Settle Primary School

Progression of Number Fact Fluency and Times Tables

Based on the Mastering Number programme, White Rose long term plans, Numbots skills and TT Rockstars.

Children not keeping up will have short burst extra sessions to precision teach/practise facts not secure with-see times table flipchart from staff training and activities within folder on Sharepoint.

These children need to use flashcards, repetition, chants, songs, rhymes, tricks and games/activities (including extra Numbots of TT Rockstar time) to repeatedly see the x tables visually in different representations. Our aim is to secure x tables to 9 x 9 as these are the facts needed to achieve automaticity in calculation work (though we will obviously teach up to 12 x 12). They will have an individual chart of the key 36 facts needed to achieve automaticity (reverse facts, , 1, 10, 11 and 12 x table facts removed). This will track what facts they still need to learn.

We emphasise 3 x 7 means 3 LOTS OF 7 and 7 x 3 means 7 LOTS OF 3. A small, but conceptually important point!

Reception

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Spotting when a group can be subitised or needs to be counted		Subitise with different arrangements, including the Hungarian number frame		Make different arrangements of numbers within 5	Spot smaller numbers hiding in bigger numbers
Autumn 2	Connect quantities/ numbers to finger patterns; explore different ways of representing numbers on their fingers.	Hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number		Counting skills and knowledge: the last number in the count tells us 'how many' (cardinality); accurate counting, each thing must be counted once and in any order; 1:1 correspondence; anything can be counted, including actions and sounds		Compare sets of objects by matching; begin to develop the language of 'whole' when talking about objects which have parts
Spring 1	Subitise numbers within and beyond 5, and increasingly connect quantities to numerals	Begin to identify missing parts for numbers within 5	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	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
Spring 2	Sort odd and even numbers according to their shape	Counting sequence, linking cardinality and ordinality through the 'staircase' pattern		Order numbers and play track games		Verbal counts beyond 20, hearing the repeated pattern within the counting numbers
Summer 1	Counting skills, counting larger sets as well as counting actions and sounds		Range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame		Compare quantities and numbers, including sets of objects which have different attributes	
Summer 2	Develop sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2		Generalise about 'one more than' and 'one less than' numbers within 10	Identify when sets can be subitised and when counting is necessary	Develop conceptual subitising skills including when using a rekenrek	

Year 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Subitise within 5, including when using a rekenrek, and re-cap the composition of 5	Develop understanding of the numbers 6 to 9 using the '5 and a bit' structure	Compare numbers within 10 and use precise mathematical language when doing so	Re-cap the order of numbers within 10 and connect this to '1 more' and '1 less' than a given number	Explore the structure of even numbers (including that even numbers can be composed by doubling any number, and can be composed of 2s)	
Autumn 2	Explore the structure of the odd numbers as being composed of 2s and 1 more		Explore the composition of each of the numbers 6, 8, and 10		Explore number tracks and number lines and identify the differences between them	
Spring 1	Explore the composition of each of the numbers 7 and 9	Explore the composition of odd and even numbers, seeing that even numbers can be made of two odd or two even parts, and that odd numbers can be composed of one odd part and one even part		Identify the number that is two more or two less than a given odd or even number, identifying that two more/ less than an odd number is the next/ previous odd number, and two more/ less than an even number is the next/ previous even number		
Spring 2	Explore the aggregation and partitioning structures of addition and subtraction through systematically partitioning and re-combining numbers within 10 and connecting this to the part-part-whole diagram, including using the language of parts and wholes			Explore the augmentation and reduction structures of addition and reduction using number stories, including introducing the 'first, then, now' language structure		
Summer 1	Explore the composition of the numbers 11 to 19 as '10 and a bit' and compare numbers within 20		Connect the composition of the numbers 11 to 19 to their position in the linear number system, including identifying the midpoints of 5, 10 and 15		Compare numbers within 20	
Summer 2	Understand how addition and subtraction equations can represent previously explored structures of addition and subtraction (aggregation/ partitioning/ augmentation/ reduction)			Practise retrieving previously taught facts and reason about these		

