Lakewood Public School District Curriculum Guide

Grade: 4	Content Area: Mathematics

Original Adoption: Original Adoption: 2023 NJSLS English Language Arts and English as a Second Language (8-21-24); Math NJSLS Mathematics (8-21-24); 2020 NJSLS Science, Social Studies, Career Readiness, Life Literacies & Key Skills, Computer Design & Thinking, Visual & Performing Arts, World Language, Comprehensive Health and Physical Education (5-11-22)
Created By:

Recommended Pacing Guide	
Unit 1: Addition and Subtraction with the Standard Algorithm	13 days
Unit 2: Place Value with Whole Numbers and Decimals; Rounding	26 days
Unit 3: Understanding Fractions	15 days
Unit 4: Understanding the Operations of Multiplication and Division	15 days
Unit 5: Multi-digit Multiplication and Division	19 days
Unit 6: Operations with Fractions and Decimals	28 days
Unit 7: Geometry	12 days
Unit 8: Patterns and Problem Solving with Measurement and Data	15 days

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)
- History of disabled and LGBT persons included in middle and high school curriculum (Section 18A:35-4.35)
- 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).

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Unit 1: Addition and Subtraction with the Standard Algorithm	Duration: 13 days

New Jersey Student Learning Standards	
4.NBT.B	**Use place value understanding and properties of operations to perform multi-digit arithmetic**
4.NBT.4	With accuracy and efficiency, add and subtract multi-digit whole numbers using the standard algorithm.
3.OA.A	**Use the four operations with whole numbers to solve problems**
3.OA.3	Solve multi-step word problems posed with whole numbers and have whole-number answers using the four operations, including problems in which remainers 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.

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

New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	• Recognize one's feelings and thoughts. • Recognize the impact of one's feelings and thoughts on one's own behavior. • Recognize one's personal traits, strengths, and limitations. • Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	• Understand and practice strategies for managing one's own emotions, thoughts, and behaviors.

	• Recognize the skills needed to establish and achieve personal and educational goals. • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	• Recognize and identify the thoughts, feelings, and perspectives of others. • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds. • Demonstrate an understanding of the need for mutual respect when viewpoints differ. • Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	• Develop, implement, and model effective problem-solving and critical thinking skills. • Identify the consequences associated with one's actions in order to make constructive choices. • Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	• Establish and maintain healthy relationships. • Utilize positive communication and social skills to interact effectively with others. • Identify ways to resist inappropriate social pressure. • Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. • Identify who, when, where, or how to seek help for oneself or others when needed.

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
L.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
L.WF.4.2	Demonstrate command of conventions of encoding and spelling.
L.WF.4.3	Demonstrate command of the conventions of writing, including those listed under grade three foundational skills.
L.KL.4.1	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
L.VL.4.2	Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies.

	A. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. B. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph). C. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
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.
RI.TS.4.4	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
RL.PP.4.6	Make connections between specific descriptions and directions in a text and a visual or oral representation of the text.
W.IW.4.2	Write informative/explanatory texts to examine a topic and convey information clearly. D. Use precise language and domain specific vocabulary to inform about or explain a topic.
SL.PE.4.1	Engage effectively in a range of collaborative discussions (one-to-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. A. Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks made by others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion
Social Studies	
6.1.5.CivicsCM.3	Identify the types of behaviors that promote collaboration and problem solving with others who have different perspectives.

Computer Science & Design Thinking	
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 data
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.

8.1.5.AP.1	Compare and refine multiple algorithms for the same task and determine which is most appropriate
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies & Key Skills	
9.4.5.CI.3	Participate in brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process
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.
9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology
9.4.5.IML.2	Create a visual representation to organize information about a problem or issue
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
CLKS.2	Attend to financial well-being.
CLKS.3	Consider the environmental, social and economic impacts of decisions.
CLKS.4	Demonstrate creativity and innovation.
CLKS.5	Utilize critical thinking to make sense of problems and persevere in solving them.
CLKS.6	Model integrity, ethical leadership and effective management.
CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Grade: 4	**Content Area: Mathematics**

Evidence of Student Learning

Formative Tasks:
- Teacher observations
- Class discussions
- Whiteboard/Communicators
- Math routine responses
- Daily DOLs
- Daily classwork
- Checks for understanding
- Spiral Quizzes
- Fluency Quizzes
- *Number Talks*
- NJSLA released items

Alternative Assessments:
- Oral assessments
- Istation

Summative Assessments:
- Unit Assessment

Benchmark Assessments:
- Istation Diagnostic
- Monthly ISIP
- Beginning of the Year Screener

Knowledge & Skills

Enduring Understandings:
- Place value can help with accuracy when adding and subtracting large numbers.
- Efficient strategies – like regrouping, breaking apart numbers, or using place-value reasoning – help me solve problems fluently.
- Accuracy and reasonableness matter when working with multi-digit numbers.
- Knowing basic addition and subtraction relationships is helpful when solving bigger, more complex problems.
- Understanding the situation in a word problem helps when deciding which operation and strategies to use.
- Equations and models help represent and solve complex problems clearly.

Essential Questions:
- How does understanding place value help when adding and subtracting large numbers?
- What strategies can be used to solve addition and subtraction problems efficiently?
- Why is it important to be accurate when adding or subtracting multi-digit numbers?

Content
Students will know…
- Place value can be used when adding or subtracting two three-digit numbers.
- Partial-sums is a place value algorithm that can be used for addition.

Skills
Students will be able to …
- Use the partial-sums algorithm to add within 1000.
- Model addition with base-10 blocks
- Use the standard algorithm to add within 1,000,000.
- Subtract two-three digit numbers using partial-differences.

● When adding three-digit numbers, we add hundreds to hundreds, tens to tens, and ones to ones. ● A ten is composed of 10 ones. ● A hundred is composed of 10 tens. ● The standard algorithm for addition is an abbreviated form of the place value algorithm. ● When subtracting three-digit numbers, we subtract hundreds from hundreds, tens from tens, and ones from ones. ● Exchanges can be made between place values to make subtraction possible. ● Bar models can be used to visualize the relationship between the numbers given and the unknown amount you are looking for in a word problem. ● Bar models help us determine which operations we need to use to solve the problem.	● Model subtraction with base-10 blocks. ● Use the standard algorithm to subtract within 1,000,000. ● Match a scenario to a given bar model. ● Match a bar model to a scenario ● Sketch a bar model to match a word problem. ● Use addition and subtraction strategies to solve one- and two-step word problems, including comparison word problems.

Core Instructional & Supplemental Materials	
Suggested Activities/Resources: ● Manipulatives ● Istation ● District Created Lessons (Unit 1) ● District Created Parent Resources ● Communicators ● Unit Review Jeopardy ● *Number Talks* ● NJSLA released items	**Supplemental Materials** ● *100 Snowmen* by Jen Arena

Suggested Accommodations
English Language Learners: ● Multi-sensory instruction ● Flexible grouping ● Small group instruction ● Provide peer tutoring ● Use a strong student as a “buddy” (does not necessarily have to speak the primary language) ● Chunking information ● Scaffolded questioning ● Manipulatives/concrete models ● Pre-Teach vocabulary ● Co-Constructed Word Banks

- Anchor charts
- Gradual release model
- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies
- Sentence starters

Special Education/Students with Disabilities:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:
- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:
- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
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- Modified assignments
- Brain breaks

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Economically Disadvantaged:

- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons
- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Unit 2: Place Value of Whole Numbers and Decimals, Rounding	Duration: 26 days

New Jersey Student Learning Standards	
4.NBT.A	**Generalize place value understanding for multi-digit whole numbers**
4.NBT.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.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.
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.
4.NF.C	**Understand decimal notation for fractions and compare decimal fractions**
4.NF.6	Use decimal notation for fractions with denominators 10 or 100.
4.NF.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 conclusions, e.g., by using a visual model.

