South Harrison Township Elementary School District

Committed to Excellence

Course Name: Math	**Grade Level(s): 5**
BOE Adoption Date: October 2017	**Revision Date(s):**

ABSTRACT

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.

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.)
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.

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.

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Mission Statement

The primary goal of the South Harrison Township Elementary School District is to prepare each student with the real life skills needed to compete in a highly competitive global economy. This will be achieved by providing a comprehensive curriculum, the integration of technology, and the professional services of a competent and dedicated faculty, administration, and support staff.

Guiding this mission will be Federal mandates, including the Every Student Succeeds Act (ESSA), the New Jersey Student Learning Standards, and local initiatives addressing the individual needs of our students as determined by the Board of Education. The diverse resources of the school district, which includes a caring Home and School Association (HSA) and active adult community, contribute to a quality school system. They serve an integral role in supporting positive learning experiences that motivate, challenge and inspire children to learn.

Curriculum and Instruction Goals

Goal(s):

1. To ensure students are college and career ready upon graduation
2. To vertically and horizontally align curriculum K-12 to ensure successful transition of students at each grade level
3. To identify individual student strengths and weaknesses utilizing various assessment measures (formative, summative, alternative, etc.) so as to differentiate instruction while meeting the rigor of the applicable content standards
4. To improve student achievement as assessed through multiple measures including, but not limited to, state testing, local assessments, and intermediate benchmarking

Philosophy of the Shared Curriculum Service with Kingsway Regional School District

Together in its partnership with the South Harrison Township Elementary School District, the Kingsway Curriculum & Instruction Department is committed to providing all students grades K-12 with an engaging and quality curricular experience that aligns with the New Jersey Student Learning Standards (NJ SLS) for mathematics and English-Language Arts as well as the New Jersey Student Learning Standards (NJ SLS) for all other core disciplines. It is the goal of this shared service to provide students with curricular and educational experiences that allows them to succeed as they move on to the middle and high school level. Through this shared service, both horizontal and vertical alignment is stressed at and within each grade level with the aim of developing life-long learners who are college and career ready upon graduation from high school. Additionally, classroom instruction will be designed to meet the unique learning desires of all children and will be differentiated according to the needs of each learner. Whether through added support or enrichment activities, it is the role of the educator in the classroom to ensure students are reaching their highest level of social, emotional, and academic growth each school year. A combination of summative, formative,

and performance-based assessments will be used to assess students' understanding and acquisition of necessary concepts and skills. Group work, projects, and a variety of co-curricular activities will make mathematics more meaningful and aid in the understanding of its application across all disciplines as well as in life.

How to Read this Document

This document contains a pacing guide and curriculum units. The pacing guides serve to deliver an estimated timeframe as to when noted skills and topics will be taught. The pacing of each course, however, will differ slightly depending upon the unique needs of each class. The curriculum units contain more detailed information as to the specific skills and concepts that are introduced as well as how students will be assessed. The terms and definitions below will assist the reader in better understanding the sections and components of this curriculum document.

Terms to Know

1. **Accommodation(s):** The term "accommodation" may be used to describe an *alteration* of environment, curriculum format, or equipment that allows an individual with a disability to gain access to content and/or complete assigned tasks. They allow students with disabilities to pursue a regular course of study. The term accommodation is often used interchangeable with the term modification. However, it is important to remember that modifications change or modify the intended learning goal while accommodations result in the same learning goal being expected but with added assistance in that achievement. Since accommodations do not alter what is being taught, instructors should be able to implement the same grading scale for students with disabilities as they do for students without disabilities.

2. **Differentiated Instruction:** Differentiation of instruction relies on the idea that instructional approaches should be tailored to each individual student's learning needs. It provides students an array of options during the learning process that allows them make sense of ideas as it relates to them. The integration of differentiated instructional techniques is a curriculum design approach to increase flexibility in teaching and decrease the barriers that frequently limit student access to materials and learning in classrooms. http://www.udlcenter.org/aboutudl

3. **Enduring Understanding:** Enduring understandings (aka big ideas) are statements of understanding that articulate deep conceptual understandings at the heart of each content area. Enduring understandings are noted in the alongside essential questions within each unit in this document. http://www.ascd.org

4. **Essential Question:** These are questions whose purpose is to stimulate thought, to provoke inquiry, and to spark more questions. They extend beyond a single lesson or unit. Essential questions are noted in the beginning of each unit in this document. http://www.ascd.org

5. **Formative Assessment(s):** Formative assessments monitor student learning to provide ongoing feedback that can be used by (1) instructors to improve teaching and (2) by students to improve their learning. Formative assessments help identify students' strengths and weaknesses and address problems immediately.

6. **Learning Activity(s):** Learning activities are those activities that take place in the classroom for which the teacher facilitates and the students participate in to ensure active engagement in the learning process. (Robert J. Marzano, *The Art and Science of Teaching*)

7. **Learning Assignment(s):** Learning assignments are those activities that take place independently by the student inside the classroom or outside the classroom (i.e. homework) to extend concepts and skills within a lesson. http://www.marzanocenter.com

8. **Learning Goal(s):** Learning goals are broad statements that note what students "should know" and/or "be able to do" as they progress through a unit. Learning goals correlate specifically to the NJSLS (New Jersey Student Learning Standards) are noted within each unit.

9. **Learning Objective(s):** Learning objectives are more specific skills and concepts that students must achieve as they progress towards the broader learning goal. These are included within each unit and are assessed frequently by the teacher to ensure students are progressing appropriately. http://www.marzanoresearch.com

10. **Model Assessment:** Within the model curriculum, model assessments are provided that included assessments that allow for measuring student proficiency of those target skills as the year of instruction progresses. http://www.state.nj.us/education/modelcurriculum/

11. **Model Curriculum:** The model curriculum has been provided by the state of New Jersey to provide a "model" for which districts can properly implement the NJSLS (New Jersey Student Learning Standards) by providing an example from which to work and/or a product for implementation.

12. **Modification(s):** The term "modification" may be used to describe a *change* in the curriculum. Modifications are typically made for students with disabilities who are unable to comprehend all of the content an instructor is teaching. The term modification is often used interchangeable with the term accommodations. However, it is important to remember that modifications change or modify the intended learning goal while accommodations result in the same learning goal being expected but with assistance in that achievement.

13. **Performance Assessment(s):** (aka alternative or authentic assessments) Performance assessments are a form of assessment that requires students to perform tasks that generate a more authentic evaluation of a student's knowledge, skills, and abilities. Performance assessments stress the application of knowledge and extend beyond traditional assessments (i.e. multiple-choice question, matching, true & false, etc.).

