

**East Newark Public School**  
**Mathematics Curriculum**  
**Grade 4**



**Equity Statement:**

East Newark Public School District does not discriminate on the basis of race, color, creed, religion, sex, ancestry, or national origin. The East Newark Board of Education ensures that all students enrolled in the schools of this district shall be afforded equal educational opportunities in strict accordance with the law. No student shall be denied access to or benefit from any educational program or activity on the basis of the student's race, color, creed, religion, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, gender identity or expression, socioeconomic status, or disability. The Board directs the Superintendent to allocate faculty, administrators, support staff members, curriculum materials, and instructional equipment supplies among classes of this district in a manner that ensures equivalency of educational opportunity throughout this district. The school district's curricula will eliminate discrimination, promote mutual acceptance and respect among students, and enable students to interact effectively with others, regardless of race, color, creed, religion, national origin, ancestry, age, marital status, affectional or sexual orientation, gender, gender identity or expression, socioeconomic status, or disability.

**Course Description:**

In Grade 4, instructional time should focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; and, (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

*Focus Area 1:*

Students generalize their understanding of place value to 1,000,000, understanding the relative sizes of numbers in each place. They apply their understanding of models for multiplication (equal-sized groups, arrays, area models), place value, and properties of operations, in particular the distributive property, as they develop, discuss, and use efficient, accurate, and generalizable methods to compute products of multi-digit whole numbers. Depending on the numbers and the context, they select and accurately apply appropriate methods to estimate or mentally calculate products. They develop fluency with efficient procedures for multiplying whole numbers; understand and explain why the procedures work based on place value and properties of operations; and use them to solve problems. Students apply their understanding of models for division, place value, properties of operations, and the relationship of division to multiplication as they develop, discuss, and use efficient, accurate, and generalizable procedures to find quotients involving multi-digit dividends. They select and accurately apply appropriate methods to estimate and mentally calculate quotients, and interpret remainders based upon the context.

*Focus Area 2:*

Students develop understanding of fraction equivalence and operations with fractions. They recognize that two different fractions can be equal (e.g.,  $15/9 = 5/3$ ), and they develop methods for generating and recognizing equivalent fractions. Students extend previous understandings about how fractions are built from unit fractions, composing fractions from unit fractions, decomposing fractions into unit fractions, and using the meaning of fractions and the meaning of multiplication to multiply a fraction by a whole number.

*Focus Area 3:*

Students describe, analyze, compare, and classify two-dimensional shapes. Through building, drawing, and analyzing two-dimensional shapes, students deepen their understanding of properties of two-dimensional objects and the use of them to solve problems involving symmetry.

**Course Modifications:**

The course instructor will determine, with the assistance of administrators, teacher assistants/aides, educational specialists, and/or special education teachers, what modifications will be made for his/her students. Such examples of modifications can include, but not be limited to:

- Extended time as needed
- Modification of tests and quizzes
- Preferential seating
- Alternative/Formative assessment (projects)
- Effective teacher questioning (ranging from simple recall to higher order critical thinking questions)
- Supplemental materials
- Cooperative learning
- Teacher tutoring
- Peer tutoring
- Differentiated Instruction

**Grade 4 Pacing Guide:**

UNIT		STANDARDS	PACING
<b>Unit 1: Place Value and Measurement Applications</b>			
1A	Patterns of Multiplication	4.OA.A.1, 4.OA.A.2, 4.OA.B.4, 4.OA.C.5	11 days
1B	Place Value	4.NBT.1, 4. NBT.2, 4.NBT.3, 4.NBT.4	18 days
1C	Operations with Whole Numbers	4.MD.A.1, 4.MD.A.2	12 days
<b>Unit 2: Whole Number Multiplication and Division</b>			
2A	Multiplication with Whole Numbers	4.NBT.B.5, 4.OA.A.1, 4.OA.A.2, 4.OA.A.3, 4.MD.A.3	18 days
2B	Division with Whole Numbers	4.NBT.6, 4.OA.A.3	15 days
2C	Grade 4 Bootcamp	4.NBT.5	10 days
<b>Unit 3: Fraction and Decimal Fractions</b>			
3A	Equivalence and Ordering of Fractions	4.NF.A.1, 4.NF.A.2, 4.NF.3B, 4.MD.B.4	13 days
3B	Unit Fractions in Relation to Addition and Multiplication	4.NF.B.3, 4.NF.B.4, 4.MD.B.4, 4.OA.C.5	17 days
3C	Decimal Fractions	4.NF.C.5, 4.NF.C.6, 4.NF.C.7, 4.MD.A.2	16 days
<b>Unit 4: Angle Measurement and Polygons</b>			
4A	Lines and Angle Measurement	4.G.A.1, 4.MD.C.5, 4.MD.C.6, 4.MD.C.7	13 days
4B	Classifying Two Dimensional Figures	4.G.A.2, 4.G.A.3, 4.MD.A.3	10 days
4C	Reflection of the Year	4.NF.3, 4.NF.4, 4.NF.5, 4.NF.6, 4.NF.7, 4.NBT.4, 4.NBT.5, 4.NBT.6, 4.MD.3, 4.OA.2, 4.OA.3	13 days

