

East Newark Public School
Mathematics Curriculum
Grade 5



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 5, instructional time should focus on three critical areas: (1) developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions); (2) extending division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations; and (3) developing understanding of volume.

Focus Area 1:

Students apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators as equivalent calculations with like denominators. They develop fluency in calculating sums and differences of fractions, and make reasonable estimates of them. Students also use the meaning of fractions, of multiplication and division, and the relationship between multiplication and division to understand and explain why the procedures for multiplying and dividing fractions make sense. (Note: this is limited to the case of dividing unit fractions by whole numbers and whole numbers by unit fractions.)

Focus Area 2:

Students develop understanding of why division procedures work based on the meaning of base-ten numerals and properties of operations. They finalize fluency with multi-digit addition, subtraction, multiplication, and division. They apply their understandings of models for decimals, decimal notation, and properties of operations to add and subtract decimals to hundredths. They develop fluency in these computations, and make reasonable estimates of their results. Students use the relationship between decimals and fractions, as well as the relationship between finite decimals and whole numbers (i.e., a finite decimal multiplied by an appropriate power of 10 is a whole number), to understand and explain why the procedures for multiplying and dividing finite decimals make sense. They compute products and quotients of decimals to hundredths efficiently and accurately.

Focus Area 3:

Students recognize volume as an attribute of three-dimensional space. They understand that volume can be measured by finding the total number of same-size units of volume required to fill the space without gaps or overlaps. They understand that a 1-unit by 1-unit by 1-unit cube is the standard unit for measuring volume. They select appropriate units, strategies, and tools for solving problems that involve estimating and measuring volume. They decompose

three-dimensional shapes and find volumes of right rectangular prisms by viewing them as decomposed into layers of arrays of cubes. They measure necessary attributes of shapes in order to determine volumes to solve real world and mathematical problems.

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 5 Pacing Guide:

UNIT		STANDARDS	PACING
Unit 1: Application of Whole Number Operations			
1A	Operations With Whole Numbers	5.OA.A.1, 5.OA.A.2, 5.NBT.B.5, 5.NBT.B.6	17 days
1B	Two-Dimensional Figures	5.G.B.3, 5.G.B.4	10 days
1C	Volume of Rectangular Prisms	5.MD.C.3a-b, 5.MD.C.4, 5.MD.C.5a-c	12 days
Unit 2: Operations with Fractions			
2A	Fraction Addition and Subtraction	5.MD.B.2, 5.NF.A.1, 5.NF.A.2, 5.NF.B.3, 5.OA.A.1	14 days
2B	Fraction Multiplication	5.NF.B.4a-b, 5.NF.B.5a-b, 5.MD.1	17 days
2C	Fraction Division	5.NF.B.6, 5.NF.B.7a-c, 5.MD.B.2	11 days
Unit 3: Decimals and Measurement			
3A	Place Value and the Number System	5.MD.A.1, 5.NBT.A.1, 5.NBT.A.2, 5.NBT.A.3a-b, 5.NBT.A.4	13 days
3B	Multiplication of Decimals	5.NBT.B.7, 5.MD.1	15 days
3C	Division of Decimals	5.NBT.7, 5.OA.1, 5.OA.2	14 days
Unit 4: Data and Measurement			
4A	Patterns and Coordinate Plane	5.G.A.1, 5.G.A.2, 5.OA.B.3	22 days
4B	Reflection of the Year	5.G.2, 5.MD.A.1, 5.MD.5, 5.NBT.7, 5.NF.A.2, 5.NF.B.3, 5.NF.6, 5.NF.7c, 5.OA.2	15 days