Year 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Review the composition of the numbers 6 to 9 as '5 and a bit'		Compare numbers using the language of comparison and use the symbols < > =		Structure of even numbers (exploring how even numbers can be composed of two odd parts or two even parts) and the composition of each of 6, 8 and 10	
Autumn 2	Structure of odd numbers (including exploring how odd numbers can be composed of one odd part and one even part) and the composition of each of 7 and 9		Consolidate their understanding of the numbers 10 and 20 as '10 and a bit'		Consolidate their understanding of the linear number system to 20 and reason about midpoints	
Spring 1	Explore how the numbers 6 to 9 can be doubled using the '5 and a bit' and '10 and a bit' structure		Use doubles to calculate near doubles		Use bonds of 10 to reason about bonds of 20, in which the given addend is greater than 10	
Spring 2	Use known number bonds within 10 to calculate within 20, working within the 10-boundary	Use their knowledge of bonds of 10 to find three addends that sum to 10	Use their knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary		Use their understanding of the linear number system to 10 to position multiples of 10 on a 0 - 100 number line and reason about midpoints	
Summer 1	Continue to explore a range of strategies to subtract across the 10-boundary	Bonds of 20 in which the given addend is greater than 10, and where the given addend is less than 10	Practise previously explored strategies to support their reasoning about inequalities and equations	Doubles/near doubles and transform additions in which two addends are adjacent odd/ even numbers into doubles	Consolidate previously taught facts and strategies through continued, varied practice	
Summer 2	2 x table (0 x 2 to 6 x 2)	2 x table (7 x 2 to 12 x 2)	5 x table (0 x 5 to 6 x 5)	5 x table (7 x 5 to 12 x 5)	10 x table (0 x 10 to 6 x 10)	10 x table (7 x 10 to 12 x 10)

Year 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Use known number bonds within 10 to calculate within 20, working within the 10-boundary	Use their knowledge of bonds of 10 to find three addends that sum to 10	Use their knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary		Use their understanding of the linear number system to 10 to position multiples of 10 on a 0 - 100 number line and reason about midpoints	
Autumn 2	Continue to explore a range of strategies to subtract across the 10-boundary	Bonds of 20 in which the given addend is greater than 10, and where the given addend is less than 10	Practise previously explored strategies to support their reasoning about inequalities and equations	Doubles/near doubles and transform additions in which two addends are adjacent odd/ even numbers into doubles	Consolidate previously taught facts and strategies through continued, varied practice	
Spring 1	Recap Year 2 2 x table	Recap Year 2 2 x table	Recap Year 2 5 x table	Recap Year 2 5 x table	Recap Year 2 10 x table	Recap Year 2 10 x table
Spring 2	3 x table (0 x 3 to 6 x 3)	3 x table (7 x 3 to 12 x 3)	3 x table (0 x 3 to 12 x 3)	4 x table (0 x 4 to 6 x 4)	4 x table (7 x 4 to 12 x 4)	4 x table (0 x 4 to 12 x 4)
Summer 1	8 x table (0 x 8 to 6 x 8)	8 x table (7 x 8 to 12 x 8)	8 x table (0 x 8 to 12 x 8)	Mixed 3 and 4 x table	Mixed 3 and 4 x table	Mixed 3 and 4 x table
Summer 2	Mixed 4 and 8 x table	Mixed 4 and 8 x table	Mixed 4 and 8 x table	Mixed 3, 4 and 8 x table	Mixed 3, 4 and 8 x table	Mixed 3, 4 and 8 x table