Marking Period	Unit Title	Recommended Instructional Days
1	Place Value and Measurement Applications	41 days
Domain:		Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSL-S-CLKS within Unit
Strand:	Progress Indicator:	Essential Question/s:
Operations and Algebraic Thinking	<ul style="list-style-type: none"> <li>● <b>4.OA.1:</b> Interpret a multiplication equation as a comparison, e.g., interpret <math>35 = 5 \times 7</math> as a statement that 35 is 5 times as many as 7 and 7 times as many as 5. Represent verbal statements of multiplicative comparisons as multiplication equations.</li> <li>● <b>4.OA.2:</b> 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.</li> <li>● <b>4.OA.3:</b> Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</li> <li>● <b>4.OA.4:</b> Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.</li> </ul>	<p><b>Essential Question/s:</b></p> <ol style="list-style-type: none"> <li>1. What questions can be answered using multiplication and division?</li> <li>2. What strategies can be used to continue a sequence?</li> <li>3. How does finding patterns help in counting and/or computation?</li> <li>4. How does the position of a digit in a number affect its value?</li> <li>5. How can place value properties aid computation?</li> <li>6. How can the use of the four operations help you solve word problems in measurement?</li> <li>7. How are customary units of measure within one system related?</li> </ol> <p><b>Activity Description:</b></p> <ul style="list-style-type: none"> <li>● <i>Are You Ready?</i> activities (Into Math)</li> <li>● Lesson Review (Into Math)</li> <li>● Assessment Forms (Into Math)</li> <li>● Interpret multiplication equations as a comparison statement.</li> <li>● Write multiplication equations from multiplicative comparisons given words.</li> <li>● Multiply and divide to solve word problems involving multiplicative comparisons, using drawings and equations containing a variable to represent the problem</li> <li>● Use equations to represent given information in a word problem using letters to represent unknowns.</li> <li>● Find all factor pairs for a whole number in the range 1 through 100 solve real world problems.</li> <li>● Determine whether a given whole number is a multiple of a given one-digit number in the range 1 through 100.</li> <li>● Determine whether a given whole number is prime or composite in the range 1 through 100.</li> </ul>

	<ul style="list-style-type: none"> <li>● <b>4.OA.5:</b> Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.</li> </ul>	<ul style="list-style-type: none"> <li>● Generate a number or shape pattern that follows a given rule using rules, words, models and/or graphs.</li> <li>● Describe features of an arithmetic number pattern or shape pattern by identifying the rule and features that are not explicit to the rule.</li> <li>● Explain that a digit in one place represents ten times what it would represent in the place to its right.</li> <li>● Represent any whole number using base-ten numerals, number names, and expanded form.</li> <li>● Read and write multi-digit whole numbers using number names.</li> <li>● Compare two multi-digit whole numbers based on place value using <math>&lt;</math>, <math>&gt;</math>, <math>=</math>, to record the results of the comparison.</li> <li>● Use understanding of numbers to round numbers to any place.</li> <li>● Fluently add and subtract multi-digit whole numbers using the standard algorithm.</li> <li>● Solve real-world and mathematical problems involving addition and subtraction.</li> <li>● Represent measurement comparisons within a single system of measurement in a two-column chart within a single system of measurement.</li> <li>● Express measurements in larger units in terms of a smaller unit within a single system of measurement.</li> <li>● Create a two-column table to record measurement equivalents.</li> <li>● Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</li> <li>● Solve word problems (using addition, subtraction and multiplication) involving, intervals of time, liquid volumes, and masses of objects.</li> <li>● Solve word problems (using all four operations) involving whole number distances, intervals of time, liquid volumes, masses of objects, including problems requiring expressing measurements given in a larger measurement unit in terms of a smaller measurement unit (conversion).</li> <li>● Construct diagrams (e.g. number line diagrams) to represent measurement quantities.</li> </ul> <p><b>Interdisciplinary Connections: Content: ;NJSLS#:</b></p> <p>Science -</p> <ul style="list-style-type: none"> <li>● 4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</li> </ul>
<p>Number and Operations in Base Ten</p>	<ul style="list-style-type: none"> <li>● <b>4.NBT.1:</b> Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that <math>700 \div 70 = 10</math> by applying concepts of place value and division.</li> <li>● <b>4.NBT.2:</b> 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 <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</li> <li>● <b>4.NBT.3:</b> Use place value understanding to round multi-digit whole numbers to any place.</li> <li>● <b>4.NBT.4:</b> Fluently add and subtract multi-digit whole numbers using the standard algorithm.</li> </ul>	
<p>Measurement and Data</p>	<ul style="list-style-type: none"> <li>● <b>4.MD.1:</b> Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...</li> <li>● <b>4.MD.2:</b> Use the four operations to solve word problems involving distances,</li> </ul>	

	<p>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.</p>	<ul style="list-style-type: none"> <li>● 4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</li> <li>● 4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth’s features.</li> <li>● 4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</li> <li>● 4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.*</li> <li>● 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</li> <li>● 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</li> </ul> <p>Technology -</p> <ul style="list-style-type: none"> <li>● 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.</li> </ul>
<p><b>Mathematics Practices</b></p>		
<ul style="list-style-type: none"> <li>● Make sense of problems and persevere in solving them.</li> <li>● Reason abstractly and quantitatively.</li> <li>● Construct viable arguments and critique the reasoning of others.</li> <li>● Model with mathematics.</li> <li>● Use appropriate tools strategically.</li> <li>● Attend to precision.</li> <li>● Look for and make use of structure.</li> <li>● Look for and express regularity in repeated reasoning.</li> </ul>		
<p><b>Social and Emotional Learning:</b> <i>Competencies</i></p>	<p><b>Social and Emotional Learning:</b> <i>Sub-Competencies</i></p>	
<ul style="list-style-type: none"> <li>● Self-Awareness</li> <li>● Self-Management</li> <li>● Responsible Decision Making</li> <li>● Social Awareness</li> <li>● Relationship Skills</li> <li>● Motivation</li> </ul>	<ul style="list-style-type: none"> <li>● Emotional Awareness</li> <li>● Internal Regulation</li> <li>● Behavior Control</li> <li>● Goal Pursuance</li> <li>● Appreciating Social and Environment Diversity</li> <li>● Adaptive Behavior</li> <li>● Communication</li> <li>● Social Engagement</li> <li>● Constructive Thinking</li> <li>● Consequence Evaluation</li> <li>● Respect for Self and Others</li> <li>● Enthusiasm</li> <li>● Initiative</li> <li>● Resilience</li> </ul>	
<p><b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p><b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>