New Jersey Standards for Mathematical Practice	
MP.1	Make sense of problems and persevere in solving them.

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9.4.5.IML.2	Create a visual representation to organize information about a problem or issue

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9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
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CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Evidence of Student Learning	
Formative Tasks: ● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	**Alternative Assessments:** ● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP

Knowledge & Skills	
Enduring Understandings: ● Each place value in a number is ten times the value of the place to its right.	**Essential Questions:** ● How does the position of a digit change its value?

● The value of a digit depends on *where* it is in the number. ● Understanding place value helps when working with large numbers (reading, writing, comparing) ● Numbers can look different but still represent the same value (standard, expanded, word form) ● There are many ways to represent a number, and each representation helps us to understand the number better. ● Digits can be compared using the value of their places, not just the digits themselves. ● Place value reasoning can be used to decide when one number is greater than, less than, or equal to another. ● Rounding helps us identify a benchmark that a number is close to. ● Many numbers round to the same benchmark number. ● Decimals and fractions are two ways to represent the same value. ● Tenths and hundredths show parts of a whole using place value systems. ● Understanding decimal place value helps me compare decimals. ● Visual models and number lines help make sense of decimal values. ● Decimals can be compared by looking at the value of the digits starting from the left. ● The place of a digit determines its size and importance in comparison. ● Decimal comparisons must be based on place value, not just how the number "looks."	● Why is understanding place value important when working with large numbers? ● How can I show the same number in different ways? ● How do different number forms (standard, word, expanded) help me understand a number? ● How can I compare numbers using place value? ● How does rounding help us understand a number's value? ● What does it mean to round a number to a specific place? ● When is rounding useful in real-life situations? ● How are fractions and decimals connected? ● How does place value help me understand tenths and hundredths? ● Why might I choose to write a number as a decimal instead of a fraction? ● How do number lines and models help me understand decimals? ● How do I compare decimals using place value? ● Why is it important to look at each digit's place when comparing decimals?
Content *Students will know…* ● Multi-digit numbers can be represented with place value disks. ● Ten of one place value is needed to make one of the next largest place value. ● Each digit in a number has a value, depending on its position in the number.	**Skills** *Students will be able to …* ● Build multi-digit numbers with place value disks. ● When given the standard form of a multi-digit number, write the number in expanded form. ● When given a multi-digit number in expanded form, write the number in standard form.

• Expanded form is when we write a number as the sum of the value of its digits. • Word form is when we write a number using words. • Place value can be used when comparing numbers. • When we multiply a number by 10, the digits shift one place to the left. • When we multiply a number by 100, the digits shift two places to the left. • Any given number falls between two benchmark numbers. • Rounding a number means to substitute a "nice" number that is close to the original number. • Fractions with the denominator 10 or 100 can be rewritten as decimals. • There are 10 tenths in a whole. • There are 100 hundredths in a whole. • There are 10 hundredths in a tenth. • Use place value understanding to compare decimals and fractions.	• When given the standard form of a multi-digit number, write the number in word form. • When given a multi-digit number in word form, write the number in standard form. • Compare two multi-digit numbers (in standard, word, or expanded form). • Use place value disks to model multiplying by 10. • Use a place value chart to model multiplying a number by 10. • Use place value disks to model multiplying by 100. • Use a place value chart to model multiplying a number by 100. • Compare the value of the same digit in two numbers. • Identify the halfway point between two given numbers and place it in its approximate location on a number line. • Determine the surrounding benchmarks for a given number. • Round multi-digit numbers to the nearest ten and hundred. • Show your thinking about rounding on an open number line. • Round multi-digit numbers to any place value. • Identify the range of numbers that will round to a given benchmark. • Model fractions with base-10 blocks. • Rewrite fractions as decimals. • Rewrite decimals as fractions. • Write the decimal and fraction that is being represented by a visual model. • Place tenths on a number line. • Place hundredths on a number line. • Compare decimals using base-10 models. • Compare decimals and fractions using base-10 models. • Use the symbols <, =, and > to record comparisons.

Core Instructional & Supplemental Materials	

Suggested Activities/Resources:
• Manipulatives
• Istation
• District Created Lessons (Unit 2)
• District Created Parent Resources
• Communicators
• Unit Review Jeopardy
	Supplemental Materials
	• Illustrated Mathematics
	  ○ 4.NBT.1
	  ○ 4.NBT.2
	  ○ 4.NBT.3
	  ○ 4.NF.6
	  ○ 4.NF.7

● *Number Talks* ● NJSLA released items	● *Great Estimations* by Bruce Goldstone ● *How Much is a Million?* By David M. Schwartz

Suggested Accommodations

English Language Learners:

- Multi-sensory instruction
- Flexible grouping
- Small group instruction
- Provide peer tutoring
- Use a strong student as a “buddy” (does not necessarily have to speak the primary language)
- Chunking information
- Scaffolded questioning
- Manipulatives/concrete models
- Pre-Teach vocabulary
- Co-Constructed Word Banks
- Anchor charts
- Gradual release model
- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies
- Sentence starters

Special Education/Students with Disabilities:

- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:

- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:

- Higher level questioning
- Enriched assignments
- Tiered assignments

- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:

- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
- Manipulatives/concrete models
- Modified assignments
- Brain breaks

Economically Disadvantaged:

- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons
- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Grade: 4	Content Area: Mathematics

Unit 3: Understanding Fractions	Duration: 15 days

New Jersey Student Learning Standards	
4.NF.A	**Extend understanding of fractions equivalence**
4.NF.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 $\frac{1}{2}$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, <, and justify the conclusions, e.g., by using a visual fractions model.
4.NF.B	**Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers**
4.NF.3	Understand a fraction $\frac{a}{b}$ with $a > 1$ as a sum of fractions $\frac{1}{b}$. **a.** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. **b.** 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.

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

New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	• Recognize one's feelings and thoughts. • Recognize the impact of one's feelings and thoughts on one's own behavior. • Recognize one's personal traits, strengths, and limitations.

	• Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	• Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. • Recognize the skills needed to establish and achieve personal and educational goals. • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	• Recognize and identify the thoughts, feelings, and perspectives of others. • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds. • Demonstrate an understanding of the need for mutual respect when viewpoints differ. • Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	• Develop, implement, and model effective problem-solving and critical thinking skills. • Identify the consequences associated with one's actions in order to make constructive choices. • Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	• Establish and maintain healthy relationships. • Utilize positive communication and social skills to interact effectively with others. • Identify ways to resist inappropriate social pressure. • Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. • Identify who, when, where, or how to seek help for oneself or others when needed.

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
L.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
L.WF.4.2	Demonstrate command of conventions of encoding and spelling.
L.WF.4.3	Demonstrate command of the conventions of writing, including those listed under grade three foundational skills.
L.KL.4.1	Use knowledge of language and its conventions when writing, speaking, reading, or listening.

L.VL.4.2	Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies. A. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. B. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph). C. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
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.
RI.TS.4.4	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
RL.PP.4.6	Make connections between specific descriptions and directions in a text and a visual or oral representation of the text.
W.IW.4.2	Write informative/explanatory texts to examine a topic and convey information clearly. D. Use precise language and domain specific vocabulary to inform about or explain a topic.
SL.PE.4.1	Engage effectively in a range of collaborative discussions (one-to-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. A. Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks made by others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion
Social Studies	
6.1.5.CivicsCM.3	Identify the types of behaviors that promote collaboration and problem solving with others who have different perspectives.

