	St Andrew's C of E Primary School	
	Curriculum Map for Maths	

Nursery	St Andrew's Curriculum					
	Autumn 1	Autumn 2	Spring 1	Spring 1	Summer 1	Summer 2
	Year A & B Me and My Family	Year A Winter Wonderland Year B Splashing Around	Year A How to Catch a Dragon Year B Me and My Shadow	Year A Fluff and Feathers Year B Let's Build Together	Year A Somewhere Over the Rainbow Year B If You're Healthy and You Know It	Year A Beside The Seaside Year B Animal Antics
	Maths Topics					
	Colour Size	Sorting, matching, classifying	Patterns	Positional Language	Colour Patterns	2D Shapes
	Number – ongoing throughout the year					
	Development Matters – Specific Area - Maths					

- Take part in finger rhymes with numbers.
- Counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence.
- Count in everyday contexts, sometimes skipping numbers - '1-2-3-5.'
- Compare sizes, weights etc. using gesture and language - 'bigger/little/smaller',
- Build with a range of resources.
- Complete inset puzzles

- Say one number for each item in order: 1,2,3,4,5.
- Show 'finger numbers' up to 5.
- Notice patterns and arrange things in patterns.
- Recite numbers past 5.
- Compare amounts, saying 'lots', 'more' or 'same'.
- Begin to understand positional language

- Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').
- Fast recognition of up to 3 objects, without having to count them individually ('subitising').
- Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.
- Solve real world mathematical problems with numbers up to 5.
- Experiment with their own symbols and marks as well as numerals.
- Compare quantities using language: 'more than', 'fewer than'.
- using words like 'in front of' and 'behind'
- Talk about and identifies the patterns
- Talk about and explore 2D shapes

	St Andrew's Curriculum					
	Autumn 1	Autumn 2	Spring 1	Spring 1	Summer 1	Summer 2
	Marvellous Me	Awesome Authors	Reach for the Stars	Commotion in the Ocean	All Creatures Great and Small	Rumble in the Jungle
	NTCEM & White Rose (Shape & Space)					
Marvellous Me	**Subitising** • perceptually subitise within 3 • identify sub-groups in larger arrangements • create their own patterns for numbers within 4 • practise using their fingers to represent quantities which they can subitise • experience subitising in a range of contexts, including temporal patterns made by sounds. **Cardinality ordinality and counting** • relate the counting sequence to cardinality, seeing that the last number spoken gives the number in the entire set • have a wide range of opportunities to develop their knowledge of the counting sequence, including through rhyme and song • have a wide range of opportunities to develop 1:1 correspondence, including by coordinating movement and counting • have opportunities to develop an understanding that anything can be counted, including actions and sounds • explore a range of strategies which support accurate counting. **Composition** • see that all numbers can be made of 1s • compose their own collections within 4. **Comparison** • understand that sets can be compared according to a range of attributes,	**Subitising** • continue from first half-term • subitise within 5, perceptually and conceptually, depending on the arrangements. **Cardinality ordinality and counting** • continue to develop their counting skills • explore the cardinality of 5, linking this to dice patterns and 5 fingers on 1 hand • begin to count beyond 5 • begin to recognise numerals, relating these to quantities they can subitise and count. **Composition** • explore the concept of 'wholes' and 'parts' by looking at a range of objects that are composed of parts, some of which can be taken apart and some of which cannot • explore the composition of numbers within 5. **Comparison** • compare sets using a variety of strategies, including 'just by looking', by subitising and by matching • compare sets by matching, seeing that when every object in a set can be matched to one in the other set, they contain the same number and are equal amounts. Circle, triangle square and rectangle	**Subitising** • increase confidence in subitising by continuing to explore patterns within 5, including structured and random arrangements • explore a range of patterns made by some numbers greater than 5, including structured patterns in which 5 is a clear part • experience patterns which show a small group and '1 more' • continue to match arrangements to finger patterns. **Cardinality ordinality and counting** • continue to develop verbal counting to 20 and beyond • continue to develop object counting skills, using a range of strategies to develop accuracy • continue to link counting to cardinality, including using their fingers to represent quantities between 5 and 10 • order numbers, linking cardinal and ordinal representations of number. **Composition** • continue to explore the composition of 5 and practise recalling 'missing' or 'hidden' parts for 5 • explore the composition of 6, linking this to familiar patterns, including symmetrical patterns • begin to see that numbers within 10 can be composed of '5 and a bit'. **Comparison** • continue to compare sets using the language of	**Subitising** • explore symmetrical patterns, in which each side is a familiar pattern, linking this to 'doubles'. **Cardinality ordinality and counting** • continue to consolidate their understanding of cardinality, working with larger numbers within 10 • become more familiar with the counting pattern beyond 20. **Composition** • explore the composition of odd and even numbers, looking at the 'shape' of these numbers • begin to link even numbers to doubles • begin to explore the composition of numbers within 10. **Comparison** • compare numbers, reasoning about which is more, using both an understanding of the 'howmanyness' of a number, and its position in the number system. Patterns Capacity Weight	**Subitising** • continue to practise increasingly familiar subitising arrangements, including those which expose '1 more' or 'doubles' patterns • use subitising skills to enable them to identify when patterns show the same number but in a different arrangement, or when patterns are similar but have a different number • subitise structured and unstructured patterns, including those which show numbers within 10, in relation to 5 and 10 • be encouraged to identify when it is appropriate to count and when groups can be subitised.. **Cardinality ordinality and counting** • continue to develop verbal counting to 20 and beyond, including counting from different starting numbers • continue to develop confidence and accuracy in both verbal and object counting. **Composition** • explore the composition of 10.. **Comparison** • order sets of objects, linking this to their understanding of the ordinal number system. Properties of shape 2D & 3D	Children will consolidate their understanding of concepts previously taught through working in a variety of contexts and with different numbers. Patterns

	including by their numerosity • use the language of comparison, including 'more than' and 'fewer than' • compare sets 'just by looking'.	size Positional language Time routines	comparison, and play games which involve comparing sets • continue to compare sets by matching, identifying when sets are equal • explore ways of making unequal sets equal.		
	2D shapes Simple Pattern Colours Sort		Heavy, light Exploring 2D & 3D shapes Compare length and height		

