Hardwick & Cambourne Reception Long Term Maths Skills Progression					
Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Children explore the maths & construction areas and know where things belong (Crash! Boom! On Sudden Hill)	Representing 5	Extend snack shop to include 10 pennies and a tens frame.	Develop an understanding of number bonds to 10	Recap of number bonds to 5	Consolidation of all mathematical skills learnt to date, through daily maths sessions:
Children are exposed to positional language through tidying up. (The Naughty Bus)	Subitising up to 5	Number bonds to 5: automatic recall	Use a tens frame to represent quantities to 10	Automatic recall of number bonds to 10	Has a deep understanding of number to 10, including the composition of each number (ELG): Composition of 6 7 8 9
Understand key times of the day & class routines	Compare quantities up to 5, recognising when one quantity is greater than, less than or the same	Recap composition of numbers to 5	Inrtoduce concept of taking away / subtraction (Ten little pirates, Burglar Billl)	Automatic recall of double facts to 10	Is able to subitise (recognise quantities without counting) up to 5 (ELG)
HCCPS Maths baseline alongside statutory Reception baseline (to be completed within 6 weeks of children starting school)	Order numerals up to 5	Verbally count to 20	Introduce subtraction number sentences, using concrete & pictorial methods	Order numerals to 20	Automatically recalls (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) (ELG)
Children talk about passage of time through 'Days of the Week song' & completing daily chart.	Combine 2 small groups of objects up to 5	Making pairs	Composition of 16	Verbally count beyond 20, recognising the pattern of the number system	Automatically recalls some number bonds to 10 (ELG)
Daily routine: Children self register on class tens frames using a photograph How many children are at school today? How many are away? Children to start to be able to visualise quantities on tens frames	Introduce concept of number bonds to 5	Combine 2 groups of objects, up to 10. Introduce concept of number sentences.	Composition of 17	Continue to develop addition skills	Can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity (ELG)
Sort objects by colour, size or shape.		Develop an understanding of teen numbers and place value using tens and ones	Composition of 18	Continue to develop subtraction skills	Is able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally (ELG)
Introduce snack shop using 5 penny coins & use of a '5 frame'	Introduce conceptual subitising for quantities to 10 (i.e. subitising by seeing 3 and 3 makes 6)	Consolidate concept of odd and even (Ruby makes it even)	Composition of 19	Introduce the concept of sharing between 2 (Sharing a Shell)	Verbally counts beyond 20, recognising the pattern of the counting system (ELG)
Verbally count to 10		Composition of 11	Composition of 20	Expand concept of sharing to beyond 2 (The Doorbell Rang)	Recap names and properties of 2d shapes: circle, triangle, rectangle, square, hexagon
Begin to count objects, actions and sounds to 10 accurately.	To begin to understand the concept of 1 more or 1 less with concrete objects (Mouse Count, A Squash and a Squeeze, The Napping House, Wonkey Donkey)	Composition of 12	Introduce doubling to 10 using concrete objects. Children to learn that double means "twice as many" and to find the double you need to "add the same again"	Explore how quantities can be distributed equally.	Recap names and properties of 3d shapes: sphere, cylinder, cuboid, cube, cone, pyramid
Understand one-to-one correspondence when counting objects.	Comparing numbers to 5	Composition of 13	Begin to compare numbers and quantities up to 10 using vocabulary more than, less than, fewer, greater than, the same as and equal to. (We're going on an egg hunt)	Sharing and Grouping During group activities, encourage children to check that items are shared equally and that everyone has the same. Provide opportunities for children to recognise and make equal groups. E.g. can you put 3 crackers on each plate or plant 2 flowers into each pot. Children will notice that sometimes there are items left over when they share or group items. Encourage them to come up with their own suggestions for how to resolve this.	Write numbers to 20, forming numerals accurately
Children learn to line objects up to ensure accurate counting, touching each object as they say the number.	Composition of 5	Composition of 14	Introduce & explore 3d shapes (Sphere, Cone, Cube, Cuboid, Cylinder, Pyramid)	Add 2 single digit numbers using objects, fingers and mental strategies including using known number facts.	Recap addition number sentences
Know that the last number reached when counting is the total.	Represent numbers 1-5 in a variety of ways For example: 5 frame, Numicon, cubes, digit, a tally, a picture, dots on a dice.	Composition of 15	Name and explain properties of 3D shapes using informal and mathematical language, such as faces, curved, flat	Subtract 2 single digit numbers using objects, fingers and mental strategies including known number facts	Recap subtraction number sentences
To be able to join in with number rhymes such as 5 currant buns.	To begin to explain composition of numbers (numbers within numbers) with the support of visual aids such as fives frames, cubes, Numicon.	Start to verbally count beyond 20 (How big is a million?)	Patterns and Relationships Children copy, continue and create a widening range of repeating patterns and symmetrical constructions, e.g. ABBC. (Red Blue Blue Pink, Square Triangle Triangle Circle)	1 more and 1 less, up to 20	Apply and use mathematical knowledge to a variety of situations and contexts, through problem solving activities
Begin to compare the size, weight & capacity using mathematical language - big, little, tall, short, heavy, light, full, empty (Goldilocks and the 3 Bears)	Link each number with its cardinal number value, up to 5	Develop understanding of ordinal numbers (The Great Race)		Odd and even, up to 20 recognising the pattern in the number system	Maths Through Stories books to explore problem solving: How many legs, One is a Snail, Ten is a Crab, Henry the Explorer
Exploring pattern. Children to understand & create AB patterns. Introduce ABB, AAB, ABC	Name some 2D shapes and explain their properties using informal and mathematical language such as sides, corners, straight, flat and round.	Explore length: to be able to measure and compare length using non-standard measures and mathematical language such as short, long, shorter/longer and shortest/longest		Maths Through Stories books to explore different mathematical concepts, e.g. adding one more, composition of numbers to 10, teen numbers, size, height, subtraction: Jasper's Beanstalk, Jack and the Beanstalk	

