

Grade Four: Mathematics

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	Numbers & The Number System	Calculations	Solving Problems Equations & Variables Logical Reasoning	Measures, Shape & Space	Handling Data
September	Translate between words/figures; identify place value (to 1 billion); compare/order whole numbers; multiply by 10 or 100	# pairs that total 100 or 1000; decimal pairs that total 1 or 10; add'n with multiple addends; sub'n of whole #s	Choose the best operation; solving non-routine problems; Word Problems: add/subtract whole #s; metric conversions	Metric units (abbreviations), choosing the best units for length, capacity and mass; measure length; metric conversions	Roman Numerals (Independent Study Unit)
October	Round to the nearest 10, 100 or 1000; round decimals to whole #s	Add and subtract money expressions	Word Problems: elapsed time	Reading scales; rounding measurements; convert 12-hour to 24-hour clock; read a timetable; Imperial Measures (Ind. Study)	More practice with Roman Numerals
November	Integers; reading thermometers; determining change in temperature on a thermometer	Add and subtract same place decimals to 100ths; commutative, associative and distributive laws	Word Problems: solving problems that involve money and change; add and subtract decimals	Parallel and perpendicular lines	Read and construct bar charts, line charts and line graphs
December	Find the missing number in a number sequence	Evaluating expressions with brackets	Identifying examples supporting mathematical facts; use patterns to solve problems; recognize/state/explain pattern rules	More practice with lines and measurement	More practice with different types of graphs
January	Count on or back with whole numbers or decimals; properties of odd/even #s; tests of divisibility	Quotients as fractions; multiplication facts from 6s to 9s; division facts; products using doubles, halves and multiples of 10	Identify equations; solve for variables (addition and subtraction)	Perimeter of rectangles and regular polygons; area of rectangles	Review of graphs
February	Multiples; squares; factors; equivalent mixed #s and improper fractions; equivalent fractions	Tricks for simplifying multiplication; relationship between multiplication and division	Solve for variables (multiplication and division)	Classify triangles by angles and sides; classify angles; measure angles; calculate angles in a straight line	Independent Study Unit: Graphs
March	Compare and order fractions; relate fractions to division; find fractions of quantities; multiply a whole # by a fraction	Using the distributive law; multiplying multiples of 10 and 100	Write variable equations to represent word problems	Classify 3D shapes; identify and count the faces, edges and vertices of 3D shapes; identify nets of open cubes; cube drawings	Preparation for probability
April	Solve ratio and proportion problems; decimal place value; writing decimals as words; ordering decimals	Approximating whole number sums, differences, products or quotients by rounding	Logical Reasoning (Ind. Study);	Lines of symmetry; reflections over lines of symmetry; complete patterns with 2 lines of symmetry	Probability: certain, likely, unlikely or impossible events
May	Convert between metric units; calculate using decimal and mixed metric units; convert fractions to decimals; diagrams as %	2-digit multiplication; dividing whole numbers/remainders as decimals; division with remainders	Word Problems: divide whole numbers; round up or down after division	1st quadrant graphing: identify translations; plot and identify coordinates; plot shapes	Find the mode
June	Express fractions as %; find % of a whole number	Use a calculator to solve math problems; check answers with equivalent calculations	Word Problems: find % of a number; solve problems with % discounts	Practice with 1st quadrant graphing	Practice with probability

All children should complete math practice every day. Above are listed the minimum skills attainment necessary to meet UK and US standards. Children are offered individualized lessons and exercises for support or enrichment as they require. Topics, once introduced, are practiced and re-visited occasionally, even after mastery.

