

Whiteshill Primary School

Maths Long Term Plan

Year 3

Unit Focus	Lesson Objective	Subject Knowledge and Teaching Notes
Number and place value	Read 3 digit numbers in words and write using numerals	
	Read 3 digit numbers in numerals ad write in words	Use word cards – not a spelling lesson
	Read 3 digit numbers in words and write using numerals including zero as a place holder	
	Read 3 digit numbers in numerals and write in words, including zero as a place holder	Use word cards – not a spelling lesson
	Represent 3 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 3 digit numbers	Arrow cards, base 10, place value chart
	Partition 3 digit numbers in different ways	Stick to changing the hundreds and tens digits e.g. 123 = 100 + 20 + 3 and also 110 + 13 using a systematic approach and looking at the pattern.
	Identify 3 digit numbers on a number line	Number line with all the numbers marked on – discussion around the numbers. You could use a 100 number line as a section e.g. 600 – 700 if you don't have a 1000 numberline.
	Represent 3 digit numbers on a number line	Blank number line but with all the divisions marked on that the children can then label – different to estimating.
	Estimate 3-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 numberFind 10 less than a given numberCount up in steps of 10 from any 2 or 3-digit numberCount back in steps of 10 from any 2 or 3 digit numberFind 100 more than a given number	Use a number square or line to show the pattern.
	Find 100 less than a given number Count up in steps of 100 from any 2 or 3 digit number	Count in steps of 50 and 100 from zero
	Count back in steps of 100 from any 2 or 3 digit number	
	Compare any two 3 digit numbers using < > and =	Less than < 4<5 Greater than > 6>5 Equal to = There are three different symbols – it is not the same one just turned around. Do some where the tens are the same, hundreds are the same and ones are the same e.g. 143, 243 or 156, 158
	Order 3-digit numbers with different hundreds	e.g. 263, 163, 763 – no more than 3 or 4 at a time – they don't need to order ten numbers in a row.
	Order 3-digit numbers with the same hundreds	e.g. 113, 117, 118 – no more than 3 or 4 at a time.
	Order 3 digit numbers	Any 3 or 4 numbers up to 1000
Multiplication and Division: Multiplication Tables	Demonstrate the 3 x table using concrete and pictorial representations. Demonstrate division facts for the 3 x table using concrete and	Count in multiples of 3 from zero
	pictorial representations.	

	Demonstrate the 4 x table using concrete and pictorial representations	Count in multiples of 4 from zero.
	Demonstrate division facts for the 4 x table using concrete and pictorial representations.	
	Demonstrate the 8 x table using concrete and pictorial representations	Count in multiples of 8 from zero.
	Demonstrate division facts for the 8 x table using concrete and pictorial representations.	
Addition: mental and	Add ones to three-digit numbers using number facts where the tens	e.g. 345 + 3 (they know that 5 + 3 = 8 so the answer
written methods	don't change	must be 348. (you are teaching the strategy – not the answer – this is about saying to the children that they just need to add the ones and the tens and hundreds columns stay the same).
	Add ones to three-digit numbers using bridging	e.g. 345 + 7 – use your number bond to ten to get to 350 and then add the remaining 2. Remember you are teaching the strategy – not the answers.
	Add ones to three-digit numbers by adding ten then adjusting	347 + 8 = 347 + 10 = 357 357 - 2 = 355 Explain that this should only be used when adding 8 or 9 to a number and make sure your examples match this – it is not a useful strategy for smaller numbers.
	Add tens to three-digit numbers using number facts, where the hundreds don't change	e.g. 342 + 40 = 382 (this is about them spotting that if you are adding a multiple of ten, only the tens column changes – remember you are teaching the strategy not the answer).
	Add tens to three-digit numbers using bridging	e.g. $342 + 70 =$ use your number bond to ten to know that $342 + 60 = 302$ and then add the remaining ten to get to 312.
	Add hundreds to three-digit numbers using number facts	e.g. 342 + 200 = 542 (this is about them spotting that if you are adding a multiple of hundred, only the hundreds column changes – remember you are teaching the strategy not the answer).

