Sticky Knowledge & Retrieval Practice

We build 'sticky knowledge' by revisiting key learning regularly so pupils can remember it and use it over time. Each unit links back to what pupils have already learned, helping them make connections and deepen understanding. Teachers use simple retrieval activities—such as quizzes, quick discussions, flashbacks, or practical recall tasks—to help children keep important knowledge in their long-term memory. This supports pupils in building secure foundations and being able to apply what they know with confidence.

Cranmore School Maths Long Term Curriculum Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
FS1	Begins to say some numbers in order To begin to notice numerals in the environment. Develop recognition of up to 3 items Explore shape and pattern through their independent play and use of manipulatives. To use shapes and objects through play.	Build on counting on their fingers through song and rhyme. To begin to compare and recognise changes in numbers of things – more/less. Recite to 5. Join in with number counting songs (which count up and down). Compare simple sizes (big, small). Recognise some basic simple shapes in the environment (square, triangle) Retrieval and sticky knowledge practise.	Recite to 5 and say one number for each number 1, 2, 3, 4, 5. Subitise up to 3 objects without counting. Demonstrate knowledge of number by independent use of number songs and rhymes. Find the longer/shorter of two lengths in play Demonstrate some use of positional language in play. Talk using informal and mathematical language (such as sides, corners, straight, flat, round etc.)	Know that the last number of objects counted is the number of objects – 5 (cardinal principle). Explore using a range of their marks and signs to ascribe meaning. Can anticipate what number is next in the context of one more and one less using songs or rhymes. Find the heavier / lighter of two objects Enjoy combining shapes to make new ones (2D / 3D). To attempt to create arches, enclosures when building with blocks. Retrieval and sticky knowledge practise.	To link numerals with amounts 1-4 Recognise numerals of personal significance. To say which group has more. To say which group has less. Finds the more/less full of two objects in capacity. Creates own spatial patterns showing some organisation and regularity.	Recite numbers accurately to 5 and count correctly using small objects and 1:1 correspondence. Use marks to represent/record numbers. To build on understanding of more/ less by using language 'more than/less than'. To recognise numerals up to 5 and begin to recognise to 10. To start to solve real world mathematical problems (i.e. 4 children but only 3 chairs). Explore and add simple linear patterns of two or three repeating items/objects. Retrieval and sticky knowledge practise.
FS2	To recognise numbers 1-3. To begin to subitise to 3. To find one more of numbers to 3. Develop counting skills and knowledge, including that the last number in the count tells us how many (cardinality).	To recognise numbers 1-5. To build on subitising skills by subitising to 5. To find one more of numbers to 5. Subitise different arrangements of numbers within 5 and talk about what they can see and connect.	To recognise numbers 0-8. To subitise to 5. To find one more of numbers to 8. To find one less of numbers to 8. Explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the	To build on number recognition by recognising numbers 0-10. To explore the composition of 9 and 10. To practise number bonds to 10. Continue to develop their counting skills,	To recognise numbers to 20 . To revise number bonds to 5. To explore how to make numbers above 10. Explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame.	To solve simple number problems. To recap and build on the composition of each number to 10. pattern Order numbers and play track games. Join in with verbal counts beyond 20.

	Match quantities and numbers to finger patterns and explore different ways of representing numbers on fingers. Hear and join in with the counting sequence and connect this to the 'staircase' pattern of counting numbers.	Compare sets of objects by matching. Begin to develop the language of 'whole' when talking about objects which have parts. Retrieval and sticky knowledge practise.	Hungarian number frame. Focus on equal and unequal groups when comparing numbers. Understand that two equal groups can be called a 'double' and connect this to finger patterns. Sort odd and even numbers according to their 'shape'	counting larger sets as well as counting actions and sounds. Order numbers and play track games Join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers. Retrieval and sticky knowledge practise.	Explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame. Understand that two equal groups can be called a 'double'. Sort odd and even numbers according to their 'shape'	Compare quantities and numbers. Generalise about 'one more than' and 'one less than' numbers within 10. Continue to identify when sets can be subitised and when counting is necessary. Develop conceptual subitising skills including when using a rekenrek. Retrieval and sticky knowledge practise.
Year 1	Place Value Addition and Subtraction	Addition and Subtraction Geometry Retrieval and sticky knowledge practise.	Place Value Addition and Subtraction	Place Value Length and Height Mass and Volume Retrieval and sticky knowledge practise.	Multiplication and Division Fractions Position and Direction	Place Value Money Time Retrieval and sticky knowledge practise.
Year 2	Place Value Addition and Subtraction	Addition and Subtraction Shape Retrieval and sticky knowledge practise.	Money Multiplication and Division	Length and Height Mass, Capacity and Temperature Retrieval and sticky knowledge practise.	Fractions Time	Statistics Position and Direction Retrieval and sticky knowledge practise.

Our Maths curriculum is carefully sequenced as a spiral curriculum to ensure that units are repeated in order to strengthen retrieval and sticky knowledge. This sequencing and constant referral to prior knowledge supports mastery and develops children's fluency, reasoning and problem-solving skills. We also use a wide range of resources, representations and technologies to support their understanding. Place value appears multiple times to aid consolidation and addition and subtraction is embedded across the year. Shape, space and measures are allocated to specific terms in both year groups to support mastery and ensure learning can be consolidated.

Retrieval practise is planned in often in all year groups. For example, regular rehearsal of composition to 5, 10, 20 or 100 (depending on the year group) and embedded reasoning talk routines.