Ottershaw C of E Schools

Maths – Year 5

PLACE VALUE			
Pupils should be taught to: * read, write, order & compare numbers to at least 1 000 000 & determine the values 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 & backwards with positive & negative whole numbers, including zero * round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 & 100 000 * solve number problems & practical problems that involve all of the above * read Roman numerals to 1 000 (M) & recognise years written in Roman numerals.			
FLUENCY	REASONING & PROBLEM SOLVING	TEST %	TEACHER ASSESSMENT BEST FIT

ADDITION & SUBTRACTION			
Pupils should be taught to: * add & subtract whole numbers with more than four digits, including using formal written methods (columnar addition & subtraction) * add & subtract numbers mentally with increasingly large numbers * use rounding to check answers to calculations & determine, in the context of a problem, levels of accuracy * solve addition & subtraction multi-step problems in contexts, deciding which operations & methods to use & why.			
FLUENCY	REASONING & PROBLEM SOLVING	TEST %	TEACHER ASSESSMENT BEST FIT

MULTIPLICATION & DIVISION			
Pupils should be taught to: * identify multiples & factors, including finding all factor pairs of a number, & common factors of two numbers * know & use the vocabulary of prime numbers, prime factors & composite (non-prime) numbers * establish whether a number up to 100 is prime & recall prime numbers up to 19 * multiply numbers up to four digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers * multiply & divide numbers mentally drawing upon known facts * divide numbers up to four digits by a one-digit number using the formal written method of short division, & interpret remainders appropriately for the context * multiply & divide whole numbers & those involving decimals by 10, 100 & 1 000 * recognise & use square numbers & cube numbers, & the notation for squared (^{2}) & cubed (^{3}) * solve problems involving multiplication & division, including using their knowledge of factors & multiples, squares & cubes * solve problems involving addition, subtraction, multiplication & division & a combination of these, including understanding the meaning of the equals sign * solve problems involving multiplication & division, including scaling by simple fractions & problems involving simple rates.			
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STATISTICS			
Pupils should be taught to: * solve comparison, sum & difference problems using information presented in a line graph * complete, read & interpret information in tables, including timetables.			
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FRACTIONS (INCLUDING DECIMALS & %)			
Pupils should be taught to: * compare & order fractions whose denominators are all multiples of the same number * identify, name & write equivalent fractions of a given fraction, represented visually, including tenths & hundredths * recognise mixed numbers & improper fractions & convert from one form to the other, & write mathematical statements > 1 as a mixed number (e.g. 2/5 + 4/5 = 6/5 = 1 1/5) * add & subtract fractions with the same denominator & denominators that are multiples of the same number * multiply proper fractions & mixed numbers by whole numbers, supported by materials & diagrams * read & write decimal numbers as fractions (e.g. 0.71 = 71/100) * recognise & use thousandths & relate them to tenths, hundredths & decimal equivalents * round decimals with two decimal places to the nearest whole number & to one decimal place * read, write, order & compare numbers with up to three decimal places * solve problems involving number up to three decimal places * recognise the per cent symbol (%) & understand that per cent relates to 'number of parts per hundred', & write percentages as a fraction with denominator 100, & as a decimal * solve problems which require knowing percentage & decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 & those fractions with a denominator of a multiple of 10 or 25.			
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MEASUREMENT			
Pupils should be taught to: * convert between different units of metric measure (e.g. kilometre & metre, centimetre & metre, centimetre & millimetre, gram & kilogram, litre & millilitre) * understand & use approximate equivalences between metric units & common imperial units such as inches, pounds & pints * measure & calculate the perimeter of composite rectilinear shapes in centimetres & metres * calculate & compare the perimeter of composite rectilinear shapes in centimetres & metres * calculate & compare the area of rectangles (including squares), & including using standard units, square centimetres (cm^2) & square metres (m^2) & estimate the area of irregular shapes * estimate volume (e.g. using 1 cm^3 blocks to build cuboids (including cubes)) & capacity (e.g. using water) * solve problems involving converting between units of time * use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling.			
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GEOMETRY			
Pupils should be taught to: * identify 3-D shapes, including cubes & other cuboids, from 2-D representations * know angles are measured in degrees * estimate & compare acute, obtuse & reflex angles * draw given angles, & measure them in degrees (˚) * identify: - angles at a point & one whole turn (total 360˚) - angles at a point on a straight line & ½ a turn (total 180˚) - other multiples of 90˚ * use the properties of rectangles to deduce related facts & find missing lengths & angles * distinguish between regular & irregular polygons, based on reasoning about equal sides & angles * identify, describe & represent the position of a shape following a reflection or translation, using the appropriate language, & know that the shape has not changed.			
FLUENCY	REASONING & PROBLEM SOLVING	TEST %	TEACHER ASSESSMENT BEST FIT