Begin to compare amounts using mathematical language of more, less, fewer, greater. (Less is when dealing with numerals, fewer is when working with objects)	Explore weight, introducing mathematical vocabulary: heavy, light, balanced, heavier, lighter, heaviest, lightest.	Explore height: to be able to measure and compare height using non-standard measures and mathematical language such as tall/short, taller/shorter, tallest/shortest and the same.			
Introduce zero (Superhero Zero)	Explore capacity, introducing mathematical vocabulary: full, nearly full, half-full, nearly-empty, empty				
Representing 1,2,3 (3 Little Pigs)	Introduce odd and even numbers Children begin to understand even numbers can be shared equally into two equal groups, but odd numbers always have one left over. Use Numberlink cubes to demonstrate this & Numicon to help children notice the odd and even structure on the number shapes.				
Comparing 1,2,3	Introduce ordinal numbers (Gingerbread Man)				
Composition 1,2,3	Representing 6,7,8				
Subitise up to 3	Comparing 6,7,8				
Circles & triangles (Link the introduction of these shapes with their corresponding properties, i.e. a circle has 1 side, a triangle has 3)	Composition 6,7,8				
Positional Language Encourage children to use positional language as they play with small world	Representing 9 & 10				
Representing 4	Comparing 9 & 10				
Comparing 1,2,3,4	Composition 9 & 10				
Composition 1,2,3,4	Comparing numbers to 10				
Explore shapes with 4 sides: square and rectangle	Order numbers to 10.				

Count objects, actions and sounds
Link numerals with its cardinal number value
Verbally count beyond 20, recognising the pattern of the number system
Daily calendar (Days of the Week song)
Daily self registration using tens frames
Daily snack shop
Number and shape of the week
Children develop spatial reasoning skills by learning through play, selecting, rotating and manipulating shapes using small world, construction, jigsaws, shape puzzles, pattern blocks, tiles and tangrams
Children develop spatial reasoning skills: compose & decompose. Children understand shapes can be combined and separated to make new shapes. Children fit shapes together, break shapes apart & notice new shapes they have created. Investigate how many different ways a given shape can be built using smaller shapes.
Patterns and Relationships: Children given opportunities to explore and investigate relationships between numbers and shapes. Classroom resources based around a standard unit such as Cuisenaire rods, pattern blocks and unit construction blocks are good for exploring these relationships.
Maths Through Stories: the maths curriculum will be underpinned by a rich variety of maths themed books that provide opportunities for children to explore and question mathematical concepts in a fun, practical and engaging manner.

Number & Shape of the Week

Greater Depth Objectives

Record quantities in games independently such as a tally chart to keep score. Able to use representations to say who has won or order the points in a game.	Using numerical patterns such as counting in 2s, 5s or 10s during play or Snack Shop. E.g counting 2p coins without prompt	Show a more complex understanding of the composition of a number when in the provision for example- "2p, 2p, 1p and the same again makes 10p altogether."	Apply number bond knowledge when solving practical problems. "There's 10 Lego people, I can only see 3 so we need to find 7."	Solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups when learning through play.	To be able to recognise what maths problems are asking in real life sentences and what processes are needed to solve the problems, e.g. Sarah has 6 apples, but a maggot has eaten 2, how many can she still eat? A greater depth child will know that they need to use subtraction to solve this
Able to use and write numbers beyond 10 independently in learning through play.	Knowing teen numbers are made from a ten and ones, e.g. using Numicon pieces	Understand and use more complex positional language such as left and right and explaining a route or location with more detail.	To be able to use number bonds and composition of number to solve problems	Able to add and subtract amounts mentally.	
To add and subtract using a numberline	Order non-consecutive numbers to and beyond 20 e.g 7, 9, 12, 19 and explain how they know.	To be able to explain their reasoning and methods when calculating and solving problems	To be able to solve problems using different methods & equipment		