14. **Standard(s):** Academic standards, from which the curriculum is built, are statements that of what students "should know" or "be able to do" upon completion of a grade-level or course of study. Educational standards help teachers ensure their students have the skills and knowledge they need to be successful by providing clear goals for student learning. http://www.state.nj.us/njded/cccs/

    - **State:** The New Jersey Student Learning Standards (NJSLS) include Preschool Teaching and Learning Standards as well as K-12 standards for: *Visual and Performing Arts; Comprehensive Health and Physical Education; Science; Social Studies; World Languages; Technology; and 21st-Century Life and Careers.*

15. **Summative Assessment(s):** Summative assessments evaluate student learning at the end of an instructional time period by comparing it against some standard or benchmark. Information from summative assessments can be used formatively when students or faculty use it to guide their efforts and activities in subsequent courses.

16. **21st Century Skill(s):** These skills emphasis the growing need to focus on those skills that prepare students successfully by focusing on core subjects and 21st century themes; learning and innovation skills; information, media and technology skills; and life and career skills. These concepts are embedded in each unit of the curriculum. http://www.p21.org/our-work/p21-framework

Proficiencies and Pacing:

Unit Title	Duration/Month(s)	Related Standards	Learning Goals	Topics and Skills
Unit 1 Understanding the Place Value System	September - November	NJ SLS 5.OA.A.1 NJ SLS 5.OA.A.2 NJ SLS 5.NBT.A.1 NJ SLS 5.NBT.A.2 NJ SLS 5.NBT.B.5 NJ SLS 5.NBT.B.6 NJ SLS 5.NBT.A.3 NJ SLS 5.NBT.A.4 **Interdisciplinary Standards** **Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3 Use a graphic organizer to organize information about problem or issue. **Career Ready Practices** CRP1 Act as a responsible and contributing citizen and employee.	Learning Goal 1: NJ SLS 5.OA.A.1 Evaluate numerical expressions that contain parentheses, brackets and braces. Learning Goal 2: NJ SLS 5.OA.A.2 Write numerical expressions when given a verbal description or word problem; interpret numerical expressions without evaluating them. Learning Goal 3: NJ SLS 5.NBT.A.1 Explain that a digit in one place represents 1/10 of what it would represent in the place to its left and ten times what it would represent in the place to its right Learning Goal 4: NJ SLS 5.NBT.A.2 Explain patterns in the number of zeros in the product when a whole number is multiplied by a power of 10; represent powers of 10 using whole-number exponents.	***Students are able to:*** • evaluate numerical expressions that include grouping symbols (parentheses, brackets or braces). • evaluate numerical expressions that include nested grouping symbols (for example, 3 x [5 + (7 - 3)]). • write a simple numerical expression when given a verbal description. • interpret the quantitative relationships in numerical expressions without evaluating (simplifying) the expression. • 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. • multiply a whole number of up to a four digits by a whole number of up two digits using the standard algorithm with accuracy and efficiency. • divide to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit

		CRP2 Apply appropriate academic and technical skills **Financial Literacy** 9.1.8.E.3 Compare and contrast product facts versus advertising claims **Science** NGSS 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.	Learning Goal 5: NJ SLS 5.NBT.B.5 Use the standard algorithm to multiply a whole number of up to a four digits by a whole number of up two digits. Learning Goal 6: NJ SLS 5.NBT.B.6 Calculate whole number quotients of whole numbers with 4-digit dividends and 2-digit divisors; explain and represent calculations with equations, rectangular arrays, and area models. Learning Goal 7: NJ SLS 5.NBT.A.3 Compare two decimals to thousandths using >, =, and < for numbers presented as base ten numerals, number names, and/or in expanded form. Learning Goal 8: NJ SLS 5.NBT.A.4 Round decimals to any place value.	divisors using strategies based on place value, properties of operations, and the relationship between multiplication and division. • represent these operations with equations, rectangular arrays, and area models. • explain the calculation by referring to the model (equation, array, or area model). • 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 expanded form. • compare two decimals to thousandths using >, =, and < symbols. • compare decimals when each is presented in a different form (base-ten numeral, number name, and expanded form). • round decimals to any place value.
Unit 2 Understanding Volume	November – January	NJ SLS 5.MD.C.3 NJ SLS 5.MD.C.4	Learning Goal 1: NJ SLS 5.MD.C.3, NJ SLS 5.MD.C.4	***Students are able to:*** • count unit cubes in order to

and Operations on Fractions		NJ SLS 5.MD.C.5 NJ SLS 5.NBT.B.5 NJ SLS 5.NF.A.1 NJ SLS 5.NF.A.2 NJ SLS 5.NF.B.3 NJ SLS 5.NF.B.4 Interdisciplinary Standards **Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding. **Career Ready Practices** CRP4 Communicate clearly and effectively and with reason **Financial Literacy** 9.1.8.E.1	&NJ SLS 5.MD.C.5a-b Measure volume by counting the total number cubic units required to fill a figure without gaps or overlaps Learning Goal 2: NJ SLS 5.MD.C.5a-c Show that the volume of a right rectangular prism found by counting all the unit cubes is the same as the formulas $V = l \times w \times h$ or $V = B \times h$. Learning Goal 3: NJ SLS 5.MD.C.5a-c Apply formulas to solve real world and mathematical problems involving volumes of right rectangular prisms that have whole number edge lengths. Learning Goal 4: NJ SLS 5.MD.C.5a-c Find the volume of a composite solid figure composed of two non-overlapping right rectangular prisms, applying this strategy to solve real-world problems.	measure the volume of a solid. • use unit cubes of centimeters, inches, and/or other units to measure volume. • pack right rectangular prisms with cubes to find volume and multiply side lengths of the right rectangular prism to find volume, showing that they are the same. • pack right rectangular prisms with cubes to find volume and multiply height by the area of the base, showing that they are the same. • explain how both volume formulas relate to counting the cubes in one layer and multiplying that value by the number of layers (height). • write the volume of an object as the product of three whole numbers. • solve real-world and mathematical problems using the formulas $V = l \times w \times h$ and $V = B \times h$. • find the volume of a composite solid composed of two right rectangular prisms. • produce an equivalent sum (or difference) of fractions with like denominators from the original sum (or difference) of fractions that has unlike denominators. • add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions. • add and subtract fractions, including

		Explain what it means to be a responsible consumer and the factors to consider when making consumer decisions. **Career Exploration** 9.2.8.B.3 Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career. **Science** NGSS 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen	Learning Goal 5: NJ SLS 5.NBT.B.5 Fluently multiply multi-digit whole numbers with accuracy and efficiency. Learning Goal 6: NJ SLS 5.NF.A.1 Add and subtract fractions (including mixed numbers) with unlike denominators by replacing the given fractions with equivalent fractions having like denominators NJ SLS 5.NF.A.2 Learning Goal 7: Solve word problems involving adding or subtracting fractions with unlike denominators, and determine if the answer to the word problem is reasonable, using estimations with benchmark fractions. Learning Goal 8: NJ SLS 5.NF.B.3 Interpret a fraction as a division of the numerator by the denominator; solve word problems in which division of whole numbers leads to fractions or mixed	mixed numbers, with unlike denominators to solve word problems. • represent calculations and solutions with visual fraction models and equations • estimate answers using benchmark fractions and explain whether the answer is reasonable. • estimate answers by reasoning about the size of the fractions and explain whether the answer is reasonable. • represent a fraction as a division statement ($a/b = a \div b$). • divide whole numbers in order to solve real world problems, representing the quotient as a fraction or a mixed number. • represent word problems involving division of whole numbers using visual fraction models and equations. • for whole number or fraction q, represent $(a/b) \times q$ as a parts of a partition of q into b equal parts [e.g. using a visual fraction model, (3/4) x 5 can be represented by 3 parts, after partitioning 5 objects into 4 equal parts]. • for whole number or fraction q, represent $(a/b) \times q$ *as* $a \times q \div b$ [e.g. showing that (2/5) x 3 is equivalent to (2 x 3) ÷ 5]. • from a story context, interpret (a/b)

