| **Topic: 5th Grade: Place Value** | **Time:** September – 3 weeks Expanded Time: March - 1 week |
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| **Essential Questions: How does understanding the numerical value of a number help you in everyday life?** | |

| Performance Indicators | Guided Questions | Essential Knowledge & Skills | Classroom Ideas | Assessment Ideas |
|---|---|---|---|---|
| 5.N.3<br><br>5.N.1<br><br>5.N.27<br><br>5.PS.22<br><br>5.N.2<br><br>5.PS.15<br><br>5.N.8<br><br>5.PS.6<br><br>5.PS.13<br><br>5.N.10 | When given a specific number in the ones, thousands, or millions period, how can you determine the value of an individual digit?<br><br>How do you read and write whole numbers up to hundred millions?<br><br>What strategies are used to round off a number?<br><br>How can rounding and estimation be used to determine reasonable answers when solving problems?<br><br>What strategies are used to compare and order whole numbers to millions?<br><br>How can making lists and charts using numerical order help to solve problems?<br><br>How do you read, write, and order decimals in tenths, hundredths, and thousandths?<br><br>How can pictures and diagrams be used to identify and write equivalent decimals?<br><br>How can base 10 models be used to identify equivalent decimal values?<br><br>How do you compare and order decimals according to their numerical value? | Understand the place value structure of the base 10 number system:<br>10 ones = 1 ten<br>10 tens = 1 hundred<br>10 hundreds = 1 thousand<br>10 thousands = 1 ten thousand<br>10 ten thousands = 1 hundred thousand<br>10 hundred thousands = 1 million<br><br>Read and write whole numbers to millions<br><br>Use rounding off to estimate in order to determine reasonable answers<br><br>Discuss whether a solution is reasonable in the context of the original problem.<br><br>Compare and order numbers to millions.<br><br>Make organized lists or charts to solve numerical problems.<br><br>Read, write and order decimals to thousandths.<br><br>Translate from a picture/diagram to a numeric expression<br><br>Model problems with picture/diagrams of physical objects.<br><br>Compare decimals using <,>, or = | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of place value:**<br><br>Use paper and pencil and blackboard to model place value.<br><br>Use the following tools to teach and practice:<br>• place value chart for demonstration<br>• individual place value charts for practice<br>• Quizmo game.<br>• base 10 blocks as manipulatives. | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

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| Connections to Text (Resources) Harcourt Math Textbook – Unit 1, Chapters 1 and 2; Supplemental resources in place value classroom folder; Harcourt Brace Manipulative Kit |
| Connections to Technology: Harcourt Brace Mega Math Program, School Island |
| Key Vocabulary: place value period, decimal, tenth, hundredth, thousandth, equivalent decimal, round off, estimate |

| **Topic: 5th Grade: Adding and Subtracting Whole Numbers and Decimals** |
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| **Essential Questions: How do you use addition and subtraction of whole numbers and decimals to help you solve problems in everyday life?** |

| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills SWBAT:** | **Classroom Ideas (Instructional Strategies)** | **Assessment Ideas (Evidence of Learning)** |
|---|---|---|---|---|
| 5.N.24 | How can you use rounding off to estimate when adding and subtracting? | Use rounding skills to estimate sums and differences | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of adding and subtracting whole numbers and decimals:**<br><br>Use paper and pencil and blackboard to model addition and subtraction of whole numbers and decimals.<br><br>Use the following tools for practice:<br>• dry erase boards<br>• Yahtzee game<br>• flash cards | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |
| 5.N.27 | How can you use estimation to determine reasonable answers in addition and subtraction? | Justify the reasonableness of answers using estimation | | |
| 5.PS.22 | How do you determine reasonable answers in addition and subtraction word problems? | Determine whether a solution is reasonable in the context of the original problem | | |
| 5.N.23 | How do you add and subtract whole numbers up to six digits? | Correctly compute addition and subtraction facts | | |
| 5.N.23 | How do you add and subtract decimal numbers to the thousandths place? | Use place value skills to regroup when adding and subtracting | | |
| | How do you check the accuracy of a sum or difference? | Use inverse operations to check accuracy of answers (addition to check subtraction and subtraction to check addition) | | |
| 5.N.23 | How do you determine the best method to use when performing operations? | Use variety of strategies to add and subtract ,including mental math or paper and pencil | | |

