South Wingfield Primary School Key Learning and Progression of Skills

Place Value – Key Learning

Foundation Stage 1	To know how to subitise to 3. To know how to count to 5. To know numbers belong in a sequence. To know the numerals to 5 and link these to amounts. To know how to accurately count up to 5 objects. To know how to identify the size of group of up to three items (cardinal principle). To know how to compare small groups of objects using the language big, small, more, less, same. To know how to mark make to represent quantities. To know some numbers beyond 5 and can apply counting skills to these.

Foundation Stage 2	Year 1	Year 2
To know how to subitise to 5 (ELG). To know the numerals to 10 and link these to amounts. To know how to identify the size of group of up to 10 items (cardinal principle). To know how to count up to and beyond 20. To know how to recognise the pattern of the counting system beyond 10 (e.g. when counting, the ones column always goes in the order 0,1,2 etc). To know how to compare quantities of up to 10, using more than, less than and equal to.	**Numbers to 10** To know how to count forwards and backwards within 10. To know how to count up to 10 objects. To know how to write numbers to 10. To know the concept of zero. To know how to compare and order numbers and objects to 10. **Numbers to 20** To know how to count forwards and backwards within 20.	**Numbers to 100** To know how to count forward and backwards within 100 in 1s and 1s. To know how to partition numbers into tens and ones. To know how to partition numbers in different ways. To know how to compare numbers to 100.

To know that consecutive numbers are one/less than each other.	To know how to write numbers to 20. To know how to compare and order numbers to 20. To know patterns within numbers to 20. **<u>Numbers to 50</u>** To know how to count forwards and backwards within 50. To know how to write numbers to 50. To know how to partition numbers to 50 into tens and ones. To know how to compare and order numbers to 50. To know how to find single digit values more or less than numbers to 50. **<u>Number to 100</u>** To know how to count forwards and backwards within 100. To know how to partition numbers into 10s and 1s. To know how to compare numbers to 100. To know how to count in 2s, 5s and 10s	

Year 1	Year 2	Year 3
Numbers to 10 To know how to count forwards and backwards within 10. To know how to count up to 10 objects. To know how to write numbers to 10. To know the concept of zero. To know how to compare and order numbers and objects to 10.	**Numbers to 100** To know how to count forward and backwards within 100 in 1s and 1s. To know how to partition numbers into tens and ones. To know how to partition numbers in different ways. To know how to compare numbers to 100.	**Numbers to 1000** To know how to count to 1,000 in 100s, 10s and 1s. To know how to partition numbers into 100s, 10s and 10s. To know how to compare and order numbers to 1,000. To know how to identify and continue number patterns in which numbers increase and decrease by 100s, 10s or 1s. To know how to count in 50s To know how to count in 4s and 8s.
Numbers to 20 To know how to count forwards and backwards within 20. To know how to write numbers to 20. To know how to compare and order numbers to 20. To know patterns within numbers to 20.		
Numbers to 50 To know how to count forwards and backwards within 50. To know how to write numbers to 50.		

To know how to partition numbers to 50 into tens and ones. To know how to compare and order numbers to 50. To know how to find single digit values more or less than numbers to 50.		
Number to 100 To know how to count forwards and backwards within 100. To know how to partition numbers into 10s and 1s. To know how to compare numbers to 100. To know how to count in 2s, 5s and 10s		

Year 2	Year 3	Year 4
Numbers to 100 To know how to count forward and backwards within 100 in 1s and 1s. To know how to partition numbers into tens and ones. To know how to partition numbers in different ways. To know how to compare numbers to 100.	**Numbers to 1000** To know how to count to 1,000 in 100s, 10s and 1s. To know how to partition numbers into 100s, 10s and 10s. To know how to compare and order numbers to 1,000. To know how to identify and continue number patterns in which numbers increase and decrease by 100s, 10s or 1s.	**Numbers to 10, 000** To know how to count in 1s, 10s, 25s, 100s and 1,00s. To know the value of each digit in numbers up to 10,000. To compare and order numbers up to 10,000. To know how to count in 6, 7 and 9s. To know how to round numbers to the nearest 10, 100 or 1,000.

	To know how to count in 50s To know how to count in 4s and 8s.	
		Roman Numerals To know the value of Roman Numerals I, V, X, L, C. To know how to write the numbers 1-100 in Roman Numerals.

Year 3	Year 4	Year 5
Numbers to 1000 To know how to count to 1,000 in 100s, 10s and 1s. To know how to partition numbers into 100s, 10s and 10s. To know how to compare and order numbers to 1,000. To know how to identify and continue number patterns in which numbers increase and decrease by 100s, 10s or 1s. To know how to count in 50s To know how to count in 4s and 8s.	**Numbers to 10, 000** To know how to count in 1s, 10s, 25s, 100s and 1,00s. To know the value of each digit in numbers up to 10,000. To compare and order numbers up to 10,000. To know how to count in 6, 7 and 9s. To know how to round numbers to the nearest 10, 100 or 1,000	**Numbers to 1, 000, 000** To know how to read and write numbers to 1,000,000. To know how to compare numbers to 1,000,000. To know the value of each digit to 1,000,000. To know how to round numbers to 1,000,000 to any degree of accuracy.
	Roman Numerals To know the value of Roman Numerals I, V, X, L, C. To know how to write the numbers 1-100 in Roman Numerals.	**Roman Numerals** To know the value of the Roman Numerals D, M. To know how to write years using Roman Numerals

Year 4	Year 5	Year 6
Numbers to 10, 000 To know how to count in 1s, 10s, 25s, 100s and 1,00s. To know the value of each digit in numbers up to 10,000. To compare and order numbers up to 10,000. To know how to count in 6, 7 and 9s. To know how to round numbers to the nearest 10, 100 or 1,000	**Numbers to 1, 000, 000** To know how to read and write numbers to 1,000,000. To know how to compare numbers to 1,000,000. To know the value of each digit to 1,000,000. To know how to round numbers to 1,000,000 to any degree of accuracy	**Numbers to 10, 000, 000** To know how to read and write numbers to 10,000,000. To know how to compare and order numbers to 10,000,000. To know how to round numbers to 10,000,000 to any degree of accuracy.
Roman Numerals To know the value of Roman Numerals I, V, X, L, C. To know how to write the numbers 1-100 in Roman Numerals.	**Roman Numerals** To know the value of the Roman Numerals D, M. To know how to write years using Roman Numerals.	

Year 5	Year 6	Year 7
Numbers to 1, 000, 000 To know how to read and write numbers to 1,000,000. To know how to compare numbers to 1,000,000. To know the value of each digit to 1,000,000. To know how to round numbers to 1,000,000 to any degree of accuracy	**Numbers to 10, 000, 000** To know how to read and write numbers to 10,000,000. To know how to compare and order numbers to 10,000,000. To know how to round numbers to 10,000,000 to any degree of accuracy.	To know how to understand and use place value for integers of any size. To know how to order positive and negative integers; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, <, >, ≤, ≥. To know how to use the concepts and vocabulary of prime numbers, factors (or divisors), multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation, including using product notation and the unique factorisation property. To know how to use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals. To know how to recognise and use relationships between operations including inverse operations. To know how to use integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 and distinguish between exact representations of roots and their decimal approximations.
Roman Numerals To know the value of the Roman Numerals D, M. To know how to write years using Roman Numerals.		

		To know how to interpret and compare numbers in standard form A x 10^n $1 \leq A < 10$, where n is a positive or negative integer or 0. To know how to round numbers and measures to an appropriate degree of accuracy [for example, to a number of decimal places or significant figures]. To know how to use approximation through rounding to estimate answers and calculate possible resulting errors expressed using inequality notation $a < x \leq b$. To know how to use a calculator and other technologies to calculate results accurately and then interpret them appropriately. To appreciate the infinite nature of the sets of integers, real and rational numbers

South Wingfield Primary School

Addition and Subtraction – Key Learning

Foundation Stage 1	To know that a group refers to a set of items. To know that groups can be combined to make a larger group. To know that numbers are composed of other numbers (children are able to assign a numerical value to the statement above). To know that groups can be split up into smaller groups. To know that numbers can be decomposed into smaller number. To know that simple real-life problems can be solved using mathematical knowledge.