Number – ongoing throughout the year

Development Matters – Specific Area - Maths

• Count objects, actions and sounds. • Subitise up to 3 • Understand the 'one more than/one less than' relationship between consecutive numbers. • Make comparisons between objects relating to size • Explore 2D shapes (for example, circles, rectangles, triangles and squares) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'	• Subitise up to 5 • Link the numeral with its cardinal number value • Count beyond ten. • Compare numbers • Explore the composition of numbers to 10 • Explore 3D shapes (for example, cube, sphere, cone, cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Compare length, weight and capacity. • Continue, copy and create repeating patterns.	• Count beyond 20 • Have a deep understanding of number to 10 • Compare quantities up to 10 • Automatically recall number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Early Learning Goal - Maths

		By the end of Reception children at the expected level of development will: - **Number** - - Have a deep understanding of number to 10, including the composition of each number - Subitise (recognise quantities without counting) up to 5 - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **Numerical Patterns** - Verbally count beyond 20, recognising the pattern of the counting system - Compare quantities up to 10 in different contexts,

			recognising when one quantity is greater than, less than or the same as the other quantity - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Year 1 National Curriculum Statutory Requirement	Year 1 St Andrew's Targets
Number	
Number & Place Value Pupils should be taught to: ♣ count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens ♣ given a number, identify one more and one less ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least ♣ read and write numbers from 1 to 20 in numerals and words.	NPV1: I can identify and represent numbers using objects and pictorial representations including a number line. NPV2: I can find one more of a given number to 10, 20, 50 and 100. NPV3: I can find one less of a given number to 10, 20, 50, and 100. NPV4: I can compare numbers using language such as equal to, more/greater, less/fewer. NPV5: I can use =, < and > symbols to compare numbers. NPV6: I can use a number line correctly. NPV7: I can order random numbers to 10, 20, 50 and 100. NPV8: I know and understand ordinal numbers. NPV9: I know the value of a 2-digit number in terms of tens and ones. NPV10: I can partition a 2-digit number.
Addition & Subtraction Pupils should be taught to: ♣ read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs ♣ represent and use number bonds and related subtraction facts within 20 ♣ add and subtract one-digit and two-digit numbers to 20, including zero ♣ solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.	AS1: I can add two sets/parts together to make a whole. AS2: I can read, write and understand mathematical statements involving addition (+), subtraction (-) and equals (=) signs. AS3: I can add 2 single digits together up to 10 and 20. AS4: I can add 2 digits by counting on up to 10 and 20. AS5: I can add a single digit number to a 2-digit number up to 20. AS6: I can solve missing number problems that involve addition up to 10, 20, 50 and 100. AS7: I can solve one-step problems that involve addition using apparatus. AS8: I can take away objects from a set and find out how many are left. AS9: I can subtract a number by counting back. AS10: I can find the difference between two numbers. AS11: I can subtract a single digit from a 2-digit number up to 20. AS12: I can solve missing number problems that involve subtraction up to 10, 20, 50 and 100. AS13: I can solve one-step problems that involve subtraction using apparatus. AS14: I know the meaning of plus, add, minus, take away, equals, total and difference.
Multiplication & Division Pupils should be taught to: ♣ solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	MD1: I understand the x and ÷ signs. MD2: I can group small quantities together to understand multiplication (pictorial). MD3: I can add equal groups together (repeated addition). MD4: I can make arrays to help me understand multiplication. MD5: I know what doubling means. MD6: I can share quantities to understand division. MD7: I can group quantities into equal groups to understand division. MD8: I can solve one-step multiplication and division problems using concrete objects, pictorial representations and arrays with the support of a teacher.

Fractions Pupils should be taught to: ♣ recognise, find and name a half as one of two equal parts of an object, shape or quantity ♣ recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	F1: I can recognise ½ as a fraction. F2: I know what halving means. F3: I can half shapes. F4: I can half a number of objects. F5: I can recognise ¼ as a fraction. F6: I can quarter whole shapes. F7: I can find a ¼ of a number of objects.
Measurement	
Pupils should be taught to: ♣ sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] ♣ recognise and use language relating to dates, including days of the week, weeks, months and years ♣ tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. ♣ compare, describe and solve practical problems for: -lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] -mass/weight [for example, heavy/light, heavier than, lighter than] -capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] -time [for example, quicker, slower, earlier, later] ♣ measure and begin to record the following: -lengths and heights -mass/weight - capacity and volume - time (hours, minutes, seconds) ♣ recognise and know the value of different denominations of coins and notes	MT1: I can sequence events in chronological order using appropriate vocabulary. MT2: I know the days of the week in order. MT3: I know the months of the year. MT4: I know the months of the year in order. MT5: I can tell the time to the hour (analogue clock) MT6: I can tell the time to half an hour (analogue clock) MT7: I can draw hands on the clock to show the correct time. MT8: I know the different between days, months and years in the date. MT9: I can compare two lengths using appropriate vocabulary (short, shorter, shortest, long, longer, longest, tall, taller, tallest) MT10: I can measure length using non-standard units. MT11: I can measure lengths using a ruler (cm). MT12: I can compare two lengths using appropriate vocabulary (short, shorter, shortest, long, longer, longest, tall, taller, tallest) MT13: I can compare two objects using appropriate vocabulary (heavy/light). MT14: I can measure the mass of an object using non-standard units. MT15: I can compare the capacity and volume using the appropriate vocabulary (full, empty, half full). MT16: I can measure the capacity using non-standard units. M1: I can recognise the British coins (1p, 2p, 5p, 10p, 20p, 50p, £1.00 and £2.00) M2: I know the value of the coins (1p, 2p, 5p, 10p, 20p, 50p, £1.00 and £2.00). M3: I know the value of £5.00, £10.00 and £20.00 notes. M4: I can count in coins correctly. M5: I can add coins together to work out the amount.
Geometry	
Properties of Shapes Pupils should be taught to: ♣ recognise and name common 2-D and 3-D shapes, including: ♣ 2-D shapes [for example, rectangles (including squares), circles and triangles] ♣ 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	GSP1: I can name 2D shapes (circle, square, triangle, rectangle). GSP2: I can recognise 2D shapes in different sizes and positions. GSP3: I can name 3D shapes (sphere, cuboid, cube, cone, cylinder, pyramid) GSP4: I can identify the 3D shape of everyday objects. GSP5: I can recognise 3D shapes in different sizes and positions. GSP6: I can complete a repeating pattern with shapes. GSP7: I can create repeating patterns

Position & Direction	GSP8: I can recognise and use whole and half turn.
Pupils should be taught to: ♣ describe position, direction and movement, including whole, half, quarter and three quarter turns.	GSP9: I can recognise and use quarter and three-quarter turns. GSP10: I can describe the position of an object using the correct language (top, middle, bottom, next to, in front of, behind, above, below). GSP11: I can follow and give instructions to move along a route.