Grade Five: Mathematics

	Numbers & The Number System	Calculations	Solving Problems Equations & Variables Logical Reasoning	Measures, Shape & Space	Handling Data
September	Multiplying/dividing large whole numbers by 10 and powers of 10	Add/subtract whole numbers and decimals; doubles/halves of multiples of 100; commutative/distributive/associative laws; partitioning	Non-routine problems; examples supporting mathematical facts; solving problems involving measurement	Metric units and abbreviations; appropriate metric/imperial units	Read/interpret bar charts
October	Rounding to the nearest 10, 100 or 1000; ordering integers	Approximate by rounding to the nearest 10, 100 or 1000	Solve 1-step word problems with whole numbers	Metric conversion of length, mass and capacity; converting imperial to metric units	Read/interpret pie charts
November	Add/subtract integers; integers on a number line; count on or back with decimals	Approximate whole number products by rounding	Solve multi-step word problems with whole numbers; solve problems involving time	More practice with metric and imperial conversions	Read/interpret line graphs
December	Find missing numbers in a sequence or pattern	Approximate decimal products by rounding to a whole number	Identify the rule for a sequence; find the n th number in a sequence or pattern	Time zones around the world	Practice with bar charts, pie graphs and line graphs
January	Properties of odd/even #s; multiples; lowest common multiple; squares of whole #s; divisibility tests; prime factors/factorization	Find squares of multiples of 10 up to 100; finding factors and multiples of numbers	Writing variable expressions; writing variable expressions for word problems	Finding the perimeter and area of composite shapes	Practice with bar charts, pie graphs and line graphs
February	Fractions: simplifying fractions; equivalent fractions; converting between improper fractions and mixed numbers	Division: by sharing or grouping; related to multiplication; with whole numbers; related to fractions	Evaluating variable expressions	Classify quadrilaterals; classify angles; measure angles; find the measure of a missing angle of a triangle	Independent Study Unit: data, charts and graphs
March	Fractions: relationships between fractions; order/comparing fractions; multiplying fractions by whole numbers	More practice with concepts of division	Writing and solving variable equations; using variable equations to solve word problems	Identify number of faces, edges and vertices of 3-D shapes; properties of 3-D shapes; visualizing shapes from drawings	Review of data, charts and graphs
April	Ratios and proportions; decimal words as figures; place value in decimals; ordering decimals	Multiplying large whole numbers; multiplying decimals	Solve problems with ratio and proportion; Logical Reasoning Independent Study; problems with \$ and currency conversion	More practice with 3-D shapes	Introduction to probability: Identify events as certain, likely, unlikely or impossible
May	Identify decimals between; rounding decimals to the nearest whole number or nearest tenth	Dividing whole numbers and decimals; stating remainders as decimals	Percentage problems; problems with discounts	Lines of symmetry; reflections over lines of symmetry; translations	Find the mean, median, mode and range of a set of data
June	Converting between decimals, fractions and percents; finding a percentage of a number	Finding doubles and halves of decimals; using inverse operations or equivalent calculations or a calculator to solve/check	Review of problem solving, equations & variables and reasoning	Coordinates: plot and identify points and coordinates of transformations and rotated shapes	Practice with probability

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TERM 2

TERM 3

Grade Six: Mathematics

	Numbers & The Number System	Calculations	Algebra Using & Applying Math to Solve Problems	Measures, Shape & Space	Handling Data
September	Decimal place value; operations with decimals and powers of 10	Operations with whole numbers and decimals; interpreting remainders in division	Strategies for solving word problems	Converting metric units of length, mass and capacity	Construct and interpret frequency tables
October	Order/compare/estimate decimals; rounding whole numbers and decimals	Using laws of arithmetic; applying order of operations	Algebraic conventions; translating words to variable expressions; order of operations; applying laws; like terms	Approximate and use metric equivalents of imperial measures	Construct and interpret pie charts
November	Integers: on a number line; ordering; adding and subtracting	Practice with order of operations	Linear equations: constructing and solving (all 4 operations); 2-step equations; solving problems using algebra; formulae	Practice with metric and imperial measurement and conversions	Construct and interpret bar charts and compound bar charts.
December	Squares of numbers and triangular numbers; roots of perfect squares roots of multiples of 100 and 10 000	Solving word problems (all 4 operations); determining reasonable estimates in context	Identifying required information; solving complex problems by breaking them into smaller parts	Use labeling conventions for lines, angles and shapes; identify intersecting, parallel and perpendicular lines	Construct and interpret line graphs
January	Find LCM; tests for divisibility; factors and factorization; prime numbers; find GCF	Interpreting calculator displays in context	Find area/perimeter of compound figures; solve quadrilateral angle size problems	Formula for perimeter and area; area of right-angled triangles; surface area; visualizing 2-D shapes	Independent Study Unit: data, charts and graphs
February	Fractions: finding equivalent fractions, simplifying, comparing and ordering	Determine if answer is reasonable	Vocabulary of sequences; extending sequences; create and extend geometric patterns	Properties of triangles and quadrilaterals; measuring angles; angle properties of a triangle	Find the mode, mean, range and median; calculate using statistics; compare sample distributions
March	Convert between mixed numbers and improper fractions; fractions of quantities or measures	Determine order of magnitude of solutions	Identify rules of a sequence; use function machines and input/output tables	Identifying faces, edges and vertices of 3-D shapes	Vocabulary and ideas of probability
April	Add/subtract fractions with like denominators; addition facts for simple fractions	Check answers using inverse operations	Solve problems involving money	Visualizing 3-D shapes from drawings	Find probability of single events
May	Convert between decimals, fractions proportions and percentages; find percent of a number; solve proportion problems	Review of calculations: whole numbers and integers	plot coordinates from a linear equation; conversion graphs; plot and read graphs of linear functions	Plot and identify coordinates on a coordinate plane; plot points determined by geometric information	Experimental vs. theoretical probability
June	Ratios and proportions: equivalent ratios; simplified ratios; division using ratios	Review of calculations: fractions, decimals and percents	Solve percentage problems; find terms in real-life patterns; identify counter-examples	Apply properties of reflections, rotations and translations; reflection and rotation symmetry	Review of probability and statistics

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