			numbers as solutions. Learning Goal 9: NJ SLS 5.NF.B.4 For whole number or fraction *q*, interpret the product (*a/b*) x *q* as *a* parts of a whole partitioned into *b* equal parts added *q* times (e.g. using a visual fraction model).\ Learning Goal 10: NJ SLS5.NF.B.4 Tile a Rectangle with unit fraction squares to find the area and multiply side lengths to find the area of the rectangle, showing that the areas are the same.	× *q* as *a* parts of a partition of *q* into *b* equal parts. • tile a rectangle having fractional side lengths using unit squares of the appropriate unit fraction [e.g. given a 3 ¼ inch x 7 ¾ inch rectangle, tile the rectangle using ¼ inch tiles]. • show that the area found by tiling with unit fraction tiles is the same as would be found by multiplying the side lengths.
Unit 3 More Operations on Fractions	January – March	NJ SLS 5.NF.B.4b NJ SLS 5.NF.B.5 NJ SLS 5.NF.B.6 NJ SLS 5.NF.B.7 NJ SLS 5.NBT.A.2 NJ SLS 5.NBT.B.7 NJ SLS 5.MD.A.1 **Interdisciplinary**	Learning Goal 1: NJ SLS 5.NF.B.4b Multiply fractions by whole numbers and fractions by fractions, drawing visual models to represent products, showing *(a/b) x (c/d) = ab(1/bd)*, and creating story contexts.	***Students are able to:*** • multiply fractional side lengths to find areas of rectangles. • represent fraction products as rectangular areas. • multiply a fraction by a whole number. • multiply a fraction by a fraction, in general, if *q* is a fraction *c/d*, then

		Standards **Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding. **Career Ready Practices** CRP9 Model integrity, ethical leaders hip and effective management **Financial Literacy** 9.1.8.E.3 Compare and contrast product facts versus advertising claims **Career Exploration** 9.2.8.B.3 Evaluate	Learning Goal 2: NJ SLS 5.NF.B.5 Explain how a product is related to the magnitude of the factors, including cases in which one factor is a fraction greater than 1 and cases in which one factor is a fraction less than 1. Learning Goal 3: NJ SLS 5.NF.B.6 Solve real-world problems involving multiplication of fractions (including mixed numbers), using visual fraction models or equations to represent the problem. Learning Goal 4: NJ SLS 5.NF.B.7 Divide a unit fraction by a non-zero whole number and interpret by creating a story context or visual fraction model. Learning Goal 5: NJ SLS 5.NF.B.7 Divide a whole number by a unit fraction and interpret by creating a story context or visual fraction model.	$(a/b)\ x\ (c/d) = a(1/b) \times c(1/d) = ac \times (1/b)(1/d) = ac(1/bd) = ac/bd.$ • compare the size of a product to the size of one of its factors, considering the size of the other factor (at least one factor is a fraction). • explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number. • explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number. • explain that multiplying a given number by a fraction equivalent to 1 does not change the product. • multiply fractions and mixed numbers in order to solve real world problems. • represent the solution to these real world problems with visual fraction models and equations. • use a story context to interpret division of a unit fraction by a whole number. • divide of a unit fraction by a whole number and represent with visual fraction models. • use a story context to interpret division of a whole number by a unit fraction. • divide of a whole number by a unit fraction and represent with visual fraction models.

		communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career. **Science** NGSS 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	Learning Goal 6: NJ SLS 5.NF.B.7 Solve real-world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions. Learning Goal 7: NJ SLS 5.NBT.A.2 Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10; represent powers of 10 using whole-number exponents. Learning Goal 8: NJ SLS 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; explain the reasoning used, relating the strategy to the written method. Learning Goal 9: NJ SLS	• 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. • add and subtract decimals to hundredths using concrete models and drawings. • multiply and divide decimals to hundredths using concrete models and drawings. • add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • relate the strategy to the written method and explain the reasoning used. • 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.

			5.MD.A.1 Convert standard measurement units within the same system (e.g., centimeters to meters) in order to solve multi-step problems.	
Unit 4 Coordinate Geometry and Classifying Figures	March – June	NJ SLS 5.G.A.1 NJ SLS 5.G.A.2 NJ SLS 5.OA.B.3 NJ SLS 5.G.B.3 NJ SLS 5.G.B.4 NJ SLS 5.MD.B.2 NJ SLS 5.NBT.B.5 NJ SLS 5.NBT.B.7 NJ SLS 5.NF.B.7 **Interdisciplinary Standards** **Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.	Learning Goal 1: NJ SLS 5.G.A.1 & NJ SLS 5.G.A.2 Represent real world and mathematical problems by graphing points defined by whole number coordinates in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation Learning Goal 2: NJ SLS 5.OA.B.3 Generate two numerical patterns from two given rules, identify the relationship between corresponding terms, create ordered pairs and graph the ordered pairs. Learning Goal 3: NJ SLS 5.G.B.3 & NJ SLS 5.G.B.4 Classify two- dimensional figures in a hierarchy based on properties.	***Students are able to:*** • 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. • classify two-dimensional figures (triangles, quadrilaterals) based on shared attributes (e.g. parallel sides, number of sides, angle size, side length, etc.). • arrange the

		8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding. **Career Ready Practices** CRP6 Demonstrate creativity and innovation. **Financial Literacy** 9.1.8.E.8 Recognize the techniques and effects of deceptive advertising **Career Explorations** 9.2.8.B.1 Research careers within the 16 Career Clusters® and determine attributes of career success. **Science** NGSS 5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day	Learning Goal 4: NJ SLS 5.MD.B.2 Make a line plot to display a data set in measurements in fractions of a unit (1/2, 1/4, 1/8) and use it to solve problems involving the four operations on fractions with unlike denominators. Learning Goal 5: NJ SLS 5.NBT.B.5 Fluently multiply multi-digit whole numbers with accuracy and efficiency. Learning Goal 6: NJ SLS 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; explain the reasoning used, relating the strategy to the written method. Learning Goal 7: NJ SLS 5.NF.B.7 Solve real world problems involving	categories/subcategories of figures (e.g. squares, rectangles, trapezoids, etc) in a hierarchy based on attributes. • identify attributes of a two-dimensional shape based on attributes of the categories to which it belongs. • 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. • multiply multi-digit whole numbers with accuracy and efficiency. • add and subtract decimals to hundredths using concrete models and drawings. • multiply and divide decimals to hundredths using concrete models and drawings. • add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • relate the strategy to the written method and explain the reasoning

		and night, and the seasonal appearance of some stars in the night sky.	division of unit fractions by whole numbers or whole numbers by unit fractions.	used. • use a story context to interpret division of a unit fraction by a whole number. • use a story context to interpret division of a whole number by a unit fraction. • 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.

