



**Allamuchy Township School District  
Allamuchy, NJ**

**Mathematics  
Grade 5**

**CURRICULUM GUIDE**

**August 26, 2019**

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**This curriculum may be modified through varying techniques,  
strategies and materials, as per an individual student's  
Individualized Education Plan (IEP).**

**Approved by the Allamuchy Board of Education  
At the regular meeting held on September 23, 2019  
And**

***Aligned with the New Jersey Core Curriculum Content Standards  
And Common Core Content Standards***

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## **Philosophy and Rationale**

Mathematics in fifth grade provides students with opportunities to strengthen their knowledge, skills, and understanding of place value, fractions, decimals, measurement and data, and using the four operations with whole numbers, fractions, and decimals. Students learn to identify and manipulate numbers as they build their problem-solving skills by applying their knowledge to real-world problems. Collaboration with peers and the use of technology allows students to interpret problems in various ways to challenge their thinking about mathematical concepts. Learning and practicing mathematical concepts gives students a range of skills and real-world applications they can use in various aspects of their lives.

## **Mission Statement**

Building on tradition and success, the mission of the Allamuchy Township School District is to foster a caring and creative environment where students grow as learners and citizens while developing 21st century skills. We provide a culture for social emotional learning that contributes to a positive school climate, increased academic success, and a sense of ownership within the community.

## **The Allamuchy Learner**

The Allamuchy Township School District pursues a holistic approach to encouraging the educational growth of every student. We consider each student as an individual with particular strengths and weaknesses, likes and dislikes and varying motivations. The goal of the Allamuchy educational program is to develop young people who are curious, well rounded, knowledgeable, caring, respectful and responsible so that they can evolve into self-sufficient and confident citizens and members of a diverse society.

## Scope and Sequence

### Unit 1: Numbers and Operations in Base Ten

- Understand the place value system.
- Perform operations with multi-digit whole numbers and with decimals to hundredths.

### Unit 2: Operations and Algebraic Thinking

- Write and interpret numerical expressions.
- Analyze patterns and relationships.

### Unit 3: Numbers and Operations - Fractions

- Use equivalent fractions as a strategy to add and subtract fractions.
- Apply and extended previous meanings of multiplication and division to multiply and divide fractions.

### Unit 4: Measurement and Data

- Convert like measurement units within a given measurement system.
- Represent and interpret data.
- Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

### Unit 5: Geometry

- Graph points on the coordinate plane to solve real-world and mathematical problems.
- Classify two-dimensional figures into categories based on their properties.

## Unit 1

### Topic: Numbers and Operations in Base Ten

#### Content Standards

**5.NBT.A1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and  $1/10$  of what it represents in the place to its left.

**5. NBT.A.2** Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.

**5.NBT.A.3** Read, write, and compare decimals to thousandths.

**5.NBT.A.3.A** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g.,  $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$ .

**5.NBT.A.3.B** Compare two decimals to thousandths based on meanings of the digits in each place, using  $>$ ,  $=$ , and  $<$  symbols to record the results of comparisons.

**5.NBT.A.4** Use place value understanding to round decimals to any place.

**5.NBT.B.5** Fluently multiply multi-digit whole numbers using the standard algorithm.

**5.NBT.B.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

**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.

#### Essential Questions

- How can place value knowledge and other strategies be used to to add and subtract whole numbers and decimals?
- How is multiplying and dividing decimals similar to multiplying and dividing whole numbers?

#### Enduring Understandings

- Each place value in a multi-digit whole number or a decimal is ten times greater than the value of the place to its right.
- Place value knowledge, models, and the Distributive Property are strategies that can be used to multiply and divide whole numbers.
- Remainders have meaning, and they must be interpreted to solve a word problem involving division.

- Place value knowledge, models, estimation, basic facts and patterns, and properties can be used to add, subtract, multiply, and divide decimals.