KS1 – Year 1

The national curriculum for Maths Aims

The national curriculum for mathematics aims to ensure that all pupils:

♣ become fluent in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

♣ reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language

♣ can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

White Rose Hub – Domains in Bold					
Autumn (12 Weeks)		**Spring (12 weeks)**		**Summer (12 Weeks)**	
Week 1-5	**Number**: Place Value (Within 10)	Week 1 -3	**Number**: Place Value (Within 20)	Week 1 -3	**Number**: Multiplication & Division
Week 6-10	**Number**: Addition & Subtraction (within 10)	Week 4 -6	**Number**: Addition & Subtraction (within 20)	Week 4-5	**Number**: Fractions
Week 11	**Geometry**: Shape	Week 7 - 8	**Number**: Place Value (Within 50)	Week 6	**Geometry**: Position & Direction
Week 12	*Consolidation*	Week 9-10	**Measurement**: Length & Height	Week 7-8	**Number**: Place Value (Within 100)
		Week 11-12	**Measurement**: Mass & Volume	Week 9	**Measurement**: Money
				Week 10-11	**Measurement**: Time
				Week 12	*Consolidation*

Year 2 National Curriculum Statutory Requirement	Year 2 St Andrew's Targets
Number	
Number & Place Value Pupils should be taught to: ♣ count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward ♣ recognise the place value of each digit in a two-digit number (tens, ones) ♣ identify, represent and estimate numbers using different representations, including the number line ♣ compare and order numbers from 0 up to 100; use and = signs ♣ read and write numbers to at least 100 in numerals and in words ♣ use place value and number facts to solve problems	NPV1: I know the value of each digit in a two-digit number (tens and ones) NPV2: I can partition two-digit numbers into different combinations of tens and ones. NPV3: I can identify, represent and estimate numbers using different representations. NPV4: I can compare numbers up to 100 using <, > and = symbols. NPV5: I can order at least 3 numbers from largest to smallest and smallest to largest up to 100.

Addition & Subtraction Pupils should be taught to: ♣ solve problems with addition and subtraction: ♣ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ♣ applying their increasing knowledge of mental and written methods ♣ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 ♣ add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ♣ a two-digit number and ones ♣ a two-digit number and tens ♣ two two-digit numbers ♣ adding three one-digit numbers ♣ show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot ♣ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	AS1: I can add a 1-digit number to a 2-digit number using an effective method. AS2: I can add two 2-digit numbers using the partitioning method. AS3: I can add two 2-digit numbers using the column method with no carrying. AS4: I know I can add in any order. AS5: I can solve simple addition worded problems up to 100. AS6: I can subtract a 1-digit number to a 2-digit number using an effective method. AS7: I can subtract two 2-digit numbers using the partitioning method. AS8: I can subtract two 2-digit numbers using the column method with no carrying. AS9: I know that when I subtraction cannot be done in any order. I subtract the smallest number away from the biggest number. AS10: I can solve simple subtraction worded problems up to 100. AS11: I know the inverse between addition and subtraction. AS12: I can use the inverse confidently to help me check my answers to missing number problems. AS13: I can solve missing number problems. (GD) AS14: I can solve 2-step number problems. (GD)
Multiplication & Division Pupils should be taught to: ♣ recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers ♣ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs ♣ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot ♣ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	MD1: I can use the x, ÷ and = signs in number sentences correctly. MD2: I can count lots of objects by grouping them into equal groups of 2, 3, 5 and 10s. MD3: I can use repeated addition to solve a multiplication calculation. MD4: I can use arrays to solve multiplication calculations. MD5: I know multiplication can be done in any order. MD6: I can solve one-step multiplication problem using apparatus if required. MD7: I can solve division questions by finding equal groups. MD8: I know division cannot be done in any order. MD9: I can solve one-step division problem using apparatus if required. MD10: I can halve and double 2 digit numbers. MD11: I can explain how I have solved the calculation or problem. MD12: I can recall multiplication and division facts for 2,5 and 10 times tables and use these to solve other multiplication problems. (GD) MD13: I can solve missing number problems. (GD) MD14: I can solve 2-step number problems. (GD)
Fractions Pupils should be taught to: ♣ recognise, find, name and write fractions 3 1 , 4 1 , 4 2 and 4 3 of a length, shape, set of objects or quantity ♣ write simple fractions for example, 2 1 of 6 = 3 and recognise the equivalence of 4 2 and 2 1 .	F1: I can recognise, write and find a ½ half of shapes, objects and numbers. F2: I can recognise and find a ¼ quarter of shapes, objects and numbers. F3: I can recognise and find a 1/3 third of shapes, objects and numbers. F4: I know all parts must be equal. F5: I can find quarters (1/4, 2/4, ¾,) of shapes, objects and numbers. F6: I can find thirds (1/3, 2/3) of shapes, objects and numbers. F7: I know 2/4 and ½ are the same.

	F8: I can count in fractions.
Measurement	
Pupils should be taught to: ♣ compare and sequence intervals of time ♣ tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times ♣ know the number of minutes in an hour and the number of hours in a day.	MT1: I can read a clock to half past and o'clock. MT2: I can draw the hands on a clock to show half past and o'clock. MT3: I can read a clock to quarter to and quarter past. MT4: I can draw the hands on a clock to show quarter to and quarter past. MT5: I know the number of minutes in an hour and the number of hours in a day. MT6: I can compare and sequence intervals of time. MT7: I can tell the time to 5 minutes. (GD)
♣ choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels ♣ compare and order lengths, mass, volume/capacity and record the results using >, < and =	MT8: I can measure lengths in cm and m. MT9: I can compare and order lengths. MT10: I can read scales where not all numbers on the scales are given and estimate points between. (GD) MT11: I can measure mass in g and kg. MT12: I can compare and order mass. MR13: I can measure capacity in ml and l. MT14: I can compare and order volume. MT15: I can read a scale that goes up in 2s, 5s and 10s. MT16: I can read scales where not all numbers on the scales are given and estimate points between. (GD)
♣ recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value ♣ find different combinations of coins that equal the same amounts of money ♣ solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	M1: I know what £ and p represent. M2: I know the value of the British coins. M3: I can find different combinations of coins that equal the same amount. M4: I can combine different coins to make amounts of money. M5: I can count money in pence, pounds and notes. M6: I can find the total amount using money. M7: I can find the change needed.
Geometry	
Properties of Shapes Pupils should be taught to: ♣ identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line ♣ identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces ♣ identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] ♣ compare and sort common 2-D and 3-D shapes and everyday objects.	GSP1: I can recognise 2D and 3D shapes. GSP2: I can describe the properties of common 2D shapes. GSP3: I can describe the properties of common 3D shapes. GSP4: I know what symmetry is and can draw lines of symmetry. GSP5: I can identify 2D shapes on the surface of 3D shapes. GSP6: I can sort 2D and 3D shapes. GSP7: I can compare common 2D and 3D shapes. GSP8: I can make patterns with 2D and 3D shapes. GSP9: I can draw 2D shapes. GSP10: I can describe similarities and differences od 2D and 3D shapes using their properties. (GD)
Position & Direction	GSP11: I can use the correct language to describe the movement of an object 'forwards', 'backwards', 'up', 'down', 'left' and 'right'. GSP12: I can describe turns using the language 'full turn', 'half turn', 'quarter turn', 'three-quarter turn', 'clockwise' and 'anticlockwise'.

