

Argyle Primary School

Year 6 Yearly Overview

Green italic objectives are essential; these should be prioritised within planning and revisited throughout the year. They are core learning on which next year's curriculum is based. All objectives need to be taught and, where possible, combine objectives so that application is stressed, e.g. using formulae for shape calculations or finding percentages of measures.

Number: Number and Place Value					
Counting	Reading & writing numbers	Understanding place value	Rounding		Problem solving
use negative numbers in context, and calculate intervals across zero	<i>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</i>	<i>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</i>	<i>round any whole number to a required degree of accuracy</i>	solve problems which require answers to be rounded to specified degrees of accuracy	<i>Solve number problems and practical problems that involve all of the above</i>
Number: Addition and Subtraction					
Mental Calculation			Inverse operations, estimating and checking answers	Problem solving	
<i>Perform mental calculations, including with mixed operations and large numbers.</i>		use their knowledge of the order of operations to carry out calculations involving the four operations	<i>use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</i>	<i>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</i>	
Number: Multiplication and Division					
Mental calculation	Written calculation				
<i>perform mental calculations, including with mixed operations and large numbers</i>	<i>multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</i>	<i>divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division.</i> Where appropriate for the context, divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division.		<i>interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</i>	
Properties of numbers		Inverse operations, estimating and checking answers		Problem solving	
<i>identify common factors, common multiples and prime numbers</i>		<i>use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy</i>		<i>solve multiplication and division multi-step problems in contexts, deciding which operations and methods to use and why</i>	
Number: Fractions					
Comparing fractions	Comparing decimals	Rounding	Equivalence		Addition and subtraction

<i>compare and order fractions, including fractions >1</i>	<i>identify the value of each digit in numbers given to three decimal places</i>	solve problems which require answers to be rounded to specified degrees of accuracy	<i>use common factors to simplify fractions; use common multiples to express fractions in the same denominator</i>	<i>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)</i>	<i>recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</i>	<i>add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</i>		
Multiplication and division of fractions			Multiplication and division of decimals					
<i>multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)</i>	<i>divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)</i>	<i>multiply one-digit numbers with up to two decimal places by whole numbers</i>	<i>multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places</i>	use written division methods in cases where the answer has up to two decimal places				
Algebra				Number: Ration and proportion				
Equations			Formulae	Sequences	Problem solving			
<i>express missing number problems algebraically</i>	find pairs of numbers that satisfy number sentences involving two unknowns	enumerate all possibilities of combinations of two variables	<i>use simple formulae</i>	generate and describe linear number sequences	solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts	<i>solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</i>	solve problems involving similar shapes where the scale factor is known or can be found	<i>solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</i>
Measurement								
Comparing and estimating			Measuring and calculating					
calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetres cubed (cm ³) and cubic metres (m ³), and extending to other units such as mm ³ and km ³ .			<i>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</i>	recognise that shapes with the same areas can have different perimeters and vice versa	calculate the area of parallelograms and triangles	<i>recognise when it is possible to use formulae for area and volume of shapes</i>		
Converting								
<i>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</i>							convert between miles and kilometres	
Geometry: Properties of Shape								
Identifying shapes			Drawing and constructing			Comparing and classifying		Angles

recognise, describe and build simple 3-D shapes, including making nets	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	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	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			Statistics		
			Interpreting, constructing and representing data	Problem solving	
describe positions on the full coordinate grid (all four quadrants)	draw and translate simple shapes on the coordinate plane, and reflect them in the axes.		<i>interpret and construct pie charts and line graphs and use these to solve problems</i>	<i>calculate and interpret the mean as an average</i>	

Examples of what each objective looks like are available on NCETM's website, (National Centre for the excellence of teaching in maths), www.ncetm.org.uk. Click on: New National Curriculum 2014 blue box – National Curriculum Resource Tool - select appropriate year group and area – click on exemplification.

**Suggested Yearly Pacer
Year 6**

Measurement should be viewed as applied number and calculation. All opportunities to use number in real life contexts should be exploited.

Links between fractions, division and multiplication should be made.

Please take all opportunities to draw objectives together rather than teach discretely. The aims of fluency, reasoning and problem solving should be embedded in all teaching.

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 2	Summer 2
Number		Number		Number	
Number and Place Value	Number and Place Value	Number and Place Value	Number and Place Value	Number and Place Value	Number and Place Value
Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction	Addition and Subtraction
Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division	Multiplication and Division
Fractions	Fractions	Fractions	Fractions	Fractions	Fractions
Algebra	Ratio	Algebra	Ratio	Algebra	Ratio
Measurement		Measurement		Measurement	
Time Money Volume	Length Perimeter Area	Money Capacity Time	Mass Area	Money Length, Mass, Capacity and Volume	Time Perimeter and Area
Geometry/Statistics		Geometry/Statistics		Geometry/Statistics	
Shape	Statistics	Position and Direction	Shape	Statistics	Shape