Computer Science & Design Thinking	
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 data

8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.AP.1	Compare and refine multiple algorithms for the same task and determine which is most appropriate
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies & Key Skills	
9.4.5.CI.3	Participate in brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process
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.
9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology
9.4.5.IML.2	Create a visual representation to organize information about a problem or issue
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
CLKS.2	Attend to financial well-being.
CLKS.3	Consider the environmental, social and economic impacts of decisions.
CLKS.4	Demonstrate creativity and innovation.
CLKS.5	Utilize critical thinking to make sense of problems and persevere in solving them.
CLKS.6	Model integrity, ethical leadership and effective management.
CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Grade: 4	**Content Area: Mathematics**

Evidence of Student Learning	
Formative Tasks: ● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	**Alternative Assessments:** ● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP

Knowledge & Skills	
Enduring Understandings: ● Fractions can be broken apart into smaller, equal unit fractions. ● A unit fraction is the basic building block of all fractions. ● Decomposing fractions helps us better understand how fractions work and how they relate to each other. ● There are many ways to break apart the same fraction. ● Addition of fractions connects directly to joining unit fractions. ● Visual models can be used to show the decomposition of a fraction into unit fractions. ● Fractions can be compared by looking at their size, not just the numbers in them. ● Benchmark fractions (like 0, $\frac{1}{2}$, and 1) help us decide which fraction is larger or smaller. ● Visual models and number lines help show the size of fractions clearly. ● Comparing fractions only makes sense when the wholes are the same size.	**Essential Questions:** ● How can I tell which of two fractions is larger or smaller? ● How do benchmark fractions like 0, $\frac{1}{2}$, and 1 help when comparing fractions? ● Why do fractions need to refer to the same-size whole when I compare them? ● How can models and number lines help us to understand fraction size? ● How can I break a fraction into smaller unit fractions? ● Why is it helpful to think of fractions as sums of unit fractions? ● How do models help us see how unit fractions combine to make a larger fraction?

Lakewood Public School District Curriculum Guide

Grade: 4	Content Area: Mathematics

Content *Students will know…*	**Skills** *Students will be able to …*
● The numerator tells us how many pieces we have. The denominator tells us the size of each piece. ● A fraction can be rewritten as a sum of unit fractions. ● Improper fractions can be renamed as mixed number. ● Mixed numbers can be renamed as improper fractions. ● Fractions are points on a number line. ● Compare fractions based on the meaning of the numerator. ● Compare fractions based on the meaning of the denominator. ● Compare two fractions by referencing the whole. ● Compare two fractions by referencing the half. ● Use the most efficient strategy when comparing two fractions.	● Use fraction circles to represent fractions. ● Decompose a fraction and rewrite it as a sum of unit fractions. ● Rewrite improper fractions as mixed numbers by rewriting them as a sum of unit fractions and determining how many wholes can be made. ● Rename mixed numbers as improper fractions by rewriting the mixed number as a sum of fractions (ex: $3\frac{5}{8} = \frac{8}{8} + \frac{8}{8} + \frac{8}{8} + \frac{5}{8}$) ● Place a fraction on a number line by first partitioning the number line. ● Identify a fraction that has been placed on a number line. ● Use fraction circles to compare fractions. ● Use the symbols <, =, and > to record fraction comparisons. ● Place fractions in their approximate location on a number line. ● Order fractions by placing them in their approximate location on a number line.

Core Instructional & Supplemental Materials	
Suggested Activities/Resources: ● Manipulatives ● Istation ● District Created Lessons (Unit 3) ● District Created Parent Resources ● Communicators ● Unit Review Jeopardy ● *Number Talks* ● NJSLA released items	**Supplemental Materials** ● Illustrated Mathematics ○ 4.NF.2 ○ 4.NF.3 ● *Too Many Cooks* by Karen Alexander

Suggested Accommodations
English Language Learners: ● Multi-sensory instruction ● Flexible grouping ● Small group instruction ● Provide peer tutoring ● Use a strong student as a "buddy" (does not necessarily have to speak the primary language) ● Chunking information ● Scaffolded questioning ● Manipulatives/concrete models

- Pre-Teach vocabulary
- Co-Constructed Word Banks
- Anchor charts
- Gradual release model
- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies
- Sentence starters

Special Education/Students with Disabilities:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:
- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:
- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
- Manipulatives/concrete models

Grade: 4	Content Area: Mathematics

- Modified assignments
- Brain breaks

Economically Disadvantaged:

- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons
- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Unit 4: Understanding the Operations of Multiplication and Division	Duration: 15 days

New Jersey Student Learning Standards	
4.OA.A	**Use the four operations with whole numbers to solve problems**
4.OA.1	Interpret a multiplication equation as a comparison, e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparison as multiplication equations.
4.OA.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.3	Solve multi-step 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.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 prime or composite.

Grade: 4	Content Area: Mathematics

New Jersey Standards for Mathematical Practice	
MP.1	Make sense of problems and persevere in solving them.
MP.2	Reason abstractly and quantitatively.
MP.3	Construct viable arguments and critique the reasoning of others.
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MP.5	Use appropriate tools strategically.
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New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	• Recognize one's feelings and thoughts. • Recognize the impact of one's feelings and thoughts on one's own behavior. • Recognize one's personal traits, strengths, and limitations. • Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	• Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. • Recognize the skills needed to establish and achieve personal and educational goals. • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	• Recognize and identify the thoughts, feelings, and perspectives of others. • Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds. • Demonstrate an understanding of the need for mutual respect when viewpoints differ. • Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	• Develop, implement, and model effective problem-solving and critical thinking skills. • Identify the consequences associated with one's actions in order to make constructive choices. • Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	• Establish and maintain healthy relationships. • Utilize positive communication and social skills to interact effectively with others.

	• Identify ways to resist inappropriate social pressure. • Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. • Identify who, when, where, or how to seek help for oneself or others when needed.

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
L.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
L.WF.4.2	Demonstrate command of conventions of encoding and spelling.
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RL.PP.4.6	Make connections between specific descriptions and directions in a text and a visual or oral representation of the text.
W.IW.4.2	Write informative/explanatory texts to examine a topic and convey information clearly. D. Use precise language and domain specific vocabulary to inform about or explain a topic.

Grade: 4	Content Area: Mathematics

SL.PE.4.1	Engage effectively in a range of collaborative discussions (one-to-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. A. Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks made by others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion
Social Studies	
6.1.5.CivicsCM.3	Identify the types of behaviors that promote collaboration and problem solving with others who have different perspectives.

Computer Science & Design Thinking	
8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
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8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies & Key Skills	
9.4.5.CI.3	Participate in brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process
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.
9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology

Grade: 4	Content Area: Mathematics

9.4.5.IML.2	Create a visual representation to organize information about a problem or issue
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
CLKS.2	Attend to financial well-being.
CLKS.3	Consider the environmental, social and economic impacts of decisions.
CLKS.4	Demonstrate creativity and innovation.
CLKS.5	Utilize critical thinking to make sense of problems and persevere in solving them.
CLKS.6	Model integrity, ethical leadership and effective management.
CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Evidence of Student Learning	
Formative Tasks: ● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	**Alternative Assessments:** ● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP

Grade: 4	**Content Area: Mathematics**

Knowledge & Skills

Enduring Understandings:

- Multiplication can be used to compare amounts, not just to find a total.
- Saying "__ times as many" describes a relationship between two quantities.
- Models, drawings, and equations help show how two quantities are related.
- Understanding multiplicative comparison helps solve real-world comparison problems.
- Bar models, drawings, and equations help organize information and show relationships.
- Understanding the situation helps me choose the correct operation.
- Some problems require more than one step or operation.
- Letters can be used in equations to represent unknown values.
- A factor pair shows how a number can be built by multiplication.
- Prime and composite numbers are defined by the number of factors they have.

