Curriculum Map – Maths – Year 7

Immanuel College
Church of England Academy

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Key focus	• Sequences • Algebraic notation and substitution • Expressions and equations	• Place value, ordering and rounding • Four operations • Averages and range • Rounding and estimation	• Graphing data • Fractions, decimals and percentages	• Directed number • Fractions and percentages of amounts • Perimeter and area	• Speed, distance and time • Properties of number	• Add and subtract fractions • Angles and polygons
Key knowledge and skills	**Sequences** • Describe, continue and generate numerical and pictorial sequences • Use and explain term-to-term rules and identify linear patterns **Algebra** • Use algebraic notation and variables • Substitute into expressions and simple formulae • Simplify expressions using like terms • Understand equality and equivalence • Form and solve simple equations	**Number** • Read, write, compare and order integers and decimals • Round to appropriate degrees of accuracy • Use efficient mental and written methods for the four operations • Apply order of operations in numerical problems **Statistics and estimation** • Calculate and interpret mean, median, mode and range • Estimate calculations and check whether answers are reasonable	**Statistics** • Read, construct and interpret frequency tables, charts and graphs • Compare data using appropriate representations **Number** • Recognise equivalent fractions, decimals and percentages • Convert between FDP forms • Compare and order fractions, decimals and percentages	**Number** • Order and calculate with positive and negative numbers • Find fractions and percentages of amounts • Solve percentage and fraction problems in context **Geometry and measures** • Calculate perimeter and area of common 2-D shapes • Solve area and perimeter problems involving compound shapes	**Rates** • Use and rearrange the relationship between speed, distance and time • Convert common units of time and distance • Interpret rate problems in context **Number properties** • Identify factors, multiples and prime numbers • Use divisibility tests and powers • Apply number properties to reasoning and problem solving	**Fractions** • Find equivalent fractions and common denominators • Add and subtract proper and improper fractions • Work with mixed numbers **Geometry** • Use angle facts at a point and on a straight line • Use properties of triangles, quadrilaterals and polygons • Solve missing-angle problems using geometric reasoning
Key words/ vocabulary	Sequence, term, rule, linear, pattern, expression, variable, coefficient, substitute, equation, equality, equivalence, simplify.	Integer, decimal, place value, order, compare, round, significant figure, operation, sum, difference, product, quotient, mean, median, mode, range, estimate.	Frequency, table, chart, axis, scale, data, distribution, fraction, decimal, percentage, equivalent, numerator, denominator.	Directed number, positive, negative, zero, fraction, percentage, amount, multiplier, perimeter, area, rectangle, triangle, compound shape.	Speed, distance, time, rate, unit, convert, factor, multiple, prime, square, cube, power, divisibility.	Equivalent, common denominator, proper, improper, mixed number, angle, acute, obtuse, reflex, parallel, perpendicular, polygon, interior, exterior.
Assessment method	Topic summaries; formative assessment; summative assessment point.	Topic summaries; formative assessment.	Topic summaries; formative assessment; summative assessment point.	Topic summaries; formative assessment.	Topic summaries; formative assessment.	Topic summaries; formative assessment; summative assessment point.
Wider links	Computing - patterns, rules and function processes.	Geography - large population figures. Science	Geography/History - interpreting data and population change.	Personal finance - discounts and budgeting.	Science - motion and speed. Geography - journey times and distances.	Art and design - angles, shape and pattern.

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	Science - introduction to using formulae.	- measurement, rounding and estimation.	Computing - presenting information graphically.	Design Technology - area and material requirements.		Architecture - polygonal structures.
Enrichment opportunities	NRICH pattern/algebra problems; suggested reading on the history of algebra; independent Sparx practice.	NRICH number problems; estimation challenges; independent Sparx practice.	Statistics investigation; NRICH data problems; independent Sparx practice.	Percentage problem-solving tasks; area investigations; independent Sparx practice.	Junior Maths Challenge preparation; NRICH number investigations; independent Sparx practice.	Junior Maths Challenge; geometric reasoning tasks; independent Sparx practice.
Careers links	Software developer; engineer; data analyst.	Statistician; scientist; quantity surveyor.	Statistician; market researcher; data journalist.	Accountant; estimator; construction planner.	Transport planner; engineer; logistics analyst.	Architect; designer; surveyor.

“Perseverance produces **character,** and character, **hope**” (Romans 5:4)