Pear Tree Primary School

Maths Long Term Plan – With End Points

'Being Our Best Selves'

Year Group	Autumn	Spring	Summer
Reception	Units: Getting to know you, Match, sort and compare, Talk about measure and patterns, It's me 1,2,3, Circles and triangles, 1,2,3,4,5, Shapes with 4 sides Getting to Know You – Weeks 1-2 Match, sort and compare – Weeks 3-4 • Match objects and pictures • Identify a set • Sort objects to a type • Explore sorting techniques and rules • Compare amounts Talk about measure and patterns – Weeks 5-6 • Compare size, mass and	Units: Alive in 5! Mass and capacity, Growing 6,7,8, Length, height and time, Building 9 and 10, Explore 3D shapes Alive in 5! – Weeks 1-2 • Introducing Zero • Find 0 to 5 • Subitise 0 to 5 • Represent 0 to 5 • Represent 0 to 5 • 1 more • 1 less • Composition • Conceptual subitizing to 5 Mass and capacity – Week 3 • Compare mass	Units: To 20 and Beyond, How many now? Manipulate, compse and decompose, Sharing and grouping, Visualise, build and map, Make connections To 20 and Beyond – Weeks 1-2 • Build numbers beyond 10 (10-13) • Continue patterns beyond 10 (10-13) • Build numbers beyond 10 (14-20) • Continue patterns beyond 10 (14-20) • Verbal counting beyond 20 • Verbal counting patterns How many now? – Week 3

	capacity • Explore simple patters • Copy and continue simple patterns • Create simple patterns It's me 1,2, 3 – Weeks 7-8 • Find 1, 2 and 3 • Subitise 1,2 and 3 • Represent 1, 2 and 3 • 1 more • 1 less • Composition of 1, 2 and 3 Circles and triangles – Week 9 • Identify and name circles and triangles • Compare circles and triangles • Shapes in the environment • Describe position 1,2,3,4,5 – Weeks 10-11 • Find 4 and 5 • Subitise 4 and 5 • Represent 4 and 5 • 1 more • 1 less • Composition of 4 and 5 • Composition of 1-5	• Find a balance • Explore capacity • Compare capacity Growing 6,7,8 – Weeks 4-5 • Find 6,7 and 8 • Represent 6,7 and 8 • 1 more • 1 less • Composition of 6,7 and 8 • Make pairs-odd and even • Double to 8 (find a double) • Double to 8 (make a double) • Combine 2 groups • Conceptual sibitising Length, height and time – Weeks 6-7 • Explore length • Compare length • Explore height • Compare height • Talk about time • Order and sequence time Building 9 and 10 – Weeks 8-10 • Find 9 and 10 • Compare numbers to 10 • Represent 9 and 10 • Conceptual subitizing to 10 • 1 more • 1 less	• Add more • How many did I add? • Take away • How many did I take away? Manipulate, compose and decompose – Weeks 4-5 • Select shapes for a purpose • Rotate shapes • Manipulate shapes • Explain shape arrangements • Compose shapes • Decompose shapes • Copy 2D shape pictures • Find 2D shapes within 3D shapes Sharing and grouping – Weeks 6-7 • Explore sharing • Sharing • Explore grouping • Grouping • Even and odd sharing • Play with and build doubles Visualise, build and map – Weeks 8-10 • Identify units of repeating patterns • Create own pattern rules

	Shapes with 4 sides – Week 12 • Identify and name shapes with 4 sides • Combine shapes with 4 sides • Shapes in the environment • My day and night	• Composition tom 10 • Bonds to 10 (2 parts) • Make arrangements of 10 • Bonds to 10 (3 parts) • Doubles to 10 (find a double) • Doubles to 10 (make a double) • Explore even and odd	• Explore own pattern rules • Replicate and build scenes and constructions • Visualise from different positions • Describe positions • Give instructions to build • Explore mapping • Represent maps with models • Create own maps from familiar places • Create own maps and plans from story situation Make connections – Week 11 • Deepen understanding • Patterns and relationships Consolidation – Week 12
Year 1	Units: Place Value (within 10), Addition and Subtraction (within 10), Shape, Place Value (within 20) Place Value – Weeks 1-5 • Count to 10 forwards and backwards beginning with 0 or 1 or from any given number • Count, read and write numerals to 10 in numerals and words	Units: Place Value (within 20), Addition and Subtraction (within 20), Place Value (within 50), Length and Height, Weight and Volume Place Value – Week 1-3 • Count to 20 forwards and backwards from any given number • Count, read and write numbers to 20 in numerals and words	Units: Multiplication and Division, Fractions, Position & Direction, Place Value (within 100), Money, Time Multiplication and Division – Week 1-3 • Count in multiples of 2's, 5's and 10's • Solve one step problems involving multiplication and division by calculating the answer using concrete objects,

