

Stone Hill School
Curriculum Plan 2019/20
Mathematics Year 9

Intent: In Year 9, pupils will begin to explore place value above 1000 and decimal numbers. Their calculation strategies will be refined, allowing for more efficient mental methods and column addition and subtraction. In fractions, they will work with numerators and begin to recognise equivalency. In Geometry, they will expand their understanding of the properties of shapes and how they can be reflected, rotated and translated. This learning will be presented in a range of contexts, including reasoning as this will prepare pupils for examinations in Key Stage 4.

Term	Week/s	Topic/Theme <i>Steam</i>	Learning Outcomes Knowledge and Skills To know, to use, to apply...	Literacy Link Numeracy Link SMSC Link
Autumn	1-2	Place Value	<ul style="list-style-type: none"> Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Identify, represent and estimate numbers using different representations. Solve number problems and practical problems involving these ideas. 	Literacy – reasoning and conjunctions
	3-7	Number, Addition and Subtraction	<ul style="list-style-type: none"> Add and subtract tens or hundreds from a three-digit number. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number facts, place value, and more complex addition and subtraction. 	
	8-12	Multiplication and division	<ul style="list-style-type: none"> Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. Solve problems involving missing numbers and scaling. 	
	13-14	Properties of Shapes.	<ul style="list-style-type: none"> Draw 2-D shapes and make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. 	Literacy - Descriptive language
Spring	1-4	Fractions	<ul style="list-style-type: none"> Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts. Recognise and show, using diagrams, equivalent fractions with small denominators. Add and subtract fractions with the same denominator within one whole. Compare and order unit fractions, and fractions with the same denominators. 	SMSC – sharing and equality

	5-8	Time	<ul style="list-style-type: none"> Tell the time from 1- hour and 24-hour clocks. Tell time to the nearest minute. Know the number of seconds in a minute, the number of days in each month and the number of days in a year/leap year. Calculate the duration of an event and solve problems involving measuring time. 	Gatsby 5,6
	9-12	Geometry: Sequences, Position and Direction	<ul style="list-style-type: none"> Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. 	Literacy – prepositions, adverbials.
Summer	1-3	Money	<ul style="list-style-type: none"> Correct use pound and pence notation. Add and subtract pound and pence to solve real life problems, including finding change. 	Gatsby 2,6
	4-5	Statistics	<ul style="list-style-type: none"> Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions [<i>for example, 'How many more?' and 'How many fewer?'</i>] using information presented in scaled bar charts and pictograms and tables. 	SMSC contexts for data Gatsby – 2,7
	6-9	Measures: Length, capacity and mass	<ul style="list-style-type: none"> Measure, compare, add and subtract lengths (m/cm/mm). Measure, compare, add and subtract mass (kg/g). Measure, compare, add and subtract volume/capacity (l/ml). Measure the perimeter of simple 2-D shapes. 	Literacy – comparative language. SMSC – cultural contexts for measuring.
	10-12	Geometry: Properties of Shapes (revisit)	<ul style="list-style-type: none"> Draw 2-D shapes and make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. 	Literacy – prepositions, adverbials, adjectives.

Intended impact:

Pupils will have a secure knowledge of calculation, shape and measures up to the level required to access the Entry Level Mathematics course in Year 10. Pupils who have excelled in Year 9 may already have taken the Entry Level examination and will work towards Functional Skills Level 1 in Year 10.