Unit 1: Understanding the Place Value System	Recommended Duration: September - November
Unit Description: Write and interpret numerical expressions, understand the place value system, perform operations with multi-digit whole numbers and with decimals to hundredths.	

Essential Questions	Enduring Understandings
• How can we represent numbers? • What makes a computation strategy effective and efficient? • How do operations affect numbers?	• Numerical expressions can be used to represent different values and real life situations. • Patterns in the place value system can make it easier to interpret and operate with numbers. • There are many ways to multiply and divide whole numbers.

Relevant Standards	Learning Goals	Learning Objectives
Content Standards: Primary NJ SLS 5.OA.A.1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. NJ SLS 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 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as*	Learning Goal 1: NJ SLS 5.OA.A.1 Evaluate numerical expressions that contain parentheses, brackets and braces. Learning Goal 2: NJ SLS 5.OA.A.2 Write numerical expressions when given a verbal description or word problem; interpret numerical expressions without evaluating them. Learning Goal 3: NJ SLS 5.NBT.A.1 Explain that a digit in one place represents 1/10 of what it would represent in the place to its left and	***Students are able to:*** • evaluate numerical expressions that include grouping symbols (parentheses, brackets or braces). • evaluate numerical expressions that include nested grouping symbols (for example, 3 x [5 + (7 - 3)]). • write a simple numerical expression when given a verbal description. • interpret the quantitative relationships in numerical expressions without evaluating (simplifying) the expression.

Relevant Standards	Learning Goals	Learning Objectives
18932 + 921, without having to calculate the indicated sum or product. NJ SLS 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. NJ SLS 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 NJ SLS 5.NBT.B.5. Fluently multiply multi-digit whole numbers using the standard algorithm. *(benchmarked) NJ SLS 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. NJ SLS 5.NBT.A.3. Read, write, and compare decimals to thousandths.	ten times what it would represent in the place to its right Learning Goal 4: NJ SLS 5.NBT.A.2 Explain patterns in the number of zeros in the product when a whole number is multiplied by a power of 10; represent powers of 10 using whole-number exponents. Learning Goal 5: NJ SLS 5.NBT.B.5 Use the standard algorithm to multiply a whole number of up to a four digits by a whole number of up two digits. Learning Goal 6: NJ SLS 5.NBT.B.6 Calculate whole number quotients of whole numbers with 4-digit dividends and 2-digit divisors; explain and represent calculations with equations, rectangular arrays, and area models. Learning Goal 7: NJ SLS 5.NBT.A.3 Compare two decimals to thousandths using >, =, and < for numbers presented as base ten numerals, number names, and/or in expanded form. Learning Goal 8: NJ SLS 5.NBT.A.4 Round decimals to any place value.	• 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. • multiply a whole number of up to a four digits by a whole number of up two digits using the standard algorithm with accuracy and efficiency. • divide to find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors using strategies based on place value, properties of operations, and the relationship between multiplication and division. • represent these operations with equations, rectangular arrays, and area models. • explain the calculation by referring to the model (equation, array, or area model). • 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 expanded form. • compare two decimals to thousandths using >, =, and < symbols.

Relevant Standards	Learning Goals	Learning Objectives
NJ SLS 5.NBT.A.3a. Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000). NJ SLS 5.NBT.A.3b. Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons. NJ SLS 5.NBT.A.4. Use place value understanding to round decimals to any place.		• compare decimals when each is presented in a different form (base-ten numeral, number name, and expanded form). • round decimals to any place value.

Formative Assessments	Summative Assessments	Performance Assessments	Major Activities/ Assignments (required)
• One to one conferencing and anecdotal notes • Rubrics • Pre/Post RTI benchmark assessments • Differentiated Facts Centers • Essential Questions • Home Link Review • Mental Math and Reflexes • Teaching the Lesson (Vocabulary Infused) • Ongoing Learning and Practice • Differentiation Options • Games (reinforcement of	• Self-Assessment • Oral and Slate Assessments • Assessment • Building Background for next unit	• Essential Questions • Class Directions/Discussion/ Questions • Work on Project • Use of rubric and teacher "informal assessment" or checklist • Reflection - Essential Questions revisited (Exit slip, Journal, Orally, etc.)	• Math Formative Diagnostic Tasks • CSA #1

Formative Assessments	Summative Assessments	Performance Assessments	Major Activities/ Assignments (required)
skill) • Reflection - Essential Questions revisited (Exit Slip, Journal, Orally, etc)			

Possible Assessment Modifications /Accommodations			
Special Education Learners	**English Language Learners**	**At-Risk Learners**	**Advanced Learners**
• Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Test study guide • Shortened tasks • Hands-on projects • Tests read aloud • Modified tests	• Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Rephrase test questions/directions • Test study guide with examples • Shortened tasks • Simplify test wording • Hands-on projects • Tests read aloud	• Prior notice of tests • Pace long term projects • Preview test procedures • Test study guide	• Pace long term projects • Individualized testing

Instructional Strategies (refer to *Robert Marzano's* 41 Elements)

- Manipulatives, KWL, academic games,
- Mathematic Workstations,
- Read Aloud
- Model think aloud comprehension strategies
- Modeling
- Choice Menus
- Math logs/journals

Possible Instructional Modifications /Accommodations/Differentiation			
Special Education Learners • Vary assignment length • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	**English Language Learners** • Vary assignment length • Utilize oral response • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Assign peer tutors/ work buddies/ note takers • Allow breaks during work periods, between tasks, during testing	**At-Risk Learners** • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Alter format of material on page (type/ highlight/ spacing) • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	**Advanced Learners** • Provide daily assignment list • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use text/ workbooks/ worksheets at an above reading level • Provide individual instruction • Allow breaks during work periods, between tasks, during testing

Unit Vocabulary
Unit Vocabulary:

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
Interdisciplinary Standards **Career Ready Practices** CRP1 Act as a responsible and contributing citizen and employee. CRP2 Apply appropriate academic and technical skills **Financial Literacy** 9.1.8.E.3 Compare and contrast product facts versus advertising claims **Science** NGSS 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen.	**Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3 Use a graphic organizer to organize information about problem or issue.	__✓__ Financial, Economic, Business, & Entrepreneurial Literacy *Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.*	_✓_ Critical Thinking and Problem Solving *Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.* _✓__ Life and Career Skills *Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.* Technologies Literacy __✓_ Communication & Collaboration *Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and problem solving real world situations involving rational numbers.*

Resources
Texts/Materials: *Textbook:*
My Math – McGraw Hill https://www.mheonline.com/mh**mymath/**