	• Given a number, identify one more or one less • Identify and represent numbers using objects and pictorial representation including a number line and use the language of equal to, more than, less than, (fewer) most, least Addition and Subtraction (within 10) – Weeks 6-10 • Represent and use number bonds and related subtraction facts within 10 • Read, write and interpret mathematical statements involving addition, subtraction and equal signs • Add and subtract one-digit numbers to 10 including 0 • Solve one step problems that involve addition and subtraction using concrete objects and pictorial representation and missing number problems Shape – Week 11 • Recognise and name common 2-D shapes e.g. square, circle and triangles	• Given a number identify one more or one less • Identify and represent numbers using objects and pictorial representation including a number line and use the language of equal to, more than, less than, (fewer) most, least Addition and Subtraction – Week 4-6 • Represent and use number bonds and related subtraction facts within 20. • • Read, write and interpret mathematical statements involving addition, subtraction and equal signs • • Add and subtract one-digit numbers to 20 including 0 • • Solve one step problems that involve addition and subtraction using concrete objects and pictorial 7=? -9 Place Value – Week 7-8 • Count to 50 forwards and backwards beginning with 0 or 1 or from any given number • Count, read and write numerals to 50 in numerals and words	pictorial representations and arrays Fractions – Week 4-5 • Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity • Compare, describe and solve practical problems for lengths and heights, e.g. long/short, longer/shorter, tall/short, double/half • Compare, describe and solve practical problems for mass and weights, e.g. heavy/light, heavier than/lighter than, Capacity and volume e.g. full/empty, more than, less than, half, half full, quarter Position and Direction – Week 6 • Describe position, direction and movement including whole, half, quarter and three-quarter turns Place Value – Week 7-8

	• Recognise and name common 3-D shapes e.g. Cuboids, cubes, pyramids and spheres Consolidation – Week 12	• Given a number, identify one more or one less • Identify and represent numbers using objects and pictorial representation including a number line and use the language of equal to, more than, less than, (fewer) most, least • Count in multiples of 2's, 5's and 10's Length and Height – Week 9-10 • Measure and begin to record lengths and heights • Compare, describe and solve practical problems for lengths and heights e.g. long/short, longer/shorter, tall/short, double/half Weight and Volume – Week 11-12 • Measure and begin to record mass/weight, capacity and volume • Compare, describe and solve practical problems for mass/weight e.g. heavy/light, heavier than/lighter than, capacity and volume e.g. full/empty, more than/less than, half, half full, quarter	• Count to 100 forwards and backwards beginning with 0 or 1 or from any given number • Count, read and write numerals to 100 in numerals and words • Given a number, identify one more or one less • Identify and represent numbers using objects and pictorial representation including a number line and use the language of equal to, more than, less than, (fewer) most, least Money – Week 9 • Recognise and know the value of different denominations of coins and notes Time – Week 10-11 • Sequence events in chronological order using language eg before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening • Recognise and use language relating to dates including days of the week, weeks, months and years

