5Curriculum Map template

Subject:

Year:

	Autumn 1	*Autumn 2*	*Spring 1*	*Spring 2*	*Summer 1*	*Summer 2*
Content Knowledge	**Higher and foundation** Basic number. Basic fractions. Basic decimals. Basic percentages. Factors and multiples. Rounding.	**Higher and foundation** Angles. Scale diagrams and Bearings. Basic algebra. Collecting and representing data. **Higher only** Coordinates and linear graphs.	**Higher and foundation** Sequences. Perimeter and area. **Higher only** Real life graphs. **Foundation only** Coordinates and linear graphs.	**Higher and foundation** Circumference and area. Ratio and proportion. **Higher only** Equations. **Foundation only** Basic probability.	**Higher and foundation** Scatter graphs. **Higher only** Basic probability. Standard form. **Foundation** Equations.	**Higher and foundation** Transformations. Constructions and Loci. 2D representation of 3D shapes.
Skills Notes: just brief outline, not too much detail. Keep < 3 pages.	Prime numbers and definitions. Prime factor trees and the decomposition method. Multiples and factors. Finding the HCF and LCM of two numbers. Venn diagram to find HCF and LCM. Fractional equivalence,	Use angle properties to find missing angles. Multi-step angle problems. Justify how an answer is established using worded mathematical reasoning. Solve angle problems using bearings and/or using scaled diagrams. Use algebra rules	Find the nth term of a linear sequence; nth term of a quadratic sequence. Apply nth term to generate terms including quadratic nth terms. Find areas and surface area of different shapes like circles, finding missing sides given some	Identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment. Simplify ratios to their simplest form, compare ratios of two quantities, express ratios as	Draw and interpret scatter diagram; estimate; use a line of best fit; infer correlation. Difference between interpolation and extrapolation and its data implications. Calculate the probability of independent and dependent	Describe translations using vector notation; identify plans and elevations of 3D shapes; draw in a plane of symmetry on objects. Use a compass, ruler and pencil to apply loci to solve problems which obey specified rules. Understand how to construct

	adding, subtracting, multiplying and dividing fractions. Convert between mixed numbers and improper fractions. Solve worded problems involving fractions. Recurring decimals to fractions and vice-versa. Rounding to decimal places and significant places; error intervals and bounds.	to collect like terms and simplify. Multiply expressions together. Understand the types of data and their pros and cons. Understand the concept of chance and bias. Classify, interpret and compare averages of data. Draw and interpret statistical diagrams. Graph y=mx+c; Learn how to find the gradient positive/negative/fractional slope of a line segment from a pair of coordinates. Gradients of parallel/perpendicular lines. Draw a straight line graph from a table of values. Rearrange a straight line equation into the form y=mx+c and	information, perimeter of compound shapes and solve perimeter problems using algebra. Solve speed,distance, time problems using the formula to solve worded problems. Straight line geometry; plot points; find and plot the midpoint and understand how to complete a table of values. Describe the changes and invariances achieved by combinations of rotations, reflections and translations.	fractions/proportions, write ratios in the form 1:n or n:1, solve best buy problems, share a given amount into a ratio and solve worded problems involving complex algebra. Inter map/model scales as a ratio. Substitute into formulas including negatives,fractions,roots and indices. Solve linear equations including unknowns on both sides,multiplication, division or where the unknown is in the denominator. Expand and simplify single and double bracket(s). Factorise and/or expand expressions. Express calculated probabilities as fractions, decimals or percentages.	combined events, including; use tree diagrams and other statistical diagrams. Convert ordinary numbers to standard form and vice-versa. Adjust to correct standard form. Multiply and divide using standard form. Add/subtract using standard form and using a calculator with standard form. Solve linear equations using inverse operations, including solving two-step equations.	an angle bisector of a given angle, perpendicular bisector of a line or a locus around a straight line. Construction of a triangle given specified rules using a compass and pencil only.