Resources
• http://pearsonsuccessnet.com • http://www.brainpopjr.com • http://www.primarygames.com • http://www.abcmouse.com • http://www.starfall.com • http://www.destiny.com • http://www.gamequarium.com • http://www.rubistar.4teachers.orghttp://kinderwebgames.com/ • http://kinderwebgames.com • http://www.njcore.org • http://www.uen.org/commoncore/ Click on the Grade 5 Core Standards for Math to move to a site that offers links for each standard that contain additional examples and explanations of the material. • http://www.ode.state.or.us/search/page/?id=3511 The Mathematics Unpacked Content for Grade 5 offers detailed explanations of the requirements for each standard to use a reference. • http://www.k-5mathteachingresources.com/ • http://illustrativemathematics.org/standards/k8

Unit 2: Understanding Volume and Operations on Fractions	Recommended Duration: November - January
Unit Description: Understand concepts of volume, perform operations with multi-digit whole numbers and with decimals to hundredths, use equivalent fractions as a strategy to add and subtract fractions, apply and extend previous understandings of multiplication and division.	

Essential Questions	Enduring Understandings
• How do you look for and make use of structure when operating with fractions and decimals? • How do you know that your answer make sense?	• The same object can be described by using different measurements. • Number benchmarks are useful for relating numbers and estimating amounts when appropriate. • Representations and operations of rational numbers can help them make sense of real world situations and problems.

Relevant Standards	Learning Goals	Learning Objectives
NJ SLS 5.MD.C.3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement. NJ SLS 5.MD.C.5a. 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. NJ SLS 5.MD.C.5b. 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. NJ SLS 5.MD.C.4. Measure volumes by counting	Learning Goal 1: NJ SLS 5.MD.C.3, NJ SLS 5.MD.C.4 &NJ SLS 5.MD.C.5a-b Measure volume by counting the total number cubic units required to fill a figure without gaps or overlaps Learning Goal 2: NJ SLS 5.MD.C.5a-c Show that the volume of a right rectangular prism found by counting all the unit cubes is the same as the formulas $V = l \times w \times h$ or $V = B \times h$. Learning Goal 3: NJ SLS 5.MD.C.5a-c Apply formulas to solve real world and mathematical problems involving volumes of right rectangular	***Students are able to:*** • count unit cubes in order to measure the volume of a solid. • use unit cubes of centimeters, inches, and/or other units to measure volume. • pack right rectangular prisms with cubes to find volume and multiply side lengths of the right rectangular prism to find volume, showing that they are the same. • pack right rectangular prisms with cubes to find volume and multiply height by the area of the base, showing that they are the same. • explain how both volume formulas relate to

Relevant Standards	Learning Goals	Learning Objectives
unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units. NJ SLS 5.MD.C.5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. NJ SLS 5.MD.C.5a. 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. NJ SLS 5.MD.C.5b. 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. NJ SLS 5.MD.C.5c. 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. NJ SLS 5.NBT.B.5. Fluently multiply multi-digit whole numbers using the standard algorithm.	prisms that have whole number edge lengths. Learning Goal 4: NJ SLS 5.MD.C.5a-c Find the volume of a composite solid figure composed of two non-overlapping right rectangular prisms, applying this strategy to solve real-world problems. Learning Goal 5: NJ SLS 5.NBT.B.5 Fluently multiply multi-digit whole numbers with accuracy and efficiency. Learning Goal 6: NJ SLS 5.NF.A.1 Add and subtract fractions (including mixed numbers) with unlike denominators by replacing the given fractions with equivalent fractions having like denominators Learning Goal 7: NJ SLS 5.NF.A.2 Solve word problems involving adding or subtracting fractions with unlike denominators, and determine if the answer to the word problem is reasonable, using estimations with benchmark fractions. Learning Goal 8: NJ SLS 5.NF.B.3 Interpret a fraction as a division of the numerator by the denominator; solve word problems in which division of whole numbers leads to fractions or mixed numbers as solutions. Learning Goal 9: NJ SLS 5.NF.B.4 For whole number or fraction q, interpret the product (a/b) x	counting the cubes in one layer and multiplying that value by the number of layers (height). • write the volume of an object as the product of three whole numbers. • solve real-world and mathematical problems using the formulas $V = l \times w \times h$ and $V = B \times h$. • find the volume of a composite solid composed of two right rectangular prisms. • produce an equivalent sum (or difference) of fractions with like denominators from the original sum (or difference) of fractions that has unlike denominators. • add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions. • add and subtract fractions, including mixed numbers, with unlike denominators to solve word problems. • represent calculations and solutions with visual fraction models and equations • estimate answers using benchmark fractions and explain whether the answer is reasonable. • estimate answers by reasoning about the size of the fractions and explain whether the answer is reasonable. • represent a fraction as a division statement $(a/b = a \div b)$. • divide whole numbers in order to solve real world problems, representing the quotient as a fraction or a mixed number. • represent word problems involving division of whole numbers using visual fraction models

Relevant Standards	Learning Goals	Learning Objectives
*(benchmarked) NJ SLS 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, 2/3 + 5/4 = 8/12 + 15/12 = 23/1 (in general, a/b + c/d = (ad + bc)/bd).* NJ SLS 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 2/5 + 1/2 = 3* */7, by observing that 3/7 < 1/2.* NJ SLS 5.NF.B.3. Interpret 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, e.g., by using visual fraction models or equations to represent the problem. *For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared*	*q* as *a* parts of a whole partitioned into *b* equal parts added *q* times (e.g. using a visual fraction model).\ Learning Goal 10: NJ SLS5.NF.B.4 Tile a rectangle with unit fraction squares to find the area and multiply side lengths to find the area of the rectangle, showing that the areas are the same.	and equations. • for whole number or fraction *q*, represent $(a/b) \times q$ as *a* parts of a partition of *q* into *b* equal parts [e.g. using a visual fraction model, (3/4) x 5 can be represented by 3 parts, after partitioning 5 objects into 4 equal parts]. • for whole number or fraction *q*, represent $(a/b) \times q$ *as* $a \times q \div b$ [e.g. showing that (2/5) x 3 is equivalent to (2 x 3) ÷ 5]. • from a story context, interpret $(a/b) \times q$ as *a* parts of a partition of *q* into *b* equal parts. • tile a rectangle having fractional side lengths using unit squares of the appropriate unit fraction [e.g. given a 3 ¼ inch x 7 ¾ inch rectangle, tile the rectangle using ¼ inch tiles]. • show that the area found by tiling with unit fraction tiles is the same as would be found by multiplying the side lengths.

Relevant Standards	Learning Goals	Learning Objectives
equally among 4 people each person has a share of size 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 what two whole numbers does your answer lie? NJ SLS 5.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. NJ SLS 5.NF.B.4a. Interpret the product (a/b) × q as a parts 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) × 4 = 8/3, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.)* NJ SLS 5.NF.B.4b. 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.		

