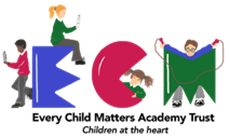
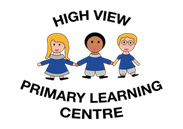
******High View Primary Learning Centre**

Mathematics Curriculum

Our aim is for the pupils to have a comprehensive and cohesive mathematics education so that they leave High View as competent mathematicians. This will be achieved by using the DFE’s Ready to Progress Criteria as the foundations before moving to the National Curriculum objectives. Where the RTP (Ready to Progress) meets the NC (National Curriculum) objectives, these will be indicated with the reference numbers in the objectives. All objectives will be covered by the time the children leave Year 6 ensuring that they are fully prepared to continue their education.

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|  | FS1 | FS2 | Year1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Autumn | Number rhymes and songs  Counting, ordinality and cardinality  Shape  Size  Pattern  Numerals  Capacity  Positional language  ‘More’ | Counting, ordinality and cardinality  Subitising  Composition  Addition and subtraction  One more/one less than  Shape  Length  Weight | Place Value  Addition and Subtraction  Shape | Place Value  Addition and subtraction  Money  Multiplication and division | Place value  Addition and subtraction  Multiplication and division | Place Value  Addition and subtraction  Perimeter  Multiplication and division | Place value  Addition and subtraction  Statistics  Multiplication and division  Perimeter and area | Place value  4 operations  Fractions  Position and direction |
| Spring | Number rhymes and songs  Counting, ordinality and cardinality  Shape  Size  Capacity  More and less  Money  Days of the week  Length  Positional language  Pattern | Counting, ordinality and cardinality  Subitising  Composition  Addition and subtraction  One more/one less than  Shape  Capacity  Money  Pattern  Estimation | Addition and subtraction  Place Value  Length, height  Weight and volume | Multiplication and division  Shape  Statistics  Fractions  Length and height | Multiplication and division  Statistics  Money  Length and perimeter  fractions | Multiplication and division  Area  Fractions  Decimals | Multiplication and division  Fractions  Decimals and percentages | Decimals  Percentages  Algebra  Measurement  Perimeter area and volume  Ratio |
| Summer | Number rhymes and songs  Counting, ordinality and cardinality  Shape  Sequencing events  Calculating  Separating  More than / fewer tham  Sorting and classifying  Routes and locations  Weight | Counting, ordinality and cardinality  Subitising  Composition  Addition and subtraction  Money  Sharing  Doubling  Halving  Capacity | Multiplication and division  Fractions  Position and direction  Place value  Money  time | Position and direction  Problem solving  Time  Measurement  investigations | Fractions  Time  Shape  Mass and capacity | Decimals  Money/Time  Statistics  Shape  Position and direction | Decimals  Shape  Position and direction  Converting units  Volume | Shape  Problem solving  Statistics  investigations |

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| Ready to Progress | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| See, explore and discuss models of common 2D and 3D shapes with varied dimensions and presented in different orientations (for example, triangles not always presented on their base). | 1G–1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one  another. | 2G–1 Use precise  language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and  differences in properties. | 3G–1 Recognise right  angles as a property of shape or a description of  a turn, and identify right angles in 2D shapes presented in different  orientations. |  | 5G–1Compare angles,  Estimate and measure angles in degrees (°) and  draw angles of a given  size |  |
| Select, rotate and manipulate shapes for a particular purpose, for example: • rotating a cylinder so it can be used to build a tower • rotating a puzzle piece to fit in its place |  |  |  |  | 5G–2 Compare areas and calculate the area of rectangles (including squares) using standard  units. |  |
|  | 1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular  orientations. |  | 3G–2 Draw polygons by  joining marked points,  and identify parallel and  perpendicular sides. | 4G–1 Draw polygons,  specified by coordinates  in the first quadrant, and  translate within the first  quadrant. |  | 6G–1 Draw, compose,  and decompose shapes according to given properties, including dimensions, angles and area, and solve related  problems. |
|  |  |  |  | 4G–2 Identify regular  polygons, including  equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. |  |  |
|  |  |  |  | 4G–3 Identify line  symmetry in 2D shapes  presented in different  orientations. Reflect  shapes in a line of  symmetry and complete a  symmetric figure or  pattern with respect to a  specified line of  symmetry. |  |  |

