Kids • multiplication.com - Games	• 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 can you represent the unknown in an equation? • How can you demonstrate relationships between numbers using multiplicative comparisons? • How can you solve multiplicative comparison problems using drawings and equations? • How can you distinguish between multiplicative and additive comparison problems? • What are some strategies we can use to solve multi-step word problems with the four operations? • What information is needed to determine the meaning of the remainder in a division problem?	**Students will be able to:** • Identify a variable in an equation. • Explain relationships between numbers using multiplicative comparisons. • Solve multiplicative comparison problems using drawings and equations. • Distinguish between multiplicative and additive comparison problems. • Solve multi-step word problems using the four operations. • Interpret remainders in word problems. • Use place value patterns and properties of operations to find products and quotients.

● How can we use place value patterns and properties of operations to find products and quotients? ● What strategies can we use to use mental math and estimation to determine if our solution is reasonable? ● How can knowledge of basic facts help you find the factors of a number? ● What patterns do you notice in the multiples of a number? ● How can we compare and contrast factors and multiples? ● What determines a pattern? How do we find patterns among a series of numbers? ● How can you use rules to generate or extend patterns with numbers or shapes? **Enduring Understandings:** *Students will know… "I can…"* ● Utilize addition and subtraction to assist with multiplication and division tasks. ● Explore multiplicative comparisons. ● Multiply and divide to solve comparison problems. ● Model and solve multi-step problems with multiplication and division. ● Identify and describe patterns within the operations. ● Estimate and use mental math strategies related to multiplication and division. ● Identify factor pairs for a number. ● Identify multiples of a number. ● Identify prime or composite numbers. ● Use concrete and visual models to identify factors of numbers up to 100 ● Use rules to find patterns and identify features of the number or shape pattern.	● Use mental math and estimation to determine if an answer is reasonable. ● Find factor pairs for whole numbers from 1-100 and determine if the number is prime or composite. ● Identify multiples of a number. ● Generate patterns that follow a given rule with numbers or shapes.

Instructional Plan	
Suggested Activities	**Resources**
• Hands on Activity: Conduct a number hunt to compare whole numbers. While conducting the number hunt around the room, students will work together with their peers showing kindness by listening to their thoughts and accepting their opinions. "A Remainder of One" book & Lesson ideas- Students will read/listen to the story "A Remainder of One" and discuss how it feels to be left out and lonely and that we need to not exclude and include all. • *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
	• Four in a Row Game
	• Jeopardy Multi-Step Word Problem
	• Collection of games
	• Differentiated lesson - grades 4 & 5

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

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

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

Teacher Notes

Number and Operations in Base Ten	**Duration: 50 days**

Standards/Learning Targets

Focus Standards (Major Standards)

- **4.NBT.A.** Generalize place value understanding for multi-digit whole numbers.
- **4.NBT.A.1** Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.
- **4.NBT.A.2** Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
- **4.NBT.A.3** Use place value understanding to round multi-digit whole numbers to any place.
- **4.NBT.B.** Use place value understanding and properties of operations to perform multi-digit arithmetic.
- **4.NBT.B.4** With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.
- **4.NBT.B.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.NBT.B.6**. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area model.

Supporting and Additional Standards

- **4.OA.A.1** Interpret a multiplication equation as a comparison, e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.

- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
- **4.M.A.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

Primary Interdisciplinary Connections

English Language Arts

- **RI.MF.4.6.** Use evidence to show how graphics and visuals (e.g., illustrations, charts, graphs, diagrams, timelines, animations) support central ideas.
- **W. IW.4.2.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

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.

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.
- **8.1.5.DA.5:** Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
- **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
- **8.1.5.AP.2:** Create programs that use clearly named variables to store and modify data.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.4.5.CT.3:** Describe how digital tools and technology may be used to solve problems.
- **9.4.5.CT.4:** Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).
- **9.1.5.CR.1:** Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
- **9.1.5.EG.3:** Explain the impact of the economic system on one's personal financial goals.
- **9.1.5. EG.4:** Describe how an individual's financial decisions affect society and contribute to the overall economy.
- **9.1.5.FP.1:** Illustrate the impact of financial traits on financial decisions.
- **9.1.5.FP.3:** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.FP.4:** Explain the role of spending money and how it affects wellbeing and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).
- **9.1.5.PB.1:** Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.
- **9.1.5.PB.2:** Describe choices consumers have with money (e.g., save, spend, donate).