| **Connections to Text (Resources) Harcourt Math Textbook – Unit 1, Chapter 3 Time: September/October - 2 weeks**<br>**Supplemental resources in addition and subtraction classroom folders Review Time: March – 1 week**<br>**Harcourt Brace Manipulative Kit** |
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| **Connections to Technology: Harcourt Brace Mega Math Program, School Island** |
| **Key Vocabulary: estimate, front-end estimation, round, difference, sum, inverse operation** |

| **Topic: 5th Grade: Algebra** | **Essential Questions: How can algebraic expressions, equations, and formulas be used as problem solving tools?** | | | |
|---|---|---|---|---|
| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills** | **Classroom Ideas** | **Assessment Ideas** |
| 5.A.2 | How do you use numerical and algebraic expressions to represent words? | Translate simple verbal expressions into algebraic expressions | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of using algebraic expressions and equations:**<br><br>Model and practice writing algebraic expressions, equations, and inequalities using:<br><br>• blackboard<br>• individual whiteboards<br>• paper and pencil<br><br>Use everyday situations to demonstrate algebraic expressions and inequalities | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |
| 5.A.4 | How do you use simple algebraic equations to solve problems? | Solve simple one-step equations using basic whole-number facts | | |
| 5.A.3 | How do you solve an equation containing one variable? | Substitute assigned values into variable expressions and evaluate using order of operations | | |
| 5.PS.7 | What factors determine if an algebraic expression is an inequality? | Represent problem situations verbally, numerically, algebraically, and/or graphically. | | |
| 5.N. 18 | How do you use order of operations to evaluate expressions? | Use the order of operations procedure to solve equations (PMDAS) | | |
| 5.A.7 | What strategies can be used to explain a given pattern algebraically? | Recognize a number pattern and use it to continue the sequence | | |
| 6.N.2 (Foundation for 6th) | | Use words or algebraic expressions to explain a pattern | | |
| | How can commutative and associative properties of addition and multiplication be used to solve equations? | Define and identify the commutative and associative properties of addition and multiplication | | |
| 6.N.3 (Foundation for 6th) | | | | |
| | How can distributive property of multiplication be used to solve equations? | Define and identify the distributive property of multiplication over addition | | |

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| **Connections to Text (Resources)** **Harcourt Math Textbook – Unit 1, Chapter 4; Unit 4, Chapter 12; Unit 7, Chapter 22**<br>**Supplemental resources in algebra classroom folder** | **Time: October – 1 week**<br>**December – 1 week**<br>**March – 2 weeks**<br>**May – 3 days** |
| **Connections to Technology: Harcourt Brace Mega Math Program, School Island** | |
| **Key Vocabulary: expression, variable, constant, equation, solution, inequality, evaluate, commutative property, associative property, distributive property, compensation, order of operations** | |

| **Topic: 5th Grade: Division of whole numbers and decimals** |
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| **Essential Questions: How do you use division of whole numbers and decimals in everyday life?** |

| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills SWBAT:** | **Classroom Ideas (Instructional Strategies)** | **Assessment Ideas** |
|---|---|---|---|---|
| 5.N.17<br>5.N.23<br>5.A.7 | What strategies can be used when dividing whole numbers with a multi-digit dividend and a one digit divisor?<br><br>What strategies can be used when dividing whole numbers with a multi-digit dividend and a two digit divisor?<br><br>What strategies can be used to divide a decimal number by a whole number?<br><br>How can using estimation when solving division problems help you determine if your answer is reasonable? | Use multiplication facts to make a reasonable guess for a quotient<br><br>Use division, multiplication, and subtraction operations to solve division problems<br><br>Recognize the need for and use zero as a place holder in a quotient<br><br>Use multiplication as an inverse operation to check the accuracy of an answer<br><br>Recognize where a decimal point will be placed in the quotient<br><br>Represent a remainder as a decimal by adding zeros to the dividend and extending the quotient<br><br>Use rounding skills to decide if a solution is reasonable | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of division:**<br><br>Use paper and pencil and blackboard to model division of whole numbers and decimals.<br><br>Use the following tools for instruction and practice:<br>• Quizmo game<br>• graph paper<br>• division wraps<br><br>Use the following strategies for estimating quotients when using two digit divisors:<br>• rounding off divisor to multiple of ten<br>• use front end estimation of divisor<br>• always use five as first guess and work up or down | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

| **Connections to Text (Resources) Harcourt Math Textbook – Unit 4, Chapter 9, 10, 11 ; Supplemental resources in division value classroom folder**<br>**Harcourt Brace Manipulative Kit** **Time: November – 3 weeks**<br>**Review: April – 1 week** |
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| **Connections to Technology: Harcourt Brace Mega Math Program, School Island** |
| **Key Vocabulary: dividend, divisor, quotient, remainder** |

| **Topic: 5th Grade: Fraction Concepts and Operations** |
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| **Essential Questions:**<br>**How does the understanding of fraction concepts apply to everyday life?**<br>**How can fraction concepts be used to solve problems in everyday life?** |

| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills SWBAT:** | **Classroom Ideas (Instructional Strategies)** | **Assessment Ideas (Evidence of Learning)** |
|---|---|---|---|---|
| 5.N.17<br>5.N.14<br>5.N.15<br>5.N.12<br>5.N.4<br>5.N.19<br>5.N.20<br>5.N.5 and 5.N.9 and 5.N.27<br>5.N.13<br>5.N.21<br>5.N.22 | What strategies can be used to divide three digit numbers by one and two digit numbers?<br><br>How do you find the factors of any given whole number?<br><br>How do you find common factors and the greatest common factor of a given set of numbers?<br><br>How do you identify prime and composite numbers?<br><br>How do you determine if two fractional numbers are equivalent?<br><br>How do you write fractions in simplest form?<br><br>How do you rename an improper fraction as a mixed number?<br><br>How do you rename a mixed number as an improper fraction?<br><br>What strategies can be used to compare and order fractions and mixed numbers of differing values? | Use divisibility rules to determine which quotients are viable<br><br>Determine the factors of a given whole number<br><br>Determine common factors of a given set of numbers<br><br>Using common factors, determine the greatest common factor of a given set of numbers<br><br>Recognize that some numbers are only divisible by 1 and themselves (are prime) and that others have multiple divisors (are composite)<br><br>Recognize when two fractions are equal in value<br><br>When given a fraction, create another fraction that is equal in value<br><br>Use common factors and the greatest common factor to determine when a fraction is in simplest form<br><br>Use division skills to convert an improper fraction to a mixed number<br><br>Use multiplication and addition skills to convert a mixed number to an improper fraction | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of fraction concepts and operations:**<br><br>Use paper and pencil and blackboard to model fraction concepts and operations.<br><br>Use the following manipulative tools to demonstrate and practice:<br><br>• number lines<br>• fraction bars<br>• fraction pieces<br>• individual white boards<br>• equivalent fraction chart<br>• bulletin board aids<br>• fraction flash cards | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

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| | How do you find multiples and the least common multiple of a given set of numbers?<br><br>What strategies can be used to add and subtract fractions with like denominators?<br><br>What strategies can be used to add and subtract mixed numbers with like denominators? | Use estimation to determine where a fraction would be placed on a number line<br><br>Recognize the ascending value of fractions or mixed numbers with unlike denominators on a number line<br><br>Use less than, greater than, and equal symbols to compare the value of a given set of fractions or mixed numbers<br><br>Place a given set of fractions or mixed numbers in value order from least to greatest or greatest to least<br><br>Generate a list of multiples for any given whole number<br><br>Use lists of multiples to determine the common multiples and the least common multiple of a given set of numbers<br><br>Use concepts of least common multiple, greatest common factor, simplest terms, and equivalent fractions when solving problems<br><br>Add and subtract a given set of fractions with like denominators<br><br>Add and subtract a given set of mixed numbers with like denominators | | |