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| N**ATIONAL CURRICULUM** | | | | | | |
| Identifying Shapes and their Properties | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: ‘sides’, ‘corners’; ‘straight’, ‘flat’, ‘round’. | 1G–1 recognise and name common 2-D and 3-D shapes, including:   * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. | 2G–1 identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line |  | 4G–2 identify lines of symmetry in 2-D shapes presented in different orientations | identify 3-D shapes, including cubes and other cuboids, from 2-D representations | recognise, describe and build simple 3-D shapes, including making nets  (appears also in Drawing and Constructing) |
| Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. |  | i2G–1 identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces |  |  |  | illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
|  |  | identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] |  |  |  |  |
| Drawing and Construction | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Combine shapes to make new ones – an arch, a bigger triangle, etc. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. | 1G–2 |  | 3G–2 draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | 4G–3 complete a simple symmetric figure with respect to a specific line of symmetry | draw given angles, and measure them in degrees (o) | 6G–1 draw 2-D shapes using given dimensions and angles  recognise, describe and build simple 3-D shapes, including making nets (appears also in Identifying Shapes and Their Properties |
| **Comparing and Classifying** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Select, rotate and manipulate shapes to develop spatial reasoning skills. | compare and sort common 2-D and 3-D shapes and everyday objects |  | compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | use the properties of rectangles to deduce related facts and find missing lengths and angles | compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons  distinguish between regular and irregular polygons based on reasoning about equal sides and angles | compare and sort common 2-D and 3-D shapes and everyday objects |
| **Angles** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  |  | recognise angles as a property of shape or a description of a turn |  | 5G–1 know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles |  |
|  |  |  | 3G–1 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 acute and obtuse angles and compare and order angles up to two right angles by size | 5G–1 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 | recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |
|  |  |  | identify horizontal and vertical lines and pairs of perpendicular and parallel lines |  |  |  |
| **Position, Direction and Movement** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Describe a familiar route. | describe position, direction and movement, including half, quarter and three-quarter turns. | 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) |  | 4G–1 describe positions on a  2-D grid as coordinates in the first quadrant | identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed | describe positions on the full coordinate grid (all four quadrants) |
| Discuss routes and locations, using words like ‘in front of’ and ‘behind’. |  |  |  | 4G–1 describe movements between positions as translations of a given unit to the left/right and up/down |  | draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
| • Understand position through words alone – for example, “The bag is under the table,” – with no pointing. |  |  |  | 4G–1 plot specified points and draw sides to complete a given polygon |  |  |
| Pattern | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc.  Extend and create ABAB patterns – stick, leaf, stick, leaf.  Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then…’ |  | order and arrange combinations of mathematical objects in patterns and sequences |  |  |  |  |
| **Comparing and Estimating Measurement** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Make comparisons between objects relating to size, length, weight and capacity. | 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] | compare and order lengths, mass, volume/capacity and record the results using >, < and = |  | estimate, compare and calculate different measures, including money in pounds and pence  (also included in Measuring) | 5G–2 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 (also included in measuring) | calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm3) and cubic metres (m3), and extending to other units such as mm3 and km3. |
|  |  |  |  |  | estimate volume (e.g. using 1 cm3 blocks to build cubes and cuboids) and capacity (e.g. using water) |  |
|  | sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] | compare and sequence intervals of time | compare durations of events, for example to calculate the time taken by particular events or tasks |  |  |  |
|  |  |  | estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o’clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time) |  |  |  |
| **Measuring and Calculating** | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  | measure and begin to record the following:   * **lengths 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, using rulers, scales, thermometers and measuring vessels | measure, compare, add and subtract: **lengths** (m/cm/mm); **mass** (kg/g); **volume/capacity** (l/ml) | estimate, compare and calculate **different measures,** including **money in pounds and pence**  (appears also in Comparing) | use all four operations to solve problems involving measure (e.g. **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  (appears also in Converting) |
|  |  |  | measure the **perimeter** of simple 2-D shapes | measure and calculate the **perimeter** of a rectilinear figure (including squares) in centimetres and metres | measure and calculate the **perimeter** of composite rectilinear shapes in centimetres and metres | recognise that shapes with the same areas can have different **perimeters** and vice versa |
|  | 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 context. |  |  |  |
|  |  |  |  | find the area of rectilinear shapes by counting squares | 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  *recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)*  (copied from Multiplication and Division) | 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 [e.g. mm3 and km3].  recognise when it is possible to use formulae for area and volume of shapes |
| Telling the Time | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  | tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. | 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. | tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks | read, write and convert time between analogue and digital 12 and 24-hour clocks  (appears also in Converting) |  |  |
|  | recognise and use language relating to dates, including days of the week, weeks, months and years | know the number of minutes in an hour and the number of hours in a day.  (appears also in Converting) | estimate and read  time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o’clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight  (appears also in Comparing and Estimating) |  |  |  |
|  |  |  |  | solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days  (appears also in Converting) | solve problems involving converting between units of time |  |
| Converting | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|  |  | know the number of minutes in an hour and the number of hours in a day.  (appears also in Telling the Time) | know the number of seconds in a minute and the number of days in each month, year and leap year | convert between different units of measure (e.g. kilometre to metre; hour to minute) | convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) | 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 |
|  |  |  |  | read, write and convert time between analogue and digital 12 and 24-hour clocks  (appears also in Converting) | solve problems involving converting between units of time | solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate  (appears also in Measuring and Calculating) |
|  |  |  |  | solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days  (appears also in Telling the Time) | understand and use equivalences between metric units and common imperial units such as inches, pounds and pints | convert between miles and kilometres |