			• Tell the time to the hour and half past the hour and draw hands on a clock face to show these times • Compare, describe and solve practical problems for time e.g. quicker, slower, earlier, later • Measure and begin to record time e.g. hours, minutes seconds Consolidation – Week 12
Year 2	Units: Place Value, Addition and Subtraction, Money, Multiplication and Division Place Value – Week 1-4 • Read and write numbers to at least 100 in numerals and words. • Recognise the place value of each digit in a 2-digit number (tens & ones) • Identify, represent and estimate numbers using different representations including the number line. • Compare and order numbers from 0 – 100; use < > and = signs. • Use place value and number facts to solve problems	Units: Money, Multiplication and Division, Length and height, Mass, capacity and temperature Money – Week 1-2 • Recognise and use symbols for pounds and pence (£/p) • Combine amounts to make a particular value • Find different combinations of coins that make the same amount of money • Solve simple problems practically, including addition and subtraction and giving change. Multiplication and Division – Week 3-7 • Recall and use multiplication facts for 2, 5 and 10-times	Units: Fractions, Time, Statistics, Position and direction Fractions – Week 1-3 • Recognise, find, name and write fractions of a length, shape, set of objects or quantity 1/2 1/3 1/4 2/4 and ¾ • Write simple fractions for example ½ of 6 = 3 • Recognise the equivalence of 2/4 and 1/2 Time – Week 4-6 • Tell and write the time to five minutes, including quarter past/to the hour. • Draw hands on a clock to show these times

	• Count in steps of 2,3, 5 and 10s from any number forwards and backwards Addition and Subtraction – Week 5-9 • Recall and use addition & subtraction facts to 20 fluently. Derive and use related facts up to 100. • Add & subtract numbers using concrete objects, pictorial representations and mentally, including two digit numbers and ones, two digit numbers and tens, two digit number and two digit number and adding 3 one digit numbers. • Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Solve problems with addition and subtraction: using concrete objects and pictorial representations. Include problems involving numbers, quantities and measures. • Recognise and use the inverse relationship between addition and subtraction. Use this to	tables including recognising odd and even numbers • Calculate mathematical statements for 2, 5 and 10's using multiplication and division using x, ÷ and = • Solve problems using multiplication and division using, materials, arrays, repeated addition and mental methods. • Show that multiplication of two numbers can be done in any order (commutative) but division cannot. Length and Height – Week 8-9 • Choose and use appropriate standards of units to estimate and measure length/height (m/cm) in any direction; mass (kg/g), temperature (®C), capacity (l/ml). • Use rulers, scales thermometers and measuring vessels to the nearest unit. • Compare and order lengths, mass, volume/capacity and record the results using < > and =	• Know the number of minutes in an hour and the number of hours in a day • Compare and sequence intervals of time Statistics – Week 7-8 • Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totaling and comparing categorical data. Position and Direction – Week 9-10 • Use mathematical vocabulary to describe position, direction and movement including in a straight line. • Distinguish between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) • Order and arrange combinations of mathematical

	Properties of Shape – Week 10-12 • Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line • Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. • Identify 2D shapes on the surface of 3D shapes e.g a circle on a cylinder and a triangle on a pyramid. • Compare and sort common 2D and 3D shapes and everyday objects Consolidation	Mass, Capacity and Temperature – Week 10-12 • Choose and use appropriate standards of units to estimate and measure length/height (m/cm) in any direction; mass (kg/g), temperature (®C), capacity (l/ml). • Use rulers, scales thermometers and measuring vessels to the nearest unit. • Compare and order lengths, mass, volume/capacity and record the results using < > and = Consolidation	objects in patterns and sequences. Consolidation – Week 12
Year 3	Units: Place Value, Addition and Subtraction, Multiplication and Division Place Value – Week 1-3 • Recognise the place value of each digit in a three-digit number • Identify, represent and estimate using different representations	Units: Multiplication and Division, Length and Perimeter, Fractions, Mass and Capacity Multiplication and Division – Week 1-3 • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate multiplication and division	Units: Fractions, Money, Time, Properties of Shape, Statistics Fractions – Week 1-2 • Recognise and show, using diagrams, equivalent fractions with small denominators • Compare and order unit fractions, and fractions with the same denominators