	Add 99 to three-digit numbers by adding one hundred and then adjusting	
	Add two 3-digit numbers choosing an efficient strategy	Choose the most appropriate of the strategies that has been taught above.
	Estimate the answer to an addition calculation	They have not been taught rounding yet so just get them to look at the largest column to estimate, not worrying about rounding.
	Use written addition for two 3 digit numbers when carrying is not required.	
	Use written addition for two 3 digit numbers when the ones column adds to more than 10.	
	Use written addition for two 3 digit numbers when the tens column adds to more than 100.	
	Use written addition for two 3 digit numbers when exchanging is required in multiple columns	
	Use written addition for 3 digit and 2 digit numbers when no exchanging is required.	
	Use written addition for 3 digit and 2 digit numbers when the ones column adds to more than 10.	
	Use written addition for 3 digit and 2 digit numbers when the tens column adds to more than 100.	
	Use written addition for 3 digit and 2 digit numbers when exchanging is required in multiple columns	
Subtraction: mental and written methods	Subtract ones from three-digit numbers using number facts where the tens don't change	
	Subtract ones from three-digit numbers using bridging	
	Subtract ones from three-digit numbers by taking away ten then adjusting.	
	Subtract tens from three-digit numbers using number facts where the hundreds don't change	
	Subtract tens from three-digit numbers using bridging	
	Subtract hundreds from three-digit numbers using number facts	

	Subtract 99 from three-digit numbers by subtracting one hundred	
	and then adjusting	
	Estimate the answer to a subtraction calculation	They have not been taught rounding yet so just get
		them to look at the largest column to estimate, not
		worrying about rounding.
	Use written subtraction for 3 digit and 2 digit numbers when no	
	exchanging is required.	
	Use written subtraction for 3 digit and 2 digit numbers when	
	exchanging is required in the ones column.	
	Use written subtraction for 3 digit and 2 digit numbers when	
	exchanging is required in the tens column.	
	Use written subtraction for 3 digit and 2 digit numbers when	
	exchanging is required in multiple columns	
	Find the difference between two one-digit numbers.	
	Find the difference between two two-digit numbers by counting on.	e.g. 23 + 17 = count on 7 to 30 then count on 10 to 40.
	Find the difference between two two-digit numbers by counting on	e.g. 23 + 17 you would count on to 43 and then adjust
	and adjusting.	back 3.
	Find the difference between a 3-digit and a two-digit number by	
	counting on.	
	Multiply 2 digit numbers by 10 using place value	Place value table
	Multiply 1 digit numbers by multiples of 10 using number facts.	e.g. 3 x 40 = 3 x 4 x 10 = 120
	Use the distributive law to multiply a teens number by a one-digit	e.g 17 x 3 is the same as 10 x 3 and 7 x 3
	number	Stick to 2, 5, 10, 3, 4 and 8.
	Use the distributive law to multiply a two-digit number by a one-	e.g. 43 x 5 is the same as 40 x 5 and 3 x 5
	digit number	Stick to 2, 5, 10, 3, 4 and 8.
Multiplication and	Multiply 2 digit number by a 1 digit number using a formal written	Stick to 2, 5, 10, 3, 4 and 8.
division	method where the ten is not bridged.	e.g. 21 x 2
	Multiply 2 digit number by a 1 digit number using a formal written	Stick to 2, 5, 10, 3, 4 and 8.
	method where the ones column multiplies to over ten.	e.g. 14 x 3

	Multiply 2 digit number by a 1 digit number using a formal written	Stick to 2, 5, 10, 3, 4 and 8.
	method where the tens column multiplies to over 100. Use multiplication to solve word problems	e.g. 73 x 2
	Use multiplication to solve missing number problems	
	Divide multiples of 2 by 2.	No sharing or grouping – how many twos go into a number.
	Divide multiples of 5 by 5.	
	Divide multiples of 10 by 10.	
	Divide multiples of 3 by 3.	
	Divide multiples of 4 by 4.	
	Divide multiples of 8 by 8.	
	Use division to solve correspondence word problems	e.g. I have 12 sweets and I share them between 4 children or I have 3 coats and 4 hats, how many outfits can I wear?
	Use multiplication or division to solve scaling problems	e.g. there are three times as many girls as boys in the class – how many girls are there if there are 4 boys.
Fractions	Recognise and represent unit fractions	e.g. a fraction where the numerator is 1.
	Count up and down in tenths	
	Recognise that tenths arise from dividing an object into 10 equal parts.	
	Recognise that tenths arise from dividing one-digit numbers or quantities by 10.	
	Recognise and represent non-unit fractions	e.g. a fraction where the numerator is more than 1 but less than the denominator.
	Compare two proper fractions which have the same denominator	Less than < Greater than > Equal to =
		e.g. 1/3 and 2/3