### Knowledge and Skills (SWBAT embedded course proficiencies)

- Read and write whole numbers through the millions.
- Compare and order whole numbers through millions.
- Use models to relate decimals to fractions.
- Represent fractions that name tenths, hundredths, and thousandths as decimals.
- Understand place value in decimal numbers.
- Read and write decimals in standard form, expanded form, and word form.
- Compare decimals.
- Order whole numbers and decimals.
- Solve problems using the four-step plan.
- Find the prime factorization of numbers.
- Explore patterns in prime factorization.
- Use powers and exponents in expressions.
- Use basic facts and patterns to multiply multiples of 10, 100, and 1,000 mentally.
- Make a table to solve problems.
- Explore multiplication by using area models.
- Use the Distributive Property to multiply mentally.
- Estimate products by using rounding and compatible numbers.
- Multiply up to a three-digit number by a one-digit number.
- Multiply up to a three-digit number by a two-digit number.
- Understand how division and multiplication are related.
- Explore division using models.
- Carry out division with and without remainders.
- Use basic facts and patterns to divide multiples of 10, 100, and 1,000 mentally.
- Estimate quotients by using rounding and compatible numbers.
- Explore division with greater numbers using models.
- Divide using the Distributive Property and partial quotients.
- Divide up to a four-digit number by a one-digit number.
- Understand how to place the first digit in a quotient.
- Solve division problems that result in quotients that have zeros.
- Explore how to interpret the remainder in a division problem.
- Interpret the remainder in a division problem.
- Identify extra information or missing information needed to solve a problem.
- Estimate quotients with two-digit divisors.
- Explore dividing by two-digit divisors using models.
- Divide up to a three-digit number by a two-digit divisor.
- Adjust the quotient when the estimated digit is too high or too low.
- Divide greater numbers by multi-digit divisors.
- Solve problems by solving a simpler problem.
- Round decimals.
- Estimate sums and differences by rounding.
- Solve problems by using an estimate or an exact answer.
- Explore adding decimals using base-ten blocks.
- Explore adding decimals using models.
- Add decimals.
- Use the Associative, Commutative, and Identity Properties to add whole numbers and decimals mentally.

- Explore subtracting decimals using base-ten blocks.
- Explore subtracting decimals using models.
- Subtract decimals.
- Estimate products of whole numbers and decimals.
- Explore multiplying decimals by whole numbers.
- Multiply decimals by whole numbers.
- Explore using decimal models to multiply decimals.
- Multiply decimals by decimals.
- Multiply decimals by powers of ten.
- Solve problems by looking for a pattern.
- Use the Associative, Commutative, and Identity Properties to multiply mentally.
- Estimate quotients of decimals and whole numbers.
- Explore dividing decimals by whole numbers.
- Divide decimals by whole numbers.
- Explore using models to divide decimals by decimals.
- Divide decimals by decimals.
- Divide decimals by powers of ten.

## **Stage 2: Evidence of Understanding, Learning Objectives and Expectations**

**Benchmarks** (embedded student proficiencies)

**Assessment Methods** (formative, summative, other evidence and/or student self- assessment)

- Teacher observation
- Small-group instruction
- Homework and Independent Practice Pages
- Common Core Quick Check Quizzes
- Am I Ready?
- Check My Progress
- Online Self-Check Quizzes
- Chapter Test
- Standardized Test Practice
- Vocabulary Test
- Oral Assessment
- eAssessment
- Teacher-made assessments and projects
- “Organize a Class Party” unit project, Chapters 3-4 (My Math website)
- “Setting Up a Class Store” unit project, Chapter 5 (My Math website)

## **Stage 3: Learning Plan** (Same for all units)

During this unit, students will be engaged through multiple means of instruction in whole-group, small-group, and partner-learning settings. Students will participate in a variety of types of instructional activities, and various assessment methods will be utilized to check for student understanding and concept mastery. Instruction will be differentiated to meet all students’ needs through written, auditory, visual, and kinesthetic components incorporated into each lesson. Reteach and enrichment worksheets and resources provided through the My Math series will be utilized to ensure that instruction and practice is provided on an appropriate level for each student.

Students will practice the 21st Century Skills of Communication and Collaboration, Critical Thinking and Problem Solving, and Creativity and Innovation, as they collaborate with peers, brainstorm ideas, and explore possible solutions to the problems presented in each lesson. Students will have

opportunities to utilize technology and virtual resources by participating in online games and activities provided by the My Math series. Daily interactive Smart Board lessons with virtual manipulatives incorporate technology into each of the unit's lessons. Students will have the opportunity to watch online videos, which model examples of the unit's concepts. The students are also able to explore online homework help and other resources at home through the My Math website.

**Time Allotment:** September-January

**Resources** (Same for all units)

- McGraw Hill My Math
- Student workbooks
- Interactive SmartBoard lessons
- Reteach and Enrich worksheets
- Online math games and videos
- Teacher-made/acquired worksheets and activities



## Unit 2

### Topic: Operations and Algebraic Thinking

#### Content Standards

**5.OA.A.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

**5.OA.A.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation “add 8 and 7, then multiply by 2” as  $2 \times (8 + 7)$ . Recognize that  $3 \times (18932 + 921)$  is three times as large as  $18932 + 921$ , without having to calculate the indicated sum or product.*

**5.OA.B.3** Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered 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.*

**5.G.A.1** Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

**5.G.A.2** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

#### Essential Questions

- How can I use patterns to solve problems?