<b>Formative Assessments:</b> <ul style="list-style-type: none"> <li>● Check for Understanding Questions</li> <li>● Quizzes</li> <li>● Class activities/participation</li> <li>● Exit tickets</li> </ul>		<b>Benchmarks:</b> <ul style="list-style-type: none"> <li>● Module Assessment</li> <li>● iReady scores</li> </ul>	
		<b>Summative Assessments:</b> <ul style="list-style-type: none"> <li>● Module Test</li> <li>● Unit Assessment</li> </ul>	
<b>Differentiated Student Access to Content: Teaching and Learning Resources/Materials</b>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core Resources
<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 1-3, 5, 7-8, 10, 18-21</li> <li>● Student Activity Cards</li> <li>● Teacher Activity Cards</li> <li>● Numeral Cards</li> <li>● Dot Cards</li> <li>● White Boards</li> <li>● Connecting Cubes</li> <li>● Number Cubes</li> <li>● Visual Representations of Numbers and Number of Objects</li> <li>● Counters</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 1-3, 5, 7-8, 10, 18-21</li> <li>● Extra Practice pages</li> <li>● Anchor charts</li> <li>● Scaffolded explanations of topics</li> <li>● Manipulatives</li> <li>● Visual aids</li> <li>● Hands-on learning activities</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 1-3, 5, 7-8, 10, 18-21</li> <li>● Visual aids</li> <li>● Manipulatives</li> <li>● Vocabulary with images and examples</li> <li>● Hands-on learning activities</li> <li>● Extra Practice pages</li> <li>● Anchor charts</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 1-3, 5, 7-8, 10, 18-21</li> <li>● Student Activity Cards</li> <li>● Teacher Activity Cards</li> <li>● Numeral Cards</li> <li>● Dot Cards</li> <li>● White Boards</li> <li>● Connecting Cubes</li> <li>● Number Cubes</li> <li>● Visual Representations of Numbers and Number of Objects</li> <li>● Counters</li> </ul>
<b>Supplemental Resources</b>			
<b>Technology:</b> <ul style="list-style-type: none"> <li>● SmartBoards</li> <li>● Chromebooks</li> <li>● IXL</li> <li>● Teacher Online Resources</li> <li>● Applicable educational videos</li> <li>● <a href="#">National Council of Teachers of Mathematics</a></li> <li>● Toy Theater</li> <li>● Mathigon Polypad</li> </ul>			
<b>Differentiated Student Access to Content: Recommended Strategies &amp; Techniques</b>			



Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<ul style="list-style-type: none"> <li>• Small group instruction</li> <li>• Peer tutoring</li> <li>• Modeling</li> <li>• Visual demonstrations</li> <li>• Encourage creative expression and thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Provide additional manipulatives to support instruction</li> <li>• Allow for alternative strategies to solve algorithms or tasks</li> <li>• Provide the steps needed to complete the task</li> <li>• Model frequently</li> <li>• Use visuals to demonstrate/model the processes</li> <li>• Extra time for work</li> <li>• Modified assignments</li> <li>• Small group work for more individualize attention</li> </ul>	<ul style="list-style-type: none"> <li>• Use of translate materials and simplified language</li> <li>• Provide additional manipulatives to support instruction</li> <li>• Allow for alternative strategies to solve algorithms or tasks</li> <li>• Provide the steps needed to complete the task</li> <li>• Model frequently</li> <li>• Use visuals to demonstrate/model the processes</li> <li>• Extra time for work</li> <li>• Modified assignments</li> <li>• Small group work for more individualize attention</li> </ul>	<ul style="list-style-type: none"> <li>• Enrichment book</li> <li>• Higher-level questions</li> <li>• Leading group work</li> </ul>

<b>NJSLS CAREER READINESS, LIFE LITERACIES &amp; KEY SKILLS</b>	<b>Disciplinary Concept:</b>	
	<b>Core Ideas:</b>	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	<b>Performance Expectation/s:</b>	<ul style="list-style-type: none"> <li>• 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g.,</li> <li>• 9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem.</li> <li>• 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.</li> </ul>
	<b>Career Readiness, Life Literacies, &amp; Key Skills Practices</b>	
	<ul style="list-style-type: none"> <li>• Act as a responsible and contributing community members and employee.</li> <li>• Attend to financial well-being.</li> <li>• Consider the environmental, social and economic impacts of decisions.</li> <li>• Demonstrate creativity and innovation.</li> <li>• Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>• Model integrity, ethical leadership and effective management</li> <li>• Plan education and career paths aligned to personal goals.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Use technology to enhance productivity increase collaboration and communicate effectively.</li> <li>• Work productively in teams while using cultural/global competence.</li> </ul>
--	--

Marking Period	Unit Title	Recommended Instructional Days
2	<b>Whole Number Multiplication and Division</b>	43 days
<b>Domain:</b>		<b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLs-CLKS within Unit</b>
<b>Strand:</b>	<b>Progress Indicator:</b>	<b>Essential Question/s:</b>
Operations and Algebraic Thinking	<ul style="list-style-type: none"> <li>• <b>4.OA.3:</b> Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</li> </ul>	<ol style="list-style-type: none"> <li>1. How can you represent multiplication of multi-digit whole numbers?</li> <li>2. How can we solve real-world problems involving area and perimeter?</li> <li>3. What are efficient strategies for finding quotients when dividing?</li> <li>4. How can a remainder affect the answer in a division word problem?</li> </ol>
Number and Operations in Base Ten	<ul style="list-style-type: none"> <li>• <b>4.NBT.5:</b> 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.</li> <li>• <b>4.NBT.6:</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</li> </ul>	<p><b>Activity Description:</b></p> <ul style="list-style-type: none"> <li>• <i>Are You Ready?</i> activities (Into Math)</li> <li>• Lesson Review (Into Math)</li> <li>• Assessment Forms (Into Math)</li> <li>• Multiply up to four-digit by one digit numbers using strategies based on place value and properties of operations.</li> <li>• Multiply two two-digit numbers using strategies based on place value and properties of operations</li> <li>• Represent multiplication calculations by using equations, rectangular arrays, and area models.</li> <li>• Explain the answers to multi-digit multiplication problems using equations, rectangular arrays, and area models (up to 4-digits by 1-digit or 2-digits by 2-digits).</li> <li>• Apply area and perimeter formulas for rectangles in real world and mathematical problems with whole numbers.</li> <li>• Solve multi-step word problems involving interpretation (in context) of a remainder.</li> </ul>