Formative Assessments	Summative Assessments	Performance Assessments	Major Activities/ Assignments (required)
• One to one conferencing and anecdotal notes • Rubrics	• Math Message • Self-Assessment • Oral and Slate Assessments	• Math Message • Self-Assessment • Oral and Slate Assessments	• Math Formative Diagnostic Tasks • CSA #2

Formative Assessments	Summative Assessments	Performance Assessments	Major Activities/ Assignments (required)
• Pre/Post RTI benchmark assessments • Differentiated Facts Centers • Essential Questions • Home Link Review • Mental Math and Reflexes • Math Message • Teaching the Lesson (Vocabulary Infused) • Ongoing Learning and Practice • Differentiation Options • Math Boxes • Games (reinforcement of skill) • Reflection - Essential Questions revisited (Exit Slip, Journal, Orally, etc)	• Assessment • Building Background for next unit	• Assessment • Building Background for next unit	

Possible Assessment Modifications /Accommodations			
Special Education Learners	**English Language Learners**	**At-Risk Learners**	**Advanced Learners**
• Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Test study guide • Shortened tasks • Hands-on projects • Tests read aloud • Modified tests	• Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Rephrase test questions/directions • Test study guide with examples • Shortened tasks • Simplify test wording • Hands-on projects • Tests read aloud	• Prior notice of tests • Pace long term projects • Preview test procedures • Test study guide	• Pace long term projects • Individualized testing

Instructional Strategies (refer to *Robert Marzano's* 41 Elements)
• Manipulatives, KWL, academic games, • Mathematic Workstations, • Read Aloud • Model think aloud comprehension strategies • Modeling • Choice Menus • Math logs/journals

Possible Instructional Modifications /Accommodations/Differentiation			
Special Education Learners	**English Language Learners**	**At-Risk Learners**	**Advanced Learners**
• Vary assignment length • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	• Vary assignment length • Utilize oral response • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Assign peer tutors/ work buddies/ note takers	• Read class materials orally • Provide daily assignment list • Provide homework lists • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Alter format of material on page (type/ highlight/ spacing) • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	• Provide daily assignment list • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use text/ workbooks/ worksheets at an above reading level • Provide individual instruction • Allow breaks during work periods, between tasks, during testing

Possible Instructional Modifications /Accommodations/Differentiation			
	• Allow breaks during work periods, between tasks, during testing		

Unit Vocabulary
Essential:

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
Interdisciplinary Standards **Career Ready Practices** CRP4 Communicate clearly and effectively and with reason **Financial Literacy** 9.1.8.E.1 Explain what it means to be a responsible consumer and the factors to consider when making consumer decisions. **Career Exploration** 9.2.8.B.3 Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career. **Science**	Technology **Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding.	__✓__ Financial, Economic, Business, & Entrepreneurial Literacy *Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.*	_✓_ Critical Thinking and Problem Solving *Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.* _✓___ Life and Career Skills *Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation.* Technologies Literacy __✓_ Communication & Collaboration *Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number*

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
NGSS 5-PS1-1 Develop a model to describe that matter is made of particles too small to be seen			*line discussions and problem solving real world situations involving rational numbers.*

Resources

Texts/Materials:

- My Math- McGraw Hill
- Reference Social Studies, Science, Math and Health curricula for other literary connections

- http://pearsonsuccessnet.com
- http://www.brainpopjr.com
- http://www.primarygames.com
- http://www.abcmouse.com
- http://www.starfall.com
- http://www.destiny.com
- http://www.gamequarium.com
- http://www.uen.org/commoncore/ Click on the Grade 5 Core Standards for Math to move to a site that offers links for each standard that contain additional
- examples and explanations of the material.
- http://www.ode.state.or.us/search/page/?id=3511 The Mathematics Unpacked Content for Grade 5 offers detailed explanations of the requirements for each standard to use a reference.
- http://www.k-5mathteachingresources.com/
- http://illustrativemathematics.org/standards/k8

Unit 3: **More Operations on Fractions**	**Recommended Duration: January - March**
Unit Description: Apply and extend previous understandings of multiplication and division, understand the place value system, perform operations with multi-digit whole numbers and with decimals to hundredths, convert like measurement units within a given measurement system	

Essential Questions	**Enduring Understandings**
• How can we model situations using operations with fractions? • How can I check the reasonableness of my answer?	• Visual models help us to represent and interpret the multiplication and division of fractions. • Using multiple methods, we can predict the size of products and quotients of fractions. • Many real-life situations require using numbers that are not whole numbers.

Relevant Standards	**Learning Goals**	**Learning Objectives**
Content Standards: Primary or Power NJ SLS 5.NF.B.4. Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction. NJ SLS 5.NF.B.4b. 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.	Learning Goal 1: NJ SLS 5.NF.B.4b Multiply fractions by whole numbers and fractions by fractions, drawing visual models to represent products, showing *(a/b) x (c/d) = ab(1/bd)*, and creating story contexts. Learning Goal 2: NJ SLS 5.NF.B.5 Explain how a product is related to the magnitude of the factors, including cases in which one factor is a fraction greater than 1 and cases in which one factor is a	***Students are able to:*** • multiply fractional side lengths to find areas of rectangles. • represent fraction products as rectangular areas. • multiply a fraction by a whole number. • multiply a fraction by a fraction, in general, if *q* is a fraction *c/d*, then (*a/b*) *x* (*c/d*) = *a*(*1/b*) × *c*(*1/d*) = *ac* × (*1/b*)(*1/d*) = *ac*(*1/bd*) = *ac/bd.*

Relevant Standards	Learning Goals	Learning Objectives
Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas. NJ SLS 5.NF.B.5. Interpret multiplication as scaling (resizing), by: NJ SLS 5.NF.B.5a. 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. NJ SLS 5.NF.B.5b. 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. NJ SLS 5.NF.B.6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem. NJ SLS 5.NF.B.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions. *(benchmarked)	fraction less than 1. Learning Goal 3: NJ SLS 5.NF.B.6 Solve real-world problems involving multiplication of fractions (including mixed numbers), using visual fraction models or equations to represent the problem. Learning Goal 4: NJ SLS 5.NF.B.7 Divide a unit fraction by a non-zero whole number and interpret by creating a story context or visual fraction model. Learning Goal 5: NJ SLS 5.NF.B.7 Divide a whole number by a unit fraction and interpret by creating a story context or visual fraction model. Learning Goal 6: NJ SLS 5.NF.B.7 Solve real-world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions. Learning Goal 7: NJ SLS 5.NBT.A.2 Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10; represent powers of 10 using whole-number exponents. Learning Goal 8: NJ SLS 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; explain the reasoning used, relating	• compare the size of a product to the size of one of its factors, considering the size of the other factor (at least one factor is a fraction). • explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number. • explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number. • explain that multiplying a given number by a fraction equivalent to 1 does not change the product. • multiply fractions and mixed numbers in order to solve real world problems. • represent the solution to these real world problems with visual fraction models and equations. • use a story context to interpret division of a unit fraction by a whole number. • divide of a unit fraction by a whole number and represent with visual fraction models. • use a story context to interpret division of a whole number by a unit fraction. • divide of a whole number by a unit fraction and represent 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.