Essential Questions:

- How can multiplication help us compare two quantities?
- How can we show multiplicative comparisons using models or equations?
- How do we decide whether to multiply or divide when solving a word problem?
- How can models, drawings, or equations help when solving comparison and unknown-value problems?
- Why is it important to understand the relationship between quantities in a problem?
- Why do some problems require more than one step?
- How can we find all factor pairs for a number?
- What patterns do we see when looking at multiples?
- How do we determine whether a number is prime or composite?

Content

Students will know…

- Multiplication can be interpreted as "groups of" and can be represented as equal groups and/or repeated addition.
- Addition strategies can be used to efficiently solve repeated addition problems.
- Division can be interpreted as grouping. The divisor can indicate the number of equal groups or the quantity within each group.
- Factors are the numbers that we multiply together.
- Multiples are all the products of a single factor.
- Prime numbers have exactly two factors.
- Composite numbers have 3 or more factors.

Skills

Students will be able to …

- Sketch a visual model to match a word problem.
- Solve multiplication word problems using visual models and multiplication.
- Solve division word problems using visual models and the relationship between multiplication and division.
- Identify the factors for a given number in the range 1-100 by creating a table of factor pairs for that number.
- Determine if a number is a factor of a given number in the range 1-100.
- Determine if a number in the range 1-100 is a multiple of a given factor.
- Determine if a number in the range 1-100 is prime or composite by creating a table of factor pairs.
- Use counters to model multiplicative comparison.

Grade: 4	Content Area: Mathematics

• Multiplication can be interpreted as a comparison between a product and one of the factors. • In an equation, a variable can be used to represent an unknown quantity. • When solving a word problem, use the model to determine the operations needed and the order of the operations.	• Complete multiplicative comparison statements. • Interpret a multiplication equation as two multiplicative comparison statements. • Create a visual model for multiplicative comparison. • Write a multiplication equation to match a multiplicative comparison statement. • Solve multiplicative comparison word problems. • Distinguish between multiplicative and additive comparison. • Write an equation that corresponds to a word problem using a variable to represent the unknown quantity. • Solve multi-step word problems.

Core Instructional & Supplemental Materials

Suggested Activities/Resources:
- Manipulatives
- Istation
- District Created Lessons (Unit 4)
- District Created Parent Resources
- Communicators
- Unit Review Jeopardy
- *Number Talks*
- NJSLA released items

Supplemental Materials
- Illustrated Mathematics
  - 4.OA.1
  - 4.OA.2
  - 4.OA.3
  - 4.OA.4

Suggested Accommodations

English Language Learners:
- Multi-sensory instruction
- Flexible grouping
- Small group instruction
- Provide peer tutoring
- Use a strong student as a “buddy” (does not necessarily have to speak the primary language)
- Chunking information
- Scaffolded questioning
- Manipulatives/concrete models
- Pre-Teach vocabulary
- Co-Constructed Word Banks
- Anchor charts
- Gradual release model
- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies

- Sentence starters

Special Education/Students with Disabilities:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:
- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:
- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
- Manipulatives/concrete models
- Modified assignments
- Brain breaks

Economically Disadvantaged:
- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons

Grade: 4	Content Area: Mathematics

- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Unit 5: Multi-digit Multiplication and Division	Duration: 19 days

New Jersey Student Learning Standards	
4.NBT.B	**Use place value understanding and properties of operations to perform multi-digit arithmetic**
4.NBT.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.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.
4.OA.A	Use the four operations with whole numbers to solve problems.
4.OA.3	Solve multi-step 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.

New Jersey Standards for Mathematical Practice	
MP.1	Make sense of problems and persevere in solving them.
MP.2	Reason abstractly and quantitatively.
MP.3	Construct viable arguments and critique the reasoning of others.

Grade: 4	Content Area: Mathematics

MP.4	Model with mathematics.
MP.5	Use appropriate tools strategically.
MP.6	Attend to precision.
MP.7	Look for and make use of structure.
MP.8	Look for and express regularity in repeated reasoning.

New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	● Recognize one's feelings and thoughts. ● Recognize the impact of one's feelings and thoughts on one's own behavior. ● Recognize one's personal traits, strengths, and limitations. ● Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	● Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. ● Recognize the skills needed to establish and achieve personal and educational goals. ● Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	● Recognize and identify the thoughts, feelings, and perspectives of others. ● Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds. ● Demonstrate an understanding of the need for mutual respect when viewpoints differ. ● Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	● Develop, implement, and model effective problem-solving and critical thinking skills. ● Identify the consequences associated with one's actions in order to make constructive choices. ● Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	● Establish and maintain healthy relationships. ● Utilize positive communication and social skills to interact effectively with others. ● Identify ways to resist inappropriate social pressure. ● Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. ● Identify who, when, where, or how to seek help for oneself or others when needed.

Grade: 4	Content Area: Mathematics

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
L.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
L.WF.4.2	Demonstrate command of conventions of encoding and spelling.
L.WF.4.3	Demonstrate command of the conventions of writing, including those listed under grade three foundational skills.
L.KL.4.1	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
L.VL.4.2	Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies. A. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. B. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph). C. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.
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.
RI.TS.4.4	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
RL.PP.4.6	Make connections between specific descriptions and directions in a text and a visual or oral representation of the text.
W.IW.4.2	Write informative/explanatory texts to examine a topic and convey information clearly. D. Use precise language and domain specific vocabulary to inform about or explain a topic.
SL.PE.4.1	Engage effectively in a range of collaborative discussions (one-to-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. A. Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles.

	C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks made by others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion
Social Studies	
6.1.5.CivicsCM.3	Identify the types of behaviors that promote collaboration and problem solving with others who have different perspectives.

Computer Science & Design Thinking	
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 data
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.AP.1	Compare and refine multiple algorithms for the same task and determine which is most appropriate
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.
8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies & Key Skills	
9.4.5.CI.3	Participate in brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process
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.
9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology
9.4.5.IML.2	Create a visual representation to organize information about a problem or issue
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Grade: 4	**Content Area: Mathematics**

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
CLKS.2	Attend to financial well-being.
CLKS.3	Consider the environmental, social and economic impacts of decisions.
CLKS.4	Demonstrate creativity and innovation.
CLKS.5	Utilize critical thinking to make sense of problems and persevere in solving them.
CLKS.6	Model integrity, ethical leadership and effective management.
CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Evidence of Student Learning	
Formative Tasks: ● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	**Alternative Assessments:** ● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP

Knowledge & Skills	
Enduring Understandings: ● Multiplication can be represented and solved using place value, area models, arrays and equations. ● Breaking numbers apart using place value helps make multiplication easier and more efficient.	**Essential Questions:** ● How can place value be used when multiplying larger numbers? ● How do models help bring meaning to multiplication problems? ● How do place value strategies help when dividing larger numbers?