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 - Fourth Grade
  - Math Milestones Tasks- Fourth Grade
  - Math Is Visual videos & Tasks
- Google Slides & Forms
- Digital Review Platforms - Kahoot / Blooket

Assessments

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

• Flipgrid • NCTM Illuminations • Splash Learn - Games for Kids • ABCya! - Games for Kids • multiplication.com - Games	• 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 are the digit values related within a number? • What are some ways to compare the value of numbers? • What does it mean to round? • How can we illustrate multiplication and division using arrays or area models? • What is the relationship between the numbers in a multiplication and division fact family? • What words can we look for in a word problem that would tell us what operation to perform? • What is an equation? • What are some ways to ensure accuracy using the	*Students will be able to..* • Explain how digit values are related within a number. • Compare the value of numbers. • Round multi-digit whole numbers within 1,000,000 to any place. • Multiply a two digit number by a two-digit number. • Multiply and divide whole numbers of up to four digits by one-digit whole numbers • Use arrays, area models, and partial products to multiply. • Solve addition and subtraction problems with numbers within 1,000,000 using the standard algorithm. • Write equations using all four operations.

addition or subtraction algorithms with multi-digit numbers? **Enduring Understandings:** *Students will know… "I can…"* ● Describe the relationship between the value of a digit and the value of a digit one place to the right. ● Apply place value understanding to compare multi-digit numbers. ● Apply place value understanding to round multi-digit whole numbers within 1,000,000 to any place ● Add and subtract whole numbers using the standard algorithm. ● Model multiplication and division using equations, rectangular arrays and area models.	
Instructional Plan	
Suggested Activities	**Resources**
● Games involving place value and multi-digit whole numbers (Guess the number; Roll it, Make it, Expand it; Place Value Battleship,etc) ● Balloon Rounding: Students take turns holding a balloon, looking at a number and removing a finger (to match the place value amount) to see if the whole number will round up or down - balloon stays in hand if "4 or less" or floats up if "five or more" (model) ● Students will work together and collaborate while rolling multiple sets of dice and comparing the numerals and place value amounts (while taking turns and accepting the thoughts of others):	● 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

○ Roll the Dice Place Value Comparing ● Discuss how important it is to Reduce, Reuse and Recycle and how everyone needs to help to make a difference and how this makes an impact on our Earth. Look up ways we can help our Earth. Create word problems for their peers to solve that include the Earth and ways to Reduce, Reuse or Recycle. ● *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	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 ● Interactive place value chart ● Printable Rounding Game ● Drag and Drop Math ● Game for addition of big numbers ● Math Antics Videos

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

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

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

Teacher Notes

Number and Operations-Fractions	50 Days

Standards/Learning Targets

Focus Standards (Major Standards)

New Jersey Student Learning Standards:

- **4.NF.A.** Extend understanding of fractions equivalence and ordering.
- **4.NF.A.1** Explain why a fraction $^{a}/_{b}$ is equivalent to a fraction $^{(n \times a)}/_{(n \times b)}$ by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.
- **4.NF.A.2** Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as ½ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or <, and justify the conclusions, e.g., by using a visual fraction model.
- **4.NF.B.** Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.
- **4.NF.B.3** Understand a fraction $^{a}/_{b}$ with a > 1 as a sum of fractions $^{1}/_{b}$.
- **4.NF.B.3a** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
- **4.NF.B.3b** Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples: $^{3}/_{8} = {}^{1}/_{8} + {}^{1}/_{8} + {}^{1}/_{8}$; $^{3}/_{8} = {}^{1}/_{8} + {}^{2}/_{8}$; $2\ {}^{1}/_{8} = 1 + 1 + {}^{1}/_{8} = {}^{8}/_{8} + {}^{8}/_{8} + {}^{1}/_{8}$.
- **4.NF.B.3c** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
- **4.NF.B.3d** Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- **4.NF.B.4** Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.
- **4.NF.B.4a** Understand a fraction $^{a}/_{b}$ as a multiple of $^{1}/_{b}$. For example, use a visual fraction model to represent $^{5}/_{4}$ as the product $5 \times ({}^{1}/_{4})$, recording the conclusion by the equation $^{5}/_{4} = 5 \times ({}^{1}/_{4})$.
- **4.NF.B.4b** Understand a multiple of $^{a}/_{b}$ as a multiple of $^{1}/_{b}$, and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express $3 \times ({}^{2}/_{5})$ as $6 \times ({}^{1}/_{5})$, recognizing this product as $^{6}/_{5}$.

(In general, $n \times (^{a}/_{b}) = {}^{(n \times a)}/_{b}$.)

- **4.NF.B.4c** Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. For example, if each person at a party will eat $^{3}/_{8}$ of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?
- **4.NF.C.** Understand decimal notation for fractions and compare decimal fractions.
- **4.NF.C.5** Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. (Clarification: Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.)
- **4.NF.C.6** Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $^{62}/_{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.
- **4.NF.C.7** Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

Supporting and Additional Standards

- **4.NBT.B.4** With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.
- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.

Primary Interdisciplinary Connections

English Language Arts

- **RI.CR.4.1.** Refer to details and examples as textual evidence when explaining what an informational text says explicitly and make relevant connections when drawing inferences from the text.
- **W.SE.4.6.** Gather relevant information from multiple print and digital sources; take notes, prioritize and categorize information; provide a list of sources.

- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

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.

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.
- **8.1.5.DA.5:** Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
- **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
- **8.1.5.AP.2:** Create programs that use clearly named variables to store and modify data.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.1.5.CR.1:** Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
- **9.1.5.EG.3:** Explain the impact of the economic system on one's personal financial goals.
- **9.1.5. EG.4:** Describe how an individual's financial decisions affect society and contribute to the overall economy.
- **9.1.5.FP.1:** Illustrate the impact of financial traits on financial decisions.
- **9.1.5.FP.3:** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.FP.4:** Explain the role of spending money and how it affects wellbeing and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).
- **9.1.5.PB.1:** Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.
- **9.1.5.PB.2:** Describe choices consumers have with money (e.g., save, spend, donate).

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 - Fourth Grade
  ○ Math Milestones Tasks- Fourth 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**

Essential Questions:

- How can we tell if 2 fractions are equivalent?
- What does ½ look like when we are thinking about parts of a whole? Does ½ always represent the exact same size?
- How is addition the same as joining 2 or more things? How is subtraction like separating 2 or more things?
- Is it possible to decompose a fraction in more than one way? Can you use a visual to support your reasoning?
- How will knowing about whole numbers help you show, build, and take apart fractions to solve problems?
- How will knowing about the properties of whole numbers help you add and subtract, multiply, and compare fractions?
- How can you model multiplication of fractions?
- What are some ways we can model a mixed number?
- How are 10th's and 100's related?
- How can you use what you know about fractions to write and compare decimals ?
- How can you use a model to understand the value of a decimal number?
- How are fractions and decimals the same and/or different?
- How can you prove that ⅓ +⅓ +⅓= 1 whole

Enduring Understandings:

Students will know… "I can…"

- Connect reasoning about the size of a fraction to a benchmark to compare fractions.
- Connect a fractional equivalent to a visual model.
- Compare fractions with the same numerators or same denominators.