Measurement and Data	<ul style="list-style-type: none"> <li>● <b>4.MD.3:</b> Apply the area and perimeter formulas for rectangles in real world and mathematical problems.</li> </ul>	<ul style="list-style-type: none"> <li>● Write equations to represent multi-step word problems, using a letter to represent the unknown quantity.</li> <li>● Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors using strategies based on place value, properties of operations and/or the relationship between multiplication and division</li> <li>● Represent and explain the division calculation using equations, rectangular arrays, and/or area models.</li> <li>● Determine the number of digits in the whole-number quotient.</li> <li>● Assess the reasonableness of answers using mental computation, estimation strategies, and rounding.</li> <li>● Explain the calculation by referring to the model (equation, array, or area model).</li> <li>● Solve real world and mathematical problems involving any of the four operations in which remainders must be interpreted.</li> </ul> <p><b>Interdisciplinary Connections: Content: ;NJSLS#:</b></p> <p>Science -</p> <ul style="list-style-type: none"> <li>● 4-PS3-4 -Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.*</li> <li>● 4-ESS3-1 - Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</li> <li>● 4-ESS3-2 - Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.*</li> <li>● 3-5-ETS1-1 - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</li> <li>● 3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</li> </ul> <p>Technology -</p> <ul style="list-style-type: none"> <li>● 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.</li> </ul>
<b>Mathematics Practices</b>		
<ul style="list-style-type: none"> <li>● Make sense of problems and persevere in solving them.</li> <li>● Reason abstractly and quantitatively.</li> <li>● Construct viable arguments and critique the reasoning of others.</li> <li>● Model with mathematics.</li> <li>● Use appropriate tools strategically.</li> <li>● Attend to precision.</li> <li>● Look for and make use of structure.</li> <li>● Look for and express regularity in repeated reasoning.</li> </ul>		
<b>Social and Emotional Learning: <i>Competencies</i></b>	<b>Social and Emotional Learning: <i>Sub-Competencies</i></b>	
<ul style="list-style-type: none"> <li>● Self-Awareness</li> <li>● Self-Management</li> <li>● Responsible Decision Making</li> <li>● Social Awareness</li> <li>● Relationship Skills</li> <li>● Motivation</li> </ul>	<ul style="list-style-type: none"> <li>● Emotional Awareness</li> <li>● Internal Regulation</li> <li>● Behavior Control</li> <li>● Goal Pursuance</li> <li>● Appreciating Social and Environment Diversity</li> <li>● Adaptive Behavior</li> <li>● Communication</li> <li>● Social Engagement</li> <li>● Constructive Thinking</li> <li>● Consequence Evaluation</li> <li>● Respect for Self and Others</li> <li>● Enthusiasm</li> <li>● Initiative</li> <li>● Resilience</li> </ul>	
<b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		<b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i>

<p><b>Formative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Check for Understanding Questions</li> <li>● Quizzes</li> <li>● Class activities/participation</li> <li>● Exit tickets</li> </ul>	<p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>● Module Assessment</li> <li>● iReady scores</li> </ul> <p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Module Test</li> <li>● Unit Assessment</li> </ul>
---	--

**Differentiated Student Access to Content:  
Teaching and Learning Resources/Materials**

Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core Resources
<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 2, 4-9</li> <li>● Student Activity Cards</li> <li>● Teacher Activity Cards</li> <li>● Numeral Cards</li> <li>● Dot Cards</li> <li>● White Boards</li> <li>● Connecting Cubes</li> <li>● Number Cubes</li> <li>● Visual Representations of Numbers and Number of Objects</li> <li>● Counters</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 2, 4-9</li> <li>● Extra Practice pages</li> <li>● Anchor charts</li> <li>● Scaffolded explanations of topics</li> <li>● Manipulatives</li> <li>● Visual aids</li> <li>● Hands-on learning activities</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 2, 4-9</li> <li>● Visual aids</li> <li>● Manipulatives</li> <li>● Vocabulary with images and examples</li> <li>● Hands-on learning activities</li> <li>● Extra Practice pages</li> <li>● Anchor charts</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 2, 4-9</li> <li>● Student Activity Cards</li> <li>● Teacher Activity Cards</li> <li>● Numeral Cards</li> <li>● Dot Cards</li> <li>● White Boards</li> <li>● Connecting Cubes</li> <li>● Number Cubes</li> <li>● Visual Representations of Numbers and Number of Objects</li> <li>● Counters</li> </ul>

**Supplemental Resources**

<p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● SmartBoards</li> <li>● Chromebooks</li> <li>● IXL</li> <li>● Teacher Online Resources</li> <li>● Applicable educational videos</li> <li>● <a href="#">National Council of Teachers of Mathematics</a></li> <li>● Didax</li> <li>● Math Learning Center</li> <li>● Mathigon Polypad</li> </ul>
--

**Differentiated Student Access to Content:  
Recommended Strategies & Techniques**

Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<ul style="list-style-type: none"> <li>• Small group instruction</li> <li>• Peer tutoring</li> <li>• Modeling</li> <li>• Visual demonstrations</li> <li>• Encourage creative expression and thinking</li> </ul>	<ul style="list-style-type: none"> <li>• Provide additional manipulatives to support instruction</li> <li>• Allow for alternative strategies to solve algorithms or tasks</li> <li>• Provide the steps needed to complete the task</li> <li>• Model frequently</li> <li>• Use visuals to demonstrate/model the processes</li> <li>• Extra time for work</li> <li>• Modified assignments</li> <li>• Small group work for more individualize attention</li> </ul>	<ul style="list-style-type: none"> <li>• Use of translate materials and simplified language</li> <li>• Provide additional manipulatives to support instruction</li> <li>• Allow for alternative strategies to solve algorithms or tasks</li> <li>• Provide the steps needed to complete the task</li> <li>• Model frequently</li> <li>• Use visuals to demonstrate/model the processes</li> <li>• Extra time for work</li> <li>• Modified assignments</li> <li>• Small group work for more individualize attention</li> </ul>	<ul style="list-style-type: none"> <li>• Enrichment book</li> <li>• Higher-level questions</li> <li>• Leading group work</li> </ul>

