Whiteshill Primary School

Maths Long Term Plan

Year 2

Unit Focus	Lesson Objective	Subject Knowledge and Teaching Notes
Number and Place Value	Read and write 2-digit numbers in words and numerals	Use word cards – not a spelling lesson
	Represent 2-digit numbers	Represent in different ways e.g. on a number line, group of objects, pictures, numicon, counting beads, unifix cubes, base 10.
	Recognise the value of digits in 2-digit numbers	Arrow cards, base 10, place value chart
	Partition 2-digit numbers in different ways	Stick to changing the tens digits e.g. 23 = 20 + 3 and also 10 + 13 using a systematic approach and looking at the pattern.
	Identify 2-digit numbers on a number line	Number line with all the numbers marked on – discussion around the numbers.
	Represent 2-digit numbers on a number line	Blank number line up to 100 but with all the divisions marked on that the children can then label – different to estimating.
	Estimate 2-digit numbers on a number line	Only the tens divisions are marked on the number line – have to use their knowledge of number to identify where it would be eg. 5 is halfway along.
	Find 10 more than a given number and count in steps of 10 from any 2-digit number.	
	Find 10 less than a given number and count back in steps of 10 from any 2-digit number	
	Compare any two 2-digit numbers using < > and =	Less than < Greater than > Equal to =

		There are three different symbols – it is not the same one just turned around. Do some where the tens are the same and the ones are the same e.g. 43 and 46 or 23 and 63 so that they can start to see which column to look at.
	Order 2-digit numbers with different tens from smallest to greatest	e.g. 63, 43, 13 – no more than 3 or 4 at a time – they don't need to order ten numbers in a row.
	Order 2-digit numbers with the same tens from smallest to greatest	e.g. 13, 17, 18 – no more than 3 or 4 at a time.
	Order 2-digit numbers	Any 3 or 4 numbers up to 100.
Addition and Subtraction	Show that addition is commutative	Only use addition number sentences they already know from year 1.
	Add three single digit numbers looking for pairs that sum to ten	
	Add three single digit numbers looking for doubles and near doubles	
	Use addition facts of 10 to derive facts of 100	
	Add ones to 2-digit numbers using number facts where the tens don't change	
	Add ones to 2-digit numbers using bridging	
	Add ones to 2-digit numbers by rounding to ten then adjusting.	e.g. 27 + 5 round the 27 to 30 then add the 5 = 35 then takeaway the 3 to adjust it back to 32.
	Add multiples of ten to 2-digit numbers using number facts	e.g. 43 + 50 – you need to know that 4 + 5 = 9
	Add two 2-digit numbers by counting on in tens then 1s	Partition the second number in to tens and ones and add on.
	Add two 2-digit numbers using partitioning and recombining (No regrouping)	Partition both numbers and then add the tens, then add the ones and put them back together (the ones need to stay below ten).

	Add two 2-digit numbers using partitioning and recombining (with re-grouping)	Same as above but the ones add to more than ten e.g. 76 + 17
	Add two 2-digit numbers by rounding to the nearest ten then adjusting	see above
	Add two 2-digit numbers choosing an efficient strategy	Remind the children of the strategies learnt above and they choose the most appropriate for a range of questions.
	Understand why subtraction is not commutative	Only use subtraction number sentences they already know from year 1.
	Use subtraction facts of 10 to subtract multiples of ten from 100	
	Subtract ones from 2 digit numbers using number facts where the tens don't change	
	Subtract ones from 2 digit numbers using bridging	
	Subtract ones from 2 digit numbers by rounding to ten then adjusting	
	Subtract multiples of ten from 2 digit numbers using number facts	
	Subtract two 2 digit numbers by counting back in tens then 1s	
	Subtract two 2 digit numbers by rounding to the nearest ten then adjusting	
	Subtract by finding the difference between two numbers - counting on	
	Subtract two 2 digit numbers choosing an efficient strategy	
	Solve missing number sentences within addition calculations	Part part whole concept – teach the concept with one-digit numbers so they understand the concept
	Solve missing number sentences within subtraction calculations	
	Derive addition and subtraction facts using inverse operations	e.g. if I know 3 + 4 = 7 what else do I know.