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| **Connections to Text (Resources) Harcourt Math Textbook – Units 5 and 6, Chapters 13, 14, 15, 16, and 17**<br>**Supplemental resources in fraction classroom folder**<br>**Harcourt Brace Manipulative Kit** **Time: December / January - 5 weeks**<br>**Review: April and May – 1 week each** |
| **Connections to Technology: Harcourt Brace Mega Math Program, School Island** |
| **Key Vocabulary: fraction, numerator, denominator, proper fraction, improper fraction, mixed number, divisible, greatest common factor, least common multiple, simplest terms, simplify, prime number, composite number, equivalent fractions, least common denominator** |

| **Topic: Geometry Unit** |
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| **Essential Questions:**<br>**How are geometric shapes used in everyday life?**<br>**How can you tell the difference between two and three dimensional figures?**<br>**How can the identification and measurement of geometric shapes aid you in problem solving?** |

| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills (SWBAT):** | **Classroom Ideas (Instructional Strategies)** | **Assessment Ideas** |
|---|---|---|---|---|
| 4.G.7<br>4.G.6<br>4.G.8<br>5.G.6<br>5.M.8<br>5.G.7<br>4.G.1<br>5.G.4<br>5.G.5<br>5.G.2<br>5.G.9<br>5.G.3 (Foundation for 6th)<br>5.G.11<br>5.PS.13<br>5.A.8<br>5.G.1 | What factors determine if a geometric figure is a point, a ray, a line, a line segment, or a plane?<br><br>What factors determine if a pair of lines is intersecting, parallel, or perpendicular?<br><br>What factors determine if an angle is acute, right, straight, or obtuse?<br><br>What factors determine if a triangle is acute, obtuse, or right?<br><br>What factors determine if a triangle is scalene, equilateral, or isosceles?<br><br>How is a protractor used as a tool to create and measure angles?<br><br>How does knowing the sum of interior angles of a triangle aid in calculating the measurement of a missing angle?<br><br>What factors are used to identify triangles, quadrilaterals, pentagons, hexagons, and octagons?<br><br>What factors determine if a quadrilateral is a square, a | Draw and identify points, rays, lines, line segments, and planes<br><br>Draw and identify intersecting, parallel, and perpendicular lines<br><br>Classify, draw, and identify angles as acute, obtuse, straight, and right<br><br>Classify, draw, and identify triangles as acute, obtuse, or right as defined by their angles<br><br>Classify, draw, and identify triangles as scalene, equilateral, and isosceles as defined by their sides<br><br>Measure and draw angles using a protractor<br><br>Know that the sum of the interior angles of a triangle equals 180 degrees and be able to calculate the measurement of a missing angle<br><br>Identify polygons by number of sides and angles<br><br>Classify quadrilaterals by properties of their angles and sides<br><br>Know that the sum of the interior | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of geometry:**<br><br>Use paper and pencil and blackboard to model drawing and naming geometric figures.<br><br>Use rulers and protractors as tools to draw and measure geometric figures and angles.<br><br>Use solid figures as manipulatives for demonstration purposes.<br><br>Use everyday objects in surroundings as models of geometric figures for demonstration purposes. | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>oral answers to directed questions<br><br>guided and independent practice of skills<br><br>completion of written assessments<br><br>teacher observation of group activities and projects |

