Home Learning Ideas　　　　　Mathematics Year 6

Category	Objective			
Place Value	Recognise the place value of each digit up to 10,000,000 & to 3 decimal places.	Place-Value-Millionaire	Crystal Crash	Place value problems
	Calculate across zero, using this to solve problems with negative numbers.	Virtual thermometer		Research diff. in winter temperatures around the world
	Round any whole number to the required degree of accuracy.	Dartboard	Rounding	Rounding decimals
Operations	Multiply and divide 4 by 2 digits (remainders as whole numbers, fractions or rounded).		Use dice to create random calcs	Multiplication problems
	Identify common factors, common multiples and prime numbers.	Greatest-common-factor		
	Solve multistep problems involving addition, subtraction, multiplication and division.	Word problems 1	Multi-step word problems	Order of operations
Fractions	Compare and order fractions.		Simplifying fractions	Fractions, decimals, percents problems (Use search and filter by Year 6)
	Add and subtract fractions with different denominators, inc. mixed number fractions.	Adding fractions Subtr. fractions	Adding & Subtr. mixed numbers	
	Multiply & divide simple proper fractions (simplifying answers).	Mult. fractions	Dividing fractions	
	Use place value to 3 decimal places.	Write digits on Post-it notes and move between place-value columns to show effect of X & ÷		
	Multiply and divide numbers by 10, 100, 1000 with answers to 3 decimal places.		Make-up X problems involving money using items in catalogue	
	Find equivalents between simple fractions, decimals and percentages.	Equivalence Dominoes to print		
Ratio & Proportion	Solve problems involving calculating & comparing % of amounts.		Using a catalogue, re-calc. prices in 15% sale	
	Solve problems involving shapes with a known or deducible scale factor.	Scale drawings	Make your own solar system	Twice as big?
ALGEBRA	Express missing number problems algebraically.	Sequences Algebra	Missing digits	Formulae for area & perimeter of shapes expressed in words, then letter symbols.
	Generate & describe linear number sequences.			Program Scratch to create number sequences or work out the area or perimeter of shapes hen length of sides are inputted
	Find pairs of numbers to solve a number sentence which is missing two numbers.			E.g. n x q = 36. What could n & q equal?
MEASURE	Calculate and convert units of measure for length, weight & capacity.		Measurement problems	Conversion problems
	Use all four operations to solve problems which involve time, inc. time-tables.			
	Recognise that shapes with the same area can have different perimeters.		Permim-bots game	Nrich problem
	Calculate the area of parallelograms and triangles.			Ask child to calc. area of shapes drawn on squared paper
	Use formulae to find area and volume of shapes.			Making boxes
GEOMETRY	Draw 2d shapes to given dimensions & angles. Draw 3d shapes using nets.	Quadrilaterals		Cut nets
	Classify shapes by their properties.			Shapes in space game
	Name the parts of a circle and know that diameter is twice the radius.	Can child indicate radius, diameter & circumference on drawn circle? If not, explain and repeat next day until remembered consistently.		
	Recognise angles at a point, on a straight line or vertically opposite. Find missing angles.	Angles problems (Filter for Year 6)		Angles around a point
	Draw and translate simple shapes on the coordinate plane.			
	Reflect shapes across axes on the coordinate plane.		Nrich reflection problem	Nrich translation problem
STATS	Construct line & pie charts and use them to solve problems.	Pie chart Qs	Construct line graph or pie chart on sqrd. paper or computer	Line graph problems
	Calculate and interpret the mean as average.	Nrich problem	Research a data set and work out mean, eg: football scores, building height, river length	

*Stages relate to year group expectations, however, it will be appropriate for some children to be working at stages higher or lower than their year group.

Please note, some online activities will require a browser supporting Flash content.