• Division can be understood as sharing equally or grouping. • Place-value strategies help break numbers apart to make division easier to solve. • Remainders have meaning and must be interpreted based on the context of the problem. • Multiplication and division are related. • Models and equations help explain division strategies	• What does a remainder mean in a real-world situation? • How are multiplication and division connected? • How can bar models help in the comprehension of a word problem? • How do we determine which operations to use when solving a word problem?
Content *Students will know…* • Extension of multiplication facts refers to the basic facts multiplied by 10 (one or more of the factors is a multiple of 10). • Partial-products is a place value algorithm for multiplying numbers. • Partial-quotients is a place value algorithm for dividing numbers. • Understand that the divisor can be interpreted as the quantity within each group. The quotient is the number of groups that can be made from the dividend. • When dividing, if we are left with a quantity that is less than the divisor, this is called the remainder. • Remainders can mean different things based on the context of the problem.	**Skills** *Students will be able to …* • Use basic facts to multiply a single-digit number by a multiple of 10. • Use basic factors to multiply 2 factors that are both multiples of 10. • Model partial-products with place value disks. • Use partial-products and the “box method” to multiply(4×1) • Use partial-products and the “box method” to multiply (2×2) • Use the partial-products algorithm to record multiplication. • Model partial-quotients using cups and counters. • Use the partial-quotients algorithm to record division. • Apply the extension of facts when dividing with partial-quotients. • Sketch a bar model to match a word problem. • Use division to solve word problems. • Determine if the remainder should be rounded up or discarded. • Match a bar model to a given scenario.

Core Instructional & Supplemental Materials	

Suggested Activities/Resources:
• Manipulatives
• Istation
• District Created Lessons (Unit 5)
• District Created Parent Resources
• Communicators
• Unit Review Jeopardy
• *Number Talks*
• NJSLA released items
	Supplemental Materials
	• Illustrated Mathematics
	  ○ 4.NBT.5
	  ○ 4.NBT.6
	  ○ 4.OA.3

Grade: 4	Content Area: Mathematics

Suggested Accommodations

English Language Learners:
- Multi-sensory instruction
- Flexible grouping
- Small group instruction
- Provide peer tutoring
- Use a strong student as a “buddy” (does not necessarily have to speak the primary language)
- Chunking information
- Scaffolded questioning
- Manipulatives/concrete models
- Pre-Teach vocabulary
- Co-Constructed Word Banks
- Anchor charts
- Gradual release model
- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies
- Sentence starters

Special Education/Students with Disabilities:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:
- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:
- Provide peer tutoring

Grade: 4	Content Area: Mathematics

- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
- Manipulatives/concrete models
- Modified assignments
- Brain breaks

Economically Disadvantaged:

- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons
- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Unit 6: Operations with Fractions and Decimals	Duration: 28 days

New Jersey Student Learning Standards	
4.NF.A	**Extend understanding of fractions equivalence and ordering**
4.NF.1	Explain why a fraction $\frac{a}{b}$ is equivalent to a fraction $\frac{(n\times a)}{(n\times b)}$ by using visual fractions 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.

Grade: 4	Content Area: Mathematics

4.NF.B	**Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.**
4.NF.3	Understand a fraction $\frac{a}{b}$ with $a > 1$ as a sum of fractions $\frac{1}{b}$. **a.** Understand addition and subtraction of fractions as joining and separating parts referring to the same whole. **b.** 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. **c.** 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. **d.** 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.4	Apply and extend previous understandings of multiplication to multiply a fraction by a whole number. **a.** Understand a fraction $\frac{a}{b}$ as a multiple of $\frac{1}{b}$. **b.** Understand a multiple $\frac{a}{b}$ as a multiple of $\frac{1}{b}$, and use this understanding to multiply a fraction by a whole number. **c.** 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.
4.NF.C	**Understand decimal notation for fractions and compare decimal fractions**
4.NF.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.

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

Grade: 4	Content Area: Mathematics

New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	● Recognize one's feelings and thoughts. ● Recognize the impact of one's feelings and thoughts on one's own behavior. ● Recognize one's personal traits, strengths, and limitations. ● Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	● Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. ● Recognize the skills needed to establish and achieve personal and educational goals. ● Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	● Recognize and identify the thoughts, feelings, and perspectives of others. ● Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds. ● Demonstrate an understanding of the need for mutual respect when viewpoints differ. ● Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	● Develop, implement, and model effective problem-solving and critical thinking skills. ● Identify the consequences associated with one's actions in order to make constructive choices. ● Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	● Establish and maintain healthy relationships. ● Utilize positive communication and social skills to interact effectively with others. ● Identify ways to resist inappropriate social pressure. ● Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. ● Identify who, when, where, or how to seek help for oneself or others when needed.

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
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CLKS.6	Model integrity, ethical leadership and effective management.

Grade: 4	**Content Area: Mathematics**

CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Evidence of Student Learning	
Formative Tasks: ● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	**Alternative Assessments:** ● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP ● SGO Assessment

Knowledge & Skills	
Enduring Understandings: ● Fractions are equivalent when they represent the same amount, even if they look different. ● Multiplying the numerator and denominator by the same number (a form of one) keeps the value of the fraction the same. ● Mathematical equations help explain and prove fraction equivalence. ● Understanding equivalence helps when comparing fractions. ● Fractions can be broken apart into sums of unit fractions. ● Adding and subtracting fractions with the same denominator means combining or separating equal parts. ● Visual models help show how fractions join or separate.	**Essential Questions:** ● How can two fractions look different but have the same value? ● How can models or number lines help to show equivalent fractions? ● How can I use equivalent fractions when making comparisons? ● Why does multiplying the numerator and denominator by the same number keep the fraction's value the same? ● When adding fractions, why is it important that they have the same denominator? ● When subtracting mixed numbers, how can I rewrite the first mixed number so that subtraction is possible? ● How do we interpret the multiplication of a fraction and a whole number in terms of "groups of"?

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- Wholes can be renamed as fractions in order to make subtraction of fractions possible.
- Multiplying a fraction by a whole number can be understood as "___ groups of" the fraction
- Models such as number lines and area models help explain fraction multiplication
- Improper fractions and mixed numbers represent the same value in different forms.
- Fractions greater than one can be shown with fraction circles and on a number line.
- Fractions with a denominator of 10 or 100 can be written as decimals.
- Equivalent fractions allow us to add fractions with denominators 10 and 100.

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- How is multiplying a fraction related to repeated addition?
- How can I model the multiplication of a whole number and a fraction?
- How are fractions with denominators of 10 and 100 related?
- Why is it helpful to rename fractions as equivalent fractions before adding them?
- How do fractions with denominators 10 and 100 relate to decimals?

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Content

Students will know…

- Equivalent fractions may look different, but they still represent the same amount.
- We can multiply a fraction by a form of one to generate an equivalent fraction.
- We can divide a fraction by a form of one to generate an equivalent fraction.
- When we multiply/divide a fraction by a form of 1, we do not change the value of the fraction.
- Common denominators can be made before comparing fractions.
- A fraction can be rewritten as a sum of fractions.
- When adding fractions with like denominators, we add the numerators and the denominator stays the same.
- When adding mixed numbers, add the fractional pieces first and then add the wholes.
- Sometimes when we add fractions, we end up with enough to make a whole.
- When subtracting fractions with like denominators, we subtract the numerators and the denominators stay the same.
- Mixed numbers can be renamed in order to subtract.

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Skills

Students will be able to …

- Use fraction pieces to create equivalent fractions.
- Generate equivalent fractions by drawing a model of a fraction and partitioning it into smaller parts
- Multiply a fraction by a form of 1 to generate an equivalent fraction.
- Create a visual model to match multiplying a fraction by a form of one.
- Determine the form of one that was used in multiplication when generating an equivalent fraction through a visual model.
- Divide a fraction by a form of 1 to generate an equivalent fraction.
- Create a visual model to match dividing a fraction by a form of one.
- Determine the form of one that was used in division when generating an equivalent fraction through a visual model.
- Use multiplication or division to determine the missing numerator/denominator when given two equivalent fractions.
- Compare two fractions by creating common denominators.
- Record comparisons using the symbols <, =, or >.
- Use fraction circles to model a fraction as a sum of fractions.
- Add fractions with like denominators.
- Model addition with fraction circles.
- Add mixed numbers.