	• Find 10 or 100 more or less than a given number • Compare and order numbers up to 1000 • Read and write numbers in numerals and words up to 1000 • Solve number problems and practical problems involving these ideas. • Count from 0 in multiples of 4, 8, 50 and 100. Addition and Subtraction – Week 4-8 • Add and subtract numbers mentally including: 3 digits and ones, 3 digits and tens, 3 digits and hundreds. • Add and subtract numbers with up to 3 digits using formal written methods of columnar addition and subtraction • Estimate the answer to a calculation and use inverse operations to check answers • Solve problems, including missing numbers, using number facts, place value and more complex addition and subtraction. Multiplication and Division – Week 9-12	statements for the tables known including 2 digits times 1-digit numbers using mental and formal written methods • Solve problems, including missing numbers involving multiplication and division. • Solve problems including positive integer scaling and correspondence problems in which n objects are connected to m objects Length and Perimeter – Week 4-6 • Measure, compare, add and subtract lengths (m/cm/mm), mass (kg/g) and volume/capacity (l/ml) • Measure the perimeter of simple 2D shapes. Fractions – Week 7-9 • Count up and down in tenths • Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. • Recognise and use fractions as numbers, unit and non-unit fractions with small denominators.	• Add and subtract fractions with the same denominator within one whole. • Solve problems that involve all the above Money – Week 3-4 • Add and subtract amounts of money to give change using £ and p in practical contexts. Time – Week 5-7 • Tell and write the time from an analogue clock • Tell and write the time from an analogue clock with Roman Numerals I to XII • Tell the 12 hour and 24-hour time • Estimate and read time with increasing accuracy to the nearest minute • Record and compare time in terms of seconds, minutes and hours • Use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight • Know the number of seconds in a minute • Know the number of days in each month

	• Count from 0 in multiples of 4, 8, 50 and 100 • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate multiplication and division statements for the tables known including 2 digits times 1-digit numbers using mental and formal written methods • Solve problems, including missing numbers involving multiplication and division. • Solve problems including positive integer scaling and correspondence Consolidation	• Recognise, find and write fractions of a discrete set of objects, unit and non-unit fractions with small denominators. • Solve problems that involve all the above. Mass and Capacity – Week 10-12 • Measure, compare, add and subtract lengths (m/cm/mm), mass (kg/g) and volume/capacity (l/ml) Consolidation	• Know the number of days in a year and leap year • Compare durations of events (time taken by particular events or tasks) Properties of Shape – Week 8-9 • Recognise angles as a property of shape or a description of a turn • Identify right angles • Recognise that 2 right angles make a half turn, 3 make three quarters of a turn, and 4 make a complete turn • Identify whether angles are greater than or less than a right angle • Identify horizontal and vertical lines. • Identify pairs of perpendicular and parallel lines • Draw 2D shapes and make 3D shapes using modelling material • Recognise 3D shapes in different orientations and describe them Statistics – Week 10-11

			• Interpret and present data using bar charts, pictograms and tables • Using information presented in scaled bar charts, pictograms and tables, solve one step and two step questions e.g How many more? How many fewer? Consolidation – Week 12
Year 4	Units: Place Value, Addition and Subtraction, Area, Multiplication and Division Place Value – Week 1-4 • Count in multiples of 6, 7, 9, 25 and 1000 • Find 1000 more or less than a given number • Recognise the place value of each digit in a 4-digit number • Order and compare numbers beyond 1000 • Identify, represent and estimate numbers using different representations • Round any number to the nearest 10, 100 and 1000 • Count backwards through zero to negative numbers	Units: Multiplication and Division, Length and Perimeter, Fractions, Decimals Multiplication and Division – Week 1-3 • Solve problems involving multiplying and adding including using the distributive law to multiply 2-digit numbers by 1 digit; integer scaling problems and correspondence problems such as n objects are connected to m objects • Divide 3 digit numbers by 1 digit numbers using a formal written method • Multiply 2 digit and 3-digit numbers by a one-digit number using formal written layout Length and Perimeter – Week 4-5	Units: Decimals, Money, Time, Properties of Shape, Statistics, Position and Direction Decimals – Week 1-2 • Compare numbers with the same number of decimal places up to two decimal places. • Round decimals with one decimal place to the nearest whole number. • Recognise and write decimal equivalents to ¼ ½ and ¾ • Understand the effect of dividing a one- or two-digit number by 10 or 100. • Identifying the value of the digits in the answer as ones, tenths and hundredths.