Pupils should be taught to: ♣ describe position, direction and movement, including whole, half, quarter and three quarter turns.	GSP13: I can describe the position, movement and turns of an object. GSP14: I can order and arrange combinations of objects in a pattern or sequence.
Statistics	
Pupils should be taught to: ♣ interpret and construct simple pictograms, tally charts, block diagrams and simple tables ♣ ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ♣ ask and answer questions about totalling and comparing categorical data.	S1: I can interpret and make a tally chart. S2: I can interpret and draw pictograms. S3: I can interpret and make a block graph. S4: I can ask and answer questions about information in tables and graphs.
	Mental Maths MM1: I can count forwards and backwards in 2's from 0. MM2: I can count forwards and backwards in 3's from 0. MM3: I can count forwards and backwards in 5's from 0. MM4: I can count forwards and backwards in 10's from any number. MM5: I know ten more and ten less than any number. MM6: I know my numbers bonds to 10 and 20. MM7: I know my inverse bonds for numbers to 10 and 20. MM8: I know my bonds to 100. MM9: I can read and write numbers to at least 100 in numerals and words. MM10: I can read numbers to 500 in digits. MM11: I know if a number is odd or even. MM12: I can add three 1-digit numbers mentally.

KS1 – Year 2	**The national curriculum for Maths Aims** The national curriculum for mathematics aims to ensure that all pupils: ♣ become **fluent** in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. ♣ **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language ♣ can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

White Rose Hub – Domains in Bold					
Autumn (12 Weeks)		**Spring (12 weeks)**		**Summer (12 Weeks)**	
Week 1-5	**Number**: Place Value	Week 1-5	**Number**: Multiplication & Division	Week	**Measurement**: Money
Week 6-10	**Number**: Addition & Subtraction	Week 6	**Number**: Addition & Subtraction recap	Week 2 -4	**Number**: Recap all four operations TAF statements SATS
Week 10-12	**Geometry**: Shape	Week 7-9	**Number**: Fractions	Week 5-6	**Measurement**: Length & Height

			Week 10-11	**Measurement:** Time	Week 7-8	**Measurement:** Mass, Capacity and temperature
			Week 12	**Measurement:** Money	Week 9-10	**Statistics**
					Week 11-12	**Geometry:** Position & Direction

Year 3 National Curriculum Statutory Requirement	Year 3 St Andrew's Targets
Number	
Number & Place Value Pupils should be taught to: ♣ count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number ♣ recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ♣ compare and order numbers up to 1000 ♣ identify, represent and estimate numbers using different representations ♣ read and write numbers up to 1000 in numerals and in words ♣ solve number problems and practical problems involving these ideas	NPV1 Read, and write numbers to at least 1000 in numerals and words. NPV2 Recognise the place value of each digit in a three-digit number. NPV3 Count from 0 in multiples of 4, 8, 50 and 100 NPV4 Find 10 or 100 more or less than any number. NPV5 Compare and order numbers up to 1000 using =, > and <. NPV6 Identify, represent and estimate numbers using different representations NPV7 Solve number problems and practical problems about number and place value
Addition & Subtraction Pupils should be taught to: ♣ add and subtract numbers mentally, including: ♣ a three-digit number and ones ♣ a three-digit number and tens ♣ a three-digit number and hundreds ♣ add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction ♣ estimate the answer to a calculation and use inverse operations to check answers ♣ solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	AS1 Add and subtract numbers mentally (including a 3-digit number with ones, rounded tens / hundreds) AS2 Add numbers with up to 3-digits, using SWM including crossing over the 10. AS3 Subtract numbers with up to 3-digits, using SWM with exchanging. AS4 Estimate the answer to a calculation and use the inverse to check answers. AS5 Solve missing number addition and subtraction problems. AS6 Solve more complex addition and subtraction problems.
Multiplication & Division Pupils should be taught to: ♣ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ♣ write and calculate mathematical statements for multiplication and division using the multiplication	MD1 Multiply a 2-digit number by a single digit using a simple grid and progressing to SWM MD2 Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. MD3 Solve problems, including missing number problems. MD4 Divide a 2-digit number by a single digit number using a simple grid and progressing to SWM.

tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods ♣ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	
Fractions Pupils should be taught to: ♣ count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ♣ recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ♣ recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ♣ recognise and show, using diagrams, equivalent fractions with small denominators ♣ add and subtract fractions with the same denominator within one whole [for example, 7 5 + 7 1 = 7 6] ♣ compare and order unit fractions, and fractions with the same denominators ♣ solve problems that involve all of the above.	FDP1 Count up and down in tenths FDP2 Find non unit fractions with small denominators of a set of objects. FDP3 Show using diagrams, equivalent fractions with small denominators. FDP4 Compare and order unit fractions and fractions with the same denominator. FDP5 Find pairs of fractions that add up to a whole. FDP6 Solve fraction problems using what I know so far about fractions. FDP7 Add and subtract fractions with the same denominator up to one whole.fractions.
Measurement	
Pupils should be taught to: ♣ tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks ♣ estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight ♣ know the number of seconds in a minute and the number of days in each month, year and leap year ♣ compare durations of events [for example to calculate the time taken by particular events or tasks]. ♣ add and subtract amounts of money to give change, using both £ and p in practical contexts	M1 Compare durations of events e.g. calculate how long events / tasks take. M2 Tell and write the 12-hour and 24-hour time from an analogue clock to the nearest minute including using Roman numerals. M3 Compare times in terms of seconds, minutes and hours. Using vocabulary such as asm/pm, morning etc M4 Know the number of seconds in a minute and the number of days in each month, year and leap year. M5 Add (up to £100) and subtract amounts of money (to £10) to give change, using £ and P.

