Year 4 Maths LTP

St Benet's RC Primary School

Autumn Term 1		Autumn Term 2		
Number & Place Value	**Addition & Subtraction**	**Multiplication & Division**	**Geometry – Shape & Angles**	**Measurement – Length & Perimeter**
-Counting multiples of 6, 7, 9, 25 and 1000. -Find 1000 more or less than a given number. -Order and compare numbers beyond 1000. -Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). -Identify, represent and estimate numbers using different representations. -Round any number to the nearest 10.	-Continue to practise mental methods for addition and subtraction, including partitioning (e.g. 1366+ 2432=1000+2000+300 + 400 + 60 + 30 + 6 + 2). -Add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate. -Estimate and use inverse operations to check answers to a calculation. -Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	-Recall multiplication and division facts for multiplication tables up to 12 × 12. -Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. -Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. -Recognise and use factor pairs and commutatively in mental calculations. -Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit and integer scaling problems.	-Identify acute and obtuse angles and compare and order angles up to two right angles by size. -Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. -Identify lines of symmetry in 2−D shapes presented in different orientations.	-Find the area of rectilinear shapes by counting squares.
Vocabulary: units, ones tens, hundreds, *thousands ten thousand, hundred thousand, million* digit, one-, two-, three- or *four*-digit number, *numeral* 'teens' number place, place value stands for, represents exchange the same number as, as many as equal to *Of* ***two*** *objects/amounts:* >, greater than, bigger than, more than, larger than <, less than, fewer than, smaller than *Of* ***three*** *or more objects/amounts:* greatest, most, largest, biggest least, fewest, smallest, one… ten… one hundred… *one thousand* more/ less compare, order, size … tenth… twentieth last, last but one before, next, between, half-way between guess how many, estimate nearly, roughly, close to, about the same as approximate, approximately just over, just under exact, exactly too many, too few, enough, not enough round (up or down), nearest round to the nearest ten *round to the nearest hundred integer, positive,*	**Vocabulary:** add, addition, more, plus, *increase* sum, total, altogether score double, near double, how many more to make…? subtract, subtraction, take away, mi− nus, *decrease* leave, how many are left over? difference between, half, halve, how many more/fewer is… than…? how much more/less is…? is the same as, equals, sign, ens boundary, hundreds boundary *inverse*	**Vocabulary:** lots of, groups of times, multiplication, multiply, multiplied by multiple of, product, once, twice, three times, four times …ten times as (big, long, wide, and so on) repeated addition array row, column double, halve share, share equally one each, two each, three each… group in pairs, threes… tens equal groups of divide, division, divided by, divided into, *divisible by* remainder *factor, quotient* *inverse*	**Vocabulary:** shape, pattern flat, *line* curved, straight round hollow, sol− id corner point, pointed face, side, edge, end sort make, build, *construct*, draw, *sketch* centre, *radius, diameter net* surface *angle*, right-angled *base,* *square-based* vertex, vertices layer, diagram *regular, irregular* *concave, convex open, closed 3D,* *three dimension− al* cube cuboid pyramid sphere, hemi−sphere, *spherical* cone cylinder, *cylindrical* prism *tetrahedron, polyhedron 2D,* *two-dimensional* circle, circular, semi- circle triangle, triangular *equilateral* *triangle, isosceles triangle* square	**Vocabulary:** length, width, height, depth, *breadth,* long, short, tall, high, low wide, narrow, deep, shallow, thick, thin longer, shorter, taller, higher… and so on longest, shortest, tallest, highest… and so on far, further, furthest, near, close distance apart… be− tween… to… from *edge, perimeter* kilometre (*km*), metre (*m*), centimetre (*cm*), *millimetre (mm)* mile ruler, metre stick, tape measure

negative above/below zero, minus number, count, how many…? odd, even every other how many times? Multiple of digit, *next, consecutive* sequence continue predict pattern, pair, rule relationship *sort, classify, property*			rectangle, rectangular, *oblong* pentagon, pentagonal hexagon, hexagonal *heptagon* octagon, octagonal *polygon* quadrilateral size bigger, larger, smaller symmetrical line of symmetry, *line symmetry* fold match mirror line, reflection, *reflect* pattern, repeating pattern, translation position over, under, underneath above, below, top, bottom, side on, in, outside, inside, around in front, behind, front, back before, beside, next to opposite, apart between, middle, edge, centre , corner direction journey, route, map, plan, right up, down, higher, lower forwards, backwards, sideways, across close, far, near along, through, to, from, towards, away from ascend, descend grid row, column *origin, coordinates* clockwise, anti- clockwise compass point, north, south, east, west (N, S, E, W) *north-east, north-west, south-east, south-west (NE, NW, SE, SW)* horizontal, vertical, diagonal movement slide, roll whole turn, half turn, quarter turn, *rotate* angle, …is a greater/smaller angle than right angle *degree* straight line stretch, bend *ruler, set square angle measurer, compasses*	