Foundation Stage 2	Year 1	Year 2
To know that the additive relationship can be represented in a part-part-whole model. To know the language addition/add, subtraction/subtract/take away. To know how to compose numbers to 10. To know number bonds to 5. To know some number bonds to 10. To know how to decompose numbers into smaller numbers. To know that real-life problems can be solved using mathematical knowledge.	**Number Bonds** To know how to make number bonds within 10. To know that real-life stories can be represented with number bonds. **Addition within 10** To know how to add using different methods (counting on and using number bonds). To know how to represent an addition as a PPW model. To know that a real-life story can be represented by a number sentence. **Subtraction within 10**	**Addition and Subtraction** To know how to use previously learnt methods to add and subtract numbers to 100. To know how to add using column subtraction. To know three numbers can be added in any order. **More Word Problems** To know that a bar model can be used to represent real-life stories. To know how to use previously learnt methods to solve real-life problems.

	To know how to subtraction using different methods (crossing out, using number bonds and counting back). To know that a real-life story can be represented by a number sentence and vice versa. **Addition and Subtraction within 20** To know how to use previously learnt methods of addition and subtraction for numbers to 20. To know how to add by making 10. To know how to subtract from 10 (e.g. 14-8 -> 4+10 – 8 -> 4+2 = 6). To know that other addition and subtraction facts can be derived from a known fact. **Word Problems** To know how to represent a real-life story using a number sentence. To know how to use previously learnt methods to solve a real-life problem	

Year 1	Year 2	Year 3
Number Bonds To know how to make number bonds within 10. To know that real-life stories can be represented with number bonds.	**Addition and Subtraction** To know how to use previously learnt methods to add and subtract numbers to 100. To know how to add using column subtraction. To know three numbers can be added in any order.	**Addition and Subtraction** To know how to derive fact families of addition and subtraction facts. To know how to add 1s, 10s and 100s to a 3-digit number. To know how to add up to 3-digit numbers to 3-digit numbers using column addition (including renaming). To know how to represent addition and subtraction problems using bar models
Addition within 10 To know how to add using different methods (counting on and using number bonds). To know how to represent an addition as a PPW model. To know that a real-life story can be represented by a number sentence.	**More Word Problems** To know that a bar model can be used to represent real-life stories. To know how to use previously learnt methods to solve real-life problems.	
Subtraction within 10 To know how to subtraction using different methods (crossing out, using number bonds and counting back). To know that a real-life story can be represented by a number sentence and vice versa.		

Addition and Subtraction within 20 To know how to use previously learnt methods of addition and subtraction for numbers to 20. To know how to add by making 10. To know how to subtract from 10 (e.g. 14-8 -> 4+10 – 8 -> 4+2 = 6). To know that other addition and subtraction facts can be derived from a known fact.		
Word Problems To know how to represent a real-life story using a number sentence. To know how to use previously learnt methods to solve a real-life problem		

Year 2	Year 3	Year 4
Addition and Subtraction To know how to use previously learnt methods to add and subtract numbers to 100. To know how to add using column subtraction. To know three numbers can be added in any order.	**Addition and Subtraction** To know how to derive fact families of addition and subtraction facts. To know how to add 1s, 10s and 100s to a 3-digit number. To know how to add up to 3-digit numbers to 3-digit numbers using column addition (including renaming).	**Addition and Subtraction within 10,000** To know how to add and subtract numbers within 10,000 using column method. To know how to use mental methods for addition/subtraction. To know the appropriate method for a given calculation. To know how to represent and solve word problems using a bar model.

	To know how to represent addition and subtraction problems using bar models	
More Word Problems To know that a bar model can be used to represent real-life stories. To know how to use previously learnt methods to solve real-life problems.		

Year 3	Year 4	Year 5
Addition and Subtraction To know how to derive fact families of addition and subtraction facts. To know how to add 1s, 10s and 100s to a 3-digit number. To know how to add up to 3-digit numbers to 3-digit numbers using column addition (including renaming). To know how to represent addition and subtraction problems using bar models	**Addition and Subtraction within 10, 000** To know how to add and subtract numbers within 10,000 using column method. To know how to use mental methods for addition/subtraction. To know the appropriate method for a given calculation. To know how to represent and solve word problems using a bar model.	**Whole Number: Addition and Subtraction** To know how to use place value to count on and back in multiplies of any power of ten. To know how to add/subtract with numbers to 1,000,000 using column method. To know how to use rounding to estimate approximate answers
		Solving Word Problems To know how to represent multistep word problems using a bar model. To know how to use a bar model to identify and solve multistep problems
		Decimals

		To know how to add and subtract decimals in the context of money. To know how to add and subtract decimals in the context of measures (up to 2 decimal places). To know how to add and subtract abstract decimals of up to 2 decimal places, including the use of column method.

Year 4	Year 5	Year 6
Addition and Subtraction within 10,000 To know how to add and subtract numbers within 10,000 using column method. To know how to use mental methods for addition/subtraction. To know the appropriate method for a given calculation. To know how to represent and solve word problems using a bar model.	**Whole Number: Addition and Subtraction** To know how to use place value to count on and back in multiplies of any power of ten. To know how to add/subtract with numbers to 1,000,000 using column method. To know how to use rounding to estimate approximate answers	**Four Operations on Whole Numbers** To know the correct order of operations. To know how to solve a mixed operation calculation using the correct order of operations
	Solving Word Problems To know how to represent multistep word problems using a bar model. To know how to use a bar model to identify and solve multistep problems	
	Decimals	

	To know how to add and subtract decimals in the context of money. To know how to add and subtract decimals in the context of measures (up to 2 decimal places). To know how to add and subtract abstract decimals of up to 2 decimal places, including the use of column method.	

Year 5	Year 6	Year 7
Whole Number: Addition and Subtraction To know how to use place value to count on and back in multiplies of any power of ten. To know how to add/subtract with numbers to 1,000,000 using column method. To know how to use rounding to estimate approximate answers	**Four Operations on Whole Numbers** To know the correct order of operations. To know how to solve a mixed operation calculation using the correct order of operations	To know how use the 4 operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative.
Solving Word Problems To know how to represent multistep word problems using a bar model. To know how to use a bar model to identify and solve multistep problems		
Decimals		

To know how to add and subtract decimals in the context of money. To know how to add and subtract decimals in the context of measures (up to 2 decimal places). To know how to add and subtract abstract decimals of up to 2 decimal places, including the use of column method.		

South Wingfield Primary School

Multiplication and Division – Key Learning

Foundation Stage 1	To know how to make a group. To know that a group can be split into smaller groups through sorting. To know the concept of equal and unequal groups (children know that things can be shared 'fairly' or 'unfairly'). To know how to identify equal and unequal groups (children can say when things have, or have not, been shared 'fairly').

Foundation Stage 2	Year 1	Year 2
	Multiplication To know how to identify and make equal groups. To know how to use repeated addition to find the total number of items in equal groups. To know how to create and describe arrays. To know that doubling is the same as having 2 equal groups. **Division** To know how to put items into groups of a given size.	**Multiplication of 2, 3 and 10** To know that repeated addition can be expressed as a multiplication. To know how to use skip counting to calculate multiplication facts in the 2-, 5- and 10-times table. To know 2-, 5- and 10- times table multiplication facts. To know that multiplication is commutative. **Multiplication and division of 2, 5 and 10**

	To know how to share items equally into a set number of groups.	To know that division can describe both grouping and sharing. To know that multiplication is the inverse of division, and use this to derive calculations. To know how to divide by 2, 5 and 10 by grouping. To know how to divide by 2, 5 and 10 by sharing.

