Toft Hill Primary School

Year 5 Maths LTP

Autumn Term	Spring Term	Summer Term
Number: Place Value - 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 problems and practical problems that involve all of the above. - Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. **Number: Addition & Subtraction** - Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). - Add and subtract numbers mentally with increasingly large numbers.	**Number: Multiplication & Division** - Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. - Multiply and divide numbers mentally drawing upon known facts. - Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. - Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. **Number: Fractions** - Compare and order fractions whose denominators are all 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	**Number: Decimals** - 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 and 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]. **Geometry: Properties of Shape** - Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. - Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. - Draw given angles, and measure them in degrees (o). - Identify: angles at a point and one whole turn (total 360o), angles at a point on a straight line and ½ a turn (total 180o) , other multiples of 90o. - Use the properties of rectangles to

- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Statistics

- Solve comparison, sum and difference problems using information presented in a line graph.
- Complete, read and interpret information in tables, including timetables.

Number: Multiplication & Division

- Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
- Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers.
- Establish whether a number up to 100 is prime and recall prime numbers up to 19.
- Multiply and divide numbers mentally drawing upon known facts.
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
- Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).
- Solve problems involving multiplication and division including using their knowledge of factors and multiples, fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 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.

Number: Decimals & Percentages

- 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 per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.
- Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25.

Consolidation & Assessment

deduce related facts and find missing lengths and angles.

- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Geometry: Position & Direction

- Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Measurement: Converting Units

- Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).
- 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.

Measurement: Volume

- Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water].
- Use all four operations to solve problems involving measure [for example, length,

squares and cubes. **Measurement: Area & Perimeter** - Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. - Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes. **Consolidation & Assessment**		mass, volume, money] using decimal notation, including scaling. **Consolidation & Assessment**

Year 5: Maths Mastery Vocabulary

Number & Place Value	Addition & Subtraction	Multiplication & Division	Fractions
Prime numbers	Distributive law	**Associative law**	**Equivalent fraction**
Composite numbers	Difference	**Common factor**	Proper fraction
Cube numbers	Associative law	**Common multiple**	Improper fraction
Integer	Addend	**Factorise**	Unit fraction
Negative integer	Sum	Short division	Non-unit fraction
Square numbers	Total	Division brackets	Congruent
Equivalent expression	Aggregation	Divisibility rules	Numerator
Place holder	Augmentation	Multiplicand	Denominator
Consecutive	Reduction	Multiplier	Vinculum
Cardinal numbers	Minuend	Product	
Cardinality	Subtrahend	Factor	
Ordinal numbers	Commutative law	Dividend	
Subitising	Near double	Divisor	
Unitising	Inverse operations	Quotient	
Partitioning		Distributive law	
Decomposing		Commutative law	
		Array	
		Inverse operations	
		Divisible	
		Multiple	

All new maths mastery vocabulary is indicated in bold.

**See 'Glossary of Terms' document for definitions of Maths Mastery Vocabulary*