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Grade: 4	Content Area: Mathematics

• A fraction can be rewritten as a multiple of a unit fraction. • Interpret the multiplication of a whole number by a fraction in terms of “groups of” • Interpret a multiplication expression that includes a whole number and a non-unit fraction as an equivalent expression that includes a whole number and a unit fraction. • When adding tenths to tenths, or hundredths to hundredths, the denominator stays the same and we add the numerators.	• Model addition of mixed numbers with fraction circles.. • Subtract fractions with like denominators. • Model subtraction with fraction circles. • Subtract mixed numbers. • Model subtraction of mixed numbers with fraction circles. • Rename a mixed number in order to subtract. • Rewrite fractions as the product of a whole number and a unit fraction. • Multiply a whole number by a fraction using fraction circles and visual models. • Multiply a whole number and a fraction by recognizing that we can multiply the whole number and the numerator; the denominator stays the same. • Identify equivalent multiplication expressions that include a whole number and a fraction. • Model addition of decimal fractions (tenths and hundredths) using base-10 blocks and hundreds grids.. • Add decimal fractions • Create equivalent fractions for tenths and hundredths in order to add decimal fractions.

Core Instructional & Supplemental Materials

Suggested Activities/Resources:	Supplemental Materials

• Manipulatives
• Istation
• District Created Lessons (Unit 6)
• District Created Parent Resources
• Communicators
• Unit Review Jeopardy
• *Number Talks*
• NJSLA released items
	• Illustrated Mathematics
	  ○ 4.NF.1
	  ○ 4.NF.3
	  ○ 4.NF.4
	  ○ 4.NF.5

Suggested Accommodations

English Language Learners:

- Multi-sensory instruction
- Flexible grouping
- Small group instruction
- Provide peer tutoring
- Use a strong student as a “buddy” (does not necessarily have to speak the primary language)
- Chunking information
- Scaffolded questioning

- Manipulatives/concrete models
- Pre-Teach vocabulary
- Co-Constructed Word Banks
- Anchor charts
- Gradual release model
- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies
- Sentence starters

Special Education/Students with Disabilities:

- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:

- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:

- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:

- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities

Grade: 4	Content Area: Mathematics

- Manipulatives/concrete models
- Modified assignments
- Brain breaks

Economically Disadvantaged:

- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons
- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Unit 7: Geometry	Duration: 12 days

New Jersey Student Learning Standards	
4.M.B	**Geometric measurement: understand concepts of angle and measure angles**
4.M.4	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement: **a.** 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 $\frac{1}{360}$th of a circle is called a "one-degree angle," and can be used to measure angles. **b.** An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
4.M.5	Measure angles whole-number degrees using a protractor. Sketch angles of specified measure.
4.M.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.

Grade: 4	Content Area: Mathematics

4.G.A	**Draw and identify lines and angles, and classify shapes by properties of their lines and angles**
4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
4.G.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.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.

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

New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	• Recognize one's feelings and thoughts. • Recognize the impact of one's feelings and thoughts on one's own behavior. • Recognize one's personal traits, strengths, and limitations. • Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	• Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. • Recognize the skills needed to establish and achieve personal and educational goals. • Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	• Recognize and identify the thoughts, feelings, and perspectives of others.

	● Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds. ● Demonstrate an understanding of the need for mutual respect when viewpoints differ. ● Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	● Develop, implement, and model effective problem-solving and critical thinking skills. ● Identify the consequences associated with one's actions in order to make constructive choices. ● Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	● Establish and maintain healthy relationships. ● Utilize positive communication and social skills to interact effectively with others. ● Identify ways to resist inappropriate social pressure. ● Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. ● Identify who, when, where, or how to seek help for oneself or others when needed.

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
L.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
L.WF.4.2	Demonstrate command of conventions of encoding and spelling.
L.WF.4.3	Demonstrate command of the conventions of writing, including those listed under grade three foundational skills.
L.KL.4.1	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
L.VL.4.2	Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies. A. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. B. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph). C. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

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.
RI.TS.4.4	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
RL.PP.4.6	Make connections between specific descriptions and directions in a text and a visual or oral representation of the text.
W.IW.4.2	Write informative/explanatory texts to examine a topic and convey information clearly. D. Use precise language and domain specific vocabulary to inform about or explain a topic.
SL.PE.4.1	Engage effectively in a range of collaborative discussions (one-to-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. A. Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks made by others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion
Social Studies	
6.1.5.CivicsCM.3	Identify the types of behaviors that promote collaboration and problem solving with others who have different perspectives.

Computer Science & Design Thinking	
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 data
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.AP.1	Compare and refine multiple algorithms for the same task and determine which is most appropriate
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.

8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies & Key Skills	
9.4.5.CI.3	Participate in brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process
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.
9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology
9.4.5.IML.2	Create a visual representation to organize information about a problem or issue
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
CLKS.2	Attend to financial well-being.
CLKS.3	Consider the environmental, social and economic impacts of decisions.
CLKS.4	Demonstrate creativity and innovation.
CLKS.5	Utilize critical thinking to make sense of problems and persevere in solving them.
CLKS.6	Model integrity, ethical leadership and effective management.
CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Evidence of Student Learning	
Formative Tasks:	**Alternative Assessments:**

Grade: 4	**Content Area: Mathematics**

● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP

Knowledge & Skills	
Enduring Understandings: ● Angles are formed when two rays share a common endpoint. ● The size of an angle depends on how much it turns, not on the length of its sides. ● Angles can be measured using degrees. ● A protractor is a tool used to measure angles accurately. ● Angles can be decomposed into smaller angles whose measures add up to the whole. ● The measures of angles can be added or subtracted to solve problems. ● Angle problems often require multiple steps and careful reasoning. ● Points, lines, line segments, rays and angles are the building blocks of geometric figures. ● Right, acute, and obtuse angles describe how much a figure turns or opens. ● Understanding and identifying angles help describe and analyze shapes. ● Shapes can be classified by their sides, angles, and other attributes. ● Some shapes belong to multiple categories because they share important properties.	**Essential Questions:** ● What is an angle and how is it different from a straight line? ● How can I describe an angle using degrees? ● Why is it important to know the size of an angle? ● How do I use a protractor to measure angles accurately? ● How can smaller angles be combined to find a larger angle? ● Why is it important to measure angles carefully? ● How can I use addition and subtraction to solve problems with angles? ● How can diagrams help me understand and solve angle problems? ● How can I describe angles as acute, right, or obtuse? ● Why is understanding angles important when classifying shapes? ● How can I classify shapes based on sides, angles, and other attributes? ● Why do some shapes belong to more than one category? ● How does understanding shape properties help us describe shapes?