#### Enduring Understandings

- The order of operations, patterns and sequences, and plotting points on a grid are strategies that can be used to solve real-world and mathematical problems.

#### Knowledge and Skills (SWBAT embedded course proficiencies)

- Write and evaluate numerical expressions.
- Use the order of operations to evaluate expressions.
- Use numbers and operation symbols to write verbal phrases as numerical expressions.
- Solve problems by working backward.
- Generate numerical patterns and identify pattern relationships.
- Identify and extend patterns and sequences.
- Plot points on a grid to solve real-world problems.
- Graph points on a coordinate plane to solve real-world and mathematical problems.

- Graph ordered pairs on a coordinate plane to solve problems involving two numerical patterns.

## **Stage 2: Evidence of Understanding, Learning Objectives and Expectations**

**Benchmarks** (embedded student proficiencies)

**Assessment Methods** (formative, summative, other evidence and/or student self- assessment)

- Teacher observation
- Small-group instruction
- Homework and Independent Practice Pages
- Common Core Quick Check Quizzes
- Am I Ready?
- Check My Progress
- Online Self-Check Quizzes
- Chapter Test
- Standardized Test Practice
- Vocabulary Test
- Oral Assessment
- eAssessment
- Teacher-made assessments and projects
- “IMPACT Project: Find a Graph,” Chapter 7 (My Math website)
- “Expressions Card Game” unit project, Chapter 7 (My Math website)

**Time Allotment:** February

## Unit 3

### Topic: Numbers and Operations - Fractions

#### Content Standards

**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,  $2/3 + 5/4 = 8/12 + 15/12 = 23/12$ . (In general,  $a/b + c/d = (ad + bc)/bd$ .)*

**5.NF.A.2** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result  $2/5 + 1/2 = 3/7$ , by observing that  $3/7 < 1/2$ .*

**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 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?*

**5.NF.B.4** Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

**5.NF.B.4.A** Interpret the product  $(a/b) \times q$  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  $(2/3) \times 4 = 8/3$ , and create a story context for this equation. Do the same with  $(2/3) \times (4/5) = 8/15$ . (In general,  $(a/b) \times (c/d) = ac/bd$ .)*

**5.NF.B.4.B** Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

**5.NF.B.5** Interpret multiplication as scaling (resizing), by:

**5.NF.B.5.A** Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication.

**5.NF.B.5.B** Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence  $a/b = (n \times a)/(n \times b)$  to the effect of multiplying  $a/b$  by 1.

**5.NF.B.6** Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

**5.NF.B.7** Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.

**5.NF.B.7.A** Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. *For example, create a story context for  $(1/3) \div 4$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $(1/3) \div 4 = 1/12$  because  $(1/12) \times 4 = 1/3$ .*

**5.NF.B.7.B** Interpret division of a whole number by a unit fraction, and compute such quotients. *For example, create a story context for  $4 \div (1/5)$ , and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that  $4 \div (1/5) = 20$  because  $20 \times (1/5) = 4$ .*

**5.NF.B.7.C** Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. *For example, how much chocolate will each person get if 3 people share  $1/2$  lb of chocolate equally? How many  $1/3$ -cup servings are in 2 cups of raisins?*

### Essential Questions

- How are factors and multiples helpful in solving problems?
- What strategies can be used to add, subtract, multiply, and divide fractions?

### Enduring Understandings

- A fraction can be interpreted as division of the numerator by the denominator.
- Fractions can be compared by making equivalent fractions with the least common denominator.
- A fraction can be represented as an equivalent decimal.
- Unlike fractions can be added or subtracted by making equivalent fractions with common denominators.
- A part of a number can be found by multiplying by a fraction.
- Bar diagrams can be used to divide whole numbers by unit fractions and unit fractions by whole numbers.

### Knowledge and Skills (SWBAT embedded course proficiencies)

- Solve word problems by interpreting a fraction as division of the numerator by the denominator.
- Determine the common factors and the greatest common factor of a set of numbers.
- Generate equivalent fractions by writing a fraction in simplest form.
- Guess, check, and revise to solve problems.
- Determine the common multiples and the least common multiple of a set of numbers.
- Compare fractions by using the least common denominator.
- Explore how to use models and fraction equivalence to write fractions as decimals.
- Use fraction equivalence to write fractions as decimals.
- Use number lines and benchmark fractions, such as  $1/2$ , to round fractions.
- Add like fractions and solve word problems involving the addition of like fractions.
- Subtract like fractions and solve word problems involving the subtraction of like fractions.
- Use models to add unlike fractions.
- Add unlike fractions and solve word problems involving the addition of unlike fractions.