♣ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) ♣ measure the perimeter of simple 2-D shapes	M6 Measure, compare, add and subtract lengths (m,cm,mm) mass (kg, g), volume and capacity (l,ml)
Geometry	
Properties of Shapes Pupils should be taught to: ♣ draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them ♣ recognise angles as a property of shape or a description of a turn ♣ identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle ♣ identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	GSP1 Draw 2D shapes and make 3D shapes using modelling materials. Recognise the 3D shapes in different orientations and describe them. GSP2 Identify right angles and recognise the angles which are greater or less than a right angle. GSP3 Measure perimeter of simple 2d shape
Statistics	
Pupils should be taught to: ♣ interpret and present data using bar charts, pictograms and tables ♣ solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables	S1 Interpret and present data using bar charts, pictograms and tables. S2 Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented.

KS2 – Year 3	**The national curriculum for Maths Aims** The national curriculum for mathematics aims to ensure that all pupils: ♣ become **fluent** in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. ♣ **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language ♣ can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

White Rose Hub – Domains in Bold					
Autumn (12 Weeks)		Spring (12 weeks)		Summer (12 Weeks)	
Week 1-3	**Number**: Place Value	Week 1-3	**Number**: Multiplication & Division B	Week 1-2	**Number**: Fractions B
Week 4-8	**Number**: Addition & Subtraction	Week 4-6	**Measurement**: Length & Perimeter	Week 3-4	**Measurement**: Money

	Week 9-12	Number: Multiplication & Division A	Week 7-9	Number: Fractions A	Week 5-6	Geometry: Shape
			Week 10-12	Measurement: Mass & Capacity	Week 7-8	Statistics
					Week 9-11	Measurement: Time
					Week 12	Consolidation

Year 4 National Curriculum Statutory Requirement	Year 4 St Andrew's Targets
Number	
Number & Place Value Pupils should be taught to ♣ count in multiples of 6, 7, 9, 25 and 1000 ♣ find 1000 more or less than a given number ♣ count backwards through zero to include negative numbers ♣ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) ♣ order and compare numbers beyond 1000 ♣ identify, represent and estimate numbers using different representations ♣ round any number to the nearest 10, 100 or 1000 ♣ solve number and practical problems that involve all of the above and with increasingly large positive numbers ♣ read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	NPV1 Count backwards through zero and understand that -2 is greater than -3. NPV2 Count in multiples of 6, 7, 9 25 and 1,000 NPV3 Find 1,000 more or less than any given number. NPV4 Order and compare numbers up to 10,000 using =, > and <. NPV5 Compare numbers with the same number of decimal places up to 2DP. NPV6 Recognise the place value of each digit in a four-digit number. NPV7 Identify, represent and estimate numbers using different representations. NPV8 Read Roman numerals to 100. NPV9 Explore the effect of dividing a 1 or 2-digit number by 10 and 100. Explore units, tenths and hundredths. NPV10 Round any numbers to the nearest 10, 100 and 1,000. NPV11 Round decimals with one decimal place to the nearest whole number. NPV12 Solve practical problems involving number.
Addition & Subtraction Pupils should be taught to: ♣ add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate ♣ estimate and use inverse operations to check answers to a calculation ♣ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	AS1 Add up to 4 digits using formal written methods AS2 Subtract up to 4 digits using formal written methods. AS3 Make a sensible estimate and check the answer using the inverse operation. AS4 Solve addition and subtraction two-step-problems in context using. Talking about methods used.
Multiplication & Division Pupils should be taught to: ♣ recall multiplication and division facts for multiplication tables up to 12 × 12 ♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three	MD1 Recall multiplication and division facts for multiplication tables up to 12x12. MD2 Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written method. MD3 Work out the factor pairs and use them in mental calculations. MD4 Use place value knowledge to multiply and divide mentally (x by 0 and 1 divide by 1). Multiply 3 numbers MD5 Solve problems involving multiplying and dividing.

numbers ♣ recognise and use factor pairs and commutativity in mental calculations ♣ multiply two-digit and three-digit numbers by a one-digit number using formal written layout ♣ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	
Fractions (Inc Decimals) Pupils should be taught to: ♣ recognise and show, using diagrams, families of common equivalent fractions ♣ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. ♣ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number ♣ add and subtract fractions with the same denominator ♣ recognise and write decimal equivalents of any number of tenths or hundredths ♣ recognise and write decimal equivalents to 4 1 , 2 1 , 4 3 ♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths ♣ round decimals with one decimal place to the nearest whole number ♣ compare numbers with the same number of decimal places up to two decimal places ♣ solve simple measure and money problems involving fractions and decimals to two decimal places.	FDP1 Count up and down in hundredths FDP2 Compare numbers and order with the same number of decimal places (up to 2dp) FDP3 Round decimals with 1dp to the nearest whole number. FDP4 Recognise and show decimal equivalents to 1/4, 1/2 and 3/4. FDP5 Calculate equivalent fractions of a given fraction including tenths and hundredths. FDP6 Add and subtract fractions with the same denominator. FDP7 Find the effects of dividing a one or two-digit number by 10 and 100. FDP8 Estimate, compare and calculate different measures including £ and P FDP9 Solve problems to calculate quantities. FDP10 Solve problems involving money 2dp
Measurement	
Pupils should be taught to: ♣ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres ♣ find the area of rectilinear shapes by counting squares ♣ read, write and convert time between analogue and digital 12- and 24-hour clocks	MT1 Measure and calculate the perimeter of rectangular figure. MT2 To show perimeter expressed algebraically as 2(a+b) MT3 Find the area of a rectilinear shape by counting squares. MT4 Read, write and convert time between analogue and digital 12hr and 24hr.

♣ solve problems involving converting from hours to minutes; minutes to seconds;	MT5 Solve problems involving converting from hrs to min, min to sec, years to months, wks to days.
♣ estimate, compare and calculate different measures, including money in pounds and Pence years to months; weeks to days	MT6 Solve problems about measures that use fractions such as ½ of 50cm.
♣ Convert between different units of measure [for example, kilometre to metre; hour to minute]	MT7 Convert between different units of measure such as cm-m, hr –min.