Year 1	Year 2	Year 3
Multiplication To know how to identify and make equal groups. To know how to use repeated addition to find the total number of items in equal groups. To know how to create and describe arrays. To know that doubling is the same as having 2 equal groups.	**Multiplication of 2, 3 and 10** To know that repeated addition can be expressed as a multiplication. To know how to use skip counting to calculate multiplication facts in the 2-, 5- and 10-times table. To know 2-, 5- and 10- times table multiplication facts. To know that multiplication is commutative.	**Multiplication and Division** To know how to count in 3s, 4s and 8s. To know multiplication facts in the 3-, 4- and 8-times tables. To know the relationship between the 4- and 8- times tables. To know how to divide by 3, 4 and 8 by grouping. To know how to divide by 3, 4 and 8 by sharing. To know how to solve problems involving multiplication and division facts.
Division To know how to put items into groups of a given size.	**Multiplication and division of 2, 5 and 10** To know that division can describe both grouping and sharing.	**Further Multiplication and Division** To know how to multiply a multiple of 10 by a 1-digit number.

To know how to share items equally into a set number of groups.	To know that multiplication is the inverse of division, and use this to derive calculations. To know how to divide by 2, 5 and 10 by grouping. To know how to divide by 2, 5 and 10 by sharing.	To know how to multiply a 2-digit number by a 1-digit number using partitioning. To know how to multiply a 2-digit number by a 1-digit number using formal written methods. To know how to divide a 2-digit number by a 1-digit number using partitioning. To know how to solve word problems involving division.

Year 2	Year 3	Year 4
Multiplication of 2, 3 and 10 To know that repeated addition can be expressed as a multiplication. To know how to use skip counting to calculate multiplication facts in the 2-, 5- and 10-times table. To know 2-, 5- and 10- times table multiplication facts. To know that multiplication is commutative.	**Multiplication and Division** To know how to count in 3s, 4s and 8s. To know multiplication facts in the 3-, 4- and 8-times tables. To know the relationship between the 4- and 8- times tables. To know how to divide by 3, 4 and 8 by grouping. To know how to divide by 3, 4 and 8 by sharing. To know how to solve problems involving multiplication and division facts.	**Multiplication and Division** To know all multiplication facts to 12 X 12. To know how to use related multiplication facts to divide by 1-12. To know how to solve division problems that include a remainder. To know how to solve word problems involving division.
Multiplication and division of 2, 5 and 10	**Further Multiplication and Division** To know how to multiply a multiple of 10 by a 1-digit number.	**Further Division** To know how to multiply by 0 and 1. To know how to divide by 1.

To know that division can describe both grouping and sharing. To know that multiplication is the inverse of division, and use this to derive calculations. To know how to divide by 2, 5 and 10 by grouping. To know how to divide by 2, 5 and 10 by sharing.	To know how to multiply a 2-digit number by a 1-digit number using partitioning. To know how to multiply a 2-digit number by a 1-digit number using formal written methods. To know how to divide a 2-digit number by a 1-digit number using partitioning. To know how to solve word problems involving division.	To know that multiplication is commutative. To know how to multiply three numbers. To know how to multiply by multiples of 100. To know how to multiply 3-digit numbers by a 1-digit number using partition, expanded and compact methods. To know how to divide 3-digit numbers by a 1-digit number using long and short division.

Year 3	Year 4	Year 5
Multiplication and Division To know how to count in 3s, 4s and 8s. To know multiplication facts in the 3-, 4- and 8-times tables. To know the relationship between the 4- and 8- times tables. To know how to divide by 3, 4 and 8 by grouping. To know how to divide by 3, 4 and 8 by sharing. To know how to solve problems involving multiplication and division facts.	**Multiplication and Division** To know all multiplication facts to 12 X 12. To know how to use related multiplication facts to divide by 1-12. To know how to solve division problems that include a remainder. To know how to solve word problems involving division.	**Whole numbers, multiplication and division** To know how to find multiples of a number. To know how to find all the factors of a number. To know how to find common multiples of a pair of numbers. To know how to find prime numbers. To know how to find square and cube numbers. To know how to multiply by 10, 100 and 1,000. To know how to

		multiply numbers of up to 4 digits by 1-digit number. To know how to multiply numbers of up to 4 digits by a 2-digit number. To know how to divide by 10, 100 and 1,000. To know how to divide numbers up to 4 digits by a 1-diigit number. To know how to interpret remainders.
Further Multiplication and Division To know how to multiply a multiple of 10 by a 1-digit number. To know how to multiply a 2-digit number by a 1-digit number using partitioning. To know how to multiply a 2-digit number by a 1-digit number using formal written methods. To know how to divide a 2-digit number by a 1-digit number using partitioning. To know how to solve word problems involving division.	**Further Division** To know how to multiply by 0 and 1. To know how to divide by 1. To know that multiplication is commutative. To know how to multiply three numbers. To know how to multiply by multiples of 100. To know how to multiply 3-digit numbers by a 1-digit number using partition, expanded and compact methods. To know how to divide 3-digit numbers by a 1-digit number using long and short division.	**Whole Numbers: Word Problems** To know how to choose the correct operation. To know how to represent key information using bar models. To know how to solve word problems.

Year 4	Year 5	Year 6
Multiplication and Division To know all multiplication facts to 12 X 12. To know how to use related multiplication facts to divide by 1-12. To know how to solve division problems that include a remainder. To know how to solve word problems involving division.	**Whole numbers, multiplication and division** To know how to find multiples of a number. To know how to find all the factors of a number. To know how to find common multiples of a pair of numbers. To know how to find prime numbers. To know how to find square and cube numbers. To know how to multiply by 10, 100 and 1,000. To know how to multiply numbers of up to 4 digits by 1-digit number. To know how to multiply numbers of up to 4 digits by a 2-digit number. To know how to divide by 10, 100 and 1,000. To know how to divide numbers up to 4 digits by a 1-diigit number. To know how to interpret remainders.	**Four operations on whole numbers** To know the correct order of operations. To know how to solve calculations with mixed operations. To know how to estimate the products of large numbers. To know how to multiply numbers of up to 4 digits by a 2-digit number. To know how to divide numbers of up to 4 digits by a 2-digit number. To know how to find common multiples of a pair of numbers.
Further Division To know how to multiply by 0 and 1. To know how to divide by 1. To know that multiplication is commutative.	**Whole Numbers: Word Problems** To know how to choose the correct operation. To know how to represent key information using bar models. To know how to solve word problems.	

To know how to multiply three numbers. To know how to multiply by multiples of 100. To know how to multiply 3-digit numbers by a 1-digit number using partition, expanded and compact methods. To know how to divide 3-digit numbers by a 1-digit number using long and short division.		

Year 5	Year 6	Year 7
Whole numbers, multiplication and division To know how to find multiples of a number. To know how to find all the factors of a number. To know how to find common multiples of a pair of numbers. To know how to find prime numbers. To know how to find square and cube numbers. To know how to multiply by 10, 100 and 1,000. To know how to multiply numbers of up to 4 digits by 1-digit number.	**Four operations on whole numbers** To know the correct order of operations. To know how to solve calculations with mixed operations. To know how to estimate the products of large numbers. To know how to multiply numbers of up to 4 digits by a 2-digit number. To know how to divide numbers of up to 4 digits by a 2-digit number. To know how to find common multiples of a pair of numbers.	To know how use the 4 operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative.

To know how to multiply numbers of up to 4 digits by a 2-digit number. To know how to divide by 10, 100 and 1,000. To know how to divide numbers up to 4 digits by a 1-diigit number. To know how to interpret remainders.		
<u>Whole Numbers: Word Problems</u> To know how to choose the correct operation. To know how to represent key information using bar models. To know how to solve word problems.		

South Wingfield Primary School

Fractions – Key Learning

Foundation Stage 1	

Foundation Stage 2	Year 1	Year 2
To know how to use the language of half in the context of sharing and capacity.	**Fractions** To know how to recognise and find half of a shape. To know how to recognise and find a quarter of a shape.	**Fractions** To know that fractions represent equal parts of a whole. To know how to recognise, find, name and write ½ and ¼. To know how to recognise, find, name and write quarters and thirds. To know how to use fraction notation. To know how to add fractions with the same denominator to make a whole. To know how to compare and order fractions with the same denominator. To know how to compare and order unit fraction. To know how to recognise and write mixed numbers. To know how to find fractions of amounts.