	• Solve number and practical problems will all of the above. Addition and Subtraction – Week 5-7 • Add and subtract numbers with up to 4 digits using the formal written method of columnar addition and subtraction where appropriate • Estimate and use inverse operations to check answers to a calculation • Solve addition and subtraction two step problems in context, , deciding which operations and methods to use and why. Area – Week 8 • Find the area of rectilinear shapes by counting squares Multiplication and Division – Week 9-11 • Recall and use multiplication and division facts for multiplication tables up to 12 X 12 • Count in multiples of 6, 7, 9, 25 and 1000 • Use place value, known and derived facts to multiply and	• Measure and calculate the perimeter of a rectilinear figure (including squares) in cm and m • Convert between different units of measure e.g. km to m Fractions – Week 6-9 • Recognise and show, using diagrams, families of common equivalent fractions • Count up and down in hundredths • Recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 • Add and subtract fractions with the same denominator • Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number Decimals – Week 10-12 • Recognise and write decimal equivalents of any number of tenths or hundredths.	Money – Week 3-4 • Estimate, compare and calculate different measures, including money in pounds and pence. • Solve simple measure and money problems involving fractions and decimals to two decimal places. Time – Week 5-6 • Read, write and convert time between analogue and digital 12- and 24-hour clocks. • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. Consolidation – Week 7 Properties of Shape – Week 8-9 • Identify acute and obtuse angles • Compare and order angles up to 2 right angles by size • Compare and classify geometric shapes including quadrilaterals and triangles,

	divide mentally, including multiplying by 0 and 1, dividing by 1 • Multiplying together 3 numbers • Recognise and use factor pairs and commutativity in mental calculations Consolidation – Week 12	• Find the effect of dividing a one- or two-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Solve simple measure and money problems involving fractions and decimals to two decimal places. • Convert between different units of measure [for example, kilometre to metre]	based on their properties and size • Identify lines of symmetry in 2D shapes presented in different orientations Statistics – Week 10 • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Position and Direction – Week 11-12 • Describe on a 2D grid as coordinates in the first quadrant • Plot specified points and draw sides to complete a given polygon • Describe movements between positions as translations of a given unit to the left/right and up/down. • Consolidation

Year 5	Units: Place Value, Addition and Subtraction, Statistics, Multiplication and Division, Fractions Place Value – Week 1-3 • Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 • Interpret negative numbers in context • Count forwards and backwards with positive and negative whole numbers including through zero • Round any number up to 1,000,000 to the nearest 10, 100,1000, 10,000 and 100,000 • Solve number and practical problems that involve all the above • Read Roman numerals up to 1,000 (M) and recognise years written in Roman numerals Addition and Subtraction – Week 4-5 • Add and subtract numbers mentally with increasingly large numbers	Units: Multiplication and Division, Fractions, Decimals and Percentages, Perimeter & Area, Statistics Multiplication and Division – Week 1-3 • Multiply and divide numbers mentally drawing upon known facts. • Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for 2-digit numbers. • Divide numbers up to 4 digits by a 1- digit number using the formal written method of short division and interpret remainders appropriately for the context. • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign Fractions – Week 4-5 • Compare and order fractions whose denominators are multiples of the same number. • Identify, name and write equivalent fractions of a given	Units: Properties of Shape, Position and Direction, Decimals, Negative Numbers, Converting Units, Volume Properties of Shape – Week 1-3 • Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles and measure them in degrees. • Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90° Position and Direction – Week 4-5 • Identify, describe and represent the position of a shape following a reflection or

	• Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar) • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • Solve addition and subtraction multi-step problems in contexts, deciding with operations and methods to use and why. Multiplication and Division – Week 6-8 • Multiply and divide numbers mentally drawing upon known facts • Multiply and divide whole numbers by 10, 100 and 1000 • Identify multiples and factors • Find all factor pairs of a number and common factors of 2 numbers • Recognise and use square numbers and cube numbers using the notations ($e.\ g$ 3 2 and 4 3) • Solve problems involving multiplication and division including using knowledge of	fraction, represented visually including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number e.g 2/5 + 4/5 = 6/5 = 1 1/5 • Add and subtract fractions with the same denominator and denominators that are multiples of the same number Decimals and Percentages – Week 6-8 • Read, write, order and compare numbers with up to three decimal places. • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Round decimals with two decimal places to the nearest whole number and to one decimal place. • Solve problems involving number up to three decimal places. • Recognise the percent symbol (%) and understand that	translation, using the appropriate language, and know that the shape has not changed Decimals – Week 6-8 • Recognise and write decimal equivalents of any number of tenths or hundredths. • Find the effect of dividing a one- or two-digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Solve simple measure and money problems involving fractions and decimals to two decimal places. • Convert between different units of measure [for example, kilometre to metre] Negative Numbers – Week 9 • Count forwards and backwards with positive and negative whole numbers including through zero Converting Units – Week 10-11 • Convert between different units of metric measure [for