Marking Period	Unit Title	Recommended Instructional Days
1	Application of Whole Number Operations	39
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"> ● 5.OA.A.1: Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. ● 5.OA.A.2: Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation “add 8 and 7, then multiply by 2” as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product. 	<ol style="list-style-type: none"> 1. How can real-world problems be solved by evaluating expressions? 2. How can we solve real-world problems using multiplication and division? 3. How can we describe and compare two-dimensional shapes? 4. How can we use two-dimensional attributes to describe real world solids and solve problems? 5. What strategies can you use to find the volume of a right rectangular prism and how are the strategies related? 6. How can you find the volume of cubes and rectangular prisms? 7. How can we use the formula for finding volume when solving real-world problems?
Number and Operations in Base Ten	<ul style="list-style-type: none"> ● 5.NBT.B.5: Fluently multiply multi-digit whole numbers using the standard algorithm. ● 5.NBT.B.6: Find whole-number quotients of whole numbers with up to four-digit dividends and two-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. 	<p>Activity Description:</p> <ul style="list-style-type: none"> ● <i>Are You Ready?</i> activities (Into Math) ● Lesson Review (Into Math) ● Assessment Forms (Into Math) ● Evaluate numerical expressions involving parentheses and all four operations with whole numbers. ● Interpret and write numerical expressions using parentheses and the order of operations to group numbers and operations in a given situation. ● Evaluate numerical expressions using the order of operations. ● Multiply multi-digit whole numbers using place value and the standard algorithm to solve real world problems. ● Represent and explain the division calculation using equations, rectangular arrays and/or areas model.
	<ul style="list-style-type: none"> ● 5.MD.C.3: Recognize volume as an attribute of solid figures and understand concepts of volume measurement. 	

	<p>a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.</p> <p>b. A solid figure which can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.</p> <ul style="list-style-type: none"> ● 5.MD.C.4: Measure volumes by counting unit cubes, using cubic cm, cubic in., cubic ft., and non-standard units. ● 5.MD.C.5: Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. <p>a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p> <p>b. Apply the formulas $V=l \times w \times h$ and $V=B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real world and mathematical problems.</p> <p>c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.</p>	<ul style="list-style-type: none"> ● Find whole-number quotients using the relationship between multiplication and division and area models. ● Solve multi-step word problems involving all four operations with whole numbers. ● Use the attributes of polygons to identify and classify them. ● Identify the attributes of polygons belonging to a category/subcategory of two-dimensional figures. ● Compare and classify figures by their sides and angles. ● Classify two-dimensional figures in a hierarchy based on properties. ● Use unit cubes to measure the volume of a solid. ● Apply unit cubes of centimeters, inches and/or other units to measure volume. ● Compute the volume of right rectangular prisms by counting the total number of same size cubic units required to fill a solid without overlap and gaps. ● Apply the appropriate cubic units based on the attributes of the three-dimensional figure you are measuring. ● Find the volume of a composite solid figure composed of two non-overlapping right rectangular prisms. ● Apply the formulas to solve real-world and mathematical problems involving volume of right rectangular prisms and composites of the same. <p>Interdisciplinary Connections: Content: ;NJSLS#:</p> <p>Science -</p> <ul style="list-style-type: none"> ● 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. ● 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. <p>Technology -</p> <ul style="list-style-type: none"> ● 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
<p style="text-align: center;">Geometry</p>	<ul style="list-style-type: none"> ● 5.G.B.3: Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles. ● 5.G.B.4: Classify two-dimensional figures in a hierarchy based on 	

	properties.	
Mathematics Practices		
<ul style="list-style-type: none"> ● Make sense of problems and persevere in solving them. ● Reason abstractly and quantitatively. ● Construct viable arguments and critique the reasoning of others. ● Model with mathematics. ● Use appropriate tools strategically. ● Attend to precision. ● Look for and make use of structure. ● Look for and express regularity in repeated reasoning. 		
Social and Emotional Learning: <i>Competencies</i>	Social and Emotional Learning: <i>Sub-Competencies</i>	
<ul style="list-style-type: none"> ● Self-Awareness ● Self-Management ● Responsible Decision Making ● Social Awareness ● Relationship Skills ● Motivation 	<ul style="list-style-type: none"> ● Emotional Awareness ● Internal Regulation ● Behavior Control ● Goal Pursuance ● Appreciating Social and Environment Diversity ● Adaptive Behavior ● Communication ● Social Engagement ● Constructive Thinking ● Consequence Evaluation ● Respect for Self and Others ● Enthusiasm ● Initiative ● Resilience 	
Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>
Formative Assessments: <ul style="list-style-type: none"> ● Check for Understanding Questions ● Quizzes ● Class activities/participation ● Exit tickets 		Benchmarks: <ul style="list-style-type: none"> ● Module Assessment ● iReady scores Summative Assessments: <ul style="list-style-type: none"> ● Module Test ● Unit Assessment