Year 1	Year 2	Year 3
Fractions To know how to recognise and find half of a shape. To know how to recognise and find a quarter of a shape.	**Fractions** To know that fractions represent equal parts of a whole. To know how to recognise, find, name and write ½ and ¼. To know how to recognise, find, name and write quarters and thirds. To know how to use fraction notation. To know how to add fractions with the same denominator to make a whole. To know how to compare and order fractions with the same denominator. To know how to compare and order unit fraction. To know how to recognise and write mixed numbers. To know how to find fractions of amounts.	**Fractions** To know how to count in tenths. To know how to add and subtract fractions with the same denominator within a whole. To know how to subtract fractions from a whole. To know how to find simple equivalent fractions. To know how to simplify fractions. To know how to compare fractions with the same denominator. To know how to compare fractions with the same numerator. To know how to find non-unit fractions of amounts. To know the relationship between fractions and division.

Year 2	Year 3	Year 4
Fractions To know that fractions represent equal parts of a whole. To know how to recognise, find, name and write ½ and ¼. To know how to recognise, find, name and write quarters and thirds.	**Fractions** To know how to count in tenths. To know how to add and subtract fractions with the same denominator within a whole. To know how to subtract fractions from a whole. To know how to find	**Fractions** To know how to write mixed numbers. To know how to write mixed numbers on a number line. To know how to simplify mixed numbers.

To know how to use fraction notation. To know how to add fractions with the same denominator to make a whole. To know how to compare and order fractions with the same denominator. To know how to compare and order unit fraction. To know how to recognise and write mixed numbers. To know how to find fractions of amounts.	simple equivalent fractions. To know how to simplify fractions. To know how to compare fractions with the same denominator. To know how to compare fractions with the same numerator. To know how to find non-unit fractions of amounts. To know the relationship between fractions and division.	To know how to convert between mixed numbers and improper fractions. To know how to add fractions greater than 1. To know how to subtract a fraction from a whole number. To know how to subtract a fraction from a mixed number (same denominator).

Year 3	Year 4	Year 5
Fractions To know how to count in tenths. To know how to add and subtract fractions with the same denominator within a whole. To know how to subtract fractions from a whole. To know how to find simple equivalent fractions. To know how to simplify fractions. To know how to compare fractions with the same denominator. To know how to compare fractions with the same numerator. To know how to find non-unit fractions of amounts.	**Fractions** To know how to write mixed numbers. To know how to write mixed numbers on a number line. To know how to simplify mixed numbers. To know how to convert between mixed numbers and improper fractions. To know how to add fractions greater than 1. To know how to subtract a fraction from a whole number.	**Fractions** To know how to compare and order fractions with different denominators. To know how to add fractions with different denominators. To know how to subtract fractions with different denominators. To know how to multiply fractions by whole numbers. To know how to multiply mixed numbers by whole numbers.

To know the relationship between fractions and division.	To know how to subtract a fraction from a mixed number (same denominator).	

Year 4	Year 5	Year 6
Fractions To know how to write mixed numbers. To know how to write mixed numbers on a number line. To know how to simplify mixed numbers. To know how to convert between mixed numbers and improper fractions. To know how to add fractions greater than 1. To know how to subtract a fraction from a whole number. To know how to subtract a fraction from a mixed number (same denominator).	**Fractions** To know how to compare and order fractions with different denominators. To know how to add fractions with different denominators. To know how to subtract fractions with different denominators. To know how to multiply fractions by whole numbers. To know how to multiply mixed numbers by whole numbers.	**Fractions** To know how to multiply fractions by fraction. To know how to divide fractions by whole numbers

Year 5	Year 6	Year 7
Fractions To know how to compare and order fractions with different denominators. To know how to add fractions with different denominators. To know how to subtract fractions with different denominators. To know how to multiply fractions by whole numbers. To know how to multiply mixed numbers by whole numbers.	**Fractions** To know how to multiply fractions by fraction. To know how to divide fractions by whole numbers	To know how to order fractions; use the number line as a model; use the symbols =, ≠, <, >, ≤, ≥ To know how to use the 4 operations, including formal written methods, applied to proper and improper fractions, and mixed numbers, both positive and negative. To know how to work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 and 3/8) To know how to interpret fractions and percentages as operators. To know how to express 1 quantity as a fraction of another, where the fraction is less than 1 and greater than 1

South Wingfield Primary School

Decimals – Key Learning

Foundation Stage 1	

Foundation Stage 2	Year 1	Year 2

Year 1	Year 2	Year 3

Year 2	Year 3	Year 4

Year 3	Year 4	Year 5
	Decimals To know how to use decimal notation to write tenths. To know how to use decimal notation to write hundredths. To know that ten tenths make a whole. To know that ten hundredths make a tenth. To know that hundred hundredths make a whole. To know how to	**Decimals** To know how to read and write decimals up to 3 decimal places. To know how to compare and order decimals up to 3 decimal places. To know how to write fractions as decimals. To know how to add and subtract decimals. To know how round decimals to the nearest whole number or tenth.

	compare and order decimals with up to 2 decimal places. To know how to round decimals to the nearest whole number. To know simple fraction/decimal equivalence (halves, quarters). To know how to divide whole numbers by 10 and 100.	

Year 4	Year 5	Year 6
Decimals To know how to use decimal notation to write tenths. To know how to use decimal notation to write hundredths. To know that ten tenths make a whole. To know that ten hundredths make a tenth. To know that hundred hundredths make a whole. To know how to compare and order decimals with up to 2 decimal places. To know how to round decimals to the nearest whole number. To know simple fraction/decimal equivalence (halves, quarters).	**Decimals** To know how to read and write decimals up to 3 decimal places. To know how to compare and order decimals up to 3 decimal places. To know how to write fractions as decimals. To know how to add and subtract decimals. To know how round decimals to the nearest whole number or tenth.	**Decimals** To know how to identify the value of each digit in numbers up to 3 decimal places. To know how to multiply and divide by 10, 100 and 1000, giving answers up to 3 decimal places. To know how to use division to convert a fraction to a decimal. To know how to multiply a 1-digit number with up to 2 decimal places by a 2-digit whole number. To know how to divide a 1-digit number with up to 2 decimal places by a 2-digit whole number

To know how to divide whole numbers by 10 and 100.		

Year 5	Year 6	Year 7
Decimals To know how to read and write decimals up to 3 decimal places. To know how to compare and order decimals up to 3 decimal places. To know how to write fractions as decimals. To know how to add and subtract decimals. To know how round decimals to the nearest whole number or tenth.	**Decimals** To know how to identify the value of each digit in numbers up to 3 decimal places. To know how to multiply and divide by 10, 100 and 1000, giving answers up to 3 decimal places. To know how to use division to convert a fraction to a decimal. To know how to multiply a 1-digit number with up to 2 decimal places by a 2-digit whole number. To know how to divide a 1-digit number with up to 2 decimal places by a 2-digit whole number	To know how to understand and use place value for decimals of any size. To know how to order decimals; use the number line as a model for ordering of the real numbers; use the symbols =, ≠, <, >, ≤, ≥ To know how to use the 4 operations, including formal written methods, applied to decimals both positive and negative. To know how to work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 and 3/8)

South Wingfield Primary School

Percentages – Key Learning

Foundation Stage 1	

Foundation Stage 2	Year 1	Year 2

Year 1	Year 2	Year 3

Year 2	Year 3	Year 4

Year 3	Year 4	Year 5
		Percentages To know that percentages are a measurement out of one hundred To know how to convert a fraction into a percentage

Year 4	Year 5	Year 6
	Percentages To know that percentages are a measurement out of one hundred To know how to convert a fraction into a percentage	**Percentages** To know how to find the percentage of a number or quantity. To know how to find percentage change. To know how to use percentage to compare.

