I AM Performance Level Descriptors (PLDs)
Grade 5 Mathematics

	Content Connector	Below Proficiency	Approaching Proficiency	At Proficiency
Algebraic Thinking				
MA.5.AT.1.a.1	Solve problems or word problems using up to 2-digit multiplication or 3-digit dividend with no remainder.	Solves word problems using one-digit multiplication with a visual representation.	Solves word problems using up to 2-digit multiplication or 2-digit division with a visual representation.	Solves word problems using up to 2-digit multiplication or 2-digit division with no remainder.
MA.5.AT.2.a.1	Solve word problems involving the addition and subtraction of fractions with unlike denominators of halves, fourths, fifths, and tenths.	Solves addition or subtraction word problems of fractions with like denominators of halves and fourths with a visual representation.	Solves addition or subtraction word problems of fractions with unlike denominators of halves and fourths with a visual representation.	Solves addition and subtraction word problems of fractions with unlike denominators of halves and fourths.
MA.5.AT.3.a.1	Solve real-world problems involving multiplication of a fraction and a whole number.	Identifies a multiplication expression of a fraction and a whole number.	Solves real-world multiplication problems of a unit fraction and a whole number with a visual representation.	Solves real-world problems involving multiplication of a fraction and a whole number.
MA.5.AT.4.a.1	Solve real-world problems involving the division of a whole number by one-half to find the total parts.	Identifies a division expression of a whole number and one-half.	Recognize the model associated with a real-world problem for the division of whole numbers by one-half.	Solves real-world problems involving the division of a whole number by one-half to find the total parts.
MA.5.AT.5.a.1	Solve one-step, real-world problems involving addition, subtraction, multiplication, and division with decimals to the hundredths place.	Solves one-step, real-world problems involving addition with decimals to the tenths place with a visual representation.	Solves one-step, real-world problems involving addition or subtraction with decimals to the tenths place with a visual representation.	Solves one-step, real-world problems involving addition, subtraction, or multiplication with decimals to the hundredths place.
MA.5.AT.6.a.1	Locate points on a graph and identify the *x*-axis and *y*-axis.	Identifies the *x*-axis and *y*-axis.	Locates points on a graph.	Locates points on a graph and identifies the *x*-axis and *y*-axis.
MA.5.AT.7.a.1	Graph ordered pairs in the first quadrant of coordinate plane.	Graphs an ordered pair, when *y* equals zero, in the first quadrant of coordinate plane.	Graphs an ordered pair, when *x* equals zero, in the first quadrant of coordinate plane.	Graphs an ordered pair in the first quadrant of coordinate plane.

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MA.5.AT.8.a.1	Given a real-world problem, evaluate the expressions for the specific values of up to two variables.	Identifies an expression with one variable with a visual representation.	Given a real-world problem, evaluates the expression for the specific value of one variable with a visual representation.	Given a real-world problem, evaluates the expressions for the specific values of up to two variables.
Computation				
MA.5.C.1.a.1	Multiply two-digit numbers by two-digit numbers.	Identifies a visual representation of a two-digit by two-digit multiplication expression.	Uses a visual representation to multiply two-digit numbers by two-digit numbers.	Multiplies two-digit numbers by two-digit numbers.
MA.5.C.2.a.1	Divide multi-digit whole numbers with dividends up to 100 without remainders.	Identifies a visual representation of a division expression (up to 100).	Given a visual representation, divides two-digit by one-digit whole numbers (up to 100) without remainders.	Given a visual representation, divides multi-digit whole numbers (up to 100) without remainders.
MA.5.C.4.a.1	Add and subtract fractions with unlike denominators, limiting denominators to halves, fourths, fifths, and tenths.	Adds or subtracts fractions with like denominators, limiting denominators to halves and fourths with a visual representation.	Adds or subtracts fractions with unlike denominators, limiting denominators to halves and fourths with a visual representation.	Adds and subtracts fractions with unlike denominators, limiting denominators to halves, fourths, fifths, and tenths with a visual representation.
MA.5.C.5.a.1	Use models to multiply a fraction by a whole number.	Identifies a model of multiplying a fraction by a whole number.	Matches a model of multiplying a fraction by a whole number to the corresponding equation.	Uses models to multiply a fraction by a whole number.
MA.5.C.6.a.1	Determine whether the product will be larger or smaller than the multiplicand based on the multiplier.	Recognizes whether the product will be larger than the multiplicand based on a whole number larger than 1 as the multiplier.	Recognizes whether the product will be smaller than the multiplicand based on a fractional (less than 1) multiplier.	Determines whether the product will be larger or smaller than the multiplicand based on the multiplier.
MA.5.C.7.a.1	Use models to divide whole numbers by one-half to solve for total number of parts.	Identifies a model of dividing whole numbers by one-half to solve for total number of parts.	Matches a model of dividing whole numbers by one-half to the corresponding equation.	Uses models to divide whole numbers by one-half to solve for total number of parts.