		identify gradient and y-intercept to solve problems.		Deduce outcomes of probability experiments using tables and frequency trees.		
Key Questions	Work out $4.75 - 2.25$? Order 87%, 0.871, ½, ⅔, 0.57 Write 0.77 as a recurring decimal The price of a car increased by 12% to £10,080. Calculate the price before the increase. Write 180 as a product of prime factors.	Simplify $6\,x\,c\,x\,d$ Write as a single fraction in its simplest form $(8\,x\,m\,x\,m) \div (4\,x\,r$ It costs James £1 to make a cake. He sells 5 of them for £1.50 each. How much profit does he make? Find the midpoint between A(5,1) and B(1,5), where A & B lie on the same line segment.	Find the nth term formula for the sequence 3,7,11,15,19… ABC is a triangle. *AB*=8 cm, *BC*=6 cm. Angle ABC is a right-angle. Calculate the perimeter of triangle ABC. Complete a table of values for $y = 6x - 1$, where x ranges from -3 to 3.	A quarter of a circle has a radius of 5cm, work out the area of the shape? How can you simplify $\frac{2}{3} \div \frac{3}{4}$? Three women receive an overtime bonus of £100 to share between them in the ratio 2 : 3 : 5. How much does each woman get? Solve $4x - 2 = 14$ The probability of rolling a six on a biased dice is 5 1 The dice is rolled	What is the probability of selecting a vowel from the word MATHEMATICS? Two fair dice are thrown and the scores are added together. What is the probability of scoring a total of 5? What is 6.5×10^4 written as an ordinary number? What is 0.00061 written in standard form Work out the value of x:	Given a straight line of 6cm, construct an equilateral triangle using a compass. Given an angle of 60 degrees, using your compass construct the angle bisector. Using the line provided, construct the perpendicular bisector of the line.

				twice. Work out the probability of rolling exactly one six?	$5x - 4 = 2x + 1$:	
Assessment	End of topic tests. End of half term tests.	End of topic tests.	End of topic tests. End of half term test.	End of topic tests.	End of topic tests. End of half term tests.	End of topic tests.
Literacy/numeracy/ SMSC/Character/	**Key words:** number, recurring, factor, multiple, intersection, significant figure, decimal place, approximation. **SMSC:** skills such as numerical fluency or confidence with estimation would benefit our students' functioning in our society. **Perseverance:** problem solving	**Key words:** angle, interior, exterior, alternate angle, corresponding angle, scale, bearing, clockwise, solve, simplify, expand, factorise, linear, equation, gradient, intercept, rearrange,substitute, coefficient. **SMSC:** Algebra is a uniquely powerful set of tools that enable us to describe and model real-life. **Resilience:** develop problem solving skills, build	**Key words:** sequence, linear, quadratic difference, fibonacci, interpret, axes, coordinate, conversion, area, surface area, perimeter, cube, cuboid, triangle, trapezia. **SMSC:** A study of Imperial units specifically is no longer on the GCSE syllabus, although students are still required to make conversions between any given units.	**Key words:** circle, circumference, radius, diameter, segment, perimeter, unitary, equation, substitute, solve, denominator, multiply, chance, unlikely, likely, certain, impossible. **SMSC:** A GCSE maths course is partly based on data and probability. A study of probability lends itself to considerations of gambling, betting, lotteries, raffles	**Key words:**scatter plot, correlation, interpret, estimate, plot, bias,outcome. solve,inverse, linear, convert, ordinary, integer, interpolation, extrapolation	**Key words:**loci, Locus, perpendicular, bisector, equidistant,

	through challenge questions.	confidence through problem solving and practice. Understand and problem solving worded problems.	**Confidence:** using mathematical vocabulary, imitative, understanding and dealing with problem solving.	and games of chance. **Community:** Problem solving challenging questions in pairs or in groups.	**SMSC:** Understand and deal with worded problem solving questions.	
Enrichment opportunities and futures						