● Understanding shape properties helps describe, name, and classify shapes. ● Symmetry is when one half of a figure matches the other half exactly. ● Symmetry can be found in real-world objects, shapes, and designs. ● Recognizing symmetry helps us understand geometric relationships. ● A line of symmetry divides a figure into two equal and matching parts.	● What is symmetry, and how can I identify a line of symmetry in a figure? ● How can symmetry be found in real-world objects and designs? ● Why is recognizing symmetry helpful in geometry? ● How can I use symmetry to check if two halves of a figure match exactly?
Content *Students will know…* ● An angle is composed of two rays that share the same endpoint. ● Number of angles is a defining attribute of a shape. ● We use the unit *degrees* to measure an angle. ● Angles can be classified as acute, right, or obtuse. ● Right angles have a measurement of 90 degrees. ● Obtuse angles have a measurement larger than 90 degrees. ● Acute angles have a measurement less than 90 degrees. ● There are 360 degrees in a circle. ● There are 180 degrees in a straight line. ● Angles can be named in two ways: by their vertex, if the vertex is not shared with other angles, or by naming one point on each ray with the vertex in the middle. ● Angle measures are additive. ● Perpendicular lines are lines that intersect at a right angle. ● Parallel lines are line that never intersect. ● Triangles can be classified by their sides or by their angles. ● Right triangles have one right angle. ● Obtuse triangles have one obtuse angle. ● Acute triangles have 3 acture angles. ● Equilateral triangles have equal side lengths. ● Isosceles triangles have two sides that are equal.	**Skills** *Students will be able to …* ● Classify angles as acute or obtuse by referencing a right angle. ● Use a protractor to measure an angle. ● Use labeled points on an angle to name the angle. ● Identify right/acute/obtuse angles in a figure. ● Use a protractor and a straightedge to sketch angles of a given measure. ● Determine the missing piece of an angle when given the entire angle measurement and the measurement(s) of part(s) of the angle. ● Sketch a bar model to interpret word problems. ● Use addition and subtraction strategies to solve for missing angles. ● Identify perpendicular lines in a figure. ● Identify parallel lines in a figure by extending the lines to determine if they will intersect. ● Classify triangles based on their side lengths. ● Classify triangles based on the measure of their angles. ● Classify quadrilaterals based on a defining attribute. ● Identify a line of symmetry in a figure. ● Sketch a line of symmetry in a figure.

Grade: 4	Content Area: Mathematics

• Scalene triangles have side lengths that are all different. • Quadrilaterals can be classified using a hierarchy. • Quadrilaterals can fall into more than one category. • Parallelograms have exactly two pairs or parallel sides. • Trapezoids have exactly one pair of parallel sides. • A rhombus has equal sides. • A rectangle has 4 right angles. • A square has equal sides and 4 right angles. • A line of symmetry is a line that goes across a figure, and if we were to fold along the line, we would have matching parts on either side of the fold.	

Core Instructional & Supplemental Materials	

Suggested Activities/Resources:
• Manipulatives
• Istation
• District Created Lessons (Unit 7)
• District Created Parent Resources
• Communicators
• Unit Review Jeopardy
• *Number Talks*
• NJSLA released items
	Supplemental Materials
	• Illustrated Mathematics
	  ○ 4.M.5
	  ○ 4.M.6
	  ○ 4.G.1
	  ○ 4.G.2
	  ○ 4.G.3
	• *The Greedy Triangle* by Marilyn Burns

Suggested Accommodations
English Language Learners: • Multi-sensory instruction • Flexible grouping • Small group instruction • Provide peer tutoring • Use a strong student as a “buddy” (does not necessarily have to speak the primary language) • Chunking information • Scaffolded questioning • Manipulatives/concrete models • Pre-Teach vocabulary • Co-Constructed Word Banks • Anchor charts • Gradual release model

- Visual models
- Hands-on activities
- Native language support when possible
- Sheltered English Instruction Strategies
- Sentence starters

Special Education/Students with Disabilities:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:
- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:
- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
- Manipulatives/concrete models
- Modified assignments
- Brain breaks

Economically Disadvantaged:
- Pre-teach vocabulary using visuals and gestures

Grade: 4	Content Area: Mathematics

- Chunk texts
- Summarize as you go
- Preview lessons
- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background

Unit 8: Patterns and Problem Solving with Measurement and Data	Duration: 15 days

New Jersey Student Learning Standards	
4.OA.C	**Generate and analyze patterns**
4.OA.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of a pattern that were not explicit in the rule itself.
4.M.A	**Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.**
4.M.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.
4.M.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.3	Apply area and perimeter formulas for rectangles in real world and mathematical problems.
4.DL.A	**Organize data and understand data visualizations**
4.DL.1	Create data-based questions, generate ideas based on the questions, and then refine the questions.

Grade: 4	Content Area: Mathematics

4.DL.2	Develop strategies to collect various types of data and organize data digitally.
4.DL.3	Understand that subsets of data can be selected and analyzed for a particular purpose.
4.DL.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.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.

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

New Jersey Social and Emotional Competencies and Sub-Competencies	
Self-Awareness	● Recognize one's feelings and thoughts. ● Recognize the impact of one's feelings and thoughts on one's own behavior. ● Recognize one's personal traits, strengths, and limitations. ● Recognize the importance of self-confidence in handling daily tasks and challenges.
Self-Management	● Understand and practice strategies for managing one's own emotions, thoughts, and behaviors. ● Recognize the skills needed to establish and achieve personal and educational goals. ● Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals.
Social Awareness	● Recognize and identify the thoughts, feelings, and perspectives of others. ● Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds.

	● Demonstrate an understanding of the need for mutual respect when viewpoints differ. ● Demonstrate an awareness of the expectations for social interactions in a variety of settings.
Responsible Decision Making	● Develop, implement, and model effective problem-solving and critical thinking skills. ● Identify the consequences associated with one's actions in order to make constructive choices. ● Evaluate personal, ethical, safety, and civic impact of decisions.
Relationship Skills	● Establish and maintain healthy relationships. ● Utilize positive communication and social skills to interact effectively with others. ● Identify ways to resist inappropriate social pressure. ● Demonstrate the ability to prevent and resolve interpersonal conflicts in constructive ways. ● Identify who, when, where, or how to seek help for oneself or others when needed.

Interdisciplinary Connections	
ELA Standards	
L.RF.4.3	Know and apply grade-level phonics and word analysis skills in decoding and encoding words; use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.
L.RF.4.4	Read with sufficient accuracy and fluency to support comprehension.
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L.WF.4.3	Demonstrate command of the conventions of writing, including those listed under grade three foundational skills.
L.KL.4.1	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
L.VL.4.2	Determine or clarify the meaning of unknown and multiple-meaning academic and domain-specific words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies. A. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. B. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph). C. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

Grade: 4	Content Area: Mathematics

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.
RI.TS.4.4	Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.
RL.PP.4.6	Make connections between specific descriptions and directions in a text and a visual or oral representation of the text.
W.IW.4.2	Write informative/explanatory texts to examine a topic and convey information clearly. D. Use precise language and domain specific vocabulary to inform about or explain a topic.
SL.PE.4.1	Engage effectively in a range of collaborative discussions (one-to-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly. A. Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion. B. Follow agreed-upon rules for discussions and carry out assigned roles. C. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks made by others. D. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion
Social Studies	
6.1.5.CivicsCM.3	Identify the types of behaviors that promote collaboration and problem solving with others who have different perspectives.

Computer Science & Design Thinking	
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 data
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.AP.1	Compare and refine multiple algorithms for the same task and determine which is most appropriate
8.2.5.ED.2	Collaborate with peers to collect information, brainstorm to solve a problem, and evaluate all possible solutions to provide the best results with supporting sketches or models.

Grade: 4	Content Area: Mathematics

8.2.5.ED.3	Follow step by step directions to assemble a product or solve a problem, using appropriate tools to accomplish the task.

Career Readiness, Life Literacies & Key Skills	
9.4.5.CI.3	Participate in brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
9.4.5.CT.1	Identify and gather relevant data that will aid in the problem-solving process
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.
9.4.5.DC.4	Model safe, legal, and ethical behavior when using online or offline technology
9.4.5.IML.2	Create a visual representation to organize information about a problem or issue
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.