Year 5	Year 6	Year 7
Percentages To know that percentages are a measurement out of one hundred To know how to convert a fraction into a percentage	**Percentages** To know how to find the percentage of a number or quantity. To know how to find percentage change. To know how to use percentage to compare.	To know how to define percentage as 'number of parts per hundred', interpret percentages and percentage changes as a fraction or a decimal, interpret these multiplicatively, express 1 quantity as a percentage of another, compare 2 quantities using percentages, and work with percentages greater than 100% To know how to interpret fractions and percentages as operators. To know how to solve problems involving percentage change, including: percentage increase, decrease and original value problems and simple interest in financial mathematics.

South Wingfield Primary School

Algebra – Key Learning

Foundation Stage 1	

Foundation Stage 2	Year 1	Year 2

Year 1	Year 2	Year 3

Year 2	Year 3	Year 4

Year 3	Year 4	Year 5

Year 4	Year 5	Year 6
		To know how to generate and describe a number pattern. To know how to express a missing number algebraically. To know how to use simple formulae.

		To know how to find pairs of numbers that satisfy an equation with two unknowns.

Year 5	Year 6	Year 7
	To know how to generate and describe a number pattern. To know how to express a missing number algebraically. To know how to use simple formulae. To know how to find pairs of numbers that satisfy an equation with two unknowns.	To know how to use and interpret algebraic notation, including: ab in place of a × b; 3y in place of y + y + y and 3 × y; a^2 in place of a × a, a^3 in place of a × a × a; a^2b in place of a × a × b a/b in place of a ÷ b; coefficients written as fractions rather than as decimals; brackets. To know how to substitute numerical values into formulae and expressions, including scientific formulae. To know how to understand and use the concepts and vocabulary of expressions, equations, inequalities, terms and factors. To know how to simplify and manipulate algebraic expressions to maintain equivalence by: collecting like terms; multiplying a single term over a bracket; taking out common factors; expanding products of 2 or more binomials To know how to understand and use standard mathematical formulae; rearrange formulae to change the subject.

		To know how to model situations or procedures by translating them into algebraic expressions or formulae and by using graphs. To know how to use algebraic methods to solve linear equations in 1 variable (including all forms that require rearrangement). To know how to work with coordinates in all 4 quadrants. To know how to recognise, sketch and produce graphs of linear and quadratic functions of 1 variable with appropriate scaling, using equations in x and y and the Cartesian plane. To know how to interpret mathematical relationships both algebraically and graphically. To know how to reduce a given linear equation in 2 variables to the standard form y = mx + c; calculate and interpret gradients and intercepts of graphs of such linear equations numerically, graphically and algebraically To know how to use linear and quadratic graphs to estimate values of y for given values of x and vice versa and to find approximate solutions of simultaneous linear equations. To know how to find approximate solutions to contextual problems from

		given graphs of a variety of functions, including piece-wise linear, exponential and reciprocal graphs. To know how to generate terms of a sequence from either a term-to-term or a position-to-term rule. To know how to recognise arithmetic sequences and find the nth term. To know how to recognise geometric sequences and appreciate other sequences that arise.

South Wingfield Primary School

Ratio – Key Learning

Foundation Stage 1	

Foundation Stage 2	Year 1	Year 2

Year 1	Year 2	Year 3

Year 2	Year 3	Year 4

Year 3	Year 4	Year 5

Year 4	Year 5	Year 6
		Ratio To know how to use ratio to compare 2 quantities. To know how to solve problems involving ratio.

Year 5	Year 6	Year 7

	<u>Ratio</u> To know how to use ratio to compare 2 quantities. To know how to solve problems involving ratio.	To know how to use scale factors, scale diagrams and maps. To know how to use ratio notation, including reduction to simplest form. To know how to divide a given quantity into 2 parts in a given part:part or part:whole ratio; express the division of a quantity into 2 parts as a ratio. To know how to understand that a multiplicative relationship between 2 quantities can be expressed as a ratio or a fraction. To know how to relate the language of ratios and the associated calculations to the arithmetic of fractions and to linear functions. To know how to solve problems involving direct and inverse proportion, including graphical and algebraic representations.

South Wingfield Primary School

Geometry – Key Learning

Foundation Stage 1	To know how to spot patterns in stories and rhymes. To know how to describe patterns they see (such as spotty and stripy). To know how to make predictions about what might happen next, given what has happen. To know how to copy and continue an AB pattern. To know how the names of 2D names (squares, triangles, rectangles, circles). To know how to use the language 'curve', 'straight', 'flat' and 'round'. To know how to make structures using construction blocks. To know and use some positional language such as on, in and under. To know how to talk about a simple, familiar route.

Foundation Stage 2	Year 1	Year 2
To know how to copy, continue and create an AB pattern. To know how to copy, continue and create more complex patterns such an ABC and ABB. To know how to notice an error within a pattern, and correct this. To know how to identify and describe a range of common 2D shapes (squares, triangles, rectangles, circles). To know that 2D shapes can be composed of other 2D shapes.	**Positions** To know ordinal numbers to 10th. To know how to use left and right to describe position.	**Two Dimensional Shapes** To know how to identify the number of sides in a 2-D shape. To know how to identify vertices in a 2-D shape. To know how to identify lines of symmetry. To know how to sort shapes, based on the above properties To know how to draw basic shapes on a grid To know how to continue and describe more complicated shape patters (ABC,

To know how to use the language 'sides' and 'vertices' to describe shapes. To know the names of 3D shapes (sphere, cone, cube, cuboid, cylinder, pyramid). To know how to copy structures from pictures using construction blocks. To know how to describe a simple, familiar route using positional language.		ABBA) To know how to move shapes on a grid, using language up, down, left, right
	Shapes and Patterns To know and identify spheres, cubes, cuboids and pyramids. To know and recognise squares, rectangles, triangles and circles. To know how to group shapes by simple properties (colours, number of sides). To know how to continue and make a simple pattern using shapes.	**Three Dimensional Shapes** To know how to use the language 'flat', 'curved', 'surface' and 'face' to describe 3D shapes. To know how to use the language 'vertex' and 'edge' to describe 3D shapes. To know how to identify the 2D shapes that make up a 3D shapes. To know how to sort 3D shapes (spheres, cubes, cuboids, cones and pyramids) based on their properties.
	Space To know how to use 'top', 'middle' and 'bottom'; 'around', 'close', 'near' and 'far'; and 'on top of', 'in front of' and 'above' to describe position. To know how to use 'up and down', 'forwards and backwards' and 'inside and outside to describe movements.	

	To know how to use 'whole turn', 'half turn', 'quarter turn' 'clockwise' and 'anticlockwise' to describe turns.	

Year 1	Year 2	Year 3
Positions To know ordinal numbers to 10th. To know how to use left and right to describe position.	**Two Dimensional Shapes** To know how to identify the number of sides in a 2-D shape. To know how to identify vertices in a 2-D shape. To know how to identify lines of symmetry. To know how to sort shapes, based on the above properties To know how to draw basic shapes on a grid To know how to continue and describe more complicated shape patters (ABC, ABBA) To know how to move shapes on a grid, using language up, down, left, right	**Angles** To know angles are a measure of a turn. To know what a right angle is. To know how to identify a right angle in a shape. To know what an acute angle is, and know how to identify it. To know what an obtuse angle is, and know how to identify it. To know that two right angles make a half-turn, three make three-quarters of a turn and four a complete turn.
Shapes and Patterns To know and identify spheres, cubes, cuboids and pyramids. To know and recognise squares, rectangles, triangles and circles. To know how to group shapes by simple properties (colours, number of sides).	**Three Dimensional Shapes** To know how to use the language 'flat', 'curved', 'surface' and 'face' to describe 3D shapes. To know how to use the language 'vertex' and 'edge' to describe 3D shapes.	**Lines and Shapes** To know how to identify parallel lines. To know how to identify perpendicular lines. To know how to identify horizontal and vertical lines. To know how to describe a shape using knowledge of lines (parallel and

To know how to continue and make a simple pattern using shapes.	To know how to identify the 2D shapes that make up a 3D shapes. To know how to sort 3D shapes (spheres, cubes, cuboids, cones and pyramids) based on their properties.	perpendicular) and angles (right, acute, obtuse). To know how to Draw 2D shapes on squared paper. To know how to make 3D shapes from nets.
Space To know how to use 'top', 'middle' and 'bottom'; 'around', 'close', 'near' and 'far'; and 'on top of', 'in front of' and 'above' to describe position. To know how to use 'up and down', 'forwards and backwards' and 'inside and outside to describe movements. To know how to use 'whole turn', 'half turn', 'quarter turn' 'clockwise' and 'anticlockwise' to describe turns.		