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| | rectangle, a rhombus, a trapezoid, or a parallelogram?<br><br>How does knowing the sum of interior angles of a quadrilateral aid in calculating the measurement of a missing angle?<br><br>What factors determine if a pair of triangles is similar?<br><br>What factors determine if a pair of triangles is congruent?<br><br>How is ratio used to determine the measurement of corresponding sides of similar triangles?<br><br>How are lines of symmetry determined?<br><br>What strategies are used to transform geometric figures and determine whether a figure or pair of figures will tessellate?<br><br>What strategies are used to find a pattern to solve problems?<br><br>What formulas or strategies are used to determine perimeter of a given polygon? | angles of a quadrilateral equals 360 degrees and be able to calculate the measurement of a missing angle<br><br>Identify pairs of similar and triangles<br><br>Identify pairs of congruent triangles<br><br>Identify the ratio of corresponding sides of similar triangles<br><br>Identify and draw lines of symmetry of basic geometric shapes<br><br>Identify reflections, translations, and rotations in geometric figures<br><br>Create a geometric pattern using concrete objects or visual drawings<br><br>Calculate the perimeter of regular and irregular polygons | | |

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| **Connections to Text (Resources) Harcourt Math Textbook – Unit 7: Chapters 20, 21, 23 and Unit 8: Chapter 25<br>Supplemental resources on geometric skills found in<br>classroom folders marked geometry and perimeter Time: January - 2 weeks (2x/day)** |
| **Connections to Technology: Harcourt Brace Mega Math Program – see teacher's manual for technology links<br>Harcourt Learning Site – www.harcourtschool.com ;School Island** |
| **Key Vocabulary: point, ray, line, line segment, parallel lines, perpendicular lines, intersecting lines, angle, plane, right angle, obtuse angle, acute angle, triangle, scalene triangle, iscoceles triangle, equilateral triangle, quadrilateral, polygon, regular polygon, rectangle, rhombus, square, parallelogram, trapezoid, pentagon, octagon, hexagon, congruent, similar, symmetry, corresponding sides and angles, degrees, protractor, translation (slide), reflection (flip), rotation (turn), perimeter, ratio of sides** |

**Topic: 5th Grade Graphing**
**Essential Questions: How does the use of graphs help you understand information?**
**How does the use of graphs help you solve problems?**

| Performance Indicators | Guided Questions | Essential Knowledge & Skills SWBAT: | Classroom Ideas (Instructional Strategies) | Assessment Ideas |
|---|---|---|---|---|
| 5.S.1<br>5.S.3<br>5.PS.7<br>5.S.4<br>5.G.12<br>5.S.2<br>5.PS.13<br>5.PS.8<br>5PS.8 | What methods are used to collect, organize, and display data from various sources?<br><br>Given a set of data, what operations and strategies are used to calculate the mean?<br><br>How can you use graphs to solve problems?<br><br>What strategies are necessary for reading, interpreting, and analyzing graphs?<br><br>How do you plot ordered pairs of numbers on a grid?<br><br>What components are necessary to accurately create and display data on single and double line graphs?<br><br>How can diagrams and drawings be used to help solve problems?<br><br>What strategies are used to choose the appropriate scales when drawing bar and line graphs?<br><br>What strategies are used to choose the appropriate type of graph when displaying data? | Collect and record data from a variety of sources (i.e., newspapers, magazines, polls, charts and surveys).<br><br>Calculate the mean for a given set of data and use to describe a set of data.<br><br>Represent problem situations verbally, numerically, algebraically, and/or graphically.<br><br>Formulate conclusions and make predictions using data from bar graphs, line graphs, circle graphs, and pictographs.<br><br>Identify and plot points in the first quadrant.<br><br>Display data in a line graph to show an increase or decrease over time.<br><br>Model problems with pictures/diagrams or physical objects.<br><br>Select appropriate intervals and scales when creating the vertical and horizontal axes on a graph.<br><br>Select the appropriate type of graph to represent data | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of graphing data:**<br><br>Use paper and pencil and blackboard to model drawing and analyzing various types of graphs.<br><br>Use blackboard and graph chart as demonstration tools.<br><br>Collect and display data from classroom surveys.<br><br>Analyze graphs using text and worksheet samples.<br><br>Use the following manipulative tools to create bar, line, double bar, and double line graphs:<br>• graph paper<br>• rulers<br>• data tables and charts | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