**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"> • <i>Into Math</i> Textbook, Modules 1-5, 20 • Student Activity Cards • Teacher Activity Cards • Numeral Cards • Dot Cards • White Boards • Connecting Cubes • Number Cubes • Visual Representations of Numbers and Number of Objects • Counters 	<ul style="list-style-type: none"> • <i>Into Math</i> Textbook, Modules 1-5, 20 • Extra Practice pages • Anchor charts • Scaffolded explanations of topics • Manipulatives • Visual aids • Hands-on learning activities 	<ul style="list-style-type: none"> • <i>Into Math</i> Textbook, Modules 1-5, 20 • Visual aids • Manipulatives • Vocabulary with images and examples • Hands-on learning activities • Extra Practice pages • Anchor charts 	<ul style="list-style-type: none"> • <i>Into Math</i> Textbook, Modules 1-5, 20 • Student Activity Cards • Teacher Activity Cards • Numeral Cards • Dot Cards • White Boards • Connecting Cubes • Number Cubes • Visual Representations of Numbers and Number of Objects • Counters

Supplemental Resources

Technology:

- SmartBoards
- Chromebooks
- IXL
- Teacher Online Resources
- Applicable educational videos
- Geogebra
- Toy Theater
- Mathigon
- Desmos Activity Builder
- Prodigy
- [National Council of Teachers of Mathematics](#)

**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"> • Small group instruction • Peer tutoring • Modeling 	<ul style="list-style-type: none"> • Provide additional manipulatives to support instruction 	<ul style="list-style-type: none"> • Use of translate materials and simplified language 	<ul style="list-style-type: none"> • Enrichment book • Higher-level questions • Leading group work

<ul style="list-style-type: none"> ● Visual demonstrations ● Encourage creative expression and thinking 	<ul style="list-style-type: none"> ● Allow for alternative strategies to solve algorithms or tasks ● Provide the steps needed to complete the task ● Model frequently ● Use visuals to demonstrate/model the processes ● Extra time for work ● Modified assignments ● Small group work for more individualize attention 	<ul style="list-style-type: none"> ● Provide additional manipulatives to support instruction ● Allow for alternative strategies to solve algorithms or tasks ● Provide the steps needed to complete the task ● Model frequently ● Use visuals to demonstrate/model the processes ● Extra time for work ● Modified assignments ● Small group work for more individualize attention 	
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NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept:	
	Core Ideas:	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	Performance Expectation/s:	<ul style="list-style-type: none"> ● 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., ● 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. ● 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.
	Career Readiness, Life Literacies, & Key Skills Practices	
	<ul style="list-style-type: none"> ● Act as a responsible and contributing community members and employee. ● Attend to financial well-being. ● Consider the environmental, social and economic impacts of decisions. ● Demonstrate creativity and innovation. ● Utilize critical thinking to make sense of problems and persevere in solving them. ● Model integrity, ethical leadership and effective management ● Plan education and career paths aligned to personal goals. ● Use technology to enhance productivity increase collaboration and communicate effectively. ● Work productively in teams while using cultural/global competence. 	

Marking Period	Unit Title	Recommended Instructional Days
2	Operations With Fractions	42
Domain:		Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSL-CLKS within Unit
Strand:	Progress Indicator:	Essential Question/s:
Number and Operations—Fractions	<ul style="list-style-type: none"> ● 5.NF.A.1: Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, $\frac{2}{3} + \frac{5}{4} = \frac{8}{12} + \frac{15}{12} = \frac{23}{12}$. (In general, $\frac{a}{b} + \frac{c}{d} = \frac{ad + bc}{bd}$.) ● 5.NF.A.2: Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. For example, recognize an incorrect result $\frac{2}{5} + \frac{1}{2} = \frac{3}{7}$, by observing that $\frac{3}{7} < \frac{1}{2}$. ● 5.NF.B.3: Interpret a fraction as division of the numerator by the denominator ($\frac{a}{b} = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret $\frac{3}{4}$ as the result of dividing 3 by 4, noting that $\frac{3}{4}$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $\frac{3}{4}$. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between 	<p>1. What strategies can you use to find/make common denominators?</p> <p>2. How can you use line plots to solve real-world problems?</p> <p>3. How can models help us understand the multiplication and division of fractions?</p> <p>4. How do I use concrete materials and drawings to understand and show understanding dividing fractions?</p> <p>5. How does division of fractions relate to multiplication of fractions?</p> <p>Activity Description:</p> <ul style="list-style-type: none"> ● <i>Are You Ready?</i> activities (Into Math) ● Lesson Review (Into Math) ● Assessment Forms (Into Math) ● Use visual models to represent the sums and differences of fractions with different-sized parts. ● Add and subtract fractions and mixed numbers with unlike denominators by using common denominators. ● Solve problems involving addition and subtraction of fractions and mixed numbers by writing equations. ● Create a line plot using a set of measurements in fractions of a unit. ● Interpret data on a line plot in order to solve given word problems. ● Interpret a fraction as division of the numerator by the denominator ($\frac{a}{b} = a \div b$). ● Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers. ● Represent the multiplication of fractions with a visual model and/or an area model. ● Multiply fractions by fractions or a whole number. ● Compare a product to a factor and explain why the product is greater than, less than, or equal to one factor.

what two whole numbers does your answer lie?