Relevant Standards	Learning Goals	Learning Objectives
NJ SLS 5.NF.B.7a. 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) ÷ 4, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that (1/3) ÷ 4 = 1/12 because (1/12) × 4 = 1/3.* NJ SLS 5.NF.B.7b. Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for 4 ÷ (1/5), and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that 4 ÷ (1/5) = 20 because 20 × (1/5) = 4.* NJ SLS 5.NF.B.7c. 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?* NJ SLS 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	the strategy to the written method. Learning Goal 9: NJ SLS 5.MD.A.1 Convert standard measurement units within the same system (e.g., centimeters to meters) in order to solve multi-step problems.	• add and subtract decimals to hundredths using concrete models and drawings. • multiply and divide decimals to hundredths using concrete models and drawings. • add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • relate the strategy to the written method and explain the reasoning used. • 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.

Relevant Standards	Learning Goals	Learning Objectives
exponents to denote powers of 10. NJ SLS 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 to a written method and explain the reasoning used. *(benchmarked) NJ SLS 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.		

• **Formative Assessments**	**Summative Assessments**	**Performance Assessments**	**Major Activities/ Assignments (required)**
• One to one conferencing and anecdotal notes • Rubrics • Pre/Post RTI benchmark assessments • Differentiated Facts Centers • Essential Questions • Home Link Review • Mental Math and Reflexes • Math Message • Teaching the Lesson (Vocabulary Infused) • Ongoing Learning and Practice	• Math Message • Self-Assessment • Oral and Slate Assessments • Assessment • Building Background for next unit	• Essential Questions • Class Directions/Discussion/Questions • Work on Project • Use of rubric and teacher "informal assessment" or checklist • Reflection - Essential Questions revisited (Exit slip, Journal, Orally, etc.)	• Math Formative Diagnostic Tasks • CSA #3

• **Formative Assessments**	**Summative Assessments**	**Performance Assessments**	**Major Activities/ Assignments (required)**
• Differentiation Options • Math Boxes • Games (reinforcement of skill) • Reflection - Essential Questions revisited (Exit Slip, Journal, Orally, etc)			

Possible Assessment Modifications /Accommodations			
Special Education Learners • Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Test study guide • Shortened tasks • Hands-on projects • Tests read aloud • Modified tests	**English Language Learners** • Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Rephrase test questions/directions • Test study guide with examples • Shortened tasks • Simplify test wording • Hands-on projects • Tests read aloud	**At-Risk Learners** • Prior notice of tests • Pace long term projects • Preview test procedures • Test study guide	**Advanced Learners** • Pace long term projects • Individualized testing

Instructional Strategies (refer to *Robert Marzano's* 41 Elements)
• Manipulatives, KWL, academic games, • Mathematic Workstations, • Read Aloud • Model think aloud comprehension strategies

Instructional Strategies (refer to *Robert Marzano's* 41 Elements)
• Modeling • Choice Menus • Math logs/journals Choice Menus • Reading logs/journals

Possible Instructional Modifications /Accommodations/Differentiation			
Special Education Learners • Vary assignment length • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	**English Language Learners** • Vary assignment length • Utilize oral response • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial	**At-Risk Learners** • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Alter format of material on page (type/ highlight/ spacing) • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	**Advanced Learners** • Provide daily assignment list • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use text/ workbooks/ worksheets at an above reading level • Provide individual instruction • Allow breaks during work periods, between tasks, during testing

Possible Instructional Modifications /Accommodations/Differentiation			
	mode materials • Assign preferential seating • Assign peer tutors/ work buddies/ note takers • Allow breaks during work periods, between tasks, during testing		

Unit Vocabulary
Essential:

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
Interdisciplinary Standards **Career Ready Practices** CRP9 Model integrity, ethical leaders hip and effective management **Financial Literacy** 9.1.8.E.3 Compare and contrast product facts versus advertising claims **Career Exploration**	**Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.F.1 Apply digital tools to collect, organize, and analyze data that support a scientific finding.	__✓__ Financial, Economic, Business, & Entrepreneurial Literacy *Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.*	__✓__ Critical Thinking and Problem Solving *Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.* __✓__ Life and Career Skills *Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a*

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
9.2.8.B.3 Evaluate communication, collaboration, and leadership skills that can be developed through school, home, work, and extracurricular activities for use in a career. **Science** NGSS 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			*workplace situation.* Technologies Literacy __✓__ Communication & Collaboration *Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and problem solving real world situations involving rational numbers.*

Resources
Texts/Materials: My Math – McGraw Hill **Materials:** • http://pearsonsuccessnet.com • http://www.brainpopjr.com • http://www.primarygames.com • http://www.abcmouse.com • http://www.starfall.com • http://www.destiny.com • http://www.gamequarium.com • http://www.rubistar.4teachers.org • http://www.uen.org/commoncore/ Click on the Grade 5 Core Standards for Math to move to a site that offers links for each standard that contain additional examples and explanations of the material. • http://www.ode.state.or.us/search/page/?id=3511 The Mathematics Unpacked Content for Grade 5 offers detailed explanations of the requirements

Resources
for each standard to use a reference. • http://www.k-5mathteachingresources.com/ • http://illustrativemathematics.org/standards/k8 • http://www.learner.org/courses/learningmath/number/session9/part_a/

Unit 4: Coordinate Geometry and Classifying Figures	Recommended Duration: March - May
Unit Description: Graph points on the coordinate plane to solve real-world and mathematical problems, analyze patterns and relationships, classify two dimensional figures into categories based on their properties, represent and interpret data, perform operations with multi-digit whole numbers and with decimals to hundredths, apply and extend previous understanding of multiplication and division.	

Essential Questions	Enduring Understandings
• How can we model situations using operations with fractions? • How can I check the reasonableness of my answer?	• Visual models help us to represent and interpret the multiplication and division of fractions. • Using multiple methods, we can predict the size of products and quotients of fractions. • Many real-life situations require using numbers that are not whole numbers.