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| **Connections to Text (Resources): Harcourt Math Textbook – Unit 2, Chapters 5 and 6**<br>**Supplemental resources found in classroom folder marked graphing**<br>**Harcourt Manipulative Kit** | **Time: January – 2 weeks**<br>**June – 3 days** |
| **Connections to Technology: Harcourt Brace Mega Math program** | |
| **Key Vocabulary: line graph, bar graph, pictograph, circle graph, mean, trend, vertical axis, horizontal axis, X axis, Y axis, interval, scale, ordered pair, plot, tally** | |

| **Topic: 5th Grade: Measurement and Time** |
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| **Essential Questions: How do you use standard and metric forms of measurement in everyday life?**<br>**How does the ability to tell time help you in everyday life?** |

| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills SWBAT:** | **Classroom Ideas (Instructional Strategies)** | **Assessment Ideas** |
|---|---|---|---|---|
| 5.M.1<br>5.M.2<br>5.M.3<br>5.M.4<br>5.M.5<br>5.M.6<br>5.M.7<br>5.M.9<br>5.M.10<br>5.M.11 | How do you use a standard ruler to determine length?<br><br>What do an inch, a foot, a yard, and a mile look like?<br><br>How do you use a metric ruler to measure length?<br><br>How are a millimeter, centimeter, meter, and kilometer related?<br><br>What strategies can be used to convert one measurement of length to another within the standard or metric system?<br><br>What is the appropriate tool for measuring given lengths?<br><br>How do you calculate elapsed time?<br><br>What is the appropriate unit to use when measuring a given length?<br><br>How can everyday objects be used to help determine measurements?<br><br>What strategies can you use to justify that an estimated measurement is reasonable? | Use a ruler to measure to the nearest inch, ½ inch, ¼ inch, and 1/8 inch<br><br>Identify customary units of length<br><br>Use a metric ruler to measure lengths to the nearest centimeter<br><br>Identify equivalent metric units of length<br><br>Convert measurements within a given system<br><br>Choose whether to use a metric or standard ruler to measure length<br><br>Use a variety of strategies to calculate elapsed time in hours and minutes<br><br>Choose the appropriate unit for measuring a given length<br><br>Estimate a given measurement by comparing it to the length of an everyday object<br><br>Justify the reasonableness of an estimate of measure | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of measurement and time:**<br><br>Use paper and pencil and blackboard to model measurement and elapsed time<br><br>Use the following tools to instruct and practice:<br>• standard rulers<br>• metric rulers<br>• tape measures<br>• individual clocks<br>• everyday objects for comparison<br>• white boards<br><br>Use the following strategies for finding elapsed time:<br>• count ahead or backward using a clock<br>• adding or subtracting hours and minutes | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

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| Connections to Text (Resources) Harcourt Math Textbook – Unit 8, Chapter 24<br>Supplemental resources in measurement and time classroom folder<br>Harcourt Brace Manipulative Kit Time: February – 2 weeks |
| Connections to Technology: Harcourt Brace Mega Math Program, School Island |
| Key Vocabulary: inch, foot, yard, mile, centimeter, millimeter, meter, kilometer, elapsed time |

| **Topic: 5th Grade: Multiplication of whole numbers and decimals** |
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| **Essential Questions: How do you use multiplication of whole numbers and decimals in everyday life?** |