Multiplication and Division	Show and use the connection between multiplication and repeated addition	Stick to twos, fives and tens so that they concentrate on learning the concept not on the calculation.
	Create multiplication number sentences to describe and solve equal grouping problems	e.g. I save 5 pence per week for 3 weeks – how much have I got altogether. Stick to 2s, 5s and 10s.
	Use arrays to solve multiplication problems	Stick to 2s, 5s and 10s.
	Show and use the commutativity of multiplication	Only use multiplication number sentences they have already been taught.
	Create division number sentences to describe and solve grouping problems	e.g. I had 20 lollies, I shared them between 5 people – how many lollies did each person get? Stick to 2s, 5s and 10s.
	Create division number sentences to describe sharing and apply to different contexts.	Stick to 2s, 5s and 10s.
	Show that division is not commutative	Only use division number sentences they have already been taught.
	Build the 2x table and count in steps of 2 from zero	
	Build the 10x table and count in steps of 10 from zero	
	Build the 5x table and count in steps of 5 from zero	
	Use factor, factor, product relationship to derive multplication and division statements	Using 2, 5 and 10 times tables only
	Recognise and use odd and even numbers	Use numicon to understand the concept that even numbers can be put in to even groups and odd numbers can't. It's not about learning even and odd numbers off by heart.
	Read scales in divisions of ones and twos,	
	Read scales in divisions of fives and tens	
Fractions	Recognise one third as one of three equal parts of a shape and use fraction notation	
	Find 1/3 of objects	
	Find 1/3 of a number.	

	Recognise two quarters as two of four equal parts, or two of one quarter of a shape and use fraction notation	
	Find 2/4 of objects	
	Find 2/4 of a number	
	Recognise that a half is equivalent to two quarters	
	Recognise a three-quarters as three of four equal parts, or three of one quarter of a shape and use fraction notation	
	Find 3/4 of objects	
	Find 3/4 of a number.	
Geometry: Properties of Shapes	Identify and describe the properties of pentagons	
	Identify and describe the properties of hexagons	
	Identify and describe the properties of octagons	
	Identify the vertical line of symmetry in 2-D shapes	Using regular and irregular 2-D shapes and non-standard outlines e.g teddy bear, heart.
	Identify and describe the number of faces and the shape of those faces on 3D shapes.	Compare and sort a wide range of shapes including cylinders, cones and prisms.
	Identify the number of edges on 3D shapes and compare their lengths.	e.g. shorter, longer, equal length Compare and sort a wide range of shapes including cylinders, cones and prisms.
	Identify the number of vertices on 3D shapes.	Compare and sort a wide range of shapes including cylinders, cones and prisms.
	Identify and describe the properties of a prism	The same polygon at either end joined by quadrilateral faces.
	Identify and describe the properties of a pyramid.	Triangular faces joining at a point.
	Identify and describe the properties of a cube.	
	Use prepositions to describe position	e.g. above, below

Geometry: Position and Direction	Use mathematical language to describe direction of a turn as clockwise or anti-clockwise.	
	Understand and use the language of quarter, half and three-quarter turns.	Re-enforce clockwise and anti-clockwise during this
	Describe and follow instructions for movement in a straight line.	e.g. go up 4 and across 3 (left and right).
	Order a range of different shapes and objects in patterns and sequences	e.g. what is third, fourth in a row
Measurement: length and Mass	Measure the mass of objects (kg)	Your scale needs to go up in 1 kgs and objects should be provided that weigh exactly 1kg, 2kgs etc. Once you have measured the first item – you then can estimate before each following item e.g. is it heavier or lighter? How much more? What is it likely to weigh?
	Measure the mass of objects (g)	Your scale needs to go up in 50s and objects should be provided that weight exactly 100g, 150g etc. Once you have measured the first item – you then can estimate before each following item e.g. is it heavier or lighter? How much more? What is it likely to weigh?
	Compare and order the mass of objects	Using the symbols < > = e.g. A < B < C or D = E
	Measure lengths and heights (m)	Use the trundle wheel to measure a large length e.g. playground. Distinction needs to be made between length (measuring horizontally) and height (measuring vertically)
	Measure lengths and heights (cm)	Using a ruler – always round to the nearest cm. Once you have measured the first item – you then can estimate before each following item e.g. is it longer or shorter? How much longer? What is it likely to measure? Distinction needs to be made between length (measuring horizontally) and height (measuring vertically)
	Compare and order lengths and heights	Using the symbols < > = e.g. A < B < C or D = E
Measurement: Capacity and Temperature	Measure the capacity of objects (litre)	Your scale needs to go up in 1 litre and you need to provide vessels that are full of liquid which measures 1 litre etc. that they then pour in to a measuring jug to read the scale. Once you have measured the

