

## The Year 6 Curriculum Statement for Spring 2018

The following information is to give you an outline of some of the work your child will be covering during this term. We hope you will actively encourage your child in the work being undertaken so that learning can be both pleasurable and rewarding.

The skills and concepts on which we will be concentrating are: -

English	<p><u>Power of Reading</u> During the last year children have loved the different reading books we have studied and we will continue to use them this academic year.</p> <p>Our aim is to expose the children to quality texts to engage them and develop their love of reading and writing.</p>	<p><u>Texts:</u> The Arrival Goodnight Mr. Tom Non-fiction texts about WWII</p> <p><u>Genres:</u> Narrative News Reports Persuasive Letter Writing Balanced Arguments</p>
	<p><u>Grammar</u> Using cohesive devices to link paragraphs. Use of higher level punctuation to mark boundaries between independent clauses. Terminology e.g. subject/object, passive/active synonym/antonym Using colons and semi colons in a list. Coordinating and subordinating conjunctions. Organising writing using bullet points and subheadings. Using commas to clarify meanings.</p>	
	<p><u>Handwriting</u> To practise writing legibly, fluently and with increasing speed by joining letters correctly. They will follow our cursive script handwriting scheme and will practise fluency, proportion and presentation.</p>	<p><u>Spelling</u> Revision of Year 4/5/6 High frequency words High Frequency/Topic words Commonly misspelt words</p> <p>Ambitious synonyms for adjectives Homophones Adjectives with –ant and –ent Nouns with –ancy and –ance, -ence and –ency Prefix words with hyphens</p>
Maths		
Number and place value	<ul style="list-style-type: none"> <li>• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>• Round any whole number to a required degree of accuracy</li> <li>• Use negative numbers in context, and calculate intervals across zero</li> <li>• Solve number and practical problems that involve number, place value and rounding</li> </ul>	
Addition, subtraction, multiplication and division	<ul style="list-style-type: none"> <li>• <i>Continue to use all the multiplication tables to 12 × 12 in order to maintain their fluency</i></li> <li>• <i>Continue to practise the four operations for larger numbers using the formal written methods of columnar addition and subtraction, short and long multiplication, and short and long division</i></li> </ul>	

