Southfields Whole School Overview - Maths

Intent Statement

The Maths curriculum at Southfields is one that is accessible to all and will maximise the development of every child's ability and academic achievement. We deliver lessons that are creative and engaging where confidence, resilience and a 'can do' attitude is nurtured through a variety of teaching and learning strategies; where the use of models, images and mathematical language are at the heart of our approach. We want children to make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems and we intend for our pupils to be able to apply their mathematical knowledge to science and other subjects. We want children to realise that mathematics has been developed over centuries, providing the solution to some of history's most intriguing problems. We want them to know that it is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. As our pupils progress, we intend for them to be able to understand the world; have the ability to reason mathematically; have an appreciation of the beauty and power of mathematics; and to have a sense of enjoyment and curiosity about the subject.

AUTUMN

	Unit	Strand
Reception	Unit 1 Numbers to 5 Unit 2 Sorting Unit 3 Comparing groups within 5 Unit 4 Change within 5 Unit 5 Time	Number – number and place value Number – addition and subtraction Number – number and place value Number – addition and subtraction Measure
Year 1	Unit 1 Numbers to 10 Unit 2 Part-whole within 10 Unit 3 Addition and subtraction within 10 (1) Unit 4 Addition and subtraction within 10 (2) Unit 5 2D and 3D shapes Unit 6 Numbers to 20	Number – number and place value Number – number and place value Number – addition and subtraction Number – addition and subtraction Geometry – properties of shape Number – number and place value

Notes from 2019- 2020 Curriculum

- Guidance from Power Maths suggests that *fluency* will be the main barrier to learning for children returning to school after 6 months away. Therefore, allocate some time each day to practise number facts and mental maths.
- Power Maths suggest teaching *prerequisite lessons*, rather than trying to teach whole units that have been missed.
- Whilst teaching a unit, *look ahead* to the next unit and *identify potential barriers* that need addressing prior to teaching the next unit.

Analysis of the Southfields Aspirations show:

- Children going into Year 2 and 3 have not had the previous years teaching of Fractions, Measurement, Geometry - Properties of Shapes or Geometry - Position and Direction.
- Children going into Year 4 have not had the previous years teaching of Fractions, Decimals and Percentages, Measurement, Geometry - Properties of Shapes or Statistics.
- Children going into Year 5 and 6 have not had the previous years teaching of Fractions, Decimals and Percentages, Measurement, Geometry - Properties of Shapes, Geometry - Position and Direction or Statistics.
- The *prerequisite lessons* will be essential when teaching these topics and more time will need to be devoted to help lay the foundations for them the following year.

Recovery Curriculum

	Unit	Strand	Prerequisite Unit	Key lessons
Year 2	Unit 1: Numbers to 100	Number and place value	Year 1C Unit 16 Numbers to 100	Lesson 3: Partitioning numbers Lesson 8: Bonds to 100
	Unit 2: Addition and subtraction (1)	Addition and subtraction	Year 1B Unit 7 Addition within 20 Year 1B Unit 8 Subtraction within 20	Unit 7 Lesson 5: Discover and Share: Add by making 10 (1) Unit 8 Lesson 3: Subtraction – crossing the 10 (1) Lesson 6: Addition and subtraction facts to 20
	Unit 3: Addition and subtraction (2)	Addition and subtraction	Year 1B Unit 8 Subtraction within 20	Lesson 4: Subtraction – crossing the 10 (2) Lesson 5: Solving word and picture problems – subtraction
	Unit 4: Money	Measurement	Year 1C Unit 18 Money	Lesson 1: Recognising coins Lesson 2: Recognising notes
	Unit 5: Multiplication and division (1)	Multiplication and division	Year 1C Unit 12 Multiplication	Lesson 2: Making equal groups Lesson 4: Making simple arrays