		first item – you then can estimate before each following item e.g. is it more or less? How much more? What is it likely to measure?
	Measure the capacity of objects (ml)	Your scale needs to go up in 50s and objects should be provided that measure exactly 100ml, 150ml etc. Once you have measured the first item – you then can estimate before each following item e.g. is it more or less? How much more? What is it likely to measure?
	Compare and order the capacity of objects	Using the symbols < > = e.g. A < B < C or D = E
	Measure temperature (degrees)	Your thermometer should have divisions of fives and tens labelled and the children should be able to read ones in between these scales e.g. 37 degrees is two divisions above 35 degrees.
	Compare and order temperatures	Using the symbols < > = e.g. A < B < C or D = E
Measurement: Time	Know and use the fact that there are 60 minutes in 1 hour	
	Know and use the fact that there are 24 hours in one day	
	Read the time from a clock face (analogue) using quarter past the hour.	With analogue you need to use the words 'quarter past' not the digital time. Recap – quarter turns/clock-wise/anti-clockwise
	Read the time using quarter to the hour on a clock face (analogue)	With analogue you need to use the words 'quarter to' not the digital time. Recap – quarter turns/clock-wise/anti-clockwise
	Draw the hands on a clock face (analogue) to show quarter past and quarter to the hour.	When drawing the hands on a clock to use a ruler and the hour hand needs to be shorter than the minute hand – accuracy is important. Make sure that the hour hand is not directly on the hour unless it is o'clock e.g. for quarter past four the hour hand will have moved proportionately past the four.
	Read the time from a clock face (analogue) to five minute intervals past the hour.	With analogue you need to use the words not the digital time. Recap – clock-wise/anti-clockwise
	Draw the hands on a clock face (analogue) to show five minute intervals past the hour	With analogue you need to use the words not the digital time. Recap – clock-wise/anti-clockwise

	Read the time from a clock face (analogue) to five minute intervals to the hour.	With analogue you need to use the words not the digital time. Recap – clock-wise/anti-clockwise
	Draw the hands on a clock face (analogue) to show five minute intervals to the hour.	With analogue you need to use the words not the digital time. Recap – clock-wise/anti-clockwise
	Compare intervals of time (using clock faces – analogue)	With analogue you need to use the words not the digital time. Recap – clock-wise/anti-clockwise
	Order intervals of time (using clock faces – analogue)	With analogue you need to use the words not the digital time. Recap – clock-wise/anti-clockwise
Measurement: Money	Recognise £1, £2, £5 and £10 and use the symbol for pounds (£)	They look at the coins and have to write the value of it. Deepen it could be adding in foreign coins and they have to pick out the right ones.
	Find different combinations of £1, £2, £5 and £10 that equal the same amounts of money	
	Solve simple problems involving paying for two or more items using £1, £2, £5 and £10	
	Solve simple problems involving giving change of £1, £2, £5 and £10	
	Recognise 1p, 2p and 5p coins and use the symbol for pence.	
	Find different combinations of 1p, 2p and 5p that equal the same amounts of money	
	Solve simple problems involving paying for two or more items using 1p, 2p and 5p.	
	Solve simple problems involving giving change of 1p, 2p and 5p.	
	Recognise 10p, 20p and 50p coins and use the symbol for pence.	
	Find different combinations of 10p, 20p and 50p that equal the same amounts of money	
	Solve simple problems involving paying for two or more items using 10p, 20p and 50p.	
	Solve simple problems involving giving change of 10p, 20p and 50p.	

Statistics	construct a tally chart and frequency table.	The headings in your table should be item, tally and total. Make sure they know that a table might not always have a column for the tally.
	Construct a pictogram where the symbol represents a single item	Use a tally chart and frequency table to give them the information needed to construct their pictogram.
	Interpret a pictogram where the symbol represents a single item	Children need to ask and answer questions about the data.
	Construct a pictogram where the symbol represents a multiple of 2 items	Use a tally chart and frequency table to give them the information needed to construct their pictogram.
	Interpret a pictogram where the symbol represents a multiple of 2 items	Children need to ask and answer questions about the data.
	Construct a block diagram where the block represents a single item	Use a tally chart and frequency table to give them the information needed to construct their block diagram. A block diagram must have individual blocks – it is not a continuous bar and does not need labelled axis.
	Interpret a block diagram where the block represents a single item	Children need to ask and answer questions about the data.
	Construct a block diagram where the block represents a multiple of 2 items	Use a tally chart and frequency table to give them the information needed to construct their block diagram. A block diagram must have individual blocks – it is not a continuous bar and does not need labelled axis.
	Interpret a block diagram where the block represents a multiple of 2 items	Children need to ask and answer questions about the data.