Year 2	Year 3	Year 4
Two Dimensional Shapes To know how to identify the number of sides in a 2-D shape. To know how to identify vertices in a 2-D shape. To know how to identify lines of symmetry. To know how to sort shapes, based on the above properties To know how to draw basic shapes on a grid To know how to continue and describe more complicated shape patters (ABC, ABBA) To know how to move shapes on a grid, using language up, down, left, right	**Angles** To know angles are a measure of a turn. To know what a right angle is. To know how to identify a right angle in a shape. To know what an acute angle is, and know how to identify it. To know what an obtuse angle is, and know how to identify it. To know that two right angles make a half-turn, three make three-quarters of a turn and four a complete turn.	**Geometry** To know how to compare angles using < > and = To know the language scalene, equilateral and isosceles triangle. To know and identify rhombus, parallelograms, trapeziums and kites. To know how to identify and draw lines of symmetry in figures. To know how to complete symmetrical shapes. To know how to complete a symmetrical pattern across a line of symmetry.
Three Dimensional Shapes To know how to use the language 'flat', 'curved', 'surface' and 'face' to describe 3D shapes. To know how to use the language 'vertex' and 'edge' to describe 3D shapes. To know how to identify the 2D shapes that make up a 3D shapes. To know how to sort 3D shapes (spheres, cubes, cuboids, cones and pyramids) based on their properties.	**Lines and Shapes** To know how to identify parallel lines. To know how to identify perpendicular lines. To know how to identify horizontal and vertical lines. To know how to describe a shape using knowledge of lines (parallel and perpendicular) and angles (right, acute, obtuse). To know how to Draw 2D shapes on squared paper.	**Position and Direction** To know how to describe co-ordinates in the first quadrant. To know how to plot co-ordinates in the first quadrant. To know how to describe translation on a grid using up, down, left and right.

	To know how to make 3D shapes from nets.	

Year 3	Year 4	Year 5
Angles To know angles are a measure of a turn. To know what a right angle is. To know how to identify a right angle in a shape. To know what an acute angle is, and know how to identify it. To know what an obtuse angle is, and know how to identify it. To know that two right angles make a half-turn, three make three-quarters of a turn and four a complete turn.	**Geometry** To know how to compare angles using < > and = To know the language scalene, equilateral and isosceles triangle. To know and identify rhombus, parallelograms, trapeziums and kites. To know how to identify and draw lines of symmetry in figures. To know how to complete symmetrical shapes. To know how to complete a symmetrical pattern across a line of symmetry.	**Geometry** To know how to measure angles using a protractor. To know how to calculate angles on a straight line. To know how to calculate angels around a point. To know how to draw angles. To know how to describe regular polygons (for example, for a square with vertices marked W, X, Y and Z, identify that <XYZ is a right angle and line WX is the same length as YZ). To know that the angles in a quadrilateral add up to 360° To know what is meant by a regular polygon.
Lines and Shapes To know how to identify parallel lines. To know how to identify perpendicular lines. To know how to identify horizontal and vertical lines.	**Position and Direction** To know how to describe co-ordinates in the first quadrant. To know how to plot co-ordinates in the first quadrant.	**Position and Movement** To know how to name and plot points in the first quadrant. To know how to translate a shape. To know how to reflect a shape (including more than once).

To know how to describe a shape using knowledge of lines (parallel and perpendicular) and angles (right, acute, obtuse). To know how to Draw 2D shapes on squared paper. To know how to make 3D shapes from nets.	To know how to describe translation on a grid using up, down, left and right.	

Year 4	Year 5	Year 6
Geometry To know how to compare angles using < > and = To know the language scalene, equilateral and isosceles triangle. To know and identify rhombus, parallelograms, trapeziums and kites. To know how to identify and draw lines of symmetry in figures. To know how to complete symmetrical shapes. To know how to complete a symmetrical pattern across a line of symmetry.	**Geometry** To know how to measure angles using a protractor. To know how to calculate angles on a straight line. To know how to calculate angels around a point. To know how to draw angles. To know how to describe regular polygons (for example, for a square with vertices marked W, X, Y and Z, identify that <XYZ is a right angle and line WX is the same length as YZ). To know that the angles in a quadrilateral add up to 360° To know what is meant by a regular polygon.	**Geometry** To know that vertically opposite angles are equal. To know that angles in a triangle equal 180°. To know the parts of a circle (radius, diameter, circumference). To know how to solve problems involving angles in circles, quadrilaterals and triangles. To know how to draw polygons of given dimensions. To know how to draw nets of 3D shapes.
Position and Direction To know how to describe co-ordinates in the first quadrant. To know how to plot co-ordinates in the first quadrant. To know how to describe translation on a grid using up, down, left and right.	**Position and Movement** To know how to name and plot points in the first quadrant. To know how to translate a shape. To know how to reflect a shape (including more than once).	**Position and Direction** To know how to name and plot points in all 4 quadrants. To know how to translate a shape and describe translations in all 4 quadrants. To know how to reflect a shape (including more than once) in all 4 quadrants.

		To know how to describe movements in all 4 quadrants.

Year 5	Year 6	Year 7
Geometry To know how to measure angles using a protractor. To know how to calculate angles on a straight line. To know how to calculate angels around a point. To know how to draw angles. To know how to describe regular polygons (for example, for a square with vertices marked W, X, Y and Z, identify that <XYZ is a right angle and line WX is the same length as YZ). To know that the angles in a quadrilateral add up to 360° To know what is meant by a regular polygon.	**Geometry** To know that vertically opposite angles are equal. To know that angles in a triangle equal 180°. To know the parts of a circle (radius, diameter, circumference). To know how to solve problems involving angles in circles, quadrilaterals and triangles. To know how to draw polygons of given dimensions. To know how to draw nets of 3D shapes.	To know how to draw and measure line segments and angles in geometric figures, including interpreting scale drawings. To know how to derive and use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle) To know how to recognise and use the perpendicular distance from a point to a line as the shortest distance to the line. To know how to describe, sketch and draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric. To know how to use the standard conventions for labelling the sides and angles of triangle ABC, and know and use the criteria for congruence of triangles. To know how to derive and illustrate properties of triangles, quadrilaterals,

		circles, and other plane figures [for example, equal lengths and angles] using appropriate language and technologies. To know how to identify properties of, and describe the results of, translations, rotations and reflections applied to given figures. To know how to identify and construct congruent triangles, and construct similar shapes by enlargement, with and without coordinate grids. To know how to apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles. To know how to understand and use the relationship between parallel lines and alternate and corresponding angles. To know how to derive and use the sum of angles in a triangle and use it to deduce the angle sum in any polygon, and to derive properties of regular polygons. To know how to apply angle facts, triangle congruence, similarity and properties of quadrilaterals to derive results about angles and sides, including Pythagoras' Theorem, and use known results to obtain simple proofs. To know how to use Pythagoras' Theorem and trigonometric ratios in similar

		triangles to solve problems involving right-angled triangles. To know how to use the properties of faces, surfaces, edges and vertices of cubes, cuboids, prisms, cylinders, pyramids, cones and spheres to solve problems in 3-D. To know how to interpret mathematical relationships both algebraically and geometrically.
Position and Movement To know how to name and plot points in the first quadrant. To know how to translate a shape. To know how to reflect a shape (including more than once).	**Position and Direction** To know how to name and plot points in all 4 quadrants. To know how to translate a shape and describe translations in all 4 quadrants. To know how to reflect a shape (including more than once) in all 4 quadrants. To know how to describe movements in all 4 quadrants.	

