



**JSD 251 Math Curriculum
Fourth Grade – Spring 2016**

Month	Materials & Resources	Standard(s)	Learning Activities	Task Analysis	Vocabulary	Assessment	Emphasis
	Envision Math: Common Core: 4 th Grade	Common Core State Standards: Math	<p>Learning activities can be found in the Envision Math Teacher's Edition.</p> <p>Work in PLC to create fluency practice for all operations. Use center activities.</p>	Task analysis is the analysis of how a task is accomplished, including a detailed description.	Vocabulary will be on the list under the topic where it is first introduced. It can and should, however, be used and reinforced throughout the entire year and <i>always taught in context.</i>	<p>Assessments should be common among building grade level teams.</p> <p>Work in PLC to create Pretest and Posttest.</p>	<p>Major Clusters Students should spend the large majority of their time on major clusters.</p> <p>Supporting Clusters These should be used to enhance the work of the major clusters.</p> <p>Additional Clusters These clusters should not be neglected but less time may be spent on them.</p>



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August	Envisions Math Topic 3 (Place Value)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Generalize place value understanding for multi-digit whole numbers.</p> <p>Standards 4.NBT.1, 4.NBT.2, 4.NBT.3</p>	As presented in Envision Math using MTI strategies. Place value blocks Place value flip chart Multiplication facts practice should begin using Rocket Math, XtraMath, IXL, or Funbrain programs, card games, and skip counting songs.	See Envisions teacher manual p. 63A for background knowledge and explanation.	digits place value standard form expanded form word form compare odd even period number line	Envisions topic test 3 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
September	Envisions Math Topic 2 (Generate and Analyze Patterns)	<p>Domain Operations and Algebraic Thinking</p> <p>Cluster Use the four operations with whole numbers to solve problems.</p> <p>Cluster Generate and analyze patterns.</p> <p>Standards 4.OA.3, 4.OA.5</p>	As presented in Envision Math using MTI strategies. Tangram pieces or colored blocks Multiplication facts practice should continue.	See Envisions teacher manual p. 37A for background knowledge and explanation.	repeating pattern input output compare	Envisions topic test 2 or grade level common assessment	Additional Clusters These clusters should not be neglected but less time may be spent on them.



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September	Envisions Math Topic 4 (Addition and Subtraction of Whole Numbers)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Generalize place value understanding for multi-digit whole numbers.</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Standards 4.NBT.3, 4.NBT.4, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Additional practice pages available in Envisions resources. Place value blocks Multiplication facts practice should continue.	See Envisions teacher manual p. 87A for background knowledge and explanation.	breaking apart compensation counting on Commutative Property of Addition Associative Property of Addition Identity Property of Addition inverse operations regroup	Envisions topic test 4 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
Month	Materials & Resources	Standard(s)	Learning Activities	Task Analysis	Vocabulary	Assessment	Emphasis
October	Envisions Math Topic 1 (Multiplication and Division Meanings and Facts)	<p>Domain Operations and Algebraic Thinking</p> <p>Cluster Use the four operations with whole numbers to solve problems.</p> <p>Cluster Gain familiarity with factors and multiples.</p> <p>Cluster Generate and analyze patterns.</p> <p>Standards 4.OA.1, 4.OA.2, 4.OA.3, 4.OA.4, 4.OA.5</p>	As presented in Envision Math using MTI strategies. Place value blocks and counters Factor trees Multiplication facts practice should continue.	See Envisions teacher manual p. 2G for background knowledge and explanation.	Array, product factors multiple breaking apart Commutative Property of Multiplication Zero Property of Multiplication Identity Property of Multiplication Distributive Property of Multiplication inverse operations fact family	Envisions topic test 1 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.