Year 3	Unit 1: Place value within 1,000	Number and place value	Year 2A Unit 1 Numbers to 100	Lesson 5: Representing numbers on a place value grid Lesson 8: Ordering numbers
	Unit 2: Addition and subtraction (1)	Addition and subtraction	Year 2A Unit 2 Addition and subtraction (1)	Lesson 8: Adding and subtracting 10s Lesson 10: Adding a 2-digit and 1-digit number Lesson 12: Subtracting a 1-digit number from a 2- digit number
	Unit 3: Addition and subtraction (2)	Addition and subtraction	Year 2A Unit 3 Addition and subtraction (2)	Lesson 2: Adding two 2-digit numbers Lesson 6: Subtracting a 2-digit number from another 2-digit number (4)
	Unit 4: Multiplication and division (1)	Multiplication and division	Year 2A Unit 5 Multiplication and division (1) Year 2A Unit 6 Multiplication and division (2)	Unit 5 Lesson 5: Using arrays Unit 6 Lesson 2: Sharing and grouping
Year 4	Unit 1: 4-digit numbers (1)	Number and place value	Year 3A Unit 1 Place value within 1,	Lesson 2: Representing numbers to 1,000 Lesson 4: 100s, 10s and 1s (2)
	Unit 2: 4-digit numbers (2)	Number and place value	Year 3A Unit 1 Place value within 1,000	Lesson 7: Finding 1, 10, 100 more or less Lesson 9: Ordering numbers to 1,000
	Unit 3: Addition and subtraction	Addition and subtraction	Year 3A Unit 3 Addition and subtraction (2	Lesson 3: Adding two 3-digit numbers (2) Lesson 5: Subtracting a 3-digit from a 3- digit number
	Unit 4: Measure – perimeter	Measurement	Year 3B Unit 8 Length	Lesson 3: Equivalent lengths – metres and centimetres Lesson 8: Measuring the perimeter (1)
	Unit 5: Multiplication and division (1)	Multiplication and division	Year 3A Unit 4 Multiplication and division (1) Year 3B Unit 5 Multiplication and division (2)	Unit 4 Lesson 4: 3 times table Unit 5: Lesson 5 Related x and ÷ calculations
Year 5	Unit 1: Place value within 100,000	Number and place value	Year 4A Unit 1 4-digit numbers (1)	Lesson 3: Rounding to the nearest 100 Lesson 9: Roman numerals to 100
	Unit 2: Place value within 1,000,000	Number and place value	Year 4A Unit 2 4-digit numbers (2)	Lesson 4: Ordering numbers to 10,000 Lesson 9: Negative numbers (2)
	Unit 3: Addition and subtraction	Addition and subtraction	Year 4A Unit 3 Addition and subtraction	Lesson 7: Subtracting two 4-digit numbers (3) Lesson 10: Estimating answers to + and -
	Unit 4: Graphs and tables	Statistics	Year 4C Unit 14 Statistics	Lesson 2: Charts and tables (2) Lesson 3: Line graphs (1)
	Unit 5: Multiplication and division (1)	Multiplication and division	Year 4A Unit 5 Multiplication and division (1)	Lesson 1: Multiplying by multiples of 10 and 100 Lesson 2: Dividing multiples of 10 and 100
	Unit 6: Measure – area and perimeter	Measurement	Year 4A Unit 4 Measure – perimeter Year 4B Unit 7 Measure – area	Unit 4 Lesson 5: Perimeter of rectilinear shapes (2) Unit 7 Lesson 5: Comparing area
Year 6	Unit 1: Place value within 10,000,000	Number and place value	Year 5A Unit 1 Place value within 100,000 Year 5A Unit 2 Place value within 1,000,000 numbers	Unit 1 Lesson 2: Rounding to the nearest 10, 100, 1000 Lesson 5: The number line to 100,000 Unit 2 Lesson 6: Negative numbers
	Unit 2: Four operations (1)	Addition, subtraction, multiplication and division	Year 5B Unit 7 Multiplication and division (2)	Lesson 6: Multiplying a 4-digit number by a 2-digit number Lesson 10: Division with remainders (2)
	Unit 3: Four operations (2)	Addition, subtraction, multiplication and division	Year 5A Unit 5 Multiplication and division (1)	Lesson 4 Using factors Lesson 10: Multiplying and dividing by multiples of 10, 100 and 1000
	Unit 4: Fractions (1)	Fractions	Year 5B Unit 8 Fractions (1) Year 5B Unit 9 Fractions (2)	Unit 8 Lesson 2: Converting improper fractions to mixed numbers Unit 9 Lesson 3: Adding and subtracting fractions (2)
	Unit 5: Fractions (2	Fractions	Year 5B Unit 10 Fractions (3)	Lesson 2: Multiplying fractions (2) Lesson 5: Calculating fractions of amounts
	Unit 6: Geometry – position and direction	Geometry – position and direction	Year 5C Unit 15 Geometry – position and direction	Lesson 2: Reflection with coordinates Lesson 4: Translation with coordinates

