Barwic Parade Community Primary School
Maths Progression Grid

This progression of skills document follows the National Curriculum progression and is also linked to the White Rose scheme of learning. The different units are as follows:

1) **Place Value**
- Counting
- Represent
- Use PV and compare
- Problems and rounding

2) **Addition, subtraction, multiplication, division**
- Recall, represent, use
- Calculations
- Solve problems
- Combined operations

3) **Fractions, decimals and percentages**
- Recognise and write
- Compare
- Calculations
- Solve problems

4) **Ratio and proportion**

5) **Algebra**

6) **Measurement**
- Using measures
- Money
- Time
- Perimeter, area, volume

7) **Geometry**
- 2D Shapes
- 3D Shapes
- Angles and Lines
- Position and direction

8) **Statistics**
- Present and interpret
- Solve Problems

9) **Recommended Websites**

Barwic Parade Community Primary School
1) Maths Progression Grid for Place Value

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Place Value: Counting	• Verbally count beyond 20, recognising the pattern of the number system • Have a deep understanding of number to 10, including the composition of each number	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. • Count numbers to 100 in numerals; count in multiples of twos, fives and tens. • Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward.	• Count from 0 in multiples of 4, 8, 50 and 100; • Find 10 or 100 more or less than a given number. • Count in multiples of 6, 7, 9, 25 and 1 000 • Find 1 000 more or less than a given number • Count backwards through zero to include negative numbers	• Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. • Count forwards and backwards with positive and negative whole numbers, including through zero. • Use negative numbers in context, and calculate intervals across zero.
Place Value: Represent	• Subitise (recognise quantities without counting) up to 5 • Explore and represent patterns up to 10 • Have a deep understanding of number to 10, including the composition of each number	• Identify and represent numbers using objects and pictorial representations. • Read and write numbers to at least 100 in numerals. • Read and write numbers from 1 to 20 in numerals and words. • Read and write numbers to at least 100	• Identify, represent and estimate numbers using different representations • Read and write numbers up to 1 000 in numerals and in words • Identify, represent and estimate numbers using different representations. • Read Roman numerals	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Comparing Numbers) • Read Roman numerals to 1 000 (M) and recognise years written in Roman numerals. • Read, write, order and

		in numerals and in words. • Identify, represent and estimate numbers using different representations, including the number line.	to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.	compare numbers up to 10 000 000 and determine the value of each digit (appears also in compare numbers)
Place Value: Use PV and compare	• Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity	• Given a number, identify one more and one less. • Recognise the place value of each digit in a two-digit number (tens, ones). • Compare and order numbers from 0 up to 100; use <, > and = signs	• Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). • Compare and order numbers up to 1 000. • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). • Order and compare numbers beyond 1000	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in: Represent) • Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Represent)

Place Value: Problems and Rounding		• Use place value and number facts to solve problems.	• Solve number problems and practical problems involving these ideas. • Round any number to the nearest 10, 100 or 1 000. • Solve number and practical problems that involve all of the above and with increasingly large positive numbers.	• Round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000. • Solve number problems and practical problems that involve all of the above.# • Round any whole number to a required degree of accuracy. • Solve number and practical problems that involve all of the above.
Vocabulary	**EYFS:** • Number/numeral/digit • One to twenty and beyond… • Forwards/backwards • Counting on and back • More/less/same • Greater than/less than • Before/after • Higher/lower • Lots • Equal/same • Between • Tally • Subitise	**Progressing on from EYFS:** • Twenty-one, twenty-two… • Forwards/ backwards • Equal to / equivalent to • Most, least • Many • Multiple of • Equal to • Half way between, above, below • Roughly (estimating) • One hundred, two hundred.. • Tally • Sequence	**Progressing on from EYFS & Y1/2:** • Factor of • Relationship • Roman numerals • One hundred more / less • Approximate / approximately • Round to the nearest 10, 100 • Round up, down … • Ten thousand, hundred thousand, mullion • Next / consecutive • Integer	**Progressing on from previous years:** • Factor pair • ≥ greater than or equal to • ≤ less than or equal to • Formula • Divisibility • Square number • Prime Number • Ascending / descending order • Round to the nearest 10,000. • Factorise • Prime Factor

		• Continue • Predict • Rule • > greater than • <less than • Hundreds • Place • Place value • Stands for • Represents • Exchange • Twenty-first, twenty-second • Exact / exactly	• Positive / negative • Above / below zero • Minus • Negative numbers • Round to the nearest thousand	

