

1		The Real and Complex Number System				Strategies											
						Animations	Classifications	Explore Tools	Graphing Tools	Interactive Diagrams	Interactive Worksheets	Proof	Real-World Scenarios	Solvers	Worked Example		
MATHia Unit	MATHia Workspace	Overview	CCSS	Concept Builder	Mastery												
Whole Numbers	Introduction to Whole Numbers	Students are introduced to whole numbers and the place value chart. They sort number, identify the value of digits in different places, and practice rounding.	2.NBT.A.1	✓							•						
	Adding Whole Numbers	Students learn vocabulary terms that can be used to represent addition. They use place value to add whole numbers with the traditional algorithm. They practice adding multi-digit numbers.	2.OA.A.1	✓												•	
	Subtracting Whole Numbers	Students learn vocabulary terms that can be used to represent subtraction. They use place value to subtract whole numbers with the traditional algorithm. They practice subtracting multi-digit numbers.	2.OA.A.1	✓													
	Multiplying Whole Numbers	Students learn vocabulary terms that can be used to represent multiplication. They use place value to multiply whole numbers with the traditional algorithm. They practice multiplying multi-digit numbers.	3.OA.A.1	✓													•
	Dividing Whole Numbers	Students learn vocabulary terms that can be used to represent division. They use place value to divide whole numbers with the traditional algorithm (long division). They practice dividing multi-digit numbers.	3.OA.A.2	✓							•						
	Problem-Solving with Whole Numbers	Students solve word problems, identifying which operations to use and calculating accurately.	3.OA.D.8	✓							•						
Representing Groups as Fractions	Representing Parts of Groups using Fractions	Students use concrete part-to-whole models to represent a fraction and an equivalent fraction, calculating the numerator of the fraction with the larger denominator.	4.NF.A.1		✓											•	
	Representing Group Totals using Fractions	Students use concrete part-to-whole models to represent a fraction and an equivalent fraction, calculating the denominator of the fraction with the larger denominator.	4.NF.A.1		✓											•	

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<b>Representing Groups as Fractions (continued)</b>	Representing Parts of Groups or Group Totals using Fractions	Students use abstract part-to-whole models to represent a fraction and an equivalent fraction, calculating the numerator or the denominator of the fraction with the larger denominator.	4.NF.A.1		✓											
<b>Equivalent Fractions</b>	Writing Equivalent Fractions using Part-to-Whole Models	Students use part-to-whole models to determine fractions with given denominators that are equivalent to given simplified fractions.	3.NF.A.3		✓											
	Writing Simplified Fractions using Part-to-Whole Models	Students use part-to-whole models to determine simplified forms of given equivalent fractions.	3.NF.A.3.b		✓											
	Comparing Fractions using Symbols	Students compare pairs of fractions in context, both symbolically and contextually, first converting them to LCD form if needed.	4.NF.A.2		✓											
	Multiplying by Fractions to Increase or Decrease Quantities	Students watch an animation showing how multiplying by a fraction can increase a quantity, decrease a quantity, or keep a quantity the same. Students reason with fractional factors that are less than 1, equal to 1, or greater than 1 to determine how they affect the resulting product.	5.NF.B.5.a	✓												
<b>Fraction Addition and Subtraction</b>	Using Part-to-Whole Models with Unlike Denominator Fractions	Students use part-to-whole models to calculate sums and differences of proper fractions with unlike denominators.	5.NF.A.1		✓											
	Using the Solver with Unlike Denominator Fractions	Students calculate sums and differences of proper fractions with unlike denominators.	5.NF.A.1		✓											
<b>Mixed Number Addition and Subtraction</b>	Adding and Subtracting with Like Denominators	Students calculate sums and differences of mixed numbers and improper fractions with like denominators.	4.NF.B.3		✓											
	Adding and Subtracting with Unlike Denominators	Students calculate sums and differences of mixed numbers and improper fractions with unlike denominators.	5.NF.A.1		✓											
<b>Decimals and Place Value</b>	Writing Money Amounts using Place Value	Students use their knowledge of money to select the place value and digits of a given amount. The given amount can be stated as a number or in words.	5.NBT.A.3		✓											

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Decimals and Place Value (continued)	Writing Decimals using Place Value	Students select the place value and digit of a given value that is written to three significant digits. The given amount can be stated as a number or in words.	5.NBT.A.3		✓										
	Identifying Place Values and Digits of Decimals	Students select the place value of a given digit, which is embedded in a number that is written to the thousands and thousandths place value. The student must also enter the digit that appears in a given place value.	5.NBT.A.3		✓										
Fraction and Decimal Conversion	Converting Decimals to Fractions	Students write fractional equivalents of decimal values.	4.NF.C.6		✓										
	Converting Decimal Fractions to Decimals	Students write decimal equivalents of fractional values with power of ten denominators.	4.NF.C.6		✓										

2		Operations & Algebraic Thinking				Strategies										
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Picture Algebra	Using Picture Algebra with Multiplication	Students use pictures to represent problems that involve a larger quantity, a smaller quantity, and a total. The relationship between the two quantities involves multiplication.	3.OA.A.3		✓											
	Using Picture Algebra with Addition	Students use pictures to represent problems that involve a larger quantity, a smaller quantity, and a total. The relationship between the two quantities involves addition.	2.OA.A.1		✓											
	Using Picture Algebra with Subtraction	Students use pictures to represent problems that involve a larger quantity, a smaller quantity, and a total. The relationship between the two quantities involves subtraction.	2.OA.A.1		✓											
Expression Evaluation using Whole Numbers	Evaluating One-Step Expressions with Whole Numbers	Students determine relevant information from scenarios and use this information to evaluate algebraic expressions with a single operation.	6.EE.A.2		✓											
	Evaluating Two-Step Expressions with Whole Numbers	Students determine relevant information from scenarios and use this information to evaluate algebraic expressions with two operations.	6.EE.A.2		✓											

3		Geometry				Strategies										
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Angles and Angle Pairs	Measuring Angles	Students use a protractor to measure acute, right, obtuse and straight angles. Students use both the inside and outside scales of a protractor to measure angles. The angles presented are given in a variety of different orientations.	4.MD.C.5 4.MD.C.6	✓												
	Classifying Angles	Students sort and classify acute, right, obtuse, and straight angles as well as angles that do not match any of these categories. Sorting is done using numerical angle measures as well as depictions of angles.	4.MD.C.5	✓						•						
Triangles, Quadrilaterals, and Other Polygons	Classifying Triangles	Students sort and classify triangles according to their measures and according to their side lengths. Students sort acute, right, and obtuse triangles as well as isosceles, equilateral, and scalene triangles.	5.NBT.A.3	✓						•						
	Classifying Quadrilaterals	Students sort and classify quadrilaterals (parallelograms, rectangles, rhombuses, squares, and trapezoids) given their properties, including side lengths and angle measures. Students choose the best description for quadrilaterals that can be assigned to two or more categories.	5.NBT.A.3	✓						•						
	Classifying Polygons	Students sort and classify regular and irregular polygons given information about their side lengths and angle measures.	4.G.A.2	✓						•						