Students will be able to:

- Determine if 2 fractions are the equivalent.
- Use symbols to compare fractions with different numerators and different denominators.
- Recognize that fractions with different denominators and the same numerators represent different values.
- Use common denominators and benchmark fractions to compare fractions with different denominators.
- Understand fraction addition and subtraction as joining and separating parts.
- Use fraction models to add and subtract fractions with common denominators.
- Add and subtract mixed numbers with common denominators.
- Decompose fractions greater than 1 into a fraction equivalent to a whole number and a fraction less than 1.
- Multiply a unit fraction by a whole number
- Solve word problems that involve multiplying a fraction by a whole number.
- Explain the relationship between tenths and hundredths.
- Add two fractions with denominators of 10 and 100.
- Write fractions with denominators of 10 or 100 as decimals.
- Write decimals as fractions with denominators of 10 or 100.

• Demonstrate decimals and fractions with denominators of 10 and 100. • Use visual models and place value concepts to compare decimals. • Make connections between fractions and decimals. • Decompose fractions into a sum of those fractions. • Understand addition and subtracting as joining and separating parts. • Use models and equations to solve word problems. • Add fractions with denominators of 10 and 100. • Use visual and concrete models and equations to represent and solve word problems involving addition and subtraction of mixed numbers • Rename mixed numbers as equivalent fractions to add or subtract. • Add and subtract mixed numbers with common denominators.	
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 onto the whole. First person to fill in their whole strip wins.	• 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

- 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.
- Adding and subtracting mixed numbers with Dominoes Students will work with a partner and need a white board, marker and some dominoes. Each partner will take one domino from the pile and take the number on either side of the domino and turn it into a fraction. (Ex: one side is a 7 and the other side is a 3- that would make $^{7}/_{3}$) If the fraction is an improper fraction the student will turn it into a mixed number. ($^{7}/_{3} = 2\ ^{1}/_{3}$) Once each student has a fraction or mixed number they will share with their partner. Now together they will add/subtract the two mixed numbers together. Continue playing by both partners grabbing another domino from the pile and turning it into a mixed number than adding/subtracting their mixed numbers. Partners will discuss the strategies they used to convert the improper fraction to a mixed number as well as how they got their sum or difference.

- Discuss how important it is to Reduce, Reuse and Recycle and how everyone needs to help to make a difference and how this makes an impact on our Earth.
    - Look up ways we can help our Earth and listen to the story "The 3 R's: Reduce, Reuse, Recycle."
    - Create fraction word problems for their peers to solve that include the Earth and ways to Reuse, Reduce or Recycle.
    - Earth Day Math Task

- *Zero* by Kathryn Otoshi

- 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

• *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	■ Click Grade Level ■ Click EXTEND and use the resources shown Useful links / online resources • Didax Virtual Manipulatives • Toy Theater Virtual Manipulatives • Collection of Fraction Manipulatives • Decomposing Fractions Free Activity • Decimal Squares Virtual Manipulative • Interactive Decimal Strips

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

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

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

Teacher Notes

Measurement	**15 Days**

Standards/Learning Targets

Focus Standards (Major Standards)

- **4.M.A** Solve problems involving measurement and conversion of measurement from a larger unit to a smaller unit.
- **4.M.A.1** Know relative sizes of measurement units within one system of units including km, m, cm, mm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...
- **4.M.A.2** Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.
- **4.M.A.3** Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.
- **4.M.B.** Geometric measurement: understand concepts of angle and measure angles.
- **4.M.B.4** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
- **4.M.B.4a** An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $^{1}/_{360\text{th}}$ of a circle is called a “one degree angle,” and can be used to measure angles.
- **4.M.B.4b** An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degrees.
- **4.M.B.5** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
- **4.M.B.6** Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.

Supporting and Additional Standards

- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
- **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- **4.G.A.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- **4.NBT.B.4** With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.
- **4.NBT.B.5** Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- **4.NBT.B.6**. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area model.

Primary Interdisciplinary Connections

English Language Arts

- **RI.CR.4.1.** Refer to details and examples as textual evidence when explaining what an informational text says explicitly and make relevant connections when drawing inferences from the text.
- **W.SE.4.6.** Gather relevant information from multiple print and digital sources; take notes, prioritize and categorize information; provide a list of sources.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

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.