	<ul style="list-style-type: none"> <li>• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>• Perform mental calculations, including with mixed operations and large numbers</li> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• Solve problems involving addition, subtraction, multiplication and division</li> <li>• Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>• Identify common factors, common multiples and prime numbers</li> <li>• 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</li> </ul> <p>Use their knowledge of the order of operations to carry out calculations involving the four operations <i>and using brackets</i>.</p>
Fractions (including decimals and percentages)	<ul style="list-style-type: none"> <li>• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>• <i>List equivalent fractions to identify fractions with common denominators</i></li> <li>• Compare and order fractions, including fractions</li> <li>• Associate a fraction with division and calculate decimal fraction equivalents</li> <li>• <i>Use understanding of relationship between unit fractions and division to work backwards by multiplying a quantity that represents a unit fraction to find the whole quantity</i></li> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>• 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</li> <li>• Multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>• Use written division methods in cases where the answer has up to two decimal places</li> <li>• <i>Multiply and divide numbers with up to two decimal places by one-digit and two-digit whole numbers</i></li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy <i>and check the reasonableness of answers</i>.</li> <li>• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. <i>e.g. find a fraction which lies between 0.4 and 0.5</i></li> </ul>
Ratio and proportion	<ul style="list-style-type: none"> <li>• Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> <li>• Solve problems involving similar shapes where the scale factor is known or can be found <i>e.g. two rectangular picture frames are the same shape, but one is bigger than the other; the smaller one measures 10cm by 15cm; the larger frame has a width of 30cm, what is its length?</i></li> <li>• <i>Begin to use the notation <math>a : b</math> to record ratio</i></li> <li>• Solve problems involving the calculation of percentages (e.g. measures) such as 15% of 360 and the use of percentages for comparison</li> <li>• <i>Link percentages of <math>360^\circ</math> to calculating angles of pie charts</i></li> </ul>
Algebra	<ul style="list-style-type: none"> <li>• <i>Use symbols and letters to represent variables and unknowns in mathematical situations...</i> <ul style="list-style-type: none"> <li>○ <i>missing numbers, lengths, coordinates and angles e.g. <math>5y+1=16</math> or the angles in an isosceles triangle are <math>50^\circ</math>, <math>y^\circ</math> and <math>y^\circ</math>; find <math>y</math></i></li> <li>○ <i>mathematics and science formulae e.g. <math>P=2(l+w)</math></i></li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ arithmetic rules e.g. <math>a \times b = b \times a</math></li> <li>○ generalising number patterns e.g. 3, 6, 9, 12, ... <math>3n</math></li> <li>○ number puzzles e.g. <math>a + b = 8.5</math> and <math>a \times 6 = 15</math>; find <math>a</math> and <math>b</math></li> </ul> <ul style="list-style-type: none"> <li>● Express missing number problems algebraically e.g. the perimeter of a triangle is 20cm; it has two sides of length 8cm; what is the length of the other side? (<math>20 = 2 \times 8 + x</math> so <math>x = 4</math>cm)</li> <li>● Use simple formulae expressed in words e.g. write a formula for the cost of a party, <math>C</math>, which costs £100 plus £2 per person, <math>n</math>. (<math>C = 100 + 2n</math>)</li> <li>● Enumerate all possibilities of combinations of two variables e.g. investigate all possible half-time scores when the full time score of a football match is 4:2</li> <li>● Generate and describe linear number sequences e.g. write the first 5 terms in a 'decrease by 9' sequence starting from 20, or find the <math>n</math>th term of a simple sequence e.g. 4, 8, 12, 16, ... <math>4n</math></li> <li>● Find pairs of numbers that satisfy number sentences involving two unknowns. e.g. <math>a - b = 5</math>, give pairs of values that <math>a</math> and <math>b</math> could have (e.g. 8, 3 or 6.5, 1.5 or ...) or <math>p \times q = 24</math>; if <math>p</math> and <math>q</math> are both positive, even numbers, list all the possible combinations (e.g. <math>2 \times 12</math>, <math>4 \times 6</math>, ...)</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>● 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 three decimal places</li> <li>● Recognise that shapes with the same areas can have different perimeters and vice versa e.g. investigate triangles with areas of <math>12\text{cm}^2</math> to find which has the smallest perimeter</li> <li>● Recognise when it is possible to use formulae for area and volume of shapes</li> <li>● Calculate the area of parallelograms and triangles, relating it to the area of rectangles, e.g. compare the 'counting squares' method to using the formula for the area of a parallelogram</li> <li>● Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate e.g. Ben walked 850m to the bus stop, travelled on a bus for 8.67km and then a train for 120.9km; how far did he travel altogether?</li> <li>● Convert between miles and kilometres and other units commonly used e.g. know that a mile is approximately 1.6km (and 1km is approximately 0.6miles) and use this to make rough calculations</li> </ul> <p>Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (<math>\text{cm}^3</math>) and cubic metres (<math>\text{m}^3</math>) and extending to other units, such as <math>\text{mm}^3</math> and <math>\text{km}^3</math>.</p>
Properties of shapes	<ul style="list-style-type: none"> <li>● Draw 2-D shapes using given ring tools and conventional markings and labels for lines and angles e.g. complete a triangle with given lengths and angles</li> <li>● Recognise, describe and build simple 3-D shapes, including making nets e.g. visualise 3-D shapes drawn on isometric paper and begin to draw 2-D representations of 3-D shapes</li> <li>● Compare and classify geometric shapes based on their properties and sizes (e.g. parallel sides, line symmetry, types of angles etc) and find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>● Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles describing them algebraically e.g. <math>a = 180 - (b + c)</math>.</li> </ul>
Position and direction	<ul style="list-style-type: none"> <li>● Describe positions on the full coordinate grid (all four quadrants)</li> <li>● Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> <li>● Predict missing coordinates of quadrilaterals by using the properties of shapes, which may be expressed algebraically e.g. translating vertex <math>(a, b)</math> to <math>(a - 2, b + 3)</math>, or find the other vertices of a square, given two of them are <math>(a, b)</math> and <math>(a + d, b + d)</math></li> </ul>

Use and interpret data	<ul style="list-style-type: none"> <li>• Calculate and interpret the mean as an average. <i>e.g. find the mean height of these children: 1.2m, 1.07m and 1.12m</i></li> <li>• Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>• <i>Encounter and draw graphs relating two variables, arising from their own enquiry and in other subjects.</i></li> </ul>
Science	Light
Computing	We are app designers We are web developers
History	World War 2
D&T	Model making – Anderson Shelters Art in the style of Lowry
PSHCE	Devising a class charter linked to Rights Respecting School Understanding democracy Moral consequences of war Sustainability issues e-safety Justice Keeping safe Anti-bullying
French	This term we will be comparing schools in France with schools in England with associated language and vocabulary.
PE	Gymnastics and Dance