<b>NJSLS CAREER READINESS, LIFE LITERACIES &amp; KEY SKILLS</b>	<b>Disciplinary Concept:</b>	
	<b>Core Ideas:</b>	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	<b>Performance Expectation/s:</b>	<ul style="list-style-type: none"> <li>• 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g.,</li> <li>• 9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem.</li> <li>• 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.</li> </ul>
	<b>Career Readiness, Life Literacies, &amp; Key Skills Practices</b>	
	<ul style="list-style-type: none"> <li>• Act as a responsible and contributing community members and employee.</li> <li>• Attend to financial well-being.</li> <li>• Consider the environmental, social and economic impacts of decisions.</li> <li>• Demonstrate creativity and innovation.</li> <li>• Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>• Model integrity, ethical leadership and effective management</li> <li>• Plan education and career paths aligned to personal goals.</li> </ul>	

	<ul style="list-style-type: none"> <li>• Use technology to enhance productivity increase collaboration and communicate effectively.</li> <li>• Work productively in teams while using cultural/global competence.</li> </ul>
--	--

Marking Period	Unit Title	Recommended Instructional Days
3	<b>Fraction and Decimal Fractions</b>	46 days
<b>Domain:</b>		<b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLs-CLKS within Unit</b>
<b>Strand:</b>	<b>Progress Indicator:</b>	<b>Essential Question/s:</b>
Number and Operations—Fractions	<ul style="list-style-type: none"> <li>• <b>4.NF.1:</b> Explain why a fraction <math>a/b</math> is equivalent to a fraction <math>(n \times a)/(n \times b)</math> by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.</li> <li>• <b>4.NF.2:</b> 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 <math>1/2</math>. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual fraction model.</li> <li>• <b>4.NF.3:</b> Understand a fraction <math>a/b</math> with a <math>&gt; 1</math> as a sum of fractions <math>1/b</math>. <ul style="list-style-type: none"> <li>a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.</li> <li>b. Decompose a fraction into a sum of fractions with the same denominator</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>1. How can fractions be modeled and compared?</li> <li>2. How can repeated addition of unit fractions help you to understand multiplication of fractions by a whole number?</li> <li>3. Why does the numerator change, but the denominator stays the same when adding and subtracting fractions with like denominators?</li> <li>4. How are fractions and decimals related?</li> <li>5. How can you compare fractions and decimals?</li> </ol> <p><b>Activity Description:</b></p> <ul style="list-style-type: none"> <li>• <i>Are You Ready?</i> activities (Into Math)</li> <li>• Lesson Review (Into Math)</li> <li>• Assessment Forms (Into Math)</li> <li>• Determine and explain if two fractions are equivalent using visual fraction models.</li> <li>• Generate equivalent fractions using <math>a/b</math> as equivalent to the fraction <math>(n \times a) / (n \times b)</math>.</li> <li>• Use common denominators to compare two fractions with different numerators and different denominators.</li> <li>• Compare two fractions with different numerators and different denominators by comparing to a benchmark fraction.</li> </ul>

in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. Examples:  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ ;  $\frac{21}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ .

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  $\frac{1}{b}$ . For example, use a visual fraction model to represent  $\frac{5}{4}$  as the product  $5 \times (\frac{1}{4})$ , recording the conclusion by the equation  $\frac{5}{4} = 5 \times (\frac{1}{4})$ .
  - b. Understand a multiple of  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ , and use this understanding to multiply a fraction by a whole number. For example, use a visual fraction model to express  $3 \times (\frac{2}{5})$  as  $6 \times (\frac{1}{5})$ , recognizing this product as  $\frac{6}{5}$ . (In general,  $n \times (\frac{a}{b}) = (\frac{n \times a}{b})$ .)
  - 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. For example, if each person at a party will eat  $\frac{3}{8}$  of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?

- Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$  and justify the conclusion using visual models and number lines.
- Decompose a fraction into a sum of fractions with the same denominator in more than one way.
- Write decompositions of fractions as an equation.
- Create visual fraction models that represent decomposed fractions and use them to justify decompositions.
- Add and subtract mixed numbers with like denominators.
- Add and subtract fractions having like denominators in order to solve real world problems.
- Develop visual fraction models and write equations to represent real world problems involving addition and subtraction of fractions.
- Make a line plot to display a specified data set of measurements using unit fractions ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ).
- Use data presented in line plots to solve problems involving addition and subtraction of fractions.
- Multiply a fraction by a whole number using visual fraction models and equations, demonstrating a fraction  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ .
- Multiply a fraction by a whole number, using a visual fraction model and equations to demonstrate that a multiple of  $\frac{a}{b}$  is the product of  $\frac{1}{b}$  and a whole number
- Solve real world problems by multiplying a fraction by a whole number, using visual fraction models and equations to represent the problem.
- Express a fraction with a denominator of 10 as an equivalent fraction that has a denominator of 100.
- Add two fractions, one with a denominator of 10 and one with a denominator of 100, by writing each fraction as a fraction with denominator 100.
- Write a decimal as a fraction that has a denominator of 10 or 100.
- Represent a decimal using a model.
- Compare two decimals to hundredths by reasoning about their size.
- Explain that comparisons are valid only when the two decimals refer to the same whole.
- Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions (e.g., by using a visual model).
- Solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, using the four operations with whole numbers, fractions and decimals.
- Solve word problems that require expressing measurements given in a larger unit in terms of a smaller unit, using the four operations.

**Interdisciplinary Connections: Content: ;NJSLS#:**

	<ul style="list-style-type: none"> <li>● <b>4.NF.5:</b> 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. For example, express <math>\frac{3}{10}</math> as <math>\frac{30}{100}</math>, and add <math>\frac{3}{10} + \frac{4}{100} = \frac{34}{100}</math>.</li> <li>● <b>4.NF.6:</b> Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as <math>\frac{62}{100}</math>; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</li> <li>● <b>4.NF.7:</b> 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 <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual model.</li> </ul>	<p>Science -</p> <ul style="list-style-type: none"> <li>● 4-ESS2-1 - Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</li> <li>● 4-ESS2-2 - Analyze and interpret data from maps to describe patterns of Earth's features.</li> <li>● 3-5-ETS1-1 - Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</li> <li>● 3-5-ETS1-2 - Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</li> </ul> <p>Technology -</p> <ul style="list-style-type: none"> <li>● 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.</li> </ul>
<p>Measurement and Data</p>	<ul style="list-style-type: none"> <li>● <b>4.MD.2:</b> 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.</li> <li>● <b>4.MD.4:</b> Make a line plot to display a data set of measurements in fractions of a unit (<math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{8}</math>). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.</li> </ul>	
<p><b>Mathematics Practices</b></p>		
<ul style="list-style-type: none"> <li>● Make sense of problems and persevere in solving them.</li> <li>● Reason abstractly and quantitatively.</li> </ul>		