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MA.5.C.8.a.1	Solve one-step problems using decimals.	Solves one-step addition problems using decimals limited to the tenths place using visual representations.	Solves one-step problems using addition or subtraction involving decimals limited to the tenths place using visual representations.	Solves one-step problems involving addition, subtraction, or multiplication using decimals.
MA.5.C.9.a.1	Evaluate an expression with one set of parentheses.	Identifies an expression with one set of parentheses.	Evaluates an addition expression using one-digit numbers up to 9 with one set of parentheses.	Evaluates an addition and multiplication expression with one set of parentheses.
Geometry, Measurement, Data Analysis and Statistics				
MA.5.DS.1.a.1	Use data (from a bar graph) to determine questions that could be answered with the graph, or answer a simple question about the graph (e.g., average height among 3 classrooms, # of boys and girls).	Identifies a picture of a bar graph out of a set of various types of graphs.	Uses data (from a bar graph) to answer a simple question about the graph (how many, most, least, etc.).	Uses data (from a bar graph) to determine questions that could be answered with the graph, or to answer a one-step simple question about the graph (how many more, how much less, etc.).
MA.5.DS.2.a.1	Use a completed line plot to find mode and median.	Identifies a picture of a line plot out of a set of various types of graphs.	Uses a completed line plot to find mode (excludes no mode or multiple modes).	Uses a completed line plot to find mode (excludes no mode or multiple modes) and median (using a set of data with an odd number of values).
MA.5.G.1.a.1	Categorize angles as right, acute, or obtuse.	Identifies a right angle when given visual representation with the angle measurement given.	Categorizes angles as right, acute, or obtuse when given visual representation with the angle measurements given.	Categorizes angles as right, acute, or obtuse when given visual representation of angles.
MA.5.G.1.a.2	Identify the diameter and radius of a circle.	Identifies the center of a circle with visual representation.	Identifies the diameter or radius of a circle with visual representation.	Identifies the diameter and radius of a circle with visual representation.

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MA.5.G.2.a.1	Recognize properties of simple plane figures by counting the number of sides.	Given a visual representation of a quadrilateral or triangle, counts the number of sides.	Given a visual representation of a pentagon, quadrilateral or triangle, counts the number of sides.	Given a visual representation of a hexagon, pentagon, quadrilateral, or triangle, counts the number of sides.
MA.5.G.2.a.2	Distinguish plane figures by the name of the shape and number of sides.	Given a visual representation of triangles, rectangles, and squares, uses the number of sides and shape to name the figure.	Given a visual representation of triangles, rectangles, squares, and trapezoids, uses the number of sides and shape to name the figure.	Given a visual representation of triangles, rectangles, squares, parallelograms, rhombuses, and trapezoids, uses the number of sides and shape to name the figure.
MA.5.M.1.a.1	Convert measurements of time (days in a week, hours in a day, months in a year, minutes in an hour, seconds in a minute).	Identifies how many days in a week and months in a year.	Identifies how many days in a week, months in a year, seconds in a minute, and minutes in a hour.	Converts measurements of time (days in a week/month, hours in a day, months in a year, minutes in an hour, seconds in a minute).
MA.5.M.1.a.2	Solve problems involving time lapse.	Solves problems involving time lapse limited to gaps of whole hours.	Solves problems involving time lapse limited to gaps of hours and/or minutes in increments of 15, 30, or 45.	Solves problems involving time lapse.
MA.5.M.2.a.1	Multiply whole numbers to find the area of a rectangle.	Multiplies one-digit whole numbers up to 5 to find the area of a rectangle.	Multiplies one-digit whole numbers to find the area of a rectangle.	Multiplies one- or two-digit whole numbers to find the area of a rectangle.

