

Mrs. Nettling's Ohio 5th Grade Math Standards Checklist

1	2	3	4	Grading Period in which this standard is covered
				Number, Number Sense, and Operations
				1. Use models and visual representation to develop the concept of ratio as part and part-to-whole, and the concept of percent as part-to-whole.
				2. Use various forms of "one" to demonstrate the equivalence of fractions.
				3. Identify and generate equivalent forms of fractions, decimals, and percents.
				4. Round decimals to a given place value and round fractions (including mixed numbers) to the nearest half.
				5. Recognize and identify perfect squares and their roots.
				6. Represent and compare numbers less than 0.
				7. Use commutative, associative, distributive, identity, and inverse properties to simplify and perform computations.
				8. Identify and use relationships between operations to solve problems.
				9. Use order of operations, including use of parentheses, to simplify numerical expressions.
				10. Justify why fractions need common denominators to be added or subtracted.
				11. Explain how place value is related to addition and subtraction of decimals.
				12. Use physical models, points of reference, and equivalent forms to add and subtract commonly used fractions with like and unlike denominators and decimals.
				13. Estimate the results of computations involving whole numbers, fractions, and decimals, using a variety of strategies.
				Measurement
				1. Identify and select appropriate units to measure angles.
				2. Identify paths between points on a grid or coordinate plane and compare lengths of the paths.
				3. Demonstrate and describe the differences between covering the faces (surface area) and filling the interior (volume) of 3-D objects.
				4. Demonstrate understanding of the differences among linear units, square, and cubic units.
				5. Make conversions within the same measurement system while performing computations.
				6. Use strategies to develop formulas for determining perimeter and area of triangles, rectangles, and parallelograms, and volume of rectangular prisms.
				7. Use benchmark angles to estimate the measure of angles, and use a tool to measure and draw angles.
				Geometry and Spatial Sense
				1. Draw circles and identify and determine relationships among the radius, diameter, center, and circumference.
				2. Use standard language to describe line, segment, ray, angle, skew, parallel, and perpendicular.
				3. Label vertex, rays, interior, and exterior for an angle.
				4. Describe/use properties of congruent figures to solve problems.

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				5. Use physical models to determine the sum of the interior angles of triangles and quadrilaterals.
				6. Extend understanding of coordinate system to include points whose x and y values may be negative numbers.
				7. Understand that the measure of an angle is determined by the degree of rotation of an angle side rather than the length of either side.
				8. Predict what 3-D object will result from folding a 2-D net, then confirm the prediction by folding the net.
				Patterns, Functions, and Algebra
				1. Justify a general rule for a pattern or a function by using physical material, visual representations, words, tables, or graphs.
				2. Use calculators or computers to develop patterns, and generalize them using tables and graphs.
				3. Use variables as unknown quantities in general rules when describing patterns and other relationships.
				4. Create and interpret the meaning of equations and inequalities representing problem situations.
				5. Model problems with physical materials and visual representations, and make models, graphs, and tables to draw conclusions and make predictions.
				6. Describe how the quantitative change in a variable affects the value of variable.
				Data Analysis and Probability
				1. Read, construct, and interpret frequency tables, circle graphs, and line graphs.
				2. Select and use a graph that is appropriate for the type of data to be displayed.
				3. Read and interpret increasingly complex displays of data, such as double graphs.
				4. Determine appropriate data to be collected to answer questions posed by students or teacher, collect and display data, and clearly communicate findings.
				5. Modify initial conclusions, propose and justify new interpretations, and make predictions as additional data are collected.
				6. Determine and use the range, mean, median, and mode, and explain what it does and does not indicate about the set of data.
				7. List and explain all possible outcomes in a given situation.
				8. Identify the probability of events within a simple experiment, such as three chances out of eight.
				9. Use 0, 1, and ratios between 0 and 1 to represent the probability of outcomes for an event, and associate the ratio with the likelihood of the outcome.
				10. Compare what should happen (theoretical/expected results) with what does happen (experimental/actual results) in a simple experiment.
				11. Make predictions based on experimental and theoretical probabilities.