<ul style="list-style-type: none"> <li>● Construct viable arguments and critique the reasoning of others.</li> <li>● Model with mathematics.</li> <li>● Use appropriate tools strategically.</li> <li>● Attend to precision.</li> <li>● Look for and make use of structure.</li> <li>● Look for and express regularity in repeated reasoning.</li> </ul>			
<p><b>Social and Emotional Learning:</b> <i>Competencies</i></p>		<p><b>Social and Emotional Learning:</b> <i>Sub-Competencies</i></p>	
<ul style="list-style-type: none"> <li>● Self-Awareness</li> <li>● Self-Management</li> <li>● Responsible Decision Making</li> <li>● Social Awareness</li> <li>● Relationship Skills</li> <li>● Motivation</li> </ul>		<ul style="list-style-type: none"> <li>● Emotional Awareness</li> <li>● Internal Regulation</li> <li>● Behavior Control</li> <li>● Goal Pursuance</li> <li>● Appreciating Social and Environment Diversity</li> <li>● Adaptive Behavior</li> <li>● Communication</li> <li>● Social Engagement</li> <li>● Constructive Thinking</li> <li>● Consequence Evaluation</li> <li>● Respect for Self and Others</li> <li>● Enthusiasm</li> <li>● Initiative</li> <li>● Resilience</li> </ul>	
<p><b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p><b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>	
<p><b>Formative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Check for Understanding Questions</li> <li>● Quizzes</li> <li>● Class activities/participation</li> <li>● Exit tickets</li> </ul>		<p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>● Module Assessment</li> <li>● iReady scores</li> </ul> <p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>● Module Test</li> <li>● Unit Assessment</li> </ul>	
<p><b>Differentiated Student Access to Content:</b> <i>Teaching and Learning Resources/Materials</i></p>			
<p><b>Core Resources</b></p>	<p><b>Alternate Core Resources</b> <i>IEP/504/At-Risk/ESL</i></p>	<p><b>ELL Core Resources</b></p>	<p><b>Gifted &amp; Talented Core Resources</b></p>

<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 11-16, 19</li> <li>● Student Activity Cards</li> <li>● Teacher Activity Cards</li> <li>● Numeral Cards</li> <li>● Dot Cards</li> <li>● White Boards</li> <li>● Connecting Cubes</li> <li>● Number Cubes</li> <li>● Visual Representations of Numbers and Number of Objects</li> <li>● Counters</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 11-16, 19</li> <li>● Extra Practice pages</li> <li>● Anchor charts</li> <li>● Scaffolded explanations of topics</li> <li>● Manipulatives</li> <li>● Visual aids</li> <li>● Hands-on learning activities</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 11-16, 19</li> <li>● Visual aids</li> <li>● Manipulatives</li> <li>● Vocabulary with images and examples</li> <li>● Hands-on learning activities</li> <li>● Extra Practice pages</li> <li>● Anchor charts</li> </ul>	<ul style="list-style-type: none"> <li>● <i>Into Math</i> Textbook, Modules 11-16, 19</li> <li>● Student Activity Cards</li> <li>● Teacher Activity Cards</li> <li>● Numeral Cards</li> <li>● Dot Cards</li> <li>● White Boards</li> <li>● Connecting Cubes</li> <li>● Number Cubes</li> <li>● Visual Representations of Numbers and Number of Objects</li> <li>● Counters</li> </ul>
---	--	--	---

**Supplemental Resources**

<p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● SmartBoards</li> <li>● Chromebooks</li> <li>● IXL</li> <li>● Teacher Online Resources</li> <li>● Applicable educational videos</li> <li>● Didax</li> <li>● Toy Theater</li> <li>● Mathigon Polypad</li> </ul>
--

**Differentiated Student Access to Content:  
Recommended *Strategies & Techniques***

<b>Core Resources</b>	<b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core</b>
<ul style="list-style-type: none"> <li>● Small group instruction</li> <li>● Peer tutoring</li> <li>● Modeling</li> <li>● Visual demonstrations</li> <li>● Encourage creative expression and thinking</li> </ul>	<ul style="list-style-type: none"> <li>● Provide additional manipulatives to support instruction</li> <li>● Allow for alternative strategies to solve algorithms or tasks</li> <li>● Provide the steps needed to complete the task</li> <li>● Model frequently</li> <li>● Use visuals to demonstrate/model the processes</li> <li>● Extra time for work</li> <li>● Modified assignments</li> </ul>	<ul style="list-style-type: none"> <li>● Use of translate materials and simplified language</li> <li>● Provide additional manipulatives to support instruction</li> <li>● Allow for alternative strategies to solve algorithms or tasks</li> <li>● Provide the steps needed to complete the task</li> <li>● Model frequently</li> <li>● Use visuals to demonstrate/model the processes</li> <li>● Extra time for work</li> </ul>	<ul style="list-style-type: none"> <li>● Enrichment book</li> <li>● Higher-level questions</li> <li>● Leading group work</li> </ul>

	<ul style="list-style-type: none"> <li>• Small group work for more individualized attention</li> </ul>	<ul style="list-style-type: none"> <li>• Modified assignments</li> <li>• Small group work for more individualized attention</li> </ul>	
--	--	--	--

<b>NJSLS CAREER READINESS, LIFE LITERACIES &amp; KEY SKILLS</b>	<b>Disciplinary Concept:</b>		
	<b>Core Ideas:</b>	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.	
	<b>Performance Expectation/s:</b>	<ul style="list-style-type: none"> <li>• 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g.,</li> <li>• 9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem.</li> <li>• 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.</li> </ul>	
	<b>Career Readiness, Life Literacies, &amp; Key Skills Practices</b>		
	<ul style="list-style-type: none"> <li>• Act as a responsible and contributing community members and employee.</li> <li>• Attend to financial well-being.</li> <li>• Consider the environmental, social and economic impacts of decisions.</li> <li>• Demonstrate creativity and innovation.</li> <li>• Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>• Model integrity, ethical leadership and effective management</li> <li>• Plan education and career paths aligned to personal goals.</li> <li>• Use technology to enhance productivity increase collaboration and communicate effectively.</li> <li>• Work productively in teams while using cultural/global competence.</li> </ul>		

