

Mathematics at Park Hill Junior School

Year 3

Autumn Term		
	Strands	Summary
1	Mental addition and subtraction (MAS)	Use multiple of 5 and 10 bonds to 100 to solve additions and subtractions; add and subtract 1-digit numbers to and from 2-digit numbers
2	Number and place value (NPV); Mental addition and subtraction (MAS)	Compare and order 2- and 3- digit numbers; count on and back in 10s and 1s; add and subtract 2-digit numbers
3	Mental multiplication and division (MMD)	Know multiplication and division facts for the 5, 10, 2, 4 and 3 times-tables; doubling and halving
4	Measurement (MEA); Geometry: properties of shapes (GPS)	Know and understand the calendar, including days, weeks, months, years; tell the time to the nearest 5 minutes on analogue and digital clocks; know the properties of 3D shapes
5	Number and place value (NPV); Mental addition and subtraction (MAS); Problem solving, reasoning and algebra (PRA)	Comparing, ordering and understanding place value of 2- and 3-digit numbers; subtracting from 2- and 3-digit numbers; using prediction to estimate calculations
6	Mental multiplication and division (MMD); Fractions, ratio and proportion (FRP)	Doubling and halving numbers up to 100 using partitioning; understanding fractions and fractions of numbers
7	Measurement (MEA); Mental addition and subtraction (MAS)	Use money to add and subtract and record using the correct notation and place value; add and subtract 2-digit numbers using partitioning; add three 2-digit numbers by partitioning and recombining.
8	Measurement (MEA)	Choose an appropriate instrument to measure a length and use a ruler to estimate, measure and draw to the nearest centimetre; know 1 litre = 1000 ml; estimate and measure capacity in millilitres
9	Number and place value (NPV); Mental addition and subtraction (MAS)	Place 2- and 3-digit numbers on a number line; round 3-digit numbers to nearest 100; use counting up to do mental subtractions with answers between 10 and 20, 10 and 30, and either side of 100
10	Mental multiplication and division (MMD); Mental addition and subtraction (MAS)	Revise times-tables learned and derive division facts; perform division with remainders; choose a mental strategy to solve additions and subtractions; solve word problems

Spring Term		
	Strands	Summary
11	Number and place value (NPV); Mental addition and subtraction (MAS)	Rehearse place value in 3-digit numbers, order them on a number line and find a number in between; compare number sentences; solve additions and subtractions using place value; multiply and divide by 10 (whole number answers); count in steps of 10, 50 and 100.
12	Mental addition and subtraction (MAS); Mental multiplication and division (MMD); Statistics (STA)	Add pairs of 2-digit numbers using partitioning (crossing 10s, 100 or both) and then extend to add two 3-digit numbers (not crossing 1000); recognise and sort multiples of 2, 3, 4, 5, and 10; double the 4 times-table to find the 8 times-table; derive division facts for the 8 times-table; multiply and divide by 4 by doubling or halving twice
13	Fractions, ratio and proportion (FRP)	Identify $\frac{1}{2}$ s, $\frac{1}{3}$ s, $\frac{1}{4}$ s, $\frac{1}{6}$ s, and $\frac{1}{8}$ s; realise how many of each make a whole; find equivalent fractions; place fractions on a 0 to 1 line; find fractions of amounts
14	Geometry: properties of shapes (GPS); Geometry: position and direction (GPD); Measurement (MEA)	Recognise right angles and know they are 90° ; understand angles are measured in degrees; recognise $^\circ$ as the symbol for the measurement of degrees; name and list simple properties of 2D shapes; begin to understand and use the term perimeter to mean the length/distance around the edge (border) of a 2D shape; begin to calculate using a ruler; know a right angle is a quarter turn; know 360° is a full turn; begin to understand angles and identify size of angles in relation to 90°
15	Number and place value (NPV); Mental addition and subtraction (MAS)	Place 3-digit numbers on empty 100 number lines; begin to place 3-digit numbers on 0-1000 landmarked and empty number lines; round 3-digit numbers to the nearest ten and to the nearest hundred; use counting up as a strategy to perform mental subtraction (Frog); subtract pounds and pence from five pounds; use counting up (Frog) as a strategy to perform mental subtraction of amounts of money; subtract pounds and pence from ten pounds
16	Number and place value (NPV); Written addition and subtraction (WAS)	Understand place-value in 3-digit numbers; separate 3-digit numbers into hundreds, tens, and ones; add two 3-digit numbers using vertical written addition (expanded); add 2- and 3- digit numbers using vertical written addition (expanded)
17	Mental addition and subtraction (MAS); Written addition and subtraction (WAS)	Add two 2-digit numbers mentally; add 2-digit to 3-digit numbers mentally using place value and rounding; add two 3-digit numbers using expanded written method (answers under 1000); begin to move tens and hundreds moving towards formal written addition; add two 3-digit numbers using expanded column addition; investigate patterns in numbers when adding them; choose to solve addition using a mental method or expanded column addition (written method)
18	Measurement (MEA)	Tell the time to the nearest minute on analogue and digital clocks (minutes past and minutes to); time events in minutes and seconds; find a time after a given interval (not crossing the hour); calculate time intervals; solve word problems involving time
19	Number and place value (NPV); Mental addition and subtraction (MAS)	Order 3-digit numbers and find numbers between; solve subtractions of 3-digit - 3-digit numbers using counting up (Frog); use counting up and counting back as strategies to perform mental subtractions; choose to solve a given subtraction by counting up or counting back
20	Mental multiplication and division (MMD); Written multiplication and division (WMD)	Double and halve numbers up to 100 by partitioning; solve word problems involving doubling and halving; multiply numbers between 10 and 25 by 1-digit numbers using the grid method; divide multiples of 10 by 1-digit numbers using known tables facts; see the relation between multiplication and division