Relevant Standards	Learning Goals	Learning Objectives
Content Standards: Primary NJ SLS 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	Learning Goal 1: NJ SLS 5.G.A.1 & NJ SLS 5.G.A.2 Represent real world and mathematical problems by graphing points defined by whole number coordinates in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation Learning Goal 2: NJ SLS 5.OA.B.3 Generate two numerical patterns from two given rules, identify the relationship between corresponding terms,	***Students are able to:*** • 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

Relevant Standards	Learning Goals	Learning Objectives
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). NJ SLS 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. NJ SLS 5.OA.A.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 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.* NJ SLS 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.*	create ordered pairs and graph the ordered pairs. Learning Goal 3: NJ SLS 5.G.B.3 & NJ SLS 5.G.B.4 Classify two- dimensional figures in a hierarchy based on properties. Learning Goal 4: NJ SLS 5.MD.B.2 Make a line plot to display a data set in measurements in fractions of a unit (1/2, 1/4, 1/8) and use it to solve problems involving the four operations on fractions with unlike denominators. Learning Goal 5: NJ SLS 5.NBT.B.5 Fluently multiply multi-digit whole numbers with accuracy and efficiency. Learning Goal 6: NJ SLS 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; explain the reasoning used, relating the strategy to the written method. Learning Goal 7: NJ SLS 5.NF.B.7 Solve real world problems involving division of unit fractions by whole numbers or whole numbers by unit fractions.	second terms in each list, etc). • identify the relationship between corresponding terms and write ordered pairs. • graph the ordered pairs. • classify two-dimensional figures (triangles, quadrilaterals) based on shared attributes (e.g. parallel sides, number of sides, angle size, side length, etc.). • arrange the categories/subcategories of figures (e.g. squares, rectangles, trapezoids, etc) in a hierarchy based on attributes. • identify attributes of a two-dimensional shape based on attributes of the categories to which it belongs. • 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. • multiply multi-digit whole numbers with accuracy and efficiency. • add and subtract decimals to hundredths using concrete models and drawings. • multiply and divide decimals to hundredths using concrete models and drawings. • add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. • relate the strategy to the written method and explain the reasoning used. • use a story context to interpret division of a

Relevant Standards	Learning Goals	Learning Objectives
NJ SLS 5.G.B.4. Classify two-dimensional figures in a hierarchy based on properties. NJ SLS 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.* NJ SLS 5.NBT.B.5. Fluently multiply multi-digit whole numbers using the standard algorithm. *(benchmarked) NJ SLS 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 to a written method and explain the reasoning used. *(benchmarked) NJ SLS 5.NF.B.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.*(benchmarked)		unit fraction by a whole number. • use a story context to interpret division of a whole number by a unit fraction. • divide unit fractions by whole numbers to solve real world problems, using visual fraction models and equations to represent the problem.

Relevant Standards	Learning Goals	Learning Objectives
NJ SLS 5.NF.B.7c. 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?*		

Formative Assessments	Summative Assessments	Performance Assessments	Major Activities/ Assignments (required)
• One to one conferencing and anecdotal notes • Rubrics • Pre/Post RTI benchmark assessments • Differentiated Facts Centers • Essential Questions • Home Link Review • Mental Math and Reflexes • Math Message • Teaching the Lesson (Vocabulary Infused) • Ongoing Learning and Practice • Differentiation Options • Math Boxes • Games (reinforcement of skill) • Reflection - Essential Questions revisited (Exit Slip, Journal, Orally, etc)	• Math Message • Self-Assessment • Oral and Slate Assessments • Assessment • Building Background for next unit	• Essential Questions • Class Directions/Discussion/Questions • Work on Project • Use of rubric and teacher "informal assessment" or checklist • Reflection - Essential Questions revisited (Exit slip, Journal, Orally, etc.)	• Math Formative Diagnostic Tasks • CSA #4

Possible Assessment Modifications /Accommodations			
Special Education Learners • Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Test study guide • Shortened tasks • Hands-on projects • Tests read aloud • Modified tests	**English Language Learners** • Limited multiple choice • Prior notice of tests • Extra time- tests • Pace long term projects • Preview test procedures • Rephrase test questions/directions • Test study guide with examples • Shortened tasks • Simplify test wording • Hands-on projects • Tests read aloud	**At-Risk Learners** • Prior notice of tests • Pace long term projects • Preview test procedures • Test study guide	**Advanced Learners** • Pace long term projects • Individualized testing

Instructional Strategies (refer to *Robert Marzano's* 41 Elements)
• Manipulatives, KWL, academic games, • Mathematic Workstations, • Read Aloud • Model think aloud comprehension strategies • Modeling • Choice Menus • Math logs/journals Choice Menus • Reading logs/journals

Possible Instructional Modifications /Accommodations/Differentiation			
Special Education Learners • Vary assignment length • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	**English Language Learners** • Vary assignment length • Utilize oral response • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide assistance/cues for transition between activities • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use multi-sensory modes to reinforce instruction • Use text/ workbooks/ worksheets at a modified reading level • Alter format of material on page (type/ highlight/ spacing) • Utilize audio/recorded books • Utilize graphic/ pictorial mode materials • Assign preferential seating • Assign peer tutors/ work buddies/ note takers • Allow breaks during work periods, between tasks,	**At-Risk Learners** • Read class materials orally • Provide daily assignment list • Provide homework lists • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Alter format of material on page (type/ highlight/ spacing) • Utilize graphic/ pictorial mode materials • Assign preferential seating • Allow breaks during work periods, between tasks, during testing	**Advanced Learners** • Provide daily assignment list • Provide options to obtain & demonstrate knowledge through: alternative projects, interviews, oral reports • Use text/ workbooks/ worksheets at an above reading level • Provide individual instruction • Allow breaks during work periods, between tasks, during testing

Possible Instructional Modifications /Accommodations/Differentiation			
	during testing		

Unit Vocabulary
Essential:

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
Interdisciplinary Standards **Career Ready Practices** CRP6 Demonstrate creativity and innovation. **Financial Literacy** 9.1.8.E.8 Recognize the techniques and effects of deceptive advertising **Career Explorations**	**Technology** 8.1.5.A.1 Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems. 8.1.5.A.3 Use a graphic organizer to organize information about problem or issue. 8.1.5.F.1 Apply digital tools to collect,	__✓__ Financial, Economic, Business, & Entrepreneurial Literacy *Establish an understanding that career-ready individuals take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.*	__✓__ Critical Thinking and Problem Solving *Students engage with real world situations involving rational numbers. Students carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.* __✓__ Life and Career Skills *Students make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a*

Interdisciplinary Connections (Applicable Standards)	Integration of Technology	21st Century Themes	21st Century Skills
9.2.8.B.1 Research careers within the 16 Career Clusters® and determine attributes of career success. **Science** NGSS 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.	organize, and analyze data that support a scientific finding.		*workplace situation.* Technologies Literacy __✓__ Communication & Collaboration *Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. Students collaborate via the integer game, number line discussions and problem solving real world situations involving rational numbers.*

Resources

Texts/Materials:

My Math- McGraw Hill

Reference Social Studies, Science, Math and Health curricula for other literary connections

Materials:

- http://pearsonsuccessnet.com
- http://www.brainpopjr.com
- http://www.primarygames.com
- http://www.abcmouse.com
- http://www.starfall.com
- http://www.destiny.com
- http://www.gamequarium.com
- http://www.uen.org/commoncore/ Click on the Grade 5 Core Standards for Math to move to a site that offers links for each standard that contain additional
- examples and explanations of the material.

Resources
• http://www.ode.state.or.us/search/page/?id=3511 The Mathematics Unpacked Content for Grade 5 offers detailed explanations of the requirements for each standard to use a reference. • http://www.k-5mathteachingresources.com/ • http://illustrativemathematics.org/standards/k8