	SPRING		Notes from 2019- 2020 Curriculum
	Unit	**Strand**	
Reception	Unit 6 Number bonds within 5 Unit 7 Numbers to 10 Unit 8 Comparing numbers within 10 Unit 9 Addition to 10 Unit 10 Number bonds to 10 Unit 11 Shape and space	Number – number and place value Number – number and place value Number – number and place value Number – addition and subtraction Number – addition and subtraction Geometry	• Guidance from Power Maths suggests that *fluency* will be the main barrier to learning for children returning to school after 6 months away. Therefore, allocate some time each day to practise number facts and mental maths. • Power Maths suggest teaching *prerequisite lessons*, rather than trying to teach whole units that have been missed. • Whilst teaching a unit, *look ahead* to the next unit and *identify potential barriers* that need addressing prior to teaching the next unit. *Analysis of the Southfields Aspirations show:* • Children going into Year 2 and 3 have not had the previous years teaching of Fractions, Measurement, Geometry - Properties of Shapes or Geometry - Position and Direction. • Children going into Year 4 have not had the previous years teaching of Fractions, Decimals and Percentages, Measurement, Geometry - Properties of Shapes or Statistics. • Children going into Year 5 and 6 have not had the previous years teaching of Fractions, Decimals and Percentages, Measurement, Geometry - Properties of Shapes, Geometry - Position and Direction or Statistics. • The *prerequisite lessons* will be essential when teaching these topics and more time will need to be devoted to help lay the foundations for them the following year.
Year 1	Unit 7 Addition within 20 Unit 8 Subtraction within 20 Unit 9 Numbers to 50 Unit 10 Introducing length and height Unit 11 Introducing weight and volume	Number – addition and subtraction Number – addition and subtraction Number – number and place value Measurement Measurement	

			Recovery Curriculum	
			Prerequisite Unit	**Key lessons**
Year 2	Unit 6: Multiplication and division (2)	Multiplication and division	Year 1C Unit 13 Division	Lesson 2: Making equal groups (2) Lesson 4: Sharing equally (2)
	Unit 7: Statistics	Statistics	No matching unit in Year 1	
	Unit 8: Length and height	Measurement	Year 1C Unit 10 Length and height	Lesson 4: Measuring length using a ruler
	Unit 9: Properties of shapes	Geometry – Properties of shape	Year 1A Unit 5 2D and 3D shapes	Lesson 1: Naming 3D shapes 1 Lesson 3: Naming 2D shapes 1
	Unit 10: Fractions	Fractions	Year 1C Unit 14 Halves and quarters	Lesson 2: Finding halves 2 Lesson 4: Finding quarters 2
Year 3	Unit 5: Multiplication and division (2)	Multiplication and division	Year 2A Unit 5 Multiplication and division (1) Year 2A Unit 6 Multiplication and division (2	Unit 5: Lesson 7: 5 times table Unit 6: Lesson 5: Dividing by 5
	Unit 6: Money	Measurement	Year 2A Unit 4 Money	Lesson 3: Counting money – coins and notes Lesson 8 Finding change
	Unit 7: Statistics	Statistics	Year 2B Unit 7 Statistics	Lesson 5: Interpreting pictograms (2) Lesson 6: Block diagrams
	Unit 8: Length	Measurement	Year 2B Unit 8 Length and height	Lesson 5: Solving word problems – length
	Unit 9: Fractions (1)	Fractions	Year 2B Unit 10 Fractions	Lesson 6: Finding a quarter Lesson 7: Unit fractions