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.
- **8.1.5.DA.5:** Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
- **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
- **8.1.5.AP.2:** Create programs that use clearly named variables to store and modify data.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.1.5.CR.1:** Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
- **9.1.5.EG.3:** Explain the impact of the economic system on one's personal financial goals.
- **9.1.5. EG.4:** Describe how an individual's financial decisions affect society and contribute to the overall economy.
- **9.1.5.FP.1:** Illustrate the impact of financial traits on financial decisions.
- **9.1.5.FP.3:** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.FP.4:** Explain the role of spending money and how it affects wellbeing and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).
- **9.1.5.PB.1:** Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.
- **9.1.5.PB.2:** Describe choices consumers have with money (e.g., save, spend, donate).

Evidence of Student Learning

Performance Tasks/Use of Technology

- i-Ready Math in Action
- i-Ready MyPath
- i-Ready Fluency Flight
- IXL

Assessments

Formative

- Exit slips
- Teacher observations/anecdotal/checklists
- i-Ready games

• Standards-based activities and tasks
  ○ Illustrative Math Tasks - Fourth Grade
  ○ Math Milestones Tasks- Fourth 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
	• 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: • When might it be helpful to measure objects in different units? • How are length, weight, and volume the same/different? • When might you use length/weight/volume to measure	**Students will be able to:** • Know relative size of objects within the metric and customary systems. • Represent measurements within one system in multiple ways (example: 2 cups = 16 oz)

an object? ● Which type of tool would you use to measure (customary and metric)? ● Compare how many cups it takes to fill a larger object. Are there any patterns? ● How does knowing the smaller units of a larger measurement tool help you solve a problem? ● What tool is the best tool to measure …? ● Is there a relationship between gallons and quarts, etc…? ● Why is it important to know how much time has passed? ● How does multiplication and division help you convert between units of measure? ● How would you describe an acute/obtuse/right angle? ● How much of a circle does a right angle represent? ● What benchmark could you use to justify an estimated angle? **Enduring Understandings:** *Students will know… "I can…"* ● Identify customary and metric measurement benchmarks ● Compare customary units of length, weight, and liquid volume ● Compare metric units of length, mass, and liquid volume ● Solve problems using measurements ● Compare units of time ● Solve problems involving elapsed time and start/finish time. ● Sketch and draw an angle with a protractor. ● Recognize angles as additive to solve problems involving angles	● Apply area and perimeter formulas in problem solving. ● Identify the type of tool you would use to measure (customary and metric). ● Solve word problems involving length, liquid volume, mass and weight. ● Convert larger units of measure to smaller units in order to solve measurement word problems. ● Recognize the relationship between the measure of an angle and the part of the circle an angle turns through. ● Sketch and measure angles to the nearest degree. ● Use addition and subtraction to solve word problems about angles measures.

Instructional Plan	
Suggested Activities	**Resources**
• Discuss how important it is to Reduce, Reuse and Recycle and how everyone needs to help to make a difference and how this makes an impact on our Earth. Look up ways we can help our Earth and listen to the story "Why Should I Recycle?." Create measurement word problems for their peers to solve that include the Earth and ways to Reuse, Reduce or Recycle. • *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

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

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

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

Teacher Notes

Data Literacy	**15 Days**

Standards/Learning Targets

Focus Standards (Major Standards)

New Jersey Student Learning Standards:

- **4.DL.A.** Organize data and understand data visualizations.
- **4.DL.A.1** Create data-based questions, generate ideas based on the questions, and then refine the questions.
- **4.DL.A.2** Develop strategies to collect various types of data and organize data digitally.
- **4.DL.A.3** Understand that subsets of data can be selected and analyzed for a particular purpose.
- **4.DL.A.4** Analyze visualizations of a single data set, share explanations, and draw conclusions that the data supports.
- **4.DL.B.** Represent and interpret measurement data.
- **4.DL.B.5** Make a line plot to display a data set of measurements in fractions of a unit (½ , ¼ , ⅛). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

Supporting and Additional Standards

- **4.NF.B.3c** Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.
- **4.NF.B.3d** Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- **4.NF.B.4** Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

Primary Interdisciplinary Connections

English Language Art

- **RI.CR.4.1.** Refer to details and examples as textual evidence when explaining what an informational text says explicitly and make relevant connections when drawing inferences from the text.
- **W.SE.4.6.** Gather relevant information from multiple print and digital sources; take notes, prioritize and categorize information; provide a list of sources.
- **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

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.