Year 4

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Recap Year 3 3 x table	Recap Year 3 3 x table	Recap Year 3 4 x table	Recap Year 3 4 x table	Recap Year 3 8 x table	Recap Year 3 8 x table
Autumn 2	6 x table (0 x 6 to 6 x 6)	6 x table (7 x 6 to 12 x 6)	7 x table (0 x 7 to 6 x 7)	7 x table (7 x 7 to 12 x 7)	8 x table (0 x 8 to 6 x 8)	8 x table (7 x8 to 12 x 8)
Spring 1	9 x table (0 x 9 to 6 x 9)	9 x table (7 x 9 to 12 x 9)	11 x table (0 x 11 to 6 x 11)	11 x table (7 x 11 to 12 x 11)	12 x table (0 x 12 to 12 x 12)	12 x table
Spring 2	Mixed practice using Sound Check on TT and MTC preparation.	Mixed practice using Sound Check on TT and MTC preparation.	Mixed practice using Sound Check on TT and MTC preparation.	Mixed practice using Sound Check on TT and MTC preparation.	Mixed practice using Sound Check on TT and MTC preparation.	Mixed practice using Sound Check on TT and MTC preparation.
Summer 1	Recap all to 9 x 9	Recap all to 9 x 9	Recap all to 9 x 9	Recap all to 9 x 9	Recap all to 9 x 9	Recap all to 9 x 9
Summer 2	Recap 11 x table	Recap 11 x table	Recap 12 x table	Recap 12 x table	Recap all to 12 x 12	Recap all to 12 x 12

Year 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Recap 2 and 4 x table	Recap 3 x table	Recap 5 and 10 x table	Recap 6 x table	Recap 7 x table	Recap 8 x table
Autumn 2	Recap 9 x table	Recap 11 x table	Recap 12 x table	All x tables mixed practice	All x tables mixed practice	All x tables mixed practice
Spring 1	All x tables mixed practice	All x tables mixed practice	All x tables mixed practice	Division facts for 2, 5 and 10 x table	Division facts for 3 x table	Division facts for 4 x table
Spring 2	Division facts for 6 x table	Division facts for 7 x table	Division facts for 8 x table	Division facts for 9 x table	Division facts for 11 x table	Division facts for 12 x table
Summer 1	Missing numbers in 2, 5 and 10 x table, ___ x 5 = 35	Missing numbers in 3 and 4 x table 4 x ____= 36	Missing numbers in 6 x table ___ x 6 = 54	Missing numbers in 7 x table 9 x ____ = 63	Missing numbers in 8 x table ____ x 8 = 48	Missing numbers in 9 x table 8 x ____ = 72
Summer 2	Mixed x table, division and missing numbers from the year.	Factors and multiples.	Prime numbers.	Composite numbers.	Square numbers.	Cube numbers.

Year 6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Autumn 1	Recap 6 x table and related division facts	Recap 7 x table and related division facts	Recap 8 x table and related division facts	Recap 9 x table and related division facts	Recap 11 x table and related division facts	Recap 12 x table and related division facts
Autumn 2	Increasing one number 10 x 60 x 7	Increasing two numbers 10 x 60 x 70	Increasing one number 100 x 600 x 7	Increasing two numbers 100 x 600 x 700	Increasing one number 1000 x 6000 x 7	Increasing two numbers 1000 x 6000 x 7000
Spring 1	Increasing one by 10x and one 100x 600 x 70	Increasing one by 10x and one 1000x 6000 x 70	Increasing one by 100x and one 1000x 6000 x 700	Decreasing one number 10 x 0.6 x 7	Decreasing one number 10 x 0.6 x 7	Decreasing one number 10 x 0.6 x 7
Spring 2	Decreasing two numbers 10 x 0.6 x 0.7	Decreasing two numbers 10 x 0.6 x 0.7	Decreasing two numbers 10 x 0.6 x 0.7	Multiplying fractions, ¼ x 3/5	Changing fraction ÷by integer to x ¼ ÷ 5 is the same as ¼ x 1/5	Changing fraction ÷by integer to x ¼ ÷ 5 is the same as ¼ x 1/5
Summer 1	Fractions of amounts 6/7 of 49	Fractions of multiples of 10 6/7 of 490	% of amounts 35% of 260	% of amounts 35% of 260	Common factors	Common multiples
Summer 2	Apply to Chinese multiplication method	Apply to Chinese multiplication method	Apply to Chinese multiplication method	Apply to Chinese multiplication method	Apply to Chinese multiplication method	Apply to Chinese multiplication method