South Wingfield Primary School

Measures – Key Learning

Foundation Stage 1	To know language now and next is used to order events. To know when an object is full and empty. To know how to describe objects using language big, small, long, short, heavy and light.

Foundation Stage 2	Year 1	Year 2
To know language today, yesterday and tomorrow. To know the names of the days of the week. To know how to use language full, empty and half full. To know how to compare objects using bigger and smaller; heavier and lighter; longer and shorter.	**Length and Height** To know how to compare lengths and heights using taller/tallest, shorter/shortest, longer/longest. To know how to measure the length and height of items using non-standard measures, e.g. cubes, paperclips or hands. To know how to measure the length and height of items using a rule.	**Temperature** To know how to read positive temperatures from a thermometer.
	Time To know how to tell the time to the hour. To know how to tell the time to the half-hour. To know how to order events using next, before, after. To know the duration of a second, a minute and a hour.	**Money** To know how to write amounts of money using either the £ or p symbol. To know how to count amounts of money, including a mixture of coins and notes, pounds and pence. To know how to find different ways of making the same amount of money.

	To know how to compare the length of events using the language faster, quicker, sooner, slower, earlier, later.	To know how to make simple exchanges of money e.g. 100p for £1, five £1s for a £5 note. To know how to calculate total amounts (for amounts involving whole pounds only). To know how to calculate change (for amounts involving whole pounds only).
		Time To know how to tell and write the time to the nearest 5 minutes (including the language of minutes to). To know how to sequence events, given the times they occurred. To know how to find the start time, end time and duration of an event. To know how to compare lengths of time.
	Money To know how to recognise coins. To know how to recognise notes.	**Volume** To know how to measure volume in litres. To know how to measure volume in millilitres. To know how to compare and order volume and record the results using >, < and =
	Volume and Capacity	

	To know how to compare volume and capacity using the terms 'more than' and 'less than', 'full' and 'empty'. To know how to find volume and capacity using non-standard units. To know how to describe volume and capacity using half and quarter	

Year 1	Year 2	Year 3
Length and Height To know how to compare lengths and heights using taller/tallest, shorter/shortest, longer/longest. To know how to measure the length and height of items using non-standard measures, e.g. cubes, paperclips or hands. To know how to measure the length and height of items using a rule.	**Length** To know how to measure length in meters. To know how to measure length in centimetres. To know how to compare lengths in meters. To know how to compare length in centimetres.	**Length** To know how to write length in metres and centimetres. To know how to write length in kilometres. To know how to compare lengths. To know how to solve word problems involving length.
Time To know how to tell the time to the hour. To know how to tell the time to the half-hour. To know how to order events using next, before, after.	**Mass** To know how to measure mass in kilograms. To know how to measure mass in grams. To know how to compare the mass of up to three objects.	**Mass** To know how to write weights using grams and kilograms. To know how to read weighing scales marked in grams and kilograms. To know how to solve problems involving mass.

To know the duration of a second, a minute and a hour. To know how to compare the length of events using the language faster, quicker, sooner, slower, earlier, later.		
		Volume To know how to measure volume and capacity in litres and millilitres. To know how to write volume and capacity in litres and millilitres. To know how to solve problems involving mass.
Money To know how to recognise coins. To know how to recognise notes.	**Temperature** To know how to read positive temperatures from a thermometer.	**Money** To know how to count and write amounts of money (including crossing the £ barrier). To know how to make amounts of money in different ways. To know how to add amounts of money. To know how to subtract amounts of money. To know how to calculate change
Volume and Capacity To know how to compare volume and capacity using the terms 'more than' and 'less than', 'full' and 'empty'.	**Money** To know how to write amounts of money using either the £ or p symbol.	**Time** To know how to tell the time to the nearest minute on digital and

To know how to find volume and capacity using non-standard units. To know how to describe volume and capacity using half and quarter	To know how to count amounts of money, including a mixture of coins and notes, pounds and pence. To know how to find different ways of making the same amount of money. To know how to make simple exchanges of money e.g. 100p for £1, five £1s for a £5 note. To know how to calculate total amounts (for amounts involving whole pounds only). To know how to calculate change (for amounts involving whole pounds only).	analogue clocks (including those marked in Roman Numerals). To know how to use am and pm. To know how to measure time in seconds, using digital and analogue clocks and timers. To know how to measure time in hours. To know how to measure time in minutes (including crossing an hour boundary). To know how to convert minutes to seconds and seconds to minutes. To know the number of days in each month, year and leap year.
Mass To know how to compare mass using lighter or heavier. To know how to find measure mass using non-standard units of measure.	**Time** To know how to tell and write the time to the nearest 5 minutes (including the language of minutes to). To know how to sequence events, given the times they occurred. To know how to find the start time, end time and duration of an event. To know how to compare lengths of time.	**Perimeter of Figures** To know the concept of perimeter. To know how to measure the perimeter of shapes. To know how to calculate the perimeter of rectangles (including squares).
	Volume To know how to measure volume in litres.	

	To know how to measure volume in millilitres. To know how to compare and order volume and record the results using >, < and =	

Year 2	Year 3	Year 4
Length To know how to measure length in meters. To know how to measure length in centimetres. To know how to compare lengths in meters. To know how to compare length in centimetres.	**Length** To know how to write length in metres and centimetres. To know how to write length in kilometres. To know how to compare lengths. To know how to solve word problems involving length.	**Time** To know how to tell the time on the 24-hour clock. To know how to convert time in hours to minutes. To know how to convert years to months and weeks to days. To know how to solve problems on duration of time.
Mass To know how to measure mass in kilograms. To know how to measure mass in grams. To know how to compare the mass of up to three objects.	**Mass** To know how to write weights using grams and kilograms. To know how to read weighing scales marked in grams and kilograms. To know how to solve problems involving mass.	**Money** To know how to write amounts of money using decimal notation. To know how to compare amounts of money. To know how to round amounts of money to the nearest £1. To know how to solve problems involving money.
	Volume To know how to measure volume and capacity in litres and millilitres.	**Mass, Volume and Length**

	To know how to write volume and capacity in litres and millilitres. To know how to solve problems involving mass.	To know how to measure mass by reading scales in grams and kilograms. To know how to write masses in kilograms and grams, and kilograms with decimals. To know how to convert between grams and kilograms. To know how to measure volume by reading scales in ml and l. To know how to write volumes in l and ml, and l with decimals. To know how to convert between ml and l. To know how to measure and write height in metres with decimals. To know how to measure length in cm (including decimals). To know how to convert between mm, cm, m and km.
Temperature To know how to read positive temperatures from a thermometer.	**Money** To know how to count and write amounts of money (including crossing the £ barrier). To know how to make amounts of money in different ways. To know how to add amounts of money.	**Areas of Figures** To know that area is a measure of the surface an object covers. To know how to measure area using non-standard units. To know how to measure area of rectilinear shapes by counting squares.

	To know how to subtract amounts of money. To know how to calculate change	
Money To know how to write amounts of money using either the £ or p symbol. To know how to count amounts of money, including a mixture of coins and notes, pounds and pence. To know how to find different ways of making the same amount of money. To know how to make simple exchanges of money e.g. 100p for £1, five £1s for a £5 note. To know how to calculate total amounts (for amounts involving whole pounds only). To know how to calculate change (for amounts involving whole pounds only).	**Time** To know how to tell the time to the nearest minute on digital and analogue clocks (including those marked in Roman Numerals). To know how to use am and pm. To know how to measure time in seconds, using digital and analogue clocks and timers. To know how to measure time in hours. To know how to measure time in minutes (including crossing an hour boundary). To know how to convert minutes to seconds and seconds to minutes. To know the number of days in each month, year and leap year.	
Time To know how to tell and write the time to the nearest 5 minutes (including the language of minutes to). To know how to sequence events, given the times they occurred.	**Perimeter of Figures** To know the concept of perimeter. To know how to measure the perimeter of shapes.	

