Unit Focus	Lesson Objective	Subject Knowledge and Teaching Notes
Number and Place Value	Read 5-digit numbers in words and write using numerals, including 0 as a place holder	
	Read 5-digit numbers in numerals and write in words, including 0 as a place holder	
	Represent 5-digit numbers	
	Recognise the value of digits in 5-digit numbers	
	Partition 5-digit numbers in different ways	
	Read 6-digit numbers in words and write using numerals including zero as a place holder	
	Read 6-digit numbers in numerals and write in words including zero as a placeholder	
	Represent 6-digit numbers on a number line	
	Recognise the value of digits in 6-digit numbers	
	Partition 6-digit numbers in different ways	
	Compare numbers up to one million	
	Order numbers up to one million	
	Round any 5-digit number to the nearest 10 000	Need to model 5-digit, 6-digit and also a mixture
	Round any 6-digit number to the nearest 100 000	
	Count forwards in tens, hundreds and thousands from any positive number up to 1 000 000	

		Count backwards in tens, hundreds and thousands from any positive number up to 1 000 000	
		Count forwards and backwards in whole number steps including through zero and with negative numbers included	
		Understand and use negative numbers in context, including temperatures below 0°C	
		Read Roman numerals to 1000 (M)	
		Recognise years written in Roman numerals	
Addition and subtraction		Add two whole numbers choosing an efficient mental strategy	Round and adjust, partitioning the second number, doubling and halving – near doubling and halving, number facts (bonds).
		Subtract two whole numbers choosing an efficient mental strategy	
		Use column addition for two numbers with more than 4 digits when regrouping is required in more than one column	
		Use column subtraction for two numbers with more than 4 digits when regrouping is required in more than one column	
		Use column addition for numbers with 3 decimal places when regrouping is required	
		Use column addition for numbers with 1,2 or 3 decimal places when regrouping is required	
		Use column subtraction for numbers with 3 decimal places when regrouping is required	
		Use column subtraction for numbers with 1,2 or 3 decimal places when regrouping is required	
		Add two decimal numbers choosing an efficient strategy	
		Subtract two decimal numbers choosing an efficient strategy	
Decimals		Recognise that thousandths arise from dividing a number (or object) into one thousand equal parts and dividing hundredths by ten	Use place value counters to support
		Write decimal equivalents of any number of thousandths	Use place value counters to support

	Read a number with three decimal places	
	Represent decimal numbers with up to 3 decimal places	
	Identify and position decimal numbers, with up to 3 decimal places, on a number line	
	Compare a set of numbers written to three decimal places	
	Compare numbers with a mixed number of decimal places	
	Order decimal numbers with 3 decimal places	
	Order numbers with a mixed number of decimal places	
	Round number with two decimal places to one decimal place	
	Round number with two decimal places to the nearest whole number	
Multiplication and division: Powers of 10	Multiply a number by 10 including whole numbers and decimals	
	Multiply a number by 100 including whole numbers and decimals	
	Multiply a number by 1000 including whole numbers and decimals	
	Divide a number by 10 including whole numbers and decimals	
	Divide a number by 100 including whole numbers and decimals	
	Divide a number by 1000 including whole numbers and decimals	
Multiplication and division: Properties of number	Find multiples of a given number	
	Find factors of a given number	
	Find the common factors of two numbers	
	Find prime and composite numbers up to 20	
	Express a given number as the product of prime factors	

	Know how to test if a number up to 100 is prime	To check if a number is prime, divide it by every prime number starting with 2, and ending when the square of the prime number is greater than the number you're checking against.
	Find square numbers and use the notation for squared	
	Find cube numbers and use the notation for cubed	
Multiplication and division: written method	Multiply numbers up to 4-digits by a one-digit number using short multiplication	
	Multiply 2 digit by 2 digit numbers using expanded vertical method	
	Multiply 2 digit by 2 digit numbers using long multiplication	
	Multiply 3 digit numbers by 2 digit numbers using long multiplication	
	Multiply 4 digit numbers by 2 digit numbers using long multiplication	
	Multiply a whole number by a decimal using a formal written method	
	Multiply two decimal numbers using a formal written method	
	Divide a four-digit number by a one-digit number using short division (divisor < thousands digit) with no remainder	
	Divide a four-digit number by a one-digit number using short division (thousands digit = multiple of divisor, divisor < hundreds digit) with no remainder	
	Divide a four-digit number by a one-digit number using short division (divisor > thousands digit) with a remainder	
	Divide a four-digit number by a one-digit number using short division (divisor < thousands digit) with a remainder	
	Divide a four-digit number by a one-digit number using short division (divisor > thousands digit) with a remainder	
	Solve problems using scaling	