Year 4	Unit 6: Multiplication and division (2)	Multiplication and division	Year 3B Unit 5 Multiplication and division (2)	Lesson 7: Multiplying a 2-digit number by a 1-digit number (3) Lesson 8: Dividing a 2-digit number by a 1-digit number (1)
	Unit 7: Measure – area	Measurement	Not covered in Year 3	
	Unit 8: Fractions (1)	Fractions (including decimals)	Year 3B Unit 9 Fractions (1) Year 3C Unit 10 Fractions (2)	Unit 9 Lesson 4: Tenths Unit 10 Lesson 2: Equivalent fractions (2)
	Unit 9: Fractions (2)	Fractions (including decimals)	Year 3B Unit 9 Fractions (1) Year 3C Unit 10 Fractions (2)	Unit 9 Lesson 5: Fractions of a set of objects Unit 10 Lesson 8: Problem solving – adding and subtracting fractions
	Unit 10: Decimals (1)	Fractions (including decimals)	Not covered in Year 3 or KS1	
Year 5	Unit 7: Multiplication and division (2)	Multiplication and division	Year 4A Unit 6 Multiplication and division (2	Lesson 5: Multiplying a 3-digit number by a 1-digit number Lesson 14: Dividing a 3-digit number by a 1-digit number
	Unit 8: Fractions (1)	Fractions (including decimals and percentages)	Year 4B Unit 8 Fractions (1)	Lesson 4: Equivalent fractions (2) Lesson 7: Fractions greater than 1 (2)
	Unit 9: Fractions (2)	Fractions (including decimals and percentages)	Year 4B Unit 9 Fractions (2)	Lesson 4: Adding and subtracting fractions (1) Lesson 5: Adding and subtracting fractions (2)
	Unit 10: Fractions (3)	Fractions (including decimals and percentages)	Year 4B Unit 9 Fractions (2)	Lesson 6: Calculating fractions of a quantity Lesson 8: Problem solving – fraction of a quantity (2)
	Unit 11: Decimals and percentages	Fractions (including decimals and percentages)	Year 4C Unit 11 Decimals (2	Lesson 4: Ordering decimals Lesson 5: Rounding decimals
Year 6	Unit 7: Decimals	Fractions (including decimals and percentages)	Year 5B Unit 11 Decimals and percentages Year 5C Unit 12 Decimals	Unit 11 Lesson 3: Decimals as fractions Unit 12 Lesson 13: Multiplying decimals by 10, 100 and 1,000 Unit 12 Lesson 15: Dividing decimals by 10, 100 and 1,000
	Unit 8: Percentages	Fractions (including decimals and percentages)	Year 5B Unit 11 Decimals and percentages	Lesson 10: Understanding percentages Lesson 12 Equivalent fractions, decimals and percentages
	Unit 9: Algebra	Algebra	Year 5A Unit 2 Place value within 1,000,000 Year 5C Unit 12 Decimals	Unit 2 Lesson 8: Number sequences Unit 12 Lesson 9: Decimal sequences
	Unit 10: Measure – imperial and metric measures	Measurement	Year 5C Unit 16 Measure – converting units	Lesson 4: Metric units (4) Lesson 5: Imperial units of length Lesson 6: Imperial units of mass
	Unit 11: Measure – perimeter, area and volume	Measurement	Year 5C Unit 6 Measure – area and perimeter Year 5C Unit 17 Volume and capacity	Unit 6 Lesson 3: Calculating perimeter Unit 6 Lesson 5: Calculating area Unit 17: Lesson 3: Estimating volume
	Unit 12: Ratio and proportion	Ratio and proportion	Year 5C Unit 16 Measure – converting units	Lesson 10: Problem solving – measure The concept of proportion, otherwise not covered previously