To know how to find the start time, end time and duration of an event. To know how to compare lengths of time.	To know how to calculate the perimeter of rectangles (including squares).	
Volume To know how to measure volume in litres. To know how to measure volume in millilitres. To know how to compare and order volume and record the results using >, < and =		

Year 3	Year 4	Year 5
Length To know how to write length in metres and centimetres. To know how to write length in kilometres. To know how to compare lengths. To know how to solve word problems involving length.	**Time** To know how to tell the time on the 24-hour clock. To know how to convert time in hours to minutes. To know how to convert years to months and weeks to days. To know how to solve problems on duration of time.	
Mass To know how to write weights using grams and kilograms. To know how to read weighing scales marked in grams and kilograms.	**Money** To know how to write amounts of money using decimal notation. To know how to compare amounts of money.	

To know how to solve problems involving mass.	To know how to round amounts of money to the nearest £1. To know how to solve problems involving money.	
Volume To know how to measure volume and capacity in litres and millilitres. To know how to write volume and capacity in litres and millilitres. To know how to solve problems involving mass.	**Mass, Volume and Length** To know how to measure mass by reading scales in grams and kilograms. To know how to write masses in kilograms and grams, and kilograms with decimals. To know how to convert between grams and kilograms. To know how to measure volume by reading scales in ml and l. To know how to write volumes in l and ml, and l with decimals. To know how to convert between ml and l. To know how to measure and write height in metres with decimals. To know how to measure length in cm (including decimals). To know how to convert between mm, cm, m and km.	
Money	**Areas of Figures** To know that area is a measure of the surface an object covers.	

To know how to count and write amounts of money (including crossing the £ barrier). To know how to make amounts of money in different ways. To know how to add amounts of money. To know how to subtract amounts of money. To know how to calculate change	To know how to measure area using non-standard units. To know how to measure area of rectilinear shapes by counting squares.	
Time To know how to tell the time to the nearest minute on digital and analogue clocks (including those marked in Roman Numerals). To know how to use am and pm. To know how to measure time in seconds, using digital and analogue clocks and timers. To know how to measure time in hours. To know how to measure time in minutes (including crossing an hour boundary). To know how to convert minutes to seconds and seconds to minutes.		

To know the number of days in each month, year and leap year.		
Perimeter of Figures To know the concept of perimeter. To know how to measure the perimeter of shapes. To know how to calculate the perimeter of rectangles (including squares).		

Year 4	Year 5	Year 6
Time To know how to tell the time on the 24-hour clock. To know how to convert time in hours to minutes. To know how to convert years to months and weeks to days. To know how to solve problems on duration of time.	**Measurement** To know how to convert between all metric units of length. To know how to approximate conversation between metric and imperial units of length. To know how to convert between all metric units of mass. To know how to approximate conversation between metric and imperial units of mass. To know how to convert between all units of time. To know how to read a thermometer showing both positive and negative values.	**Measurement** To know how to convert between all metric units of length. To know how to convert between all metric units of mass. To know how to convert between all units of time.
Money	**Area and Perimeter**	**Area and Perimeter**

To know how to write amounts of money using decimal notation. To know how to compare amounts of money. To know how to round amounts of money to the nearest £1. To know how to solve problems involving money.	To know how to find the perimeter of regular polygons and rectilinear shapes. To know how to calculate the area of rectangles (including squares). To know how to calculate the area of rectilinear shapes. To know how to estimate the area of irregular shapes	To know how to calculate the area of triangles. To know how to calculate the area of parallelograms.
Mass, Volume and Length To know how to measure mass by reading scales in grams and kilograms. To know how to write masses in kilograms and grams, and kilograms with decimals. To know how to convert between grams and kilograms. To know how to measure volume by reading scales in ml and l. To know how to write volumes in l and ml, and l with decimals. To know how to convert between ml and l. To know how to measure and write height in metres with decimals. To know how to measure length in cm (including decimals).	**Volume** To know the concept of volume. To know how to calculate the volume of 3D shapes by counting cubes. To know how to calculate the volume of cubes and cuboids. To know how to convert between metric units of volume. To know how to convert between pints and ml/l.	

To know how to convert between mm, cm, m and km.		
Areas of Figures To know that area is a measure of the surface an object covers. To know how to measure area using non-standard units. To know how to measure area of rectilinear shapes by counting squares.		

Year 5	Year 6	Year 7
Measurement To know how to convert between all metric units of length. To know how to approximate conversation between metric and imperial units of length. To know how to convert between all metric units of mass. To know how to approximate conversation between metric and imperial units of mass. To know how to convert between all units of time. To know how to read a thermometer showing both positive and negative values.	**Measurement** To know how to convert between all metric units of length. To know how to convert between all metric units of mass. To know how to convert between all units of time.	To know how to use standard units of mass, length, time, money and other measures, including with decimal quantities. To know how to use compound units such as speed, unit pricing and density to solve problems. To know how to derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms, trapezia, volume of cuboids (including cubes) and other prisms (including cylinders) To know how to calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes.

		To know how to change freely between related standard units [for example time, length, area, volume/capacity, mass].
<u>Area and Perimeter</u> To know how to find the perimeter of regular polygons and rectilinear shapes. To know how to calculate the area of rectangles (including squares). To know how to calculate the area of rectilinear shapes. To know how to estimate the area of irregular shapes	**<u>Area and Perimeter</u>** To know how to calculate the area of triangles. To know how to calculate the area of parallelograms.	
<u>Volume</u> To know the concept of volume. To know how to calculate the volume of 3D shapes by counting cubes. To know how to calculate the volume of cubes and cuboids. To know how to convert between metric units of volume. To know how to convert between pints and ml/l.		

South Wingfield Primary School

Statistics – Key Learning

Foundation Stage 1	

Foundation Stage 2	Year 1	Year 2
		Picture Graphs To know how to read picture graphs.

Year 1	Year 2	Year 3
	Picture Graphs To know how to read picture graphs.	**Picture Graphs and Bar Charts** To know how to draw picture graphs. To know how to draw bar graphs. To know how to read bar graphs.

Year 2	Year 3	Year 4
Picture Graphs To know how to read picture graphs.	**Picture Graphs and Bar Charts** To know how to draw picture graphs. To know how to draw bar graphs. To know how to read bar graphs.	**Graphs** To know how to read and draw picture graphs. To know how to read and draw bar graphs.

		To know how to draw and read line graphs.

Year 3	Year 4	Year 5
Picture Graphs and Bar Charts To know how to draw picture graphs. To know how to draw bar graphs. To know how to read bar graphs.	**Graphs** To know how to read and draw picture graphs. To know how to read and draw bar graphs. To know how to draw and read line graphs.	**Graphs** To know how to read tables. To know how to read line graphs

Year 4	Year 5	Year 6
Graphs To know how to read and draw picture graphs. To know how to read and draw bar graphs. To know how to draw and read line graphs.	**Graphs** To know how to read tables. To know how to read line graphs	**Graphs and Averages** To know the concept of average. To know how to calculate the mean. To know how to display information in a pie chart. To know how to interpret pie charts. To know how to interpret line graphs. To know how to use line graphs to convert between miles and kilometres.

Year 5	Year 6	Year 7
Graphs To know how to read tables.	**Graphs and Averages** To know the concept of average.	To know how to describe, interpret and compare observed distributions of a

To know how to read line graphs	To know how to calculate the mean. To know how to display information in a pie chart. To know how to interpret pie charts. To know how to interpret line graphs. To know how to use line graphs to convert between miles and kilometres.	single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers). To know how to construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped and grouped numerical data. To know how to describe simple mathematical relationships between 2 variables (bivariate data) in observational and experimental contexts and illustrate using scatter graphs.