- **5.NF.B.4:** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.
 - a. Interpret the product $(a/b) \times q$ as a part of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)
 - b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
- **5.NF.B.5:** Interpret multiplication as scaling (resizing), by:
 - a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.
 - b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
- **5.NF.B.6:** Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual

- Solve real world problems involving multiplication of mixed numbers by using visual models or equations to represent the problem.
- Find the area of a rectangle with mixed number side lengths.
- Divide a unit fraction by a whole number using a visual model by finding the size of the equal parts.
- Use a visual model to represent the division of a whole number by a unit fraction.
- Represent a fraction as division of the numerator by the denominator ($a/b = a \div b$).
- Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.
- Represent word problems involving division of whole numbers using visual fraction models and equations.
- Use a story context to interpret division of a unit fraction by a whole number.
- Divide a unit fraction by a whole number and represent it with visual fraction models.
- Use a story context to interpret division of a whole number by a unit fraction.
- Divide a whole number by a unit fraction and represent it with visual fraction models.
- Divide unit fractions by whole numbers to solve real-world problems, using visual fraction models and equations to represent the problem.
- Divide whole numbers by unit fractions to solve real-world problems, using visual fraction models and equations to represent the problem.
- Use measurement information to create a line plot.
- Using measurement information presented in line plots, add, subtract, multiply and divide fractions in order to solve problems.

Interdisciplinary Connections: Content: ;NJSLS#:

Science -

- 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.
- 5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved.
- 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.

	<p>fraction models or equations to represent the problem.</p> <ul style="list-style-type: none"> • 5.NF.B.7: Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. <ul style="list-style-type: none"> a. Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$. b. Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$ c. Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share $1/2$ lb. of chocolate equally? How many $1/3$-cup servings are in 2 cups of raisins? 	<p>Technology -</p> <ul style="list-style-type: none"> • 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.
<p>Measurement and Data</p>	<ul style="list-style-type: none"> • 5.MD.B.2: Make a line plot to display a data set of measurements in fractions of a unit ($1/2, 1/4, 1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally. 	

Mathematics Practices		
<ul style="list-style-type: none"> ● Make sense of problems and persevere in solving them. ● Reason abstractly and quantitatively. ● Construct viable arguments and critique the reasoning of others. ● Model with mathematics. ● Use appropriate tools strategically. ● Attend to precision. ● Look for and make use of structure. ● Look for and express regularity in repeated reasoning. 		
Social and Emotional Learning: <i>Competencies</i>	Social and Emotional Learning: <i>Sub-Competencies</i>	
<ul style="list-style-type: none"> ● Self-Awareness ● Self-Management ● Responsible Decision Making ● Social Awareness ● Relationship Skills ● Motivation 	<ul style="list-style-type: none"> ● Emotional Awareness ● Internal Regulation ● Behavior Control ● Goal Pursuance ● Appreciating Social and Environment Diversity ● Adaptive Behavior ● Communication ● Social Engagement ● Constructive Thinking ● Consequence Evaluation ● Respect for Self and Others ● Enthusiasm ● Initiative ● Resilience 	
Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>
Formative Assessments: <ul style="list-style-type: none"> ● Check for Understanding Questions ● Quizzes ● Class activities/participation ● Exit tickets 		Benchmarks: <ul style="list-style-type: none"> ● Module Assessment ● iReady scores Summative Assessments: <ul style="list-style-type: none"> ● Module Test ● Unit Assessment
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"> • <i>Into Math</i> Textbook, Modules 6-12 • Student Activity Cards • Teacher Activity Cards • Numeral Cards • Dot Cards • White Boards • Connecting Cubes • Number Cubes • Visual Representations of Numbers and Number of Objects • Counters 	<ul style="list-style-type: none"> • <i>Into Math</i> Textbook, Modules 6-12 • Extra Practice pages • Anchor charts • Scaffolded explanations of topics • Manipulatives • Visual aids • Hands-on learning activities 	<ul style="list-style-type: none"> • <i>Into Math</i> Textbook, Modules 6-12 • Visual aids • Manipulatives • Vocabulary with images and examples • Hands-on learning activities • Extra Practice pages • Anchor charts 	<ul style="list-style-type: none"> • <i>Into Math</i> Textbook, Modules 6-12 • Student Activity Cards • Teacher Activity Cards • Numeral Cards • Dot Cards • White Boards • Connecting Cubes • Number Cubes • Visual Representations of Numbers and Number of Objects • Counters
Supplemental Resources			
<p>Technology:</p> <ul style="list-style-type: none"> • SmartBoards • Chromebooks • IXL • Teacher Online Resources • Applicable educational videos • Geogebra • Toy Theater • Mathigon • Desmos Activity Builder • Prodigy • Visnos • National Council of Teachers of Mathematics • PBS Learning Media 			
Differentiated Student Access to Content: Recommended <i>Strategies & Techniques</i>			
Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<ul style="list-style-type: none"> • Small group instruction • Peer tutoring 	<ul style="list-style-type: none"> • Provide additional manipulatives to support instruction 	<ul style="list-style-type: none"> • Use of translate materials and simplified language 	<ul style="list-style-type: none"> • Enrichment book • Higher-level questions