Computer Science and Design Thinking Standards

- **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.
- **8.1.5.DA.5:** Propose cause and effect relationships, predict outcomes, or communicate ideas using data.
- **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
- **8.1.5.AP.2:** Create programs that use clearly named variables to store and modify data.

Career Readiness, Life Literacies, and Key Skills Standards

- **9.1.5.CR.1:** Compare various ways to give back and relate them to your strengths, interests, and other personal factors.
- **9.1.5.EG.3:** Explain the impact of the economic system on one's personal financial goals.
- **9.1.5. EG.4:** Describe how an individual's financial decisions affect society and contribute to the overall economy.
- **9.1.5.FP.1:** Illustrate the impact of financial traits on financial decisions.
- **9.1.5.FP.3:** Analyze how spending choices and decision-making can result in positive or negative consequences.
- **9.1.5.FP.4:** Explain the role of spending money and how it affects wellbeing and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.).
- **9.1.5.PB.1:** Develop a personal budget and explain how it reflects spending, saving, and charitable contributions.
- **9.1.5.PB.2:** Describe choices consumers have with money (e.g., save, spend, donate).

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 - Fourth Grade
  - Math Milestones Tasks- Fourth 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

Assessments

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
Essential Questions: ● What questions could you ask in order to collect a variety of data? ● How can you organize the data digitally? ● What does the data represent? ● What conclusions can be drawn from the data? ● How does a line plot help you organize the data we collect? ● Can you use different data displays to represent the same data? How do we use information from one type of data display to another? ● How can you interpret the data in a line plot? **Enduring Understandings:** *Students will know… "I can…"* ● Generate questions to collect data. ● Organize data in a digital data display. ● Analyze data presented and draw conclusions about the data. ● Solve problems using data sets and subsets. ● Create and represent data in a line plot. ● Answer questions about the data displayed in a line plot.	*Students will be able to..* ● Collect data. ● Represent and interpret data and data subsets. ● Organize the data that is collected. ● Use information from one type of data display to another. ● Create word problems using comparative data. ● Interpret data presented on a line plot. ● Make a line plot that displays data in fractional units. ● Solve addition and subtraction word problems by using data presented in line plots.

Instructional Plan	
Suggested Activities	**Resources**
● Read the story "One". Discuss why it's important to speak kindly to others and how it affects others. After reading	● Ready Mathematics Program ● i-Ready MyPath

the book and discussing, create a line plot on tracking how many times students use positive words in the classroom. ● *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	● 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 ● Online Graph Maker

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

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

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

Teacher Notes

Geometry	**20 Days**

Standards/Learning Targets

Focus Standards (Major Standards)

- **4.G.A.** Draw and identify lines and angles, and classify shapes by properties of their lines and angles.
- **4.G.A.1** Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- **4.G.A.2** Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
- **4.G.A.3** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Supporting and Additional Standards

- **4.OA.A.3** Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. 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.
- **4.M.B.4** Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
- **4.M.B.4a** An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a “one degree angle,” and can be used to measure angles.
- **4.M.B.4b** An angle that turns through n one-degree angles is said to have an angle measure of n degrees. Students who can generate equivalent fractions can develop strategies for adding fractions with unlike denominators in general. But addition and subtraction with unlike denominators in general is not a requirement at this grade.
- **4.M.B.5** Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