Barwic Parade Community Primary School
2) Maths Progression Grid for Addition, Subtraction, Multiplication and Division

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Add and Subtract: Recall, Represent, Use	• Recall number bonds 0-5 and some number bonds to 10 , including double facts	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods) • Represent and use number bonds and related subtraction facts within 20 • Recall and use addition and	• Estimate the answer to a calculation and use inverse operations to check answers. • Estimate and use inverse operations to check answers to a calculation.	• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.

		subtraction facts to 20 fluently, and derive and use related facts up to 100 • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.		
Add and Subtract: Calculations		• Add and subtract one-digit and two-digit numbers to 20, including zero. • add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➢ a two-digit number and ones, ➢ a two-digit number and tens, ➢ two two-digit numbers, ➢ adding three one-digit numbers.	• add and subtract numbers mentally, including: ➢ a three-digit number and ones ➢ a three-digit number and tens ➢ a three-digit number and hundreds. * Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction * Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where	* Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). * Add and subtract numbers mentally with increasingly large numbers * Perform mental calculations, including with mixed operations and large numbers * Use their knowledge of the order of operations to carry out calculations involving the four operations

			appropriate	
Add and Subtract: Solve Problems		* Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = * - 9 * Solve problems with addition and subtraction: ➢ Using concrete objects and pictorial representations, including those involving numbers, quantities and measures ➢ Applying their increasing knowledge of mental and written methods	* Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. * Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	* 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 and a combination of these, including understanding the meaning of the equals sign. * Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Multiplication & Division: Recall, Represent, Use		* Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. * Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	* Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. * Recall multiplication and division facts for multiplication tables up to 12 × 12 * Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three	* Identify multiples and factors, including all factor pairs of a number, and common factors of two numbers. * Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. * Establish whether a number up to 100 is prime and recall prime numbers up to 19. * Recognise and use square numbers and cube numbers, and the notation for squared

			numbers. * Recognise and use factor pairs and commutativity in mental calculations.	and cubed. * Identify common factors, common multiples and prime numbers. * Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Multiplication & Division: Calculations		• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. • Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. • Multiply and divide numbers mentally drawing upon known facts. • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • 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 the context. • Perform mental calculations, including with mixed operations and large numbers.
Multiplication & Division: Solve Problems		• Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder	• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. • Solve problems involving multiplication and division, including scaling by simple fractions and problems

			correspondence problems such as n objects are connected to m objects.	involving simple rates. • Solve problems involving addition, subtraction, multiplication and division.
Multiplication & Division: Combined Operations				• Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding of the equals sign. • Use their knowledge of the order of operations to carry out calculations involving the four operations.
Vocabulary	**EYFS:** • Add • Plus • Double • Half • Subtract • Take away • Minus • Equals • Is the same as • Totals • Number bonds • Recall	**Progressing on from EYFS:** • Addition • Double • Half / halve • Subtract • Equals • Is the same as • Number bonds / pairs • Missing number • Multiplication • Multiply • Multiplied by • Multiple • Division • Dividing	**Progressing on from EYFS & Y1/2:** • Product • Factor • Remainder • Inverse • Square / squared • Cube / cubed	**Progressing on from previous years:**

	• Facts	• Grouping • Array • One hundred more / less… • Number facts • Groups of • Times • Once, twice, three times, ten times …repeated addition • Divide / divided by / into • Share / share equally • One each / two each … • Group in pairs, threes, tens • Equal groups of • Row, column • Multiplication table • Multiplication / division facts		

Barwic Parade Community Primary School 3) Maths Progression Grid for Fractions, Decimals and Percentages				
	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Fractions: Recognise &		• Recognise, find and name a half as one of two equal	• Count up and down in tenths; recognise that	• Identify, name and write equivalent fractions of a

Write		parts of an object, shape or quantity. • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity • Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity.	tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	given fraction, represented visually, including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number for example 2/5 + 4/5 = 6/5 = 1 and 1/5
Fractions: Compare		• Recognise the equivalence of 2/4 and 1/2 .	• Recognise and show; using diagrams, equivalent fractions with small denominators. • Compare and order unit fractions, and fractions with the same denominator. • Recognise and show, using diagrams, families of common equivalent fractions.	• Compare and order fractions whose denominators are all multiples of the same number. • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Compare and order fractions, including fractions

				> 1
Fractions: Calculations		• Write simple fractions e.g. 1/2 of 6 = 3 •	• Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7). • Add and subtract fractions with the same denominator	• Add and subtract fractions with the same denominator and multiples of the same number. • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • 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 (for example ¼ x ½ = 1/8). • Divide proper fractions by whole numbers (for example 1/3 divided 2 = 1/6)
Fractions: Solve Problems			• Solve problems that include all of the above. • Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.	
Decimals: Recognise and			• Recognise and write decimal equivalents of any number	• Read and write decimal numbers as fractions (e.g.