Marking Period	Unit Title	Recommended Instructional Days
4	<b>Angle Measurements and Polygons</b>	36 days

Domain:		Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSL-CLKS within Unit
Strand:	Progress Indicator:	Essential Question/s:
Operations and Algebraic Thinking	<ul style="list-style-type: none"> <li>● <b>4.OA.2:</b> 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.</li> <li>● <b>4.OA.3:</b> Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.</li> </ul>	<ol style="list-style-type: none"> <li>1. How can angles be composed or decomposed to form larger or smaller angles?</li> <li>2. How are angles applied to the context of a circle?</li> <li>3. How can an addition or subtraction equation be used to solve a missing angle measure when the whole angle has been divided into two angles and only one measurement is given?</li> <li>4. How can lines, angles, and shapes be described, analyzed, and classified?</li> <li>5. What are examples of 2-dimensional figures in everyday life?</li> <li>6. How can you multiply and divide multi-digit whole numbers?</li> <li>7. How can you solve problems involving addition and subtraction of fractions?</li> </ol> <p><b>Activity Description:</b></p> <ul style="list-style-type: none"> <li>● <i>Are You Ready?</i> activities (Into Math)</li> <li>● Lesson Review (Into Math)</li> <li>● Assessment Forms (Into Math)</li> <li>● Draw points, lines, line segments, rays, right angles, acute angles, obtuse angles, perpendicular lines and parallel lines.</li> <li>● Identify points, lines, line segments, rays, right angles, acute angles, obtuse angles, perpendicular lines and parallel lines in two-dimensional figures.</li> <li>● Sketch angles that have a specified measure angle measure as additive</li> <li>● Solve addition and subtraction problems to find unknown angle measures on a diagram in real world and mathematical problems.</li> <li>● Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines.</li> <li>● Classify two-dimensional figures based on the presence or absence of angles of a specified size.</li> <li>● Identify line-symmetric figures and draw lines of symmetry.</li> <li>● Determine if a two-dimensional figure is symmetric and determine the lines of symmetry, including rotational symmetry.</li> <li>● Multiply and divide to solve word problems involving multiplicative comparisons, using drawings and equations containing a variable to represent the problem.</li> </ul>
Number and Operations in Base Ten	<ul style="list-style-type: none"> <li>● <b>4.NBT.4:</b> Fluently add and subtract multi-digit whole numbers using the standard algorithm.</li> <li>● <b>4.NBT.5:</b> 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.</li> <li>● <b>4.NBT.6:</b> Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</li> </ul>	
Number and Operations—Fractions	<ul style="list-style-type: none"> <li>● <b>4.NF.3:</b> Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of fractions <math>1/b</math>.</li> </ul>	

	<ul style="list-style-type: none"> <li>● <b>4.NF.4:</b> Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.</li> <li>● <b>4.NF.5:</b> Understand decimal notation for fractions, and compare decimal fractions. 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 100.4 For example, express <math>\frac{3}{10}</math> as <math>\frac{30}{100}</math>, and add <math>\frac{3}{10} + \frac{4}{100} = \frac{34}{100}</math>.</li> <li>● <b>4.NF.6:</b> Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as <math>\frac{62}{100}</math>; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</li> <li>● <b>4.NF.7:</b> 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 <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual model.</li> </ul>	<ul style="list-style-type: none"> <li>● Apply area and perimeter formulas for rectangles in real world and mathematical problems with whole numbers.</li> <li>● Multiply two two-digit numbers using strategies based on place value and properties of operations.</li> <li>● Represent and explain the division calculation using equations, rectangular arrays, and/or area models.</li> <li>● Solve multi-step word problems involving interpretation (in context) of a remainder.</li> <li>● Add and subtract fractions having like denominators in order to solve real world problems.</li> <li>● Develop visual fraction models and write equations to represent real world problems involving addition and subtraction of fraction.</li> <li>● Solve real world problems by multiplying a fraction by a whole number, using visual fraction models and equations to represent the problem.</li> </ul> <p><b>Interdisciplinary Connections: Content: ;NJSLS#:</b></p> <p>Science -</p> <ul style="list-style-type: none"> <li>● 4-LS1-1 - Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</li> <li>● 4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.</li> <li>● 4-PS4-1 - Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move.</li> <li>● 4-PS4-2 - Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.</li> <li>● 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.</li> <li>● 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</li> </ul> <p>Technology -</p> <ul style="list-style-type: none"> <li>● 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.</li> </ul>
Measurement and Data	<ul style="list-style-type: none"> <li>● <b>4.MD.3:</b> Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.</li> <li>● <b>4.MD.5:</b> Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement.</li> <li>● <b>4.MD.6:</b> Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</li> <li>● <b>4.MD.7:</b> 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</li> </ul>	

	world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.	
Geometry	<ul style="list-style-type: none"> <li>● <b>4.G.1:</b> Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</li> <li>● <b>4.G.2:</b> 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.</li> <li>● <b>4.G.3:</b> 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.</li> </ul>	
<b>Mathematics Practices</b>		
<ul style="list-style-type: none"> <li>● Make sense of problems and persevere in solving them.</li> <li>● Reason abstractly and quantitatively.</li> <li>● Construct viable arguments and critique the reasoning of others.</li> <li>● Model with mathematics.</li> <li>● Use appropriate tools strategically.</li> <li>● Attend to precision.</li> <li>● Look for and make use of structure.</li> <li>● Look for and express regularity in repeated reasoning.</li> </ul>		
<b>Social and Emotional Learning: <i>Competencies</i></b>	<b>Social and Emotional Learning: <i>Sub-Competencies</i></b>	
<ul style="list-style-type: none"> <li>● Self-Awareness</li> <li>● Self-Management</li> <li>● Responsible Decision Making</li> <li>● Social Awareness</li> <li>● Relationship Skills</li> <li>● Motivation</li> </ul>	<ul style="list-style-type: none"> <li>● Emotional Awareness</li> <li>● Internal Regulation</li> <li>● Behavior Control</li> <li>● Goal Pursuance</li> <li>● Appreciating Social and Environment Diversity</li> <li>● Adaptive Behavior</li> <li>● Communication</li> </ul>	