Primary Interdisciplinary Connections
English Language Arts- open ended questions, relevant read-alouds related to math are used to introduce and reinforce math concepts ● **RI.CR.4.1.** Refer to details and examples as textual evidence when explaining what an informational text says explicitly and make relevant connections when drawing inferences from the text. ● **W.SE.4.6.** Gather relevant information from multiple print and digital sources; take notes, prioritize and categorize information; provide a list of sources. ● **SL.PE.4.1.** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
Computer Science and Design Thinking Standards
● **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. ● **8.1.5.DA.5:** Propose cause and effect relationships, predict outcomes, or communicate ideas using data. ● **8.1.5.AP.1:** Compare and refine multiple algorithms for the same task and determine which is the most appropriate.
Career Readiness, Life Literacies, and Key Skills Standards
● **9.1.5.CR.1:** Compare various ways to give back and relate them to your strengths, interests, and other personal factors. ● **9.1.5. EG.4:** Describe how an individual's financial decisions affect society and contribute to the overall economy. ● **9.1.5.FP.3:** Analyze how spending choices and decision-making can result in positive or negative consequences. ● **9.1.5.FP.4:** Explain the role of spending money and how it affects wellbeing and happiness (e.g., "happy money," experiences over things, donating to causes, anticipation, etc.). ● **9.1.5.PB.2:** Describe choices consumers have with money (e.g., save, spend, donate).
Evidence of Student Learning

Performance Tasks/Use of Technology	Assessments
● i-Ready Math in Action ● i-Ready MyPath	**Formative** ● Exit slips

<table>
<tr>
<td>

- i-Ready Fluency Flight
- IXL
- Standards-based activities and tasks
  - Illustrative Math Tasks - Fourth Grade
  - Math Milestones Tasks- Fourth 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

</td>
<td>

- 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

</td>
</tr>
<tr><th colspan="2">Knowledge and Skills</th></tr>
<tr><th>Content</th><th>Skills</th></tr>
<tr>
<td>

Essential Questions:

- What is different about a set of parallel and perpendicular lines? How are they the same?

</td>
<td>

Students will be able to..

- Identify and draw points, lines,line segments, rays, and angles and identify them in two-dimensional figures.

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

<table>
<tr>
<td>

- Does this figure contain parallel or perpendicular lines?
- How can we compare and contrast triangles? What makes them different or the same?
- What does symmetrical mean?
- How do we identify a line of symmetry in a symmetrical figure?
- What makes something symmetrical?

Enduring Understandings:
Students will know… "I can…"

- Identify and draw points, lines, line segments, rays.
- Identify and draw acute, obtuse and right angles.
- Identify and draw perpendicular and parallel lines.
- Identify and classify right triangles.
- Classify two-dimensional figures by their attributes of lines and angles.
- Identify and draw lines of symmetry.

</td>
<td>

- Identify and draw acute, obtuse and right angles.
- Identify if a figure contains parallel or perpendicular lines.
- Identify and classify right triangles.
- Classify two-dimensional figures by their attributes of lines and angles.
- Identify and draw lines of symmetry.
- Explain how we can compare and contrast triangles, and what makes them different or the same.
- Sort two-dimensional figures based on parallel or perpendicular sides and on acute, obtuse, or right angles.

</td>
</tr>
<tr><th colspan="2">Instructional Plan</th></tr>
<tr><th>Suggested Activities</th><th>Resources</th></tr>
<tr>
<td>

- Hands on Activity:

Conduct a Shape hunt to identify, compare and contrast the attributes of different shapes *(ex: number of sides, types of angles, parallel and/or perpendicular sides, lines of symmetry)*. While conducting the shape hunt around the room, students will work together with their peers showing kindness

</td>
<td>

- Ready Mathematics Program
- i-Ready MyPath
- IXL
- Seesaw
- Class Dojo
- **NJSLS and iRCL 2024 Padlet**
- Manipulatives by iReady Lessons
- Achieve the Core Coherence Map

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

by listening to their thoughts and accepting their opinions. Geometry Sorts: Classifying Shapes - The Teacher Studio ● *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	● 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 ● Alien Angles Game ● 8 Angle Activities to Engage students

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

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

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

Teacher Notes / Reflections