<ul style="list-style-type: none"> ● Modeling ● Visual demonstrations ● Encourage creative expression and thinking 	<ul style="list-style-type: none"> ● Allow for alternative strategies to solve algorithms or tasks ● Provide the steps needed to complete the task ● Model frequently ● Use visuals to demonstrate/model the processes ● Extra time for work ● Modified assignments ● Small group work for more individualized attention 	<ul style="list-style-type: none"> ● Provide additional manipulatives to support instruction ● Allow for alternative strategies to solve algorithms or tasks ● Provide the steps needed to complete the task ● Model frequently ● Use visuals to demonstrate/model the processes ● Extra time for work ● Modified assignments ● Small group work for more individualized attention 	<ul style="list-style-type: none"> ● Leading group work
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NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept:	
	Core Ideas:	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	Performance Expectation/s:	<ul style="list-style-type: none"> ● 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g., ● 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. ● 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.
	Career Readiness, Life Literacies, & Key Skills Practices	
	<ul style="list-style-type: none"> ● Act as a responsible and contributing community members and employee. ● Attend to financial well-being. ● Consider the environmental, social and economic impacts of decisions. ● Demonstrate creativity and innovation. ● Utilize critical thinking to make sense of problems and persevere in solving them. ● Model integrity, ethical leadership and effective management ● Plan education and career paths aligned to personal goals. ● Use technology to enhance productivity increase collaboration and communicate effectively. ● Work productively in teams while using cultural/global competence. 	

Marking Period	Unit Title	Recommended Instructional Days
3	Decimals and Measurement	42
Domain:		Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLs-CLKS within Unit
Strand:	Progress Indicator:	Essential Question/s:
Number and Operations in Base Ten	<ul style="list-style-type: none"> ● 5.NBT.A.1: Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left. ● 5.NBT.A.2: Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10. ● 5.NBT.A.3: Read, write, and compare decimals to thousandths. <ul style="list-style-type: none"> a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$. b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons. ● 5.NBT.A.4: Use place value understanding to round decimals to any place. ● 5.NBT.B.7: Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy 	<ol style="list-style-type: none"> 1. How are whole numbers and decimals written, compared and ordered? 2. How can the place value system be useful in converting among different sized metric units within a given measurement system? 3. What strategies can we use to solve real world problems involving decimals and how do we check the reasonableness of our solutions? 4. How do we apply prior knowledge of multiplication to multiply and divide decimals? 5. What strategies can we use to solve real world problems involving decimals and how do we check the reasonableness of our solutions? 6. How do we apply prior knowledge of multiplication and division to multiply and divide decimals? <p>Activity Description:</p> <ul style="list-style-type: none"> ● <i>Are You Ready?</i> activities (Into Math) ● Lesson Review (Into Math) ● Assessment Forms (Into Math) ● Explain that a digit in one place represents 1/10 of what it would represent in the place to its left. ● Explain that a digit in one place represents ten times what it would represent in the place to its right. ● Explain patterns in the number of zeros of the product when multiplying a whole number by powers of 10. ● Write powers of 10 using whole-number exponents. ● Read and write decimals to thousandths using base ten numerals. ● Read and write decimals to thousandths using number names. ● Read and write decimals to thousandths using expanding form. ● Compare decimals when each is presented in a different form (base-ten numeral, number name and expanded form). ● Round decimals to any place.