	Solve problems involving simple rates	A rate is something that can be gained or lost overtime e.g. money, speed so it is measured per something e.g. miles per hour, money per day, price per kg
Fractions, decimals and percentages	Compare and order fractions whose denominators are multiples of the same number	
	Identify equivalent fractions represented visually	
	Identify equivalent fractions represented using tenths, hundredths and thousandths	
	Write a number less than1 with one decimal place as a fraction	
	Write a number less than 1 with two decimal places as a fraction	
	Wtite a number less than 1 with three decimal places as a fraction	
	Understand that per cent relates to number of parts per hundred by writing any percentage as a fraction with a denominator of 100	
	Write any percentage as a decimal	
	Know percentage equivalents of 1/2, 1/4, 1/5, 2/5, 4/5	
	Establish percentage equivalents of fractions with a denominator of multiples of 10	
	Establish percentage equivalents of fractions with a denominator of multiples of 25	
Calculating fractions	Convert a mixed number into an improper fraction	
	Convert an improper fraction into a mixed number	Relate back to your previous lessons on 40/100
	Add proper fractions whose denominators are multiples of each other e.g. ½ and ¼ that do not add to more than one whole	

	Add proper fractions whose denominators are multiples of each other which have a mixed number answer	
	Add a mixed number to a proper fraction with matching denominators where the whole number does not change in the answer.	e.g. 1 ¼ + 1/4 = 1 ½ - the whole number is still 1 – it hasn't changed.
	Add a mixed number and a proper fraction with matching denominators where the answer exceeds a whole.	e.g. 1 ¾ + ¾ = 2 ½
	Add a mixed number and a proper fraction whose denominators are multiples of each other where the whole number does not change	
	Add a mixed number and a proper fraction whose denominator are multiples of each other where the answer exceeds a whole.	
	Subtract proper fractions from mixed numbers with the same denominator within the whole	
	Subtract proper fractions from mixed numbers with the same denominator (across the whole)	
	Subtract proper fractions with denominators that are multiples of each other within the whole	
	Subtract a proper fraction from a mixed number with denominators that are multiples of each other within the whole	
	Subtract a proper fraction from a mixed number where the denominators are multiples of each other (across whole)	
	Multiply unit fraction by a whole number	
	Multiply non-unit fraction by a whole number	
	Multiply mixed number by a whole number	
	Multiply mixed number by a whole number (beyond whole)	
Geometry: properties of shape	Identify cubes from nets	
	Identify cuboids from nets	

	Identify prisms from nets	
	Identify pyramids from nets	
	Identify reflex angles	
	Estimate acute, obtuse and reflex angles	Just looking at a picture of an angle and naming it – don't need to know the precise measurement
	Use a protractor to measure acute angles	
	Use a protractor to measure obtuse angles	
	Use a protractor to measure reflex angles	
	Use a protractor to draw acute angles	
	Use a protractor to draw obtuse angles	
	Use a protractor to draw reflex angles	
	Identify and find angles at a point	
	Identify and find angles at a point on a straight line	
	Use the properties of rectangles to deduce related facts and find missing lengths and angles	e.g. opposite sides and angles are the same, all angles are 90 degrees and add up to 360 degrees.
	Know the difference between a regular and an irregular polygon based on reasoning about equal sides and angles.	
Geometry: Position and direction	Identify a shape following translation	Give them three different shapes – which one is it?

Important that the children understand that the shape does not change (it is congruent) throughout this unit. |
	Describe how a shape has been translated	e.g. four right and 2 up or point A is now at (4,8)
	Translate a shape by following instructions	
	Identify a shape following reflection	
	Describe how a shape has been reflected	

	Reflect a shape by following instructions	e.g. reflect this shape in the y axis
Measurement: Length, mass, capacity	Convert between kilometres and metres using decimal notation	
	Convert between centimetres and metres using decimal notation	
	Convert between centimetres and millimetres using decimal notation	
Measurement: Area and volume	Measure the perimeter of composite rectilinear shapes	
	Calculate the perimeter of composite rectilinear shapes where all measurements are given	
	Calculate the perimeter of composite rectilinear shapes where some measurements need to be calculated	
	Calculate the area of rectangles, including squares	
	Compare the area of rectangles	
	Estimate the area of irregular shapes bounded by straight lines	Where the lines go over a square e.g. diagonally across.
	Estimate the area of irregular shapes that include curved lines	
	Estimate volume by using 1 cm3 blocks to build cuboids, including cubes	
Measurement: Length, mass, capacity	Convert between kilograms and grams using decimal notation	
	Convert between litres and millilitres using decimal notation	
	Estimate capacity	
	Know approximate equivalencies between metric and imperial units including inches, pounds and pints	
Statistics	Record information in a table	
	Read and interpret information given in a table	
	Read and interpret information given in a timetable	

	Answer one-step questions about data in line graphs (e.g. 'How much?')	
	Answer two-step questions about data in line graphs (e.g. 'How much more?')	