Geometry

Properties of Shapes Pupils should be taught to: ♣ compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes ♣ identify acute and obtuse angles and compare and order angles up to two right angles by size ♣ identify lines of symmetry in 2-D shapes presented in different orientations ♣ complete a simple symmetric figure with respect to a specific line of symmetry. ♣ describe positions on a 2-D grid as coordinates in the first quadrant ♣ describe movements between positions as translations of a given unit to the left/right and up/down ♣ plot specified points and draw sides to complete a given polygon.	GSP1 Identify lines of symmetry in 2D shapes in different orientations. GSP2 Complete a simple symmetric figure with respect to a specific line of symmetry. GSP3 Compare and classify 2-D shapes, including quadrilaterals and triangles, based on their properties and sizes. GSP4 Plot specific points and draw sides to complete a given polygon. GSP5 Identify acute and obtuse angles and compare and order angles up to two right angles by size. GSP6 Describe positions on a 2D grid as coordinates (first quadrant) GSP7 Describe movement between position as translations on a given unit to the L/R + up/down

Statistics

Pupils should be taught to: ♣ interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ♣ solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	S1 Interpret and present data using bar charts, pictograms and tables S2 Solve 1 and 2 step questions using information presented in bar charts, pictograms and tables.

KS2 – Year 4	**The national curriculum for Maths Aims** The national curriculum for mathematics aims to ensure that all pupils: ♣ become **fluent** in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. ♣ **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using

mathematical language
♣ can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

White Rose Hub – Domains in Bold					
Autumn (12 Weeks)		Spring (12 weeks)		Summer (12 Weeks)	
Week 1-4	**Number**: Place Value	Week 1-3	**Number**: Multiplication & Division B	Week 1-2	**Number**: Decimals B
Week 5-7	**Number**: Addition & Subtraction	Week 4-5	**Measurement**: Length & Perimeter	Week 3-4	**Measurement**: Money
Week 8	**Measurement**: Area	Week 6-9	**Number**: Fractions	Week 5-6	**Measurement**: Time
Week 9-11	**Number**: Multiplication & Division A	Week 10-12	**Number**: Decimals A	Week 7	*Consolidation*
Week 12	*Consolidation*			Week 8-9	**Geometry**: Shape
				Week 10	**Statistics**
				Week 11-12	**Geometry**: Position & Direction

Year 5 National Curriculum Statutory Requirement	Year 5 St Andrew's Targets
Number	
Number & Place Value Pupils should be taught to: ♣ read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit ♣ count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 ♣ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero ♣ round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 ♣ solve number problems and practical problems that involve all of the above ♣ read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	NPV1 Count forwards and backwards in steps of 10, 100, 1,000 and 100,000 from any number up to 1,000,000. NPV2 Read write and compare numbers to at least 1,000,000 and determine the value of each digit. NPV3 Read Roman numerals to 1000(M) and recognise years written in Roman numerals. NPV4 Interpret negative numbers in context. NPV5 Round any number up to 1,000,000 to the nearest 100,000 10,000, 1000, 100 and 10. NPV6 Solve number problems and practical problems that involve all these aspects.
Addition & Subtraction Pupils should be taught to: ♣ add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) ♣ add and subtract numbers mentally with increasingly large numbers ♣ use rounding to check answers to calculations and	AS1 Mentally add and subtract any 2 and 3-digit numbers. AS2 Add and subtract any 1000s number from any 5-digit number using formal written methods. AS3 Use rounding to check answers with accuracy. AS4 Solve addition and subtraction multi-step problems in context, deciding which method to use and why.

determine, in the context of a problem, levels of accuracy ♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	
Multiplication & Division Pupils should be taught to: ♣ identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers ♣ know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers ♣ establish whether a number up to 100 is prime and recall prime numbers up to 19 ♣ multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers ♣ multiply and divide numbers mentally drawing upon known facts ♣ divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context ♣ multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	MD1 Identify multiples and be able to find all factor pairs. MD2 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 MD3 Recognise and use squared and cubed numbers and the correct notation. Use the signs. MD4 Know and use the vocabulary of prime numbers. Recall prime numbers to 19 and establish whether a number up to 100 is prime. MD5 Multiply numbers up to 4-digits by a 1-digit and 2-digit number using an efficient written method. MD6 Divide numbers up to 4-digits by a 1-digit number using short division written method. MD7 Solve problems where larger numbers are used by decomposing them into their factors. MD8 Solve problems including scaling by simple fractions and problems involving simple rates.
Fractions (Inc Decimals & Percentages) Pupils should be taught to: ♣ compare and order fractions whose denominators are all multiples of the same number ♣ identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths ♣ recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 5 2 + 5 4 = 5 6 = 1 5 1] ♣ add and subtract fractions with the same denominator and denominators that are multiples of the same number ♣ multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams ♣ read and write decimal numbers as fractions [for example, 0.71 = 100 71] ♣ recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents ♣ round decimals with two decimal places to the	FDP1 Read write order and compare numbers with up to 3 decimal places. FDP2 Compare and order fractions whose denominators are all multiples of the same number. FDP3 Read and write decimal numbers as fractions such as 0.71 = 71/100 FDP4 Recognise and use thousandths and relate them to tenths, hundredths, and decimal equivalents. FDP5 Recognise the % symbol and understands that % relates to "number of parts per hundred" and write % as a fraction with denominator 100 as a decimal fraction. FDP6 Mentally add and subtract tenths and mixed numbers with tenths. FDP7 Add and subtract decimals up to 3 decimal places. FDP8 Add and subtract fractions with the same denominator and multiples of the same number. FDP9 Recognise mixed number and improper fractions and convert from one for to the other and write mathematical statements. FDP10 Round decimals with two decimal places to the nearest whole number to one decimal place. FDP11 Multiply proper fractions and mixed numbers by whole numbers up to 10, supported by materials and diagrams. FDP12 Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25. FDP13 Solve problems involving numbers up to 3 decimal places. FDP14 Solve problems which require knowing percentage and decimal equivalence.