	SUMMER		Notes from 2019- 2020 Curriculum
	Unit	**Strand**	
Reception	Unit 12 Exploring patterns Unit 13 Counting on and back 3 Unit 14 Numbers to 20 Unit 15 Numerical patterns Unit 16 Measure	Number – number and place value Number – addition and subtraction Number – number and place value Number – multilplication and division Measure	• Guidance from Power Maths suggests that *fluency* will be the main barrier to learning for children returning to school after 6 months away. Therefore, allocate some time each day to practise number facts and mental maths. • Power Maths suggest teaching *prerequisite lessons*, rather than trying to teach whole units that have been missed. • Whilst teaching a unit, *look ahead* to the next unit and *identify potential barriers* that need addressing prior to teaching the next unit. *Analysis of the Southfields Aspirations show:* • Children going into Year 2 and 3 have not had the previous years teaching of Fractions, Measurement, Geometry - Properties of Shapes or Geometry - Position and Direction. • Children going into Year 4 have not had the previous years teaching of Fractions, Decimals and Percentages, Measurement, Geometry - Properties of Shapes or Statistics. • Children going into Year 5 and 6 have not had the previous years teaching of Fractions, Decimals and Percentages, Measurement, Geometry - Properties of Shapes, Geometry - Position and Direction or Statistics. • The *prerequisite lessons* will be essential when teaching these topics and more time will need to be devoted to help lay the foundations for them the following year.
Year 1	Unit 12 Multiplication Unit 13 Division Unit 14 Halves and quarters Unit 15 Position and direction Unit 16 Numbers to 100 Unit 17 Time Unit 18 Money	Number – multiplication and division Number – multiplication and division Number – fractions Geometry – position and direction Number – number and place value Measurement Measurement	

			Recovery Curriculum	
			Prerequisite Unit	**Key lessons**
Year 2	Unit 11: Position and direction	Geometry – Position and direction	Year 1C Unit 15 Position and direction	Lesson 2: Describing positions 1 Lesson 3: Describing positions 2
	Unit 12: Problem solving and efficient methods	Number and place value Addition and subtraction Multiplication and division	Year 1B Unit 7 Addition within 20 Year 1B Unit 8 Subtraction within 20 Year 1C Unit 12 Multiplication Year 1C Unit 13 Division	Discover and Share sections of: Unit 7 Lesson 6: Solving word problems – addition Unit 8 Lesson 8: Solving word and picture problems – addition and subtraction Unit 12 Lesson 6: Solving word problems – multiplication Unit 13 Lesson 5: Solving word problems - division
	Unit 13: Time	Measurement	Year 1C Unit 17 Time	Lesson 4: Telling time to the half hour (Discover and Share) Lesson 5: Solving word problems – time
	Unit 14: Weight, volume and temperature	Measurement	Year 1B Unit 11 Introducing weight and volume	Lesson 2: Measuring weight Lesson 5: Measuring capacity
Year 3	Unit 10: Fractions (2)	Fractions	Year 2B Unit 10 Fractions	Lesson 9: ½ and 2/4 Lesson 11: Understanding a whole
	Unit 11: Time	Measurement	Year 2C Unit 13 Time	Lesson 4: Minutes in an hour Lesson 5: Durations
	Unit 12: Angles and properties of shapes	Geometry – Properties of shapes	Year 2B Unit 9 Properties of shapes Year 2C Unit 11 Position and direction	Unit 9 Lesson 6: Sorting 2D shapes Lesson 11: Sorting 3D shapes Unit 11 Lesson 2: Describing turns
	Unit 13: Mass	Measurement	Year 2C Unit 14 Weight, volume and temperature	Lesson 3: Measuring mass in grams (2) Lesson 4: Measuring mass in kg
	Unit 14: Capacity	Measurement	Year 2C Unit 14 Weight, volume and temperature	Lesson 7: Measuring volume in millilitres Lesson 8: Measuring volume in litres