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October	Envisions Math Topic 5 (Number Sense: Multiplying by 1-Digit Numbers)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Standards 4.NBT.3, 4.NBT.5, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Place value blocks Multiplication facts practice should continue.	See Envisions teacher manual p. 113A for background knowledge and explanation.	partial products compensation multiples arrays factor product	Envisions topic test 5 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
Month	Materials & Resources	Standard(s)	Learning Activities	Task Analysis	Vocabulary	Assessment	Emphasis
November	Envisions Math Topic 6 (Developing Fluency: Multiplying by 1-Digit Numbers)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Cluster Generalize place value understanding for multi-digit whole numbers.</p> <p>Cluster Use the four operations with whole numbers to solve problems.</p> <p>Standards 4.NBT.5, 4.NBT.3, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Multiplication facts practice should continue.	See Envisions teacher manual p. 135A for background knowledge and explanation.	product factor array rounding	Envisions topic test 6 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
	Envisions Math Topic 7 (Number Sense: Multiplying by 2-Digit Numbers)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Generalize place value understanding for multi-digit whole numbers.</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Standards 4.NBT.3, 4.NBT.5, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Multiplication facts practice should continue.	See Envisions teacher manual p.163A for background knowledge and explanation.	compatible numbers equation	Envisions topic test 7 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.



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December	Envisions Math Topic 8 (Developing Fluency: Multiplying by 2-Digit Numbers)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Standards 4.NBT.5, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Multiplication facts practice should continue.	See Envisions teacher manual p.183A for background knowledge and explanation.	rounding compatible Commutative Property of Multiplication Distributive Property of Multiplication	Envisions topic test 8 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
January	Envisions Math Topic 9 (Number Sense: Dividing by 1-Digit Divisors)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Standards 4.NBT.6. Also 4.NBT.5, 4.OA.2, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Multiplication facts practice should continue.	See Envisions teacher manual p. 203A for background knowledge and explanation.	division remainder divisor quotient dividend multiple product factor	Envisions topic test 9 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
	Envisions Math Topic 10 (Developing Fluency: Dividing by 1-digit Divisors)	<p>Domain Number and Operations in Base Ten</p> <p>Cluster Use place value understanding and properties of operations to perform multi-digit arithmetic.</p> <p>Standards 4.NBT.6. Also 4.NBT.5, 4.OA.2, 4.OA.3</p>	As presented in Envision Math using MTI strategies. Multiplication facts practice should continue.	See Envisions teacher manual p. 225A for background knowledge and explanation.	array factors compatible numbers partial products	Envisions topic test 10 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.



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February	Envisions Math Topic 11 (Fraction Equivalence and Ordering)	<p>Domain Number and Operations—Fractions</p> <p>Cluster Extend understanding of fraction equivalence and ordering.</p> <p>Cluster Gain familiarity with factors and multiples.</p> <p>Cluster Generate and analyze patterns.</p> <p>Standards 4.NF.1, 4.NF.2, 4.OA.4, 4.OA.5</p>	As presented in Envision Math using MTI strategies. Fraction strips and models Number lines Multiplication facts practice should continue.	See Envisions teacher manual p. 255A for background knowledge and explanation.	fraction denominator numerator benchmark fraction equivalent fractions prime number composite number thirds	Envisions topic test 11 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
	Envisions Math Topic 12 (Adding and Subtracting Fractions and Mixed Numbers with Like Denominators)	<p>Domain Number and Operations—Fractions</p> <p>Cluster Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p> <p>Standards 4.NF.3, 4.NF.3.a, 4.NF.3.b, 4.NF.3.c, 4.NF.3.d</p>	As presented in Envision Math using MTI strategies. Fraction strips and models Number lines Multiplication facts practice should continue.	See Envisions teacher manual p. 287A for background knowledge and explanation.	mixed number improper fraction denominator numerator factor product	Envisions topic test 12 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.
March	Envisions Math Topic 13 (Extending Fraction Concepts)	<p>Domain Number and Operations—Fractions</p> <p>Cluster Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</p> <p>Cluster Understand decimal notation for fractions, and compare decimal fractions.</p> <p>Standards 4.NF.4, 4.NF.4.a, 4.NF.4.b, 4.NF.4.c, 4.NF.5, 4.NF.6, 4.NF.7, 4.MD.1, 4.MD.2</p>	As presented in Envision Math using MTI strategies.	See Envisions teacher manual p. 327A for background knowledge and explanation.	unit fraction decimal point hundredth tenth greater digits place value number line	Envisions topic test 13 or grade level common assessment	Major Cluster Students should spend the large majority of their time on major clusters.