nearest whole number and to one decimal place ♣ read, write, order and compare numbers with up to three decimal places ♣ solve problems involving number up to three decimal places ♣ recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal ♣ solve problems which require knowing percentage and decimal equivalents of 2 1 , 4 1 , 5 1 , 5 2 , 5 4 and those fractions with a denominator of a multiple of 10 or 25.	
Measurement	
Pupils should be taught to: ♣ convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) ♣ measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres ♣ calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes ♣ use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. ♣ estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] ♣ understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints ♣ solve problems involving converting between units of time	MT1 Convert between different units of metric measure. MT2 Measure and calculate the perimeter of composite rectilinear shapes in cm and m. MT3 Calculate and compare the areas of squares and rectangles using square centimetres and square metres and estimate the area of irregular shapes. MT4 Use all four operations to solve problems involving measure using decimal notations including scaling. MT5 Estimate volume and capacity. MT6 Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints. MT7 Solve problems involving converting between units of time.
Geometry	
Properties of Shapes Pupils should be taught to: ♣ identify 3-D shapes, including cubes and other cuboids, from 2-D representations ♣ know angles are measured in degrees: estimate and	GSP1 Identify 3-D shapes from 2D representations. GSP2 Draw squares, rectangles and all triangles using given dimensions (to the nearest millimetre) and angles with a protractor. GSP3 State and use the properties of a rectangle (including squares) to deduce related facts and missing lengths and angles. GSP4 Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

compare acute, obtuse and reflex angles ♣ draw given angles, and measure them in degrees (°) ♣ identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and ½ a turn (total 180°) - other multiples of 90° ♣ use the properties of rectangles to deduce related facts and find missing lengths and angles ♣ distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	GSP5 Know angles are measured in degrees, estimate and compare acute, obtuse and reflex. GSP6 Identify angles at a point and on a straight line. GSP8 Draw given angles and measure them in degrees
Position & Direction Pupils should be taught to: ♣ identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	GSP7 Identify, describe and represent the position of a shape following a reflection or translation in all four quadrants, using the appropriate language, and know that the shape has not changed.
Statistics	
Pupils should be taught to: ♣ solve comparison, sum and difference problems using information presented in a line graph ♣ complete, read and interpret information in tables, including timetables	S1 Complete, read and interpret information in tables including timetables. S2 Solve comparison, sum and difference problems using information presented in line graphs. S3 Interpret information stored in a pie chart.

KS2 – Year 5	**The national curriculum for Maths Aims**
	The national curriculum for mathematics aims to ensure that all pupils: ♣ become **fluent** in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. ♣ **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language ♣ can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

White Rose Hub – Domains in Bold					
Autumn (12 Weeks)		Spring (12 weeks)		Summer (12 Weeks)	
Week 1-2	**Number**: Place Value	Week 1	**Number**: Place Value	Week 1	**Number**: Place Value
Week 3-4	**Number**: Addition & Subtraction	Week 2	**Number**: 4 operations	Week 2	**Number**: 4 operations
Week 5	**Number**: Addition& Subtraction recap	Week 3-5	**Number**: Fractions	Week 3-4	**Geometry**: Properties of Shapes
Week 6-7	**Statistics**	Week 6-7	**Number**: Decimals & Percentages	Week 5-6	**Geometry**: Position & Direction
Week 8-11	**Number** Multiplication & Division (Assessment Week)	Week 8 -10	**Number**: Place Value & 4 Operations recap	Week 7 -8	**Number**: Place Value & 4 Operations recap (Assessment Week)

	Week 12 +	**Measurement**: Perimeter & Area	Week 11-12	(Assessment Week) **Number**: Fractions, Decimals & Percentages recap	Week 9-10	**Measurement**: Converting Un its
					Week 11-12	Consolidation

Year 6 **National Curriculum Statutory Requirement**	Year 6 **St Andrew's Targets**
Number	
Number & Place Value Pupils should be taught to: ♣ read, write, order and compare numbers up to 10 000 000 and determine the value of each digit ♣ round any whole number to a required degree of accuracy ♣ use negative numbers in context, and calculate intervals across zero ♣ solve number and practical problems that involve all of the above.	N1 I can read and write numbers to 10 000 000 N2 I can determine the value of each digit to 10 000 000 N3 I can identify the value of each digit to 3 decimal places N4 I can compare numbers up to 10 000 000 N5 I can order numbers to 10 000 000 N6 I can use negative numbers in context and calculate intervals across 0 N7 I can round any whole number to a required degree of accuracy N8 I can order decimals that have a mixture of one, two or three decimal places and position them on a number line. N9 I can work out the pattern used in a given sequence and use this to decide whether a given larger number would be in the sequence.
Addition & Subtraction Multiplication & Division Pupils should be taught to: ♣ multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication ♣ divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context ♣ divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context ♣ perform mental calculations, including with mixed operations and large numbers ♣ identify common factors, common multiples and prime numbers ♣ use their knowledge of the order of operations to carry out calculations involving the four operations ♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	AS1 I can use SWM to add and subtract numbers that do not have the same number of decimal places (up to 3 dp). (Step 6) AS2 I can add and subtract negative numbers. AS3 I can solve problems involving ordering, adding, subtracting negative numbers. MD1 I can multiply by 10, 100 and 1000 giving answers to 3 decimal places MD2 I can divide by 10, 100 and 1000 giving answers to 3 decimal places MD3 I can multiply multi-digit numbers by 2 digits using SWM (Step 6) MD4 I can multiply a one digit number with up to 2 decimal places by whole numbers using SWM (Step 6) MD5 I can divide 4 digit numbers by a 2 digit number using long division (Step 6) MD6 I can divide numbers where the answer has up to 2 decimal places (Step 6) MD7 I can interpret the remainder in relation to the context 4A I can use the relationships between the four operations to calculate effectively with numbers to 1 000 000 4B I can make and justify estimates and approximations to calculations. 4C I can check the answer to a calculation by using inverse operations. 4D I know that when brackets have been used in a calculation that I must do the sum within the brackets first. 4E I can use the order of operations including brackets (BODMAS) 4F I know that in some word problem it is necessary to work out the answers to two sums before I can solve the overall problem.

♣ solve problems involving addition, subtraction, multiplication and division
♣ use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Fractions (Inc Decimals & Percentages)

Pupils should be taught to:

♣ use common factors to simplify fractions; use common multiples to express fractions in the same denomination

♣ compare and order fractions, including fractions > 1

♣ add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions

♣ multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 4 1 × 2 1 = 8 1]

♣ divide proper fractions by whole numbers [for example, 3 1 ÷ 2 = 6 1]

♣ associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 8 3]

♣ identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places

♣ multiply one-digit numbers with up to two decimal places by whole numbers

♣ use written division methods in cases where the answer has up to two decimal places

♣ solve problems which require answers to be rounded to specified degrees of accuracy

♣ recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Ratio & Proportion

Pupils should be taught to:

♣ solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts

♣ solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison

♣ solve problems involving similar shapes where the scale factor is known or can be found

♣ solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

PDPR1	I can simplify fractions
PDPR2	I can compare and order fractions including fractions > 1
PDPR3	I am able to order a set of fractions by finding a common denominator
PDPR4	I can add fractions with different denominators
PDPR5	I can subtract fractions with different denominators
PDPR6	I can multiply pairs of proper fractions
PDPR7	I can divide proper fractions by whole numbers
PDPR8	I can write answers in simplest forms
PDPR9	I can convert a more complex fraction eg. 2/5 into a decimal number and vice versa.
PDPR10	I can convert a more complex fraction eg. 2/5 into a percentage and vice versa.
PDPR11	I can solve problems involving calculating percentages
PDPR12	I can solve simple problems involving ratio by scaling quantities up or down.
PDPR13	I can use multiplication to solve ratio problems.