Year 4	Unit 11: Decimals (2	Fractions (including decimals)	Not covered in Year 3 or KS1	
	Unit 12: Money	Measurement	Year 3B Unit 6 Money	Lesson 2: Converting pounds and pence Lesson 5: Problem solving – money
	Unit 13: Time	Measurement	Year 3C Unit 11 Time	Lesson 6: Telling time to the minute (2) Lesson 9: Comparing duration
	Unit 14: Statistics	Statistics	Year 3B Unit 7 Statistics	Lesson 4: Bar charts (2) Lesson 5: Tables
	Unit 15: Geometry – angles and 2D shapes	Geometry – properties of shapes	Year 3C Unit 12 Angles and properties of shapes Year 2B Unit 9 Properties of shapes	Year 3C Unit 12 Lesson 3: Comparing angles Year 2B Unit 9 Lesson 5: Finding lines of symmetry
	Unit 16: Geometry – position and direction	Geometry – position and direction	Not covered in Year 3	Symmetry covered in previous unit: Year 4 Unit 16
Year 5	Unit 12: Decimals	Fractions (including decimals and percentages)	Year 4B Unit 10 Decimals (1)	Lesson 5: Dividing by 10 (2) Lesson 9: Dividing by 100
	Unit 13: Geometry – properties of shapes (1)	Geometry – properties of shapes	Year 4C Unit 15 Geometry – angles and 2D shapes	Lesson 1: Identifying angles Lesson 2: Comparing and ordering angles
	Unit 14: Geometry – properties of shapes (2)	Geometry – properties of shapes	Year 4C Unit 15 Geometry – angles and 2D shapes	Lesson 3: Identifying regular and irregular shapes Lesson 5: Classifying and comparing quadrilaterals
	Unit 15: Geometry – position and direction	Geometry – position and direction	Year 4C Unit 16 Geometry – position and direction	Lesson 2: Describing a position (2) Lesson 6: Describing a movement on a grid
	Unit 16: Measure – converting units	Measurement	Year 4C Unit 11 Decimals (2) Year 4C Unit 13 Time	Unit 11 Lesson 7: Problem solving – decimals Unit 13 Lesson 5: Problem solving – units of time
	Unit 17: Measure – volume and capacity	Measurement	Not covered in Year 4 (Year 3C Unit 14)	
Year 6	Unit 13: Geometry – properties of shapes	Geometry – properties of shapes	Year 5C Unit 13 Geometry – properties of shapes 1	Lesson 2: Measuring with a protractor (1) Lesson 5: Calculating angles on a straight line
	Unit 14: Problem solving	Number and place value Addition and subtraction, multiplication and division Fractions (including decimals and percentages) Ratio and proportion Measurement	Year 5A Unit 1 Place value within 100,000 Year 5A Unit 2 Place value within 1,000,000 Year 5A Unit 3 Addition and subtraction Year 5A Unit 5 Multiplication and division (1) Year 5B Unit 7 Multiplication and division (2) Year 5B Unit 8 Fractions (1) Year 5B Unit 9 Fractions (2) Year 5B Unit 10 Fractions (3) Year 5B Unit 11 Decimals and percentages Year 5C Unit 14 Geometry – properties of shapes 2 Year 5C Unit 16 Measure – converting units Year 5C Unit 17 Volume and capacity	Unit 14 Lesson 4: Regular and irregular polygons Unit 16 Lesson 9: Timetables Depends on areas of weakness as this is Problem Solving with everything they have been taught
	Unit 15: Statistics	Statistics	Year 5A Unit 4 Graphs and tables Year 5C Unit 13 Geometry – properties of shapes 1	Unit 4 Lesson 4: Interpreting line graphs (2) Unit 13 Lesson 6: Calculating angles around a point