	Compare two unit fractions with different denominators.	Less than < Greater than > Equal to = e.g. 1/5 and 1/7 The bigger the denominator, the smaller the fraction.
	Order a set of proper fractions which have the same denominator	
	Order a set of unit fractions with different denominators.	The bigger the denominator, the smaller the fraction.
	Compare two proper fractions which have the same numerator > 1 (small denominator)	e.g. 2/6 and 2/8
	Order a set of proper fractions which have the same numerator > 1 (small denominator)	e.g 3/5 and 3/8 and 3/6
	Recognise and show equivalent proper fractions where the denominators are multiples of each other.	Only use 2, 5, 10 and 4 and 8 as the denominators.
Fractions: Calculating	Find unit fractions of a number of objects (2, 5, 10, 3, 4, 8)	
	Find unit fractions of a number (2, 5, 10, 3, 4, 8)	
	Find non-unit fractions of a number of objects (2, 5, 10, 3, 4, 8)	
	Find non-unit fractions of a number (2, 5, 10, 3, 4, 8)	
	Add fractions with the same denominator within one whole	e.g. 2/8 + 3/8 = 5/8
	Subtract fractions with the same denominator within one whole	e.g. 5/5 – 2/5 = 3/5
	Solve word problems involving fractions.	
Geometry: Properties	identify and draw horizontal lines	
of shape	identify and draw vertical lines	
	identify and draw parallel lines	
	identify and draw perpendicular lines	
Geometry: Angles	Understand that angle is a description of a turn.	Do not label them at this point beyond being an angle – they don't know any more than this. Concept of angle

		being a turn from one point to another – can show this with two lines – one where you started and one where you ended. Could use a curved arrow to show the turn between the lines.
	understand that angles are a feature of shapes.	Don't label the angles in any way – just understand the concept that two lines on a shape show a turn and this is an angle. Could use a curved arrow to show the turn within the shape.
	Identify a right angle as a quarter turn,	
	Identify that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn	
	Identify angles that are less than a right angle (acute) or greater than a right angle (obtuse).	
Measurement: Length,	Use a ruler to measure lengths in millimetres	
mass, capacity	Use a ruler to measure lengths in centimetres.	
	Use measuring equipment to measure lengths in metres.	
	Compare the length of two or more objects	Need to include m and cm in the same comparison.
	Add and subtract the lengths of two objects.	Same unit for each length e.g. cm
	Use digital and mechanical scales to measure mass in kg	
	Use digital and mechanical scales to measure mass in g	
	Compare the mass of two or more objects	Need to include both kg and g in the same comparison
	Add and subtract the mass of two objects.	Same unit for each mass e.g. kg
	Use measuring vessels to measure capacity in ml	
	Use measuring vessels to measure capacity in I	
	Compare the capacity of two or more objects	Need to include both I and mI in the same comparison
	Add and subtract the capacity of two vessels.	Same unit for each capacity e.g. ml

	solve scaling problems involving multiplication and division of measure	e.g. the skyscraper is 3 times as high as the house.
Geometry: Properties of shape	Draw irregular 2-D shapes	
	Find the perimeter of a 2-D shape by measuring in cm.	The shapes used need to have whole cm sides e.g. a pentagon where each side measures 5cm or an irregular shape with sides of 3cm, 4cm, 2cm and 5cm.
	make 3-D shapes using modelling materials	
	Identify when a shape has a right, obtuse or acute angle	
	name and describe the properties of 3-D shapes	Faces (number and shape), edges, vertices (number of), angles. Need to use actual shapes not pictures.
	Recognise pictures of 3-D shapes in different orientations.	Use 3D shapes to support this and help them visualise.
Measurement: Time	Know the number of seconds in a minute, minutes in an hour and hours in a day.	
	Know the number of days in each month	
	Know the number of days in a year and leap year	Use their knowledge of the days in each month to calculate days in a year and then discuss February having 29 in a leap year.
	Read and write the time from a clock face (analogue) to the nearest minute	Do not use am or pm with an analogue clock – the children just answer with three thirty or quarter past three etc.
	Read Roman numerals up to XII	
	Read and write the time from a clock using Roman numerals to the nearest minute	Do not use am or pm with an analogue clock – the children just answer with three thirty or quarter past 3 etc.
	Read and write the time from a digital clock face up to 12 noon.	Introduce the concept of am.
	Read the time from a digital clock face between 12 noon and midnight.	Introduce the concept of pm and 24 hour clock e.g. take away 12 from the number to say the time.

	Estimate and record time durations	e.g. how long does it take me to run around the playground, read a page of my book etc.
	Compare times given in seconds, minutes and/or hours	e.g. 24 seconds, 3 minutes, 1 hour – keep it simple so they don't have to convert. You can use the times recorded in the previous lesson as a starting point.
Measurement: Money	Solve simple problems involving paying for two or more items when the units are the same.	
	Solve simple problems involving paying for two or more items when the units are different	
	Solve simple problems involving giving change when the units are the same	
	Solve simple problems involving giving change when the units are different	
	Present data in table	
Statistics	Interpret data from a table	One and two-step questions.
	Construct a pictogram where the symbol represents multiple items	Read a table to get their information for the pictogram.
	Interpret a pictogram where the symbol represents multiple items	One and two-step questions.
	Construct a bar chart	
	Interpret a bar chart	One and two-step questions.