Algebra	A1	I can represent information as a formula.
Pupils should be taught to: ♣ use simple formulae ♣ generate and describe linear number sequences ♣ express missing number problems algebraically ♣ find pairs of numbers that satisfy an equation with two unknowns ♣ enumerate possibilities of combinations of two variables.	A2	I can represent unknown numbers in a formula using symbols.
	A3	I can use simple formulae involving one or two step operations.
	A4	I can understand simple expressions which use symbols eg. '2 less than n' can be written as 'n - 2'.
	A5	I can check that an expression / formula works by substituting numbers into it.

Measurement	
Pupils should be taught to: ♣ solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate ♣ use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places ♣ convert between miles and kilometres ♣ recognise that shapes with the same areas can have different perimeters and vice versa ♣ recognise when it is possible to use formulae for area and volume of shapes ♣ calculate the area of parallelograms and triangles ♣ calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3].	M1 I can convert between miles and kilometres M2 I can work out metric conversions for weight length and capacity M3 I know shapes with the same area can have different perimeters M4 I can use the formula for calculating area (l x w) M5 I can calculate the area of a parallelogram (base x height) M6 I can calculate an area of a triangle ($\frac{1}{2}$ l x w) M7 I can estimate and compare the volume of cubes and cuboids M8 I can use the formula to calculate volumes of cubes and cuboids M9 I can work out the size of each interval on a scale and check, using counting M10 I can estimate the value of a point that falls between two marks on a scale M11 I can read a scale to solve problems involving length, weight and capacity M12 I can read a timetable in order to solve a problem, recording my calculation methods clearly M13 I can read a calendar in order to solve a problem, recording my calculation methods clearly

Geometry	

Properties of Shapes	G1	I can draw 2D shapes using given dimensions and angles
Pupils should be taught to: ♣ draw 2-D shapes using given dimensions and angles ♣ recognise, describe and build simple 3-D shapes, including making nets ♣ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	G2	I can reflect shapes in axes
	G3	I can recognize and build 3D shapes including making nets
	G4	I can use my knowledge of shape properties to solve problems
	G5	I can solve problems involving shapes where there is a known scale factors
	G6	I can explain position and movement of shapes
	G7	I can find unknown angles in any triangle
	G8	I can find unknown angles in quadrilaterals

♣ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius ♣ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	G9 G10 G11 G14	I can find unknown angles in regular polygons I can name parts of circle radius, diameter and circumference I know the diameter is 2x the radius (d = 2 x r = 2r) I can use knowledge of angle facts to work out angles in shapes and diagrams
Position & Direction Pupils should be taught to: ♣ describe positions on the full coordinate grid (all four quadrants) ♣ draw and translate simple shapes on the coordinate plane, and reflect them in the axes	G12 G13	I can describe the position of co-ordinates in all four quadrants I can draw simple shapes using co-ordinates
Statistics		
Pupils should be taught to: ♣ interpret and construct pie charts and line graphs and use these to solve problems ♣ calculate and interpret the mean as an average.	S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11	I can use the mode to describe sets of data I can use the range to describe sets of data I can find the median to compare two sets of data and explain what they tell me I can find the mean of two sets of data and compare them and explain what they tell me I can construct and interpret line graphs I can use line graphs to answer questions I can interpret pie charts using protractors as an aid I can construct pie charts I can interpret data, answer questions and draw conclusions in more complex graphs and charts I can solve pie chart problems I can explain why events are equally likely and use this to find the probability of outcomes
	Mental Maths MM1 MM2 MM3 MM4 MM5 MM6 MM7	I can perform mental calculations involving mixed operations I can identify common factors I can identify common multiples I can identify prime numbers Perform mental calculations, including with mixed operations and large numbers I can use mental methods where appropriate to calculate fractions of given quantities. I can use mental methods where appropriate to calculate percentages of given quantities.

Exceeding Year 6 Expectations	
EX1	I can use all four operations to calculate mass, length, time, money and measures calculations including decimals
EX2	I can use =, <, >, ≠, ≤, ≥ correctly
EX3	I can multiply all integers, mixed numbers and negative numbers using efficient methods
EX4	I can compare, order and convert between fractions, decimals and percentages in other subjects
EX5	I can calculate problems such as $X \times 10^n$ where n is positive
EX6	I can find the nth term
EX7	I can calculate the area of an irregular shape
EX8	I can create a scaled model to an acceptable degree of accuracy in other subjects
EX9	I can create costs and time calculations involving visiting a destination in other subjects
EX10	I can collect data and present information using appropriate charts and graphs to answer questions related to my research

KS2 – Year 6	**The national curriculum for Maths Aims**

The national curriculum for mathematics aims to ensure that all pupils:

♣ become **fluent** in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

♣ **reason** mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language

♣ can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

White Rose Hub – Domains in Bold					
Autumn (12 Weeks)		**Spring (12 weeks)**		**Summer (12 Weeks)**	
Week 1-2	**Number**: Place Value	Week 1	**Number**: Standard Written Method 4 operations	Week 1-4	SATs Revision
Week 3-4	**Number**: Addition & Subtraction Multiplication & Division	Week 2	**Angles,** Perimeter, Area & Volume	Week 5 - 12	Themed Projects
Week 5	**Number**: Calculating percentages Calculations with missing values Inverse Operations	Week 3	**Geometry**: Radius & Diameter		
Week 6	**Number**: BODMAS And positive and negative numbers Rounding	Week 4	**Number**: Fractions		
Week 7	**Number**: SWM – addition, subtraction, multiplication and division with decimal numbers	Week 5	**Statistics**		
Week 8- 10	**Number**: Fractions	Wek 6	**Number**: Standard Written Method 4 operations		
Week 11	**Geometry**: 2D & 3D Shapes	Week 7-12	SATs Revision		
Week 12	**Measurement: Angles,** Perimeter, Area & Volume				