Write			of tenths or hundredths. • Recognise and write decimal equivalents to 1/4; 1/2; 3/4.	0.71 = $^{71}/_{100}$) • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Identify the value of each digit in numbers given to three decimal places
Decimals: Compare			• Round decimals with one decimal place to the nearest whole number. • Compare numbers with the same number of decimal places up to two decimal places	• Round decimals with two decimal places to the nearest whole number and to one decimal place. • Read, write, order and compare numbers with up to three decimal places.
Decimals: Calculations & Problems			• Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	• Solve problems involving number up to three decimal places. • Multiply and divide numbers by 10, 100 and 1000 giving answers 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.
Fractions, Decimals and Percentages			• Solve simple measure and money problems involving fractions and decimals to two decimal places.	• Recognise the percent symbol (%) and understand that percent relates o 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. • Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25. • Associate a fraction with division and calculate decimal fraction equivalents (for example 0.375) for a simple fraction (for example 3/8). • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Vocabulary	**EYFS:** • Half • Whole • Parts	**Progressing on from EYFS:** • Fraction • Equal part • Equal grouping	**Progressing on from EYFS & Y1/2:** • Sixths, sevenths, eighths… • Hundredths • Decimal	**Progressing on from previous years:** • Mixed number • Proper / improper fraction • Equivalent, reduced to,

	• Share	• Equal sharing • One of two equal parts • One of four equal parts • Equivalent fraction • Numerator • Denominator • One quarter, two quarters … • One third, two thirds … • One of three equal parts …	• Decimal point • Decimal place • Decimal equivalent	cancel • Thousandths • In every, for every … • Percentage, percent, %

Barwic Parade Community Primary School
4) Maths Progression Grid for Ratio and Proporation

(Note - **Statements only appear in Year 6 but should be connected to previous learning, particularly fractions and multiplication and division)**

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Ratio and Proportion				• 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 calculation of percentages [for example, of measures, and 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.
Vocabulary				**Just Year 6:** • Ratio • To scale • Relative sizes • Quantities • Scale factor

Barwic Parade Community Primary School
5) Maths Progression Grid for Algebra

(Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1, Y2, Y3

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Algebra		• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9 • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.	• Solve problems, including missing number problems.	• Use simple formulae. • Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables.
Vocabulary				**Just Year 6:** • Formula/ formulae • Equation • Unknown • Variable • Algebra / algebraically • Variable

Barwic Parade Community Primary School
6) Maths Progression Grid for Measurement

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Using Measures		• Compare, describe and solve practical problems for: ➢ Lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half]. ➢ Mass/weight [e.g. heavy/light, heavier than, lighter than] . ➢ Capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter]. ➢ Time [e.g. quicker, slower, earlier, later. • Measure and begin to record the following: ➢ Length and heights ➢ Mass / weight ➢ Capacity and volume ➢ Time (hours, minutes, seconds) • Choose and use appropriate standard units to estimate and measure: ➢ length/height in any direction (m/cm); ➢ mass (kg/g); ➢ temperature (°C); ➢ capacity (litres/ml) to the nearest appropriate unit,	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). • Convert between different units of measure (e.g. kilometre to metre; hour to minute). • Estimate compare and calculate different measures.	• Convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Use all four operations to solve problems involving measure (for examples, length, mass, volume, money) using decimal notation, including scaling. • Solve problems involving the calculation and conversion of units of measure, using decimal notation up 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