	to a written method and explain the reasoning used.	<ul style="list-style-type: none"> Convert from one measurement unit to another within a given measurement system (e.g., convert 5 cm to 0.05 m, convert minutes to hours). Solve multi-step, real world problems that require conversions. Use place-value strategies and properties of operations to add and subtract decimals. Find, explain, and use patterns in the placement of decimal points when multiplying decimals by powers of 10. Use visual models, place-value strategies, and properties of operations to multiply decimals to the hundredths. Assess the reasonableness of products of decimals less than 1 and whole numbers. Relate the strategy to the written method and explain the reasoning used. Solve multi-step word problems involving the four operations and decimals. Convert from one measurement unit to another within a given measurement system (e.g., convert 5 cm to 0.05 m, convert minutes to hours). Solve multi-step, real world problems that require conversions. Divide decimals to hundredths using concrete models and drawings. Divide decimals to hundredths using strategies based on place value, properties of operations. Relate the strategy to the written method and explain the reasoning used. Evaluate numerical expressions that include grouping symbols involving whole numbers, fractions and decimals. Write a simple numerical expression when given a verbal description involving fractions and decimals.
Measurement and Data	<ul style="list-style-type: none"> 5.MD.A.1: Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems. 	
Mathematics Practices		<ul style="list-style-type: none"> Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Model with mathematics. Use appropriate tools strategically. Attend to precision. Look for and make use of structure. Look for and express regularity in repeated reasoning.
<ul style="list-style-type: none"> Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Construct viable arguments and critique the reasoning of others. Model with mathematics. Use appropriate tools strategically. Attend to precision. Look for and make use of structure. Look for and express regularity in repeated reasoning. 		
Social and Emotional Learning: Competencies	Social and Emotional Learning: Sub-Competencies	<p>Interdisciplinary Connections: Content: ;NJSLS#:</p> <p>Science -</p> <ul style="list-style-type: none"> 5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. 5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. 5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.
<ul style="list-style-type: none"> Self-Awareness Self-Management Responsible Decision Making Social Awareness Relationship Skills Motivation 	<ul style="list-style-type: none"> Emotional Awareness Internal Regulation Behavior Control Goal Pursuance Appreciating Social and Environment Diversity Adaptive Behavior Communication Social Engagement Constructive Thinking Consequence Evaluation Respect for Self and Others Enthusiasm Initiative Resilience 	

		<ul style="list-style-type: none"> 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. <p>Technology -</p> <ul style="list-style-type: none"> 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim. 	
Assessments (Formative) <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		Assessments (Summative) <i>To show evidence of meeting the standard/s, students will successfully complete:</i>	
Formative Assessments: <ul style="list-style-type: none"> Check for Understanding Questions Quizzes Class activities/participation Exit tickets 		Benchmarks: <ul style="list-style-type: none"> Module Assessment iReady scores Summative Assessments: <ul style="list-style-type: none"> Module Test Unit Assessment 	
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"> <i>Into Math</i> Textbook, Modules 1, 12-18 Student Activity Cards Teacher Activity Cards Numeral Cards Dot Cards White Boards Connecting Cubes Number Cubes Visual Representations of Numbers and Number of Objects Counters 	<ul style="list-style-type: none"> <i>Into Math</i> Textbook, Modules 1, 12-18 Extra Practice pages Anchor charts Scaffolded explanations of topics Manipulatives Visual aids Hands-on learning activities 	<ul style="list-style-type: none"> <i>Into Math</i> Textbook, Modules 1, 12-18 Visual aids Manipulatives Vocabulary with images and examples Hands-on learning activities Extra Practice pages Anchor charts 	<ul style="list-style-type: none"> <i>Into Math</i> Textbook, Modules 1, 12-18 Student Activity Cards Teacher Activity Cards Numeral Cards Dot Cards White Boards Connecting Cubes Number Cubes Visual Representations of Numbers and Number of Objects Counters

Supplemental Resources

Technology:

- SmartBoards
- Chromebooks
- IXL
- Teacher Online Resources
- Applicable educational videos
- Geogebra
- Toy Theater
- Desmos
- Prodigy
- Math Learning Center

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

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	Disciplinary Concept:	
	<i>Core Ideas:</i>	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
	<i>Performance Expectation/s:</i>	<ul style="list-style-type: none"> ● 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process (e.g.,

		<ul style="list-style-type: none"> 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. 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global.
	Career Readiness, Life Literacies, & Key Skills Practices	
	<ul style="list-style-type: none"> Act as a responsible and contributing community members and employee. Attend to financial well-being. Consider the environmental, social and economic impacts of decisions. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management Plan education and career paths aligned to personal goals. Use technology to enhance productivity increase collaboration and communicate effectively. Work productively in teams while using cultural/global competence. 	

Marking Period	Unit Title	Recommended Instructional Days
4	Data and Measurement	37
Domain:		Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLs-CLKS within Unit
Strand:	Progress Indicator:	<p><u>Essential Question/s:</u></p> <ol style="list-style-type: none"> How are points graphed? How can we show the relationship between sequences on a graph? <p><u>Activity Description:</u></p>
Operations and Algebraic Thinking	<ul style="list-style-type: none"> 5.OA.B.3: Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered 	

	<p>pairs on a coordinate plane. For example, given the rule “Add 3” and the starting number 0, and given the rule “Add 6” and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.</p>	<ul style="list-style-type: none"> ● <i>Are You Ready?</i> activities (Into Math) ● Lesson Review (Into Math) ● Assessment Forms (Into Math) ● Graph points defined by whole number coordinates in the first quadrant of the coordinate plane in order to represent real world and mathematical problems. ● Interpret coordinates in context. ● Use two rules to create two numerical patterns. ● Compare corresponding terms (e.g. compare the first terms in each list, compare the second terms in each list, etc). ● Identify the relationship between corresponding terms and write ordered pairs. ● Graph the ordered pairs on the coordinate plane in the first quadrant. ● Use two rules to create two numerical patterns. ● Compare corresponding terms (e.g. compare the first terms in each list, compare the second terms in each list, etc). ● Identify the relationship between corresponding terms and write ordered pairs.
<p style="text-align: center;">Geometry</p>	<ul style="list-style-type: none"> ● 5.G.A.1: Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate). ● 5.G.A.2: Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation. 	<p>Interdisciplinary Connections: Content: ;NJSLS#:</p> <p>Science -</p> <ul style="list-style-type: none"> ● 5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. ● 5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. ● 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. ● 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
Mathematics Practices		
<ul style="list-style-type: none"> ● Make sense of problems and persevere in solving them. ● Reason abstractly and quantitatively. ● Construct viable arguments and critique the reasoning of others. ● Model with mathematics. ● Use appropriate tools strategically. ● Attend to precision. ● Look for and make use of structure. ● Look for and express regularity in repeated reasoning. 		<p>Technology -</p> <ul style="list-style-type: none"> ● 8.1.5.DA.1: Collect, organize, and display data in order to highlight relationships or support a claim.

Social and Emotional Learning: Competencies	Social and Emotional Learning: Sub-Competencies		
<ul style="list-style-type: none"> ● Self-Awareness ● Self-Management ● Responsible Decision Making ● Social Awareness ● Relationship Skills ● Motivation 	<ul style="list-style-type: none"> ● Emotional Awareness ● Internal Regulation ● Behavior Control ● Goal Pursuance ● Appreciating Social and Environment Diversity ● Adaptive Behavior ● Communication ● Social Engagement ● Constructive Thinking ● Consequence Evaluation ● Respect for Self and Others ● Enthusiasm ● Initiative ● Resilience 		
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<ul style="list-style-type: none"> • Connecting Cubes • Number Cubes • Visual Representations of Numbers and Number of Objects • Counters 	<ul style="list-style-type: none"> • Hands-on learning activities 	<ul style="list-style-type: none"> • Extra Practice pages • Anchor charts 	<ul style="list-style-type: none"> • Connecting Cubes • Number Cubes • Visual Representations of Numbers and Number of Objects • Counters
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Supplemental Resources

<p>Technology:</p> <ul style="list-style-type: none"> • SmartBoards • Chromebooks • IXL • Teacher Online Resources • Applicable educational videos • Geogebra • Toy Theater • Mathigon • NCTM

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

	Disciplinary Concept:
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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>
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