	factors and multiples, squares and cubes • Know and use vocabulary of prime numbers, prime factors and composite (non-prime) numbers • Establish whether a number up to 100 is a prime and recall prime numbers up to 19 Fractions – Week 9-12 • Compare and order fractions whose denominators are multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number e.g 2/5 + 4/5 = 6/5 = 1 1/5 • Add and subtract fractions with the same denominator and denominators that are multiples of the same number	percent relates to 'number of parts per hundred', • Write percentages as a fraction with denominator 100, and as a decimal. • Solve problems which require knowing percentage and decimal equivalents of 1/2 , 1/4 , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25 Perimeter and Area – Week 9-10 • Measure and calculate the perimeter of composite rectilinear shapes in cm and m • Calculate and compare the area of rectangles (including squares) using standard units cm2/m2 • Estimate the area of irregular shapes Statistics – Week 11-12 • Solve comparison, sum and difference problems using information presented in a line graph	example, km and m; cm and m; cm and mm; g and kg; l and ml] • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Solve problems involving converting between units of time. Volume – Week 12 • Estimate volume (e.g. using 1$cm3$ blocks to build cuboids, including cubes) and capacity (e.g. using water) • Use all 4 operations to solve problems involving measure Consolidation

	Consolidation	• Complete, read and interpret information in tables including timetables.	
Year 6	Units: Place Value, Four Operations, Fractions, Converting Units Place Value – Week 1-2 • Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit • Round any whole number to a required degree of accuracy • Use negative numbers in context and calculate intervals across zero • Solve number and practical problems that involve all the above Four Operations – Week 3-7 • Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why • Multiply multi-digit numbers up to 4 digits by a 2-digit number using the formal written method of long multiplication	Units: Ratio, Algebra, Decimals, Fractions,Decimals&Percentages, Perimeter Area and Volume, Statistics Ratio – Week 1-2 • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. • Solve problems involving similar shapes where the scale factor is known or can be found. • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Algebra – Week 3-4 • Use simple formulae. • Generate and describe linear number sequences. • Express missing number problems algebraically.	Units: Properties of Shape, Position and direction Properties of Shape – Week 1-3 • Draw 2-D shapes using given dimensions and angles. • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Position and Direction – Week 4 • Describe positions on the full co-ordinate grid (all 4 quadrants) • Draw and translate simple shapes on the co-ordinate plane and reflect them in the axes

	• Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division. • Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division • Interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context • Perform mental calculations, including with mixed operations and large numbers • Identify common factors, common multiples and prime numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations • Solve problems involving addition, subtraction, multiplication and division • Use estimation to check answers to calculations and determine in context of a problem, an appropriate degree of accuracy Fractions- Week 8-11	• Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables. Decimals – Week 5-6 • Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. • Multiply 1-digit numbers with up to 2 decimal places by whole numbers. • Use written division methods in cases where the answer has up to 2 decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy. Fractions, Decimals and Percentages – Week 7-8 • Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison.	Consolidation and themed projects – Week 5 onwards

	• Use common factors to simplify fractions • Use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions >1 • Generate and describe linear number sequences (with fractions) • Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions • Multiply simple pairs of proper fractions writing the answer in its simplest form e.g. 1/4 X 1/2 = 1/8 • Divide proper fractions by whole numbers e.g. 1/3 ÷ 2 = 1/6 • Associate a fraction with division and calculate decimal fraction equivalents • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts Converting Units – Week 12 • Solve problems involving the calculation and conversion of	• Recall and use equivalences between simple fractions, decimals and percentages including in different contexts Perimeter, Area and Volume – Week 9-10 • Recognise that shapes with the same areas can have different perimeters and vice versa. • Recognise when it is possible to use formulae for area and volume of shapes. • Calculate the area of parallelograms and triangles. • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3 , m3 and extending to other units (mm3 , km3) Statistics – Week 11-12 • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. • Interpret and construct pie charts and line graphs and use these to solve problems.	

	units of measure, using decimal notation up to three decimal places where appropriate. • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 dp. • Convert between miles and kilometres. Consolidation •	• Calculate the mean as an average. Consolidation	