New National Curriculum 2014 Year 6 Coverage

Autumn T1&2 Spring T3&4 Summer T5&6

Year 6 programme of study **Year 6 problem solving references**

Number, place value, approximation and estimation Pupils should be taught to:	T1	T2	T3	T4	T5	T6
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 problems and practical problems that involve all elements of place value						

Addition, subtraction, multiplication and division Pupils should be taught to:	T1	T2	T3	T4	T5	T6
multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication						
divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context						
divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to 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 addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why						
solve problems involving addition, subtraction, multiplication and division						
use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.						

Fractions (including decimals and percentages) Pupils should be taught to:	T1	T2	T3	T4	T5	T6
use common factors to simplify fractions; use common multiples to express fractions in the same denomination						
compare and order fractions, including fractions >1						
add and subtract fractions with different denominators 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 × 1/2 = 1/8)						
divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6).						
associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8)						
identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places						
multiply one digit numbers with up to two decimal places by whole numbers						

use written division methods in cases where the answer has up to two decimal places						
solve problems which require answers to be rounded to specified degrees of accuracy						
recall and use equivalences between simple fractions, decimals and percentages, including in different contexts						

Ratio and proportions Pupils should be taught to:	T1	T2	T3	T4	T5	T6
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 the calculations of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison						
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 Pupils should be taught to:	T1	T2	T3	T4	T5	T6
express missing number problems algebraically						
use simple formulae expressed in words						
generate and describe linear number sequences						
find pairs of numbers that satisfy number sentences involving two unknowns.						
enumerate all possibilities of combinations of two variables						

Measures Pupils should be taught to:	T1	T2	T3	T4	T5	T6
solve problems involving the calculation and conversion of units of measure, using decimal notation 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 three decimal places						
convert between miles and kilometres						
recognise that shapes with the same areas can have different perimeters and vice versa						
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calculate the area of parallelograms and triangles						
calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) and extending to other units, such as mm^3 and km^3.						

Geometry: Properties of shape Pupils should be taught to:	T1	T2	T3	T4	T5	T6
draw 2-D shapes using given dimensions and angles						
recognise, describe and build simple 3-D shapes, including making nets						
compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons						
illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius						
recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles						

Geometry: position and direction Pupils should be taught to:	T1	T2	T3	T4	T5	T6
describe positions on the full coordinates grid (all four quadrants)						
draw and translate simple shapes on the coordinates plane, and reflect them in the axes						

Statistics Pupils should be taught to:	T1	T2	T3	T4	T5	T6
interpret and construct pie charts and line graphs and use these to solve problems						
calculate and interpret the mean as an average						