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April	Envisions Math Topic 14 (Measurement Units and Conversions)	<p>Domain Measurement and Data</p> <p>Cluster Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</p> <p>Standards 4.MD.1, 4.MD.2</p>	As presented in Envision Math using MTI strategies. Rulers Measuring cups, pints, quarts, gallons, liters, eyedropper	See Envisions teacher manual p. 363A for background knowledge and explanation.	inch, foot, yard, mile, capacity, cup, pint, gallon, weight, ounce, pound, ton, millimeter, centimeter, decimeter, meter, kilometer, milliliter, liter, mass, gram, kilogram	Envisions topic test 14 or grade level common assessment	Supporting Clusters These should be used to enhance the work of the major clusters.
	Envisions Math Topic 16 (Lines, Angles, and Shapes)	<p>Domain Geometry</p> <p>Cluster Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</p> <p>Cluster Geometric measurement; understand concepts of angle and measure angles.</p> <p>Standards 4.G.1, 4.G.2, 4.G.3, 4.MD.5.a, 4.MD.5.b, 4.MD.6, 4.MD.7</p>	As presented in Envision Math using MTI strategies. Pattern blocks Protractors	See Envisions teacher manual p.419A for background knowledge and explanation.	point, line, plane, parallel lines, intersecting lines, perpendicular lines, line segment, ray, angle, right angle, acute angle, obtuse angle, straight angle, degree, unit angle, angle measure,	Envisions topic test 16 or grade level common assessment	Additional Clusters These clusters should not be neglected but less time may be spent on them.



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April	Envisions Math Topic 16 (Lines, Angles, and Shapes) ...continued	<p>Domain Geometry</p> <p>Cluster Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</p> <p>Cluster Geometric measurement: understand concepts of angle and measure angles.</p> <p>Standards 4.G.1, 4.G.2, 4.G.3, 4.MD.5.a, 4.MD.5.b, 4.MD.6, 4.MD.7</p>	As presented in Envision Math using MTI strategies. Pattern blocks Protractors	See Envisions teacher manual p.419A for background knowledge and explanation.	protractor, polygon, side, vertex, triangle, quadrilateral, pentagon, hexagon, octagon, equilateral triangle, isosceles triangle, scalene triangle, right triangle, acute triangle, obtuse triangle, rhombus, trapezoid, parallelogram, rectangle, square, symmetric, line of symmetry	Envisions topic test 16 or grade level common assessment	Additional Clusters These clusters should not be neglected but less time may be spent on them.
Month	Materials & Resources	Standard(s)	Learning Activities	Task Analysis	Vocabulary	Assessment	Emphasis
May	Envisions Math Topic 15 (Solving Measurement Problems)	<p>Domain Measurement and Data</p> <p>Cluster Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.</p> <p>Cluster Represent and interpret data.</p> <p>Standards 4.MD.2, 4.MD.3, 4.MD.4</p>	As presented in Envision Math using MTI strategies. Bills and coins	See Envisions teacher manual p. 399A for background knowledge and explanation.	perimeter area line plot	Envisions topic test 15 or grade level common assessment	Supporting Clusters These should be used to enhance the work of the major clusters.



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May	Envisions Math Topic 17 (Step Up to Fifth Grade)		MTI strategies		Distributive Property variables algebraic expressions decimals fractions whole numbers volume cubic unit		Additional Clusters These clusters should not be neglected but less time may be spent on them.
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