Spring Term 1		Spring Term 2		
Number & Place Value	**Fractions**	**Measurement - Time**	**Decimals**	**Measurement – Money**
-Count in multiples of 6, 7, 9, 25 and 1000. -Count backwards through zero to include negative numbers. -Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. -Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). -Identify, represent and estimate numbers using different representations. -Round any number to the nearest 10, 100 or 1000. -Solve number and practical problems that involve all of the above and with increasingly large positive numbers	-Recognise and show, using diagrams, families of common equivalent fractions. -Count up and down in hundredths; recognise that hundredths arise when dividing an object or number by one hundred and dividing tenths by ten. -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.	-Convert between different units of measure (e.g. hour to minute). -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.	-Recognise and write decimal equivalents of any number of tenths or hundredths. -Recognise and write decimal equivalents to ¼, ½, ¾. -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. -Solve simple measure and money problems involving fractions and decimals to two decimal places. -Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	-Estimate, compare and calculate different measures, including money in pounds and pence.
Vocabulary: See Autumn Term	**Vocabulary:** part, equal parts fraction one whole half, quarter, eighth third, sixth, tenth, twentieth proportion, in every	**Vocabulary:** days of the week: Monday, Tuesday… months of the years, seasons: spring, summer, autumn, winter day, week, fort- night, month year, leap year, century, millennium weekend, birthday, holiday calendar, date, date of birth, morning, afternoon, evening, night, am, pm, noon, midnight today, yesterday, tomorrow before, after, next, last now, soon, early, late, earliest, latest quick, quicker, quickest, quickly fast, faster, fastest, slow, slower, slowest, slowly old, older, oldest, new, newer, newest takes longer, takes less time how long ago? how long will it be to…? how long will it take to…? timetable, arrive, depart hour, minute, second o'clock, half past, quarter to, quarter past clock, watch, hands, digital/analogue clock/ watch, timer how often? always, never, sometimes, usually	**Vocabulary:** For every decimal, decimal fraction decimal point, decimal place	**Vocabulary:** money coin, note penny, pence, pound (£) price, cost buy, bought, sell, sold spend, spent pay change, dear, costs, more, more/most expensive cheap, costs less, cheaper, less/least expensive how much…? how many…? total, amount value, worth

Summer Term 1		Summer Term 2		
Geometry – Shape & Symmetry	**Geometry – Position & Direction**	**Measurement – Money (The 4 operations)**	**Measurement**	**Statistics**
-Identify lines of symmetry in 2-D shapes presented in different orientations. -Complete a simple symmetric figure with respect to a specific line of symmetry.	-Describe movements between positions as translations of a given unit to the left/right and up/down. -Plot specified points and draw sides to complete a given polygon. -Describe positions on a 2-D grid as coordinates in the first quadrant.	-Estimate, compare and calculate different measures, including money in pounds and pence. -Add and subtract numbers with up to 4 digits using the formal written methods 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 contexts, deciding which operations and methods to use and why. -Recall multiplication and division facts for multiplication tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. -Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. -Recognise and use factor pairs and commutativity in mental calculations.	-Convert between different units of measure (e.g. kilometres and metres; centimetres and metres; centimetres and millimetres). -Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. -Find the area of rectilinear shapes by counting squares -Convert between different units of measure (e.g. millilitres to litres, grams to kilograms). -Estimate, compare and calculate different measures.	-Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. -Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
Vocabulary: size bigger, larger, smaller, symmetrical line of symmetry, line symmetry fold match mirror line, reflection, reflect, pattern, repeating pattern, translation		**Vocabulary:** See Autumn Term	**Vocabulary:** measure, measurement size compare unit, standard unit metric unit, imperial unit , mass: big, bigger, small, smaller, balances weight: heavy/light, heavier/lighter, heaviest/lightest weigh, weighs kilogram (kg), half-kilogram, gram (g) balance, scales, area surface, square centimetres, cm 2	**Vocabulary:** count, tally, sort, vote survey, questionnaire, data graph, block graph, pictogram represent group, set list, chart, bar chart, tally chart table, frequency table Carroll diagram, Venn diagram label, title, axis, axes diagram most popular, most common least popular, least common

Fluency Memory Joggers:

Within the daily maths session, 5/10 minutes is used to ensure the children have varied and fluent practise of basic skills. Previous maths domains are visited.

Mini Maths Meet:

A daily 10 minute focus (outside of the maths session) on a specific aspect of maths/ basic skills/ problem solving/ reasoning which is explored in depth. Eg. 6x3.

Problem Solving & Reasoning:

PSR takes place within sessions & also in a discrete PSR session once a week.

Year 4 Skills:

	Skills
Problem Solving	Engage with mathematical activities and problems, making links and moving between different representations (concrete, pictorial, abstract).
	Independently choose to scaffold thinking using concrete, pictorial or abstract representations, if required.
	Independently choose to represent thinking using concrete, pictorial or abstract representations, as appropriate.
	Make suggestions of ways to solve a range of problems.
	Develop and apply a systematic approach.
	Find and predict possibilities that match the context using patterns spotted to support.
	Independently check and improve work (e.g. look for other possibilities, repeats, missing answers, errors and ways to improve).
	Pattern spot and with support, express generalisations/rules in words.
	Make and investigate conjectures and provide examples and counter-examples.
	When they have solved a problem, pose a similar problem for a peer.

	Skills
Reasoning	Provide a clear, correct, logical justification and with support, express generalisation/rules formed in words.
	Reflect on others' justifications and use this to improve their work.
	Edit and improve their own and a peer's justification.
	Investigate 'what if?' questions.
	Create 'what if?' questions.