		➢ using rulers, scales, thermometers and measuring vessels. • Compare and order lengths, mass, volume/capacity and record the results using >, < and =		measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. • Convert between miles and kilometres.
Money		• Recognise and know the value of different denominations of coins and notes. • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • Find different combinations of coins that equal the same amounts of money. • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	• Add and subtract amounts of money to give change, using both £ and p in practical contexts. • Estimate, compare and calculate different measures, including money in pounds and pence.	• Use all four operations to solve problems involving measure (for example. money).
Time		• Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening). • Recognise and use language relating to dates, including days of the week, weeks,	• Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. • Estimate and read • time with increasing accuracy to the nearest minute; record and compare time in terms of seconds,	• Solve problems involving converting between units of time. • 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.

		months and years. • Tell the time to the hour and half past the hour and draw hands on a clock face to show these times. • Compare and sequence intervals of time. • Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. • Know the number of minutes in an hour and the number of hours in a day.	minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight. • Know the number of seconds in a minute and the number of days in each month, year and leap year. • Compare durations of events (for example to calculate the time taken by particular events or tasks). • Read, write and convert time between analogue and digital 12 and 24-hour clocks. • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	
Perimeter, Area, Volume			• Measure the perimeter of simple 2-D shapes. • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimeters and metres • Find the area of rectilinear shapes by counting squares.	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of

				irregular shapes. • Estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (for example, using water). • Recognise that shapes with the same areas can have different perimeters and vice versa. • Recognise when it is possible to use formulae for area and volume of shapes. • Calculate the area of parallelograms and triangles. • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example,. mm3 and km3].
Vocabulary		**Progressing on from EYFS:** • Measurement • Roughly • Centimetre • Ruler • Meter stick • Kilogram / half a kilogram • Litre / half a litre • Capacity	**Progressing on from EYFS & Y1/2:** • Approximately • Kilometre • Mile • Distance apart / between/ to / from / perimeter • Century • Calendar • Earliest / latest	**Progressing on from previous years:** • Imperial unit • Square metre • Square millimetre • Pint • Gallon • Discount • Currency • Yard/ foot/ feet/ inch/

		• Volume • More than • Less than • Quarter full • Months of the year • Seasons • Days, weeks, weekend, month, year • Earlier, later • Next, first, last • Midnight • Date • How long ago? • How long will it be to? • How long will it take to? • How often? • Always, never, sometimes, often • Usually • Once, twice • Hour o'clock/ half past • Clock face / hands • Hour / minute hand • Hours / minutes • Change • Costs more / less • Cheap / cheapest • Cost the same as • How much …? • How many …? • Total • Measuring scale	• A.M / P.M • 12 Hour clock time • 24 hour clock time • Unit / standard unit • Metric Unit • Edge • Area / covers • Square centimetre (cm) • Mass: big / bigger /small / smaller • Weight: Heavy/light, heavier/lighter, heaviest / lightest • Measuring cylinder • Leap year • Millennium • Noon • Date of birth • Timetable • Arrive • Depart	inches • Circumference • Tonne, pound, ounce • Centilitre • Cubic centimetres • Cubic metres • Cubic millimetres • Cubic kilometres • Greenwich mean time • British summer time • Profit / lose

		• Further / furthest • Gram • Millilitre • Holds / contains • Temperature • Degree • Fortnight • Quarter past / to • 5, 10, 15 minutes past • Digitial / analogue • Timer • Seconds • Bought /sold		

Barwic Parade Community Primary School
7) Maths Progression Grid for Geometry

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
2D Shapes		• Recognise and name common 2D shapes (for example, rectangles including squares, circles and triangles). • Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. • Compare and sort common 2D shapes and everyday objects.	• Draw 2D shapes. • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • Identify lines of symmetry in 2-D shapes presented in different orientations.	• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Draw 2-D shapes using given dimensions and angles. • Compare and classify geometric shapes based on their properties and sizes. • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
3D Shapes		• Recognise and name common 3D shapes (for example, cuboids including cubes, pyramids and spheres). • Recognise and name common 3D shapes (for example, cuboids, including cubes, pyramids and spheres).	• Make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them.	• Identify 3D shapes, includes cubes and other cuboids, from 2D representations. • Recognise, describe and build simple 3D shapes, including making nets.