Summer Term		
	Strands	Summary
21	Mental addition and subtraction (MAS); Written multiplication and division (WMD); Fractions, ratio and proportion (FRP)	Add 3-digit and 1-digit numbers mentally, using number facts; subtract 1-digit numbers from 3-digit numbers mentally using number facts; add and subtract multiples of 10 by counting on and back in 10s and using number facts to cross 100s; compare and order fractions with the same denominator; begin to recognise equivalences of $\frac{1}{2}$; add and subtract fractions with the same denominator
22	Mental multiplication and division (MMD); Written multiplication and division (WMD)	Use function machines to multiply by 2, 3, 4, 5 and 8 and understand the inverse; use scaling to multiply heights and weights by 2, 4, 8, 5 and 10; use known facts to multiply multiples of 10 by 2, 3, 4 and 5; multiply numbers between 10 and 30 by 3, 4 and 5 using the grid method; multiply 2-digit numbers by 3, 4, 5 and 8 using the grid method
23	Mental multiplication and division (MMD); Written multiplication and division (WMD)	Divide without remainders, just beyond the 12th multiple; division using chunking, with remainders; use the grid method to multiply 2-digit numbers by 3, 4, 5 and 8; begin to estimate products
24	Statistics (STA); Measurement (MEA)	Draw and interpret block graphs and pictograms where one square/symbol represents two units; compare and measure weights in multiples of 100g; know how many grams are in a kilogram; estimate and weigh objects to the nearest 100g; draw and interpret bar charts where one square represents one hundred units
25	Mental addition and subtraction (MAS); Written addition and subtraction (WAS)	Add 3-digit and 2-digit numbers using mental strategies; add two 3-digit numbers using mental strategies or by using column addition
26	Written addition and subtraction (WAS); Mental addition and subtraction (MAS)	Use column addition to add three 2- and 3-digit numbers together and four 2- and 3-digit numbers together; subtract 3-digit numbers using counting up; solve word problems choosing an appropriate method
27	Written addition and subtraction (WAS); Mental addition and subtraction (MAS)	Add 3-digit numbers using column addition; solve problems involving measures; solve subtractions of 3-digit numbers using counting up on a line and work systematically to find possibilities; choose an appropriate strategy to solve addition or subtraction
28	Geometry: properties of shapes (GPS); Measurement (MEA)	Identify, name and draw horizontal, vertical, perpendicular, parallel and diagonal lines, angles and symmetry in 2D shapes; measure the perimeter of 2D shapes by counting and measuring with a ruler; tell the time on analogue and digital clocks to the minute, begin to tell the time 5, 10, 20 minutes later, recognise am and pm and 24-hour clock times
29	Written multiplication and division (WMD); Mental multiplication and division (MMD); Fractions, ratio and proportion (FRP); Decimals, percentages and their equivalence to fractions (DPE)	Use the grid method to multiply 2-digit numbers by 3, 4, 5, 6 and 8; estimate products; divide using chunking, with and without remainders; decide whether to use multiplication or division to solve word problems; recognise tenths and equivalent fractions; find one-tenth and several tenths of multiples of 10 and begin to find one-tenth of single-digit numbers
30	Mental addition and subtraction (MAS); Written addition and subtraction (WAS); Written multiplication and division (WMD); Mental multiplication and division (MMD)	Revise column addition for adding three 3-digit numbers; revise mental strategies for addition; subtract 3-digit numbers using written and mental methods; find change using counting up; check subtraction using addition; multiply numbers between 10 and 40 by 1-digit numbers using grid method; solve division problems just beyond the known tables facts