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MA.5.M.3.a.1	Provided the formula, students will insert the correct numbers into the correct location of the formula.	Given a parallelogram and provided the formula, inserts correct numbers into correct locations of the formula.	Given a triangle or parallelogram and provided the formula, inserts the correct numbers into the correct location of the formula.	Given a triangle, parallelogram, or trapezoid and provided the formula for area, inserts the correct numbers into the correct location of the formula.
MA.5.M.4.a.1	Model volume by counting the number of cubic units that fit into a rectangular prism.	Models volume by counting the number of cubic units that fit into a rectangular prism (limited to a single layer of cubic units where all units are visible).	Models volume by counting the number of cubic units that fit into a rectangular prism (limited to 1 or 2 layers where all units might not be visible).	Models volume by counting the number of cubic units that fit into a rectangular prism.
MA.5.M.5.a.1	Provided the formula, students will insert the correct numbers into the correct location of the formula.	Recognizes the different dimensions of a right rectangular prism (length, width, height).	Recognizes that the base (*B*) of a right rectangular prism is comprised of length and width.	Provided the formula for volume ($V = l \times w \times h$ and $V = B \times h$), inserts the correct numbers into the correct location of the formula.
MA.5.M.6.a.1	Provided the formula, solve for volume.	Provided the formula and limited to one-digit numbers up to 5, solves for volume.	Provided the formula and limited to one-digit numbers, solves for volume.	Provided the formula and one- or two-digit numbers, solves for volume.
Number Sense				
MA.5.NS.1.a.1	Compare two fractions using <, >, and = symbols and vocabulary.	Compares two fractions using the concept "larger/smaller" when each fraction is paired with a visual representation.	Compares two fractions with like denominators using <, >, and = with visual representations of both fractions.	Compares two fractions using <, >, and = and vocabulary ("greater than" and "less than") of both fractions.
MA.5.NS.1.a.2	Compare two decimals to the hundredths place with a value of less than 1 using <, >, and = symbols and vocabulary.	Compares two decimals using the concept "larger/smaller" when each decimal is paired with a visual representation.	Compares two decimals to the tenths place with a value of less than 1 using <, >, and = symbols with visual representation.	Compares two decimals to the hundredths place with a value of less than 1 using <, >, and = symbols and vocabulary ("greater than" and "less than").
MA.5.NS.2.a.1	Represent fractions as part of a set, whole, or division of whole numbers.	Represents fractions as part of a whole with a visual representation.	Represents fractions as part of a set or of a whole with a visual representation.	Represents fractions as part of a set, whole, or division of whole numbers.

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MA.5.NS.3.a.1	Compare the value of a digit when it is represented in different place values of 2 three-digit numbers.	Using the concept "larger/smaller," compares the value of two models of the same digit in different place values when both are modeled with visual representation (e.g., 7 ones vs. 7 tens).	Compares the value of a digit when it is represented in different place values of 2 two-digit numbers with visual representation.	Compares the value of a digit when it is represented in different place values of 2 three-digit numbers.
MA.5.NS.5.a.1	Round decimals to the nearest whole number.	Rounds decimals (tenths) to the nearest whole number with a visual representation.	Rounds decimals (hundredths) to the nearest whole number with a visual representation.	Rounds decimals to the nearest whole number.
MA.5.NS.6.a.1	Use a model to represent percent as part of 100.	Uses a model to represent percent as part of 100 (limit to 25, 50, 75, and 100).	Uses a model to represent percent as part of 100 (limit to multiples of ten).	Uses a model to represent percent as part of 100.
Process Standards				
PS.1	Make sense of problems and persevere in solving them.	Identifies given quantities and unknowns for a given problem.	Identifies what question is asking, relevant or irrelevant information, and can set up solution method.	Makes sense of and solves problems.
PS.2	Reason abstractly and quantitatively.	Represents a problem using numbers and symbols.	Identifies a symbolic expression or equation that represents a problem situation.	Creates symbolic expressions or equations to represent problem situations.
PS.3	Construct viable arguments and critique the reasoning of others.	Identifies clearly invalid arguments, without justification or explanation.	Identifies the flaws in a given argument.	Constructs arguments and justifications for mathematical thinking, and critiques the reasoning of others.

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PS.4	Model with mathematics.	Identifies parts of a real-world problem.	Creates a model to represent a real-world problem.	Applies math knowledge to solve real-world problems using a variety of models and representations and reflects to make sure the answer makes sense.
PS.5	Use appropriate tools strategically.	Recognizes familiar mathematic tools.	Uses familiar tools to aid mathematical process.	Uses relevant mathematical tools and external mathematical resources to communicate mathematical ideas.
PS.6	Attend to precision.	Identifies common mathematical definitions.	Uses common mathematical vocabulary to connect or explain simple mathematical concepts.	Communicates correct mathematical language with appropriate precision and context.
PS.7	Look for and make use of structure.	Identifies simple structures.	Identifies the rules for simple numeric and geometric structures, and uses those rules to extend a pattern.	Applies structural classifications and patterns to answer problems in a variety of ways.
PS.8	Look for and express regularity in repeated reasoning.	Identifies simple examples of repeated reasoning or patterns.	Identifies the rules exhibited in repeated reasoning or patterns.	Applies repeated reasoning to develop general methods, rules, and short-cuts for solving mathematical problems.