		• Compare and sort common 2-D and 3-D shapes and everyday objects.		
Angles and Lines			• Recognise angles as a property of shape or a description of a turn. • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. • Identify acute and obtuse angles and compare and order angles up to two right angles by size. • Identify lines of symmetry in 2-D shapes presented in different orientations. • Complete a simple symmetric figure with respect to a specific line of symmetry.	• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees (o). • Identify: ➢ Angles at a point and one whole turn (total 360o). ➢ Angles at a point on a straight line and ½ a turn (total 180o). ➢ Other multiples of 90o. • 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.
Position and direction		• Describe position, direction and movement, including half, quarter and three-quarter turns.	• Describe positions on a 2-D grid as coordinates in the first quadrant. • Describe movements	• Identify, describe and represent the position of a shape following a reflection or translation, using the

		• Order and arrange combinations of mathematical objects in patterns and sequences. • Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).	between positions as translations of a given unit to the left/right and up/down. • Plot specified points and draw sides to complete a given polygon.	appropriate language, and know that the shape has not changed. • 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.
Vocabulary		**Progressing on from EYFS:** • Symmetry / symmetrical pattern • Point / pointed • Cuboid • Cylinder • Underneath • Centre • Journey • Quarter turn, three quarter turn … • Surface • Line symmetry • Rectangular • Circular • Triangular	**Progressing on from EYFS & Y1/2:** • Right angle • Straight line • Perimeter • Pentagonal • Hexagonal • Octagonal • Quadrilateral • Parallel, perpendicular • Hemisphere • Prism • Triangular prism • Line • Construct • Sketch • Centre	**Progressing on from previous years:** • Radius • Diameter • Axis of symmetry • Reflective symmetry • X-axis, Y-axis • Quadrant • Octahedron • Net • Coordinate • Protractor • Compass • Circumference • Intersecting, intersection • Dodecahedron • Reflex angle

		• Pentagon • Hexagon • Octagon • Route • Higher, lower • Clockwise / anticlockwise	• Base / square based • Reflect / reflection • Regular / irregular • Oblong • Rectilinear • Equilateral triangle • Isosceles triangle • Scalene triangle • Heptagon • Parallelogram/ rhombus, trapezium, polygon • Spherical • Tetrahedron, polyhedron • North east, north west, south east, south west, NE, NW, SE, SW • Translate, translation • Rotate, rotation • Degree • Reflection	

Barwic Parade Community Primary School
8) Maths Progression Grid for Statistics

	EYFS	Key Stage One	Lower Key stage Two	Upper Key stage Two
Present and Interpret		• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	• Interpret and present data using bar charts, pictograms and tables. • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	• Complete, read and interpret information in tables, including timetables. • Interpret and construct pie charts and line graphs and use these to solve problems.
Solve Problems		• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. • Ask and answer questions about totalling and comparing categorical data.	• Solve one-step and two-step questions [for examples, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	• Solve comparison, sum and difference problems using information presented in a line graph. • Calculate and interpret the mean as an average.
Vocabulary		**Progressing on from EYFS:** • Vote • Table • Tally • Graph • Bar chart	**Progressing on from EYFS & Y1/2:** • Frequency table • Carroll diagram /Venn • Axis / axes • Diagram • Survey, questionnaire, data	**Progressing on from previous years:** • Bar line chart • Line graph • Maximum / minimum value • Outcome • Pie chart

		• Pictogram • Represent • Label • Title • Most popular/common • Least popular /common		• Mean • Statistics

Barwic Parade Community Primary School
9) Maths:Recommended Websites

Use websites for staff, children, parents & carers:

1) Maths Shed: https://www.mathshed.com/en-gb
2) Times Tables Rock Stars: https://ttrockstars.com/
3) White Rose Maths: https://whiterosemaths.com/
4) Classroom Secrets: https://classroomsecrets.co.uk/
5) Twinkl: https://www.twinkl.co.uk/
6) NRich: https://nrich.maths.org/frontpage

A range of maths games, problems and articles on all areas of maths.

7) Oxford Owl: https://www.oxfordowl.co.uk/maths-owl/maths

Includes a range of activities, top tips and eBooks to help your child with their maths at home.

8) Family Maths Toolkit: https://www.familymathstoolkit.org.uk/

National Numeracy Parent Toolkit has a wealth of tips and advice for parent

9) Top marks: https://www.topmarks.co.uk/
10) Maths Frame: https://mathsframe.co.uk/en/resources/category/22/most-popular
11) Maths is fun: http://www.mathsisfun.com/index.htm
12) BBC Bitesize ks1: http://www.bbc.co.uk/bitesize/ks1/maths
13) BBC Bitesize ks2: http://www.bbc.co.uk/bitesize/ks2/maths/
14) Maths Zone: https://mathszone.co.uk/