| Performance Indicators | Guided Questions | Essential Knowledge & Skills | Classroom Ideas | Assessment Ideas |
|---|---|---|---|---|
| 5N.27<br>5.N. 16<br>5.PS.22<br>5.N.23<br>5.PS.17 | How can multiples of 10 be used to determine an estimated answer?<br><br>How do you solve a multiplication problem when the second factor is one digit?<br><br>How do you solve a multiplication problem when the second factor is a two digit number?<br><br>How do you solve a three digit by three digit multiplication problem?<br><br>How can using estimation when solving multiplication word problems help you determine if your answer is reasonable?<br><br>How do you multiply a decimal by a whole number?<br><br>How do you multiply a decimal by a decimal?<br><br>How do you use patterns of 10 to find decimal products?<br><br>How do you determine the placement of the decimal point in a decimal multiplication product?<br><br>How do you multiply decimals with zeros in the factors or product?<br><br>How do you determine what information in a word problem is necessary in reaching a solution? | Justify the reasonableness of answer using estimation<br><br>Use a variety of strategies to multiply three digit by three digit numbers<br><br>Discuss whether a solution is reasonable in the context of the original problem<br><br>Use a variety of strategies to add, subtract, multiply, and divide decimals to the thousandths<br><br>Determine what information is needed to solve problems | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of multiplication:**<br><br>Use paper and pencil and blackboard to model multiplication of whole numbers and decimals.<br><br>Drill multiplication facts using:<br><br>• multiplication wraps<br>• multiplication fact cards<br>• charts<br>• Around the World Game<br>• Quizmo game | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

| Connections to Text (Resources) Harcourt Math Textbook – Unit 1, Chapter 7 and 8; Supplemental resources in multiplication classroom folder; Harcourt Brace Manipulative Kit<br>Time: October / November – 3 weeks Review Time: April – 2 weeks |
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| Connections to Technology: Harcourt Brace Mega Math Program, School Island |
| Key Vocabulary: multiples, factor, product, fact family, zero property, identity property |

| **Topic: 5th Grade: Ratio, Percent, and Probability** | **Time: February – 2 weeks** |
|---|---|
| **Essential Questions:**<br><br>**How are ratios, percents, and probability used in everyday life?** | |

| **Performance Indicators** | **Guided Questions** | **Essential Knowledge & Skills SWBAT:** | **Classroom Ideas (Instructional Strategies)** | **Assessment Ideas (Evidence of Learning)** |
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| 5.S.3<br><br>5.S.5<br><br>5.N.6<br><br>5.N.7<br><br>5.S.6<br><br>5.N.11<br><br>5.S.7 | How do you calculate the mean of a given set of numbers?<br><br>What strategies can be used to determine a variety of possible outcomes?<br><br>What is a ratio?<br><br>How can ratios be expressed in different forms?<br><br>How can you use ratios and fractions to record results of experiments?<br><br>What is percent? How do you write percents in fractional and decimal forms?<br><br>What strategies can be used to determine probability? | Calculate the mean for a given set of data<br><br>Use a mean to describe a set of data<br><br>List the possible outcomes for a single event experiment<br><br>Understand the concept of ratio<br><br>Express a ratio in three different forms, including as a fraction<br><br>Use ratios and fractions to express the results of experiments<br><br>Understand the relationship among percents, fractions, and decimals and convert given data to all three forms<br><br>Determine the probability of an occurrence by completing a simple experiment | **One or more of the following instructional strategies will be used to teach the essential knowledge and skills of place value:**<br><br>Use paper and pencil and blackboard to model and teach ratio and percent<br><br>Use the following strategies to teach ratio:<br>• girls to boys<br>• beads<br>• colors<br><br>Use the following tools to conduct probability experiments:<br>• spinners<br>• dice<br>• pennies<br>• marbles<br>• colors | **Students demonstrate mastery of knowledge and skills by one or more of the following methods:**<br><br>Oral answers to directed questions<br><br>Guided and independent practice of skills<br><br>Completion of written assessments<br><br>Teacher observation of group activities and projects |

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| **Connections to Text (Resources):**<br>**Harcourt Math Textbook – Unit 9, Chapters 28, 29, 30; Supplemental resources in classroom folder for ratio, percent, and probability**<br>**Harcourt Brace Manipulative Kit** |
| **Connections to Technology: Harcourt Brace Mega Math Program, School Island** |
| **Key Vocabulary: ratio, equivalent ratio, proportion, percent, probability, possible outcomes, theoretical probability, equally likely** |