- Use models to subtract unlike fractions.
- Subtract unlike fractions and solve word problems involving the subtraction of unlike fractions.
- Solve problems by determining reasonable answers.
- Use number sense and benchmark fractions to estimate sums and differences.
- Explore adding mixed numbers using models.
- Add mixed numbers and solve word problems involving the addition of mixed numbers.
- Subtract mixed numbers and solve word problems involving the subtraction of mixed numbers.
- Use fraction equivalence to subtract with renaming.
- Explore how to find part of a number.
- Estimate products of fractions using compatible numbers and rounding.
- Explore multiplying whole numbers and fractions using models.
- Multiply whole numbers and fractions.
- Explore using models to multiply a fraction by a fraction.
- Multiply fractions.
- Multiply mixed numbers.
- Interpret multiplication of fractions as scaling.
- Divide whole numbers by unit fractions using models.
- Use bar diagrams to divide whole numbers by unit fractions.
- Use bar diagrams to divide unit fractions by whole numbers.
- Solve problems by drawing a diagram.

## **Stage 2: Evidence of Understanding, Learning Objectives and Expectations**

**Benchmarks** (embedded student proficiencies)

**Assessment Methods** (formative, summative, other evidence and/or student self- assessment)

- Teacher observation
- Small-group instruction
- Homework and Independent Practice Pages
- Common Core Quick Check Quizzes
- Am I Ready?
- Check My Progress
- Online Self-Check Quizzes
- Chapter Test
- Standardized Test Practice
- Vocabulary Test
- Oral Assessment
- eAssessment
- Teacher-made assessments and projects
- “Making and Grading Your Own Test” unit project, Chapter 8 (My Math website)
- “Make a Furniture Floor Plan” unit project, Chapter 9 (My Math website)

**Time Allotment:** March-April

## Unit 4

### Topic: Measurement and Data

#### Content Standards

**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.

**5.MD.B.2** Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). 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.*

#### Essential Questions

- How can measurement conversions help me solve real-world problems?

#### Enduring Understandings

- Different customary and metric units are used to measure length, capacity, mass, and weight.
- Converting measurements can help make the meaning of a measurement easier to understand.

#### Knowledge and Skills (SWBAT embedded course proficiencies)

- Measure length to the nearest half inch and quarter inch.
- Convert measurements of length within the customary system.
- Solve problems by using logical reasoning.
- Estimate the weight of objects and use a balance to measure the weight of objects.
- Convert measurements of weight within the customary system.
- Estimate and measure the capacity of liquids.
- Convert measurements of capacity within the customary system.
- Display measurement data in fractions of a unit on a line plot and solve real-world problems.
- Measure the length of objects to the nearest centimeter and millimeter.
- Convert measurements of length within the metric system.
- Estimate the mass of objects and use a balance to measure the mass of objects.
- Convert measurements of mass within the metric system.
- Convert measurements of capacity within the metric system.

### **Stage 2: Evidence of Understanding, Learning Objectives and Expectations**

#### Benchmarks (embedded student proficiencies)

#### Assessment Methods (formative, summative, other evidence and/or student self- assessment)

- Teacher observation
- Small-group instruction
- Homework and Independent Practice Pages
- Common Core Quick Check Quizzes
- Am I Ready?
- Check My Progress

- Online Self-Check Quizzes
- Chapter Test
- Standardized Test Practice
- Vocabulary Test
- Oral Assessment
- eAssessment
- Teacher-made assessments and projects
- “Tile-Method Measurements” unit project, Chapter 11 (My Math website)

**Time Allotment:** May

## Unit 5

Topic: Geometry

Content

Standards:

**5.G.B.3** Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.

**5.G.B.4** Classify two-dimensional figures in a hierarchy based on properties.

**5.MD.C.3** Recognize volume as an attribute of solid figures and understand concepts of volume measurement.

**5.MD.C.3.A** A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.

**5.MD.C.3.B** A solid figure which can be packed without gaps or overlaps using  $n$  unit cubes is said to have a volume of  $n$  cubic units.

**5.MD.C.4** Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units.

**5.MD.C.5** Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.

**5.MD.C.5.A** Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.

**5.MD.C.5.B** Apply the formulas  $V = l \times w \times h$  and  $V = B \times h$  for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.

