Grade 5 Math Planner

	Number	Space	Measurement, Chance and Data	Structure	Working Mathematically
1st Quarter	• Appropriate selection and use of mental and written algorithms to add, subtract, multiply, and divide (by single digits) natural numbers • Use of brackets to determine order of operations • Representation of square numbers using a power of 2; for example, 3 squared = 9 • Ordering of integers (for example, positive and negative temperatures) • Use of large number multiples of ten to approximate common quantities; for example 100 000 people in a major sports venue • Listing of objects and their size, where size varies from thousandths to thousands of a unit. • Identification of calculation errors resulting in unreasonable results	• Representation of relationships within a family (people or animals) through use of a tree diagram (network) • Interpretation of maps of their own immediate environment using various scales; for example, school ground, suburb, state, country • Use of a graphical scale to determine actual size and distance from a map	• Conversion between metric measurements for length; for example, 0.27m = 27 cm • awareness of the accuracy of measurement required	• conversion between venn diagrams and karnaugh maps as representations of relationships between two sets • recognition and completion of patterns formed by constant addition or subtraction • use of add and subtract as inverse operations to solve simple word equations such as "I am thinking of a number. If I add 6 I get 18, what number did I start with? • Use of trial and error to find a missing number in a number sentence; for example, 4 X ? + 6 = 22 • Sorting of sequences into certain types (constant addition, constant multiplication, fibonacci, square, triangular) • Consistent and correct use of conventions for order of operations	• Identification of mathematical vocabulary for each operation: _____ _____ _____ _____ _____ • Use of familiar problems to focus on strategies to help in solving an unfamiliar problem. • Efficient communication when using mathematical language, symbols and representations

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2nd Quarter	• Reinforce ordering of integers (for example, positive and negative temperatures) • Ordering of positive fractions • Addition, subtraction, multiplication and division of fractions using approximations such as whole number estimates and technology to confirm accuracy • Multiplication of fractions by fractions through use of the rectangle area model (grid) • Use of ratios to describe relative sizes • Representation of simple ratios as percentages, fractions • Reinforce identification of calculation errors resulting in unreasonable results	• Construction or selection of possible objects given a plan (bird's eye view) or an elevation (side view) • Representation of relationships within a family (people or animals) through use of a tree diagram (network)	• Use of fractions to assign probability values between 0 and 1 to probabilities based on symmetry; for example, P(six on a die) = 1/6 • Identification of mode and range for a set of data • Estimation and measurement of perimeter of polygons • Estimation and measurement of surface area; for example, use of square metres, and area of land; for example, use of hectares	• conversion between Venn diagrams and Karnaugh maps as representations of relationships between two sets • Recognition and completion of patterns formed by constant addition or subtraction • Use of add and subtract as inverse operations to solve simple word equations such as "I am thinking of a number. If I add 6 I get 18, what number did I start with? • Use of trial and error to find a missing number in a number sentence; for example, 4 X ? + 6 = 22 • Sorting of sequences into certain types (constant addition, constant multiplication, fibonacci, square, triangular) Consistent and correct use of conventions for order of operations	• Identification of mathematical vocabulary for each operation: _____ _____ _____ _____ _____ • Use of familiar problems to focus on strategies to help in solving an unfamiliar problem. • Location of data sources, including use of the world wide web • Collection of mathematical data using technology; for example, using data logging

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3rd Quarter	• Ordering of decimal numbers • Addition, subtraction, multiplication and division of decimals using approximations such as whole number estimates and technology to confirm accuracy • Use of ratios to describe relative sizes • Representation of simple ratios as percentages, fractions, and decimals • Reinforce identification of calculation errors resulting in unreasonable results	• Use of a graphical scale to determine actual size and distance from a map • Construction or selection of possible objects given a plan (bird's eye view) or an elevation (side view) • Representation of relationships within a family (people or animals) through use of a tree diagram (network) • Interpretation of maps of their own immediate environment using various scales; for example, school ground, suburb, state, country	• Estimation and measurement of perimeter of polygons • Estimation and measurement of surface area; for example, use of square metres, and area of land; for example, use of hectares • Conversion between metric measurements for length; for example, 0.27m = 27cm • Awareness of the accuracy of measurement required and the appropriate tools and units • Identification of mode and range for a set of data.	• Incorporation of tables of information relating to pairs of everyday variables • Use of division and multiplication as inverses; for example, multiplication by 25 can be carried out as 'multiplication by 100 followed by division by 4'	• Identification of mathematical vocabulary for each operation: _____ _____ _____ _____ _____ • Use of familiar problems to focus on strategies to help in solving an unfamiliar problem. • Location of data sources, including use of the world wide web • Development and testing of conjectures with the aid of a calculator; for example, divisibility tests

Grade 5 Math Planner

	Number	Space	Measurement, Chance and Data	Structure	Working Mathematically
4th Quarter	• Reinforce representation of simple ratios as percentages, fractions and decimals • Reinforce addition, subtraction and multiplication of fractions and decimals (to one decimal place) using approximations such as whole number estimates and technology to confirm accuracy • Reinforce use of brackets to determine order of operations	• Use of scaled grids to draw similar figures (enlarged or reduced) • Classification and sorting of two-dimensional shapes using the properties of lines (curvature, orientation and length) and angles (less than, equal to, or greater than 90) • Construction of transformed shapes and patterns by stamping, folding, and rotating • Description of a path by a set of coordinates	• Estimation and measurement of angles in degrees to the nearest 10° • Estimation and measurement of perimeter of polygons Subdivision of a circle into two sectors according to a given proportion for arc length	• Incorporation of tables of information relating pairs of everyday variables • Conversion between Venn diagrams and Karnaugh maps as representations of relationships between to sets	• Identification of mathematical vocabulary for each operation: _____ _____ _____ _____ _____ • Use of familiar problems to focus on strategies to help in solving an unfamiliar problem. • Appreciation of the history of mathematics in development of geometry and number concepts