	<ul style="list-style-type: none"> <li>• Social Engagement</li> <li>• Constructive Thinking</li> <li>• Consequence Evaluation</li> <li>• Respect for Self and Others</li> <li>• Enthusiasm</li> <li>• Initiative</li> <li>• Resilience</li> </ul>		
<p align="center"><b>Assessments (Formative)</b>  <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>		<p align="center"><b>Assessments (Summative)</b>  <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>	
<p><b>Formative Assessments:</b></p> <ul style="list-style-type: none"> <li>• Check for Understanding Questions</li> <li>• Quizzes</li> <li>• Class activities/participation</li> <li>• Exit tickets</li> </ul>		<p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>• Module Assessment</li> <li>• iReady scores</li> </ul> <p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>• Module Test</li> <li>• Unit Assessment</li> </ul>	
<p align="center"><b>Differentiated Student Access to Content:  Teaching and Learning Resources/Materials</b></p>			
<p><b>Core Resources</b></p>	<p><b>Alternate Core Resources  IEP/504/At-Risk/ESL</b></p>	<p><b>ELL Core Resources</b></p>	<p><b>Gifted &amp; Talented Core Resources</b></p>
<ul style="list-style-type: none"> <li>• <i>Into Math</i> Textbook, Modules 13, 17-18</li> <li>• Student Activity Cards</li> <li>• Teacher Activity Cards</li> <li>• Numeral Cards</li> <li>• Dot Cards</li> <li>• White Boards</li> <li>• Connecting Cubes</li> <li>• Number Cubes</li> <li>• Visual Representations of Numbers and Number of Objects</li> <li>• Counters</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Into Math</i> Textbook, Modules 13, 17-18</li> <li>• Extra Practice pages</li> <li>• Anchor charts</li> <li>• Scaffolded explanations of topics</li> <li>• Manipulatives</li> <li>• Visual aids</li> <li>• Hands-on learning activities</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Into Math</i> Textbook, Modules 13, 17-18</li> <li>• Visual aids</li> <li>• Manipulatives</li> <li>• Vocabulary with images and examples</li> <li>• Hands-on learning activities</li> <li>• Extra Practice pages</li> <li>• Anchor charts</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Into Math</i> Textbook, Modules 13, 17-18</li> <li>• Student Activity Cards</li> <li>• Teacher Activity Cards</li> <li>• Numeral Cards</li> <li>• Dot Cards</li> <li>• White Boards</li> <li>• Connecting Cubes</li> <li>• Number Cubes</li> <li>• Visual Representations of Numbers and Number of Objects</li> <li>• Counters</li> </ul>
<p align="center"><b>Supplemental Resources</b></p>			
<p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>• SmartBoards</li> </ul>			

- Chromebooks
- IXL
- Teacher Online Resources
- Applicable educational videos
- Toy Theater
- Transum
- Mathigon Polypad
- Prodigy

**Differentiated Student Access to Content:  
Recommended *Strategies & Techniques***

Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<ul style="list-style-type: none"> <li>● Small group instruction</li> <li>● Peer tutoring</li> <li>● Modeling</li> <li>● Visual demonstrations</li> <li>● Encourage creative expression and thinking</li> </ul>	<ul style="list-style-type: none"> <li>● Provide additional manipulatives to support instruction</li> <li>● Allow for alternative strategies to solve algorithms or tasks</li> <li>● Provide the steps needed to complete the task</li> <li>● Model frequently</li> <li>● Use visuals to demonstrate/model the processes</li> <li>● Extra time for work</li> <li>● Modified assignments</li> <li>● Small group work for more individualize attention</li> </ul>	<ul style="list-style-type: none"> <li>● Use of translate materials and simplified language</li> <li>● Provide additional manipulatives to support instruction</li> <li>● Allow for alternative strategies to solve algorithms or tasks</li> <li>● Provide the steps needed to complete the task</li> <li>● Model frequently</li> <li>● Use visuals to demonstrate/model the processes</li> <li>● Extra time for work</li> <li>● Modified assignments</li> <li>● Small group work for more individualize attention</li> </ul>	<ul style="list-style-type: none"> <li>● Enrichment book</li> <li>● Higher-level questions</li> <li>● Leading group work</li> </ul>

<b>NJSLS CAREER READINESS, LIFE LITERACIES &amp; KEY SKILLS</b>	<b>Disciplinary Concept:</b>	
	<b>Core Ideas:</b>	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	<b>Performance Expectation/s:</b>	<ul style="list-style-type: none"> <li>● 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g.,</li> <li>● 9.4.5.CT.2: Identify a problem and list the types of individuals and resources (e.g., school, community agencies, governmental, online) that can aid in solving the problem.</li> <li>● 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and</li> </ul>



		global.
	<b>Career Readiness, Life Literacies, &amp; Key Skills Practices</b>	
	<ul style="list-style-type: none"> <li>● Act as a responsible and contributing community members and employee.</li> <li>● Attend to financial well-being.</li> <li>● Consider the environmental, social and economic impacts of decisions.</li> <li>● Demonstrate creativity and innovation.</li> <li>● Utilize critical thinking to make sense of problems and persevere in solving them.</li> <li>● Model integrity, ethical leadership and effective management</li> <li>● Plan education and career paths aligned to personal goals.</li> <li>● Use technology to enhance productivity increase collaboration and communicate effectively.</li> <li>● Work productively in teams while using cultural/global competence.</li> </ul>	

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)								
	Amistad Law: <i>N.J.S.A. 18A            52:16A-88</i>		Holocaust Law: <i>N.J.S.A. 18A:35-28</i>		LGBT and Disabilities Law: <i>N.J.S.A.            18A:35-4.35</i>		Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>	Standards in Action: <i>Climate Change</i>