**5.MD.C.5.C** Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.

### Essential Questions

- How does geometry help me solve problems in everyday life?

### Enduring Understandings

- Two-dimensional and three-dimensional figures can be classified according to their attributes.
- A protractor can be used to measure angles.
- The volume of a rectangle prism can be found by using the formula:  $V = l \times w \times h$ .
- Multiplication and addition are both used to find the volume of composite figures.



## Knowledge and Skills (SWBAT embedded course proficiencies)

- Classify two-dimensional figures based on properties.
- Measure the sides and angles of triangles.
- Classify triangles based on attributes, such as side measures and angle measures.
- Measure the sides and angles of quadrilaterals.
- Classify quadrilaterals based on attributes, such as congruent sides, parallel sides, and right angles.
- Build nets and explore properties of three-dimensional figures.
- Describe properties of three-dimensional figures.
- Use models to find the volume of rectangular prisms.
- Use volume formulas to find the volume of rectangular prisms.
- Use models to build composite figures and find the volume of composite figures.
- Find the volume of composite figures by relating volume to the operations of multiplication and addition.
- Make a model to solve problems.

## **Stage 2: Evidence of Understanding, Learning Objectives and Expectations**

### Benchmarks (embedded student proficiencies)

### Assessment Methods (formative, summative, other evidence and/or student self- assessment)

- Teacher observation
- Small-group instruction
- Homework and Independent Practice Pages
- Common Core Quick Check Quizzes
- Am I Ready?
- Check My Progress
- Online Self-Check Quizzes
- Chapter Test
- Standardized Test Practice
- Vocabulary Test
- Oral Assessment
- eAssessment
- Teacher-made assessments and projects
- “Design a Fish Aquarium” unit project, Chapter 12 (My Math website)

### **Time Allotment:** June

## **Modifications and Accommodations for all units:**

### **For students receiving services under IDEA:**

- Models and/or manipulatives; Enlarged graph paper; Number line; Multiplication and Division table
- Small group instruction
- Hands on activities
- Visual cues
- Highlighted instructions/keywords and/or computation signs
- Reworded questions in simpler language
- Provision of calculator and/or number line for math tests
- Word bank of choices for answers to test questions
- Modified workload or length of assignments/tests
- Modified time demands
- Pass/no pass option
- Modified grades based on IEP

### **For students receiving services under Section 504 or Students at Risk:**

- Models and/or manipulatives; Enlarged graph paper; Number line; Multiplication and Division table
- Small group instruction
- Hands on activities
- Visual cues
- Highlighted instructions/keywords and/or computation signs
- Reworded questions in simpler language
- Provision of calculator and/or number line for math tests
- Word bank of choices for answers to test questions
- Modified workload or length of assignments/tests
- Modified time demands
- Pass/no pass option
- Modified grades based on IEP

### **For English Language Learner students:**

- Simplified Instruction (written and verbal)
- Simplified directions
- Provide notes in advance
- Online Dictionary
- Manipulatives
- Use lots of visuals
- Use physical activity; model, role-play
- Teacher modeling
- Partner talk
- Repeat/Rephrase often
- Alternate Responses / Nonverbal responses
- Prompts
- Vocabulary banks
- Extended Time
- Use lower level materials when appropriate

### **For Gifted and Talented students:**

- Differentiated curriculum for the gifted learner.
- Flexible groupings of students to facilitate differentiated instruction and curriculum.
- Centers / Interest centers
- Small group enrichment instruction or activities
- Active classroom discussion
- Challenging problem solving situations
- Independent, innovative oral and written presentations
- Independent writing and research
- Learning log
- Extension activities

## **New Jersey Core Curriculum and Common Core Content Standards**

<http://www.state.nj.us/education/cccs/>

### **Integration of 21<sup>st</sup> Century Theme(s)**

The following websites are sources for the following 21<sup>st</sup> Century Themes and Skills:

<http://www.nj.gov/education/code/current/title6a/chap8.pdf>

<http://www.p21.org/about-us/p21-framework> .

<http://www.state.nj.us/education/cccs/standards/9/index.html>

### **21st Century Interdisciplinary Themes (into core subjects)**

- Global Awareness
- Financial, Economic, Business and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy

### **Learning and Innovation Skills**

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

### **Information, Media and Technology Skills**

- Information Literacy
- Media Literacy
- ICT (Information, Communications and Technology) Literacy

### **Life and Career Skills**

- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

### **Integration of Digital Tools**

- Classroom computers/laptops/Chromebooks
- Technology Lab
- Voice amplification device
- Other software programs