Career Readiness, Life Literacies, and Key Skills Practices	
CLKS.1	Act as a responsible and contributing community member and employee.
CLKS.2	Attend to financial well-being.
CLKS.3	Consider the environmental, social and economic impacts of decisions.
CLKS.4	Demonstrate creativity and innovation.
CLKS.5	Utilize critical thinking to make sense of problems and persevere in solving them.
CLKS.6	Model integrity, ethical leadership and effective management.
CLKS.7	Plan education and career paths aligned to personal goals.
CLKS.8	Use technology to enhance productivity, increase collaboration and communicate effectively.
CLKS.9	Work productively in teams while using cultural/global competence.

Evidence of Student Learning	
Formative Tasks:	**Alternative Assessments:**

● Teacher observations ● Class discussions ● Whiteboard/Communicators ● Math routine responses ● Daily DOLs ● Daily classwork ● Checks for understanding ● Spiral Quizzes ● Fluency Quizzes ● *Number Talks* ● NJSLA released items	● Oral assessments ● Istation
Summative Assessments: ● Unit Assessment	**Benchmark Assessments:** ● Istation Diagnostic ● Monthly ISIP ● End of Year Assessment

Knowledge & Skills	
Enduring Understandings: ● Patterns can be created using numbers and operations like addition and multiplication. ● Understanding patterns helps predict what comes next and identify relationships between numbers. ● Rules can describe patterns and make them easier to extend or explain. ● Units of measurement can be compared to understand which are larger or smaller. ● Measurements within the same system are related by multiplication. ● We can use multiplication to convert from a larger unit to a smaller unit in the same system. ● Standard units allow us to measure objects in ways everyone can understand. ● The smaller the unit of measure, the more precise the measurement. ● The perimeter and area of rectangles can be calculated using formulas. ● Area measures the space inside a shape. ● Perimeter measures the distance around a shape. ● Data can be collected, organized and interpreted in various ways. ● Data can be collected in a variety of ways.	**Essential Questions:** ● How can I use the four operations to create a pattern? ● What strategies help me figure out what comes next in a pattern? ● How can patterns help me understand the relationship between numbers? ● How can we change a measurement from one unit to another unit within the same system? ● How can we sketch a model to represent measurement conversions? ● How can we decide which operation to use when solving real-world measurement problems? ● Why is it helpful to represent measurements visually using diagrams or number lines? ● How can converting measurements between larger and smaller units help us solve problems more accurately? ● How can we use what we know about addition, subtraction, multiplication and division to solve complex measurement problems? ● How can we use formulas to find the area and perimeter of rectangles?

● Line plots are a way to organize and display measurement data clearly. ● Measurements can be shown in fractions of a unit, such as ½, ¼, or ⅛, to be more precise. ● Using line plots helps us see patterns, compare data, and solve problems. ● Addition and subtraction of fractions can be applied to real-world problems using data from line plots.	● Why is it important to understand the difference between area and perimeter? ● How can knowing the area and perimeter help us solve real world problems? ● How can a line plot help me organize and display measurement data? ● How can I use a line plot to compare different measurements? ● How can addition and subtraction of fractions help me solve problems using a line plot? ● How can I draw a model to match a given scenario? ● How can I use a model to determine the steps and operations needed to solve a multi-step problem?
Content *Students will know…* ● A number pattern is a sequence of numbers that follow the same rule. ● Measuring an object to the nearest one-eighth of an inch gives us a more precise measurement. ● Data can be arranged in a line plot. ● Measurements can be converted within the same system of measurement. ● In converting a measurement to a different unit, we are not changing the length; we are simply recording the same length with a different unit of measure. ● Perimeter is the distance around a figure. ● We can find the perimeter of a figure by adding up all of its side lengths. ● Area is a measure of the space inside a figure. ● The area of a rectangle can by found using the formula $length \times width$.	**Skills** *Students will be able to …* ● Given a starting number and a rule, generate a number pattern. ● Use the four operations to complete number patterns. ● Analyze a sequence of numbers to determine the pattern that was used to generate the sequence. ● Use a ruler to measure lengths to the nearest one-half, one-fourth, and one-eighth of an inch. ● Measure to collect data. ● Create a line plot to organize the data. ● Use the line plot to answer questions about data. ● Use all four operations (including operations with fractions) to answer questions about data presented in a line plot. ● Sketch a bar model to illustrate measurement conversion. ● Use multiplication to convert a larger unit to a smaller unit. ● Solve multi-step word problems that require measurement conversions. ● Find the perimeter of figures with fractional side lengths. ● Add fractions and mixed numbers. ● When given the perimeter and some side lengths, determine any missing side lengths. ● Use the area formula to find the area of a rectangle.

Grade: 4	Content Area: Mathematics

	• When given the area of a rectangle and the length of one side, determine the missing side length. • Apply properties of squares and rectangles when working with area and perimeter. • Use the four operations to solve word problems involving time and money. • Sketch a bar model to match a word problem. • Use an open number line to represent elapsed time.

Core Instructional & Supplemental Materials	

Suggested Activities/Resources:
• Manipulatives
• Istation
• District Created Lessons (Unit 8)
• District Created Parent Resources
• Communicators
• Unit Review Jeopardy
• *Number Talks*
• NJSLA released items
	Supplemental Materials
	• Illustrated Mathematics
	  ○ 4.OA.5
	  ○ 4.M.1
	  ○ 4.M.2
	  ○ 4.M.3
	  ○ 4.DL.5
	• *Lucky Beans* by Becky Birtha
	• *Hidden Figures* by Margot Lee Shetterly, Winifred Conking
	• *Number Patterns* by Robert Lee
	• *Perimeter, Area, and Volume* by David A. Adler

Suggested Accommodations
English Language Learners: • Multi-sensory instruction • Flexible grouping • Small group instruction • Provide peer tutoring • Use a strong student as a “buddy” (does not necessarily have to speak the primary language) • Chunking information • Scaffolded questioning • Manipulatives/concrete models • Pre-Teach vocabulary • Co-Constructed Word Banks • Anchor charts • Gradual release model • Visual models • Hands-on activities • Native language support when possible • Sheltered English Instruction Strategies

- Sentence starters

Special Education/Students with Disabilities:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Follow all IEP modifications
- Calculators
- Manipulatives/concrete models
- Directions repeated, clarified, and reworded
- Breakdown task into manageable parts

504 Plans:
- Allow extra time to complete assignments or tests
- Work in a small group
- Allow answers to be given orally or dictated
- Calculators
- Manipulatives/concrete models
- Follow all 504 modifications

Gifted and Talented:
- Higher level questioning
- Enriched assignments
- Tiered assignments
- Choice board to extend learning
- NJSLA released items

Students at Risk of Failure:
- Provide peer tutoring
- Use a strong student as a “buddy”
- Allow extra time to complete assignments or tests
- Work in a small group
- One on one instruction
- Provide immediate praise and feedback
- Create a nurturing environment
- Provide visuals
- Be flexible with assignments and time frames
- Provide needed academic resources
- Chunking information
- Scaffolded questioning
- Tiered activities
- Manipulatives/concrete models
- Modified assignments
- Brain breaks

Economically Disadvantaged:
- Pre-teach vocabulary using visuals and gestures
- Chunk texts
- Summarize as you go
- Preview lessons

- Graphic organizers
- Highlight key words
- Sentence starters
- Prompting and cueing
- Activate schema
- Build background knowledge

Culturally Diverse:

- Create an emotionally positive classroom climate.
- Create effective communication
- Model and teach cultural respect
- Build relationships with students by interviewing students to understand their background