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| VOCABULARY  These are the words that pupils will know, use and understand.  The pupils will know, use and understand the words in their current year group and the prior years. | | | | | | | |
| EYFS/Development matters/ Previous knowledge | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Properties of shape  Shape, pattern Flat, curved, straight, round, hollow, solid  Sort, make, build, draw  Size, bigger, larger, smaller  Symmetrical, pattern, repeating pattern, match  2-D shape Corner, side, rectangle (including square), circle, triangle  3-D shape Face, edge, vertex, vertices cube, pyramid, sphere, cone,  Position and direction  Position, over, under, above, below, top, bottom, side, on, in, outside, inside, around, in front, behind, front, back, beside, next to, opposite, apart, between, middle, edge, corner Direction, left, right, up, down, forwards, backwards, sideways, across , next to, close, near, far, along, through, to, from, towards, away from Movement, slide, roll, turn, stretch, bend Whole turn, half turn  Measure, size, compare Guess, estimate Enough, not enough  Too much, too little, too many, too few, nearly, close to, about the same as, just over, just under  Length Metre Length, height, width, depth Long, short, tall, high, low, wide, narrow, thick, thin, longer, shorter, taller, higher, longest,, shortest, tallest, highest Far, near, close  Weight Weigh, weighs,, balances heavy, light, heavier than, lighter than, heaviest, lightest, scales Capacity and volume Full, empty, half full, holds, container  Time, days of the week, day, week, birthday, holiday, morning, afternoon, evening, night, bedtime, dinner time, playtime, Today, yesterday, tomorrow  Before, after, next, last, now, soon, early, late Quick, quicker, quickest, quickly, slow, slower, slowest, slowly Old, older, oldest, new, newer, newest  Takes longer, takes less time  Hour, o’clock, clock, watch, hands,  Money  Money, coin, penny, pence, pound  Price, cost, buy, sell, spend, spent, pay | Symmetry symmetrical pattern point, pointed cuboid, cylinder underneath centre journey,, quarter turn,, three-quarter turn  measurement roughly Centimetre Ruler, metre stick  Kilogram, half kilogram litre, half litre, capacity, volume  more than, less than, quarter full, weekend, month, year, months of the year, date, seasons, midnight earlier, later, first, how long ago? how long will it be to..?  how long will it take to …? how often? always, never, often, sometimes, usually, once, twice  half past, quarter past,, quarter to, clock face, hour hand, minute hand, hours, minutes dear, costs more, cheap, costs less, cheaper, costs the same as, how much …?, how many …?  total | , surface line symmetry  rectangular circular triangular, pentagon, hexagon, octagon route higher, lower clockwise, anti-clockwise right angle, straight line  measuring scale  further, furthest tape measure gram millilitre contains Temperature, degree  fortnight, 10, 15 … minutes past digital/analogue clock/watch, timer, seconds bought sold, | perimeter, pentagonal hexagonal octagonal  Quadrilateral, right-angled, parallel, perpendicular  , hemisphere, prism, triangular prism Compass point, north, south, east, west, N, S, E, W, horizontal, vertical, diagonal  angle … is a greater/smaller angle than, acute angle, obtuse angle  division approximately Millimetre kilometre, mile distance apart … between … to … from Perimeter  centigrade century, calendar earliest, latest, a.m, p.m Roman numerals, 12-hour clock time, 24-hour clock time | , line, construct, centre sketch angle, right-angled base, square-based  Reflect, reflection, regular, irregular  2-D, two-dimensional oblong  rectilinear,  equilateral triangle, isosceles triangle, scalene triangle, heptagon, parallelogram, rhombus, trapezium, polygon3-D, three-dimensional  spherical cylindrical, tetrahedron, polyhedron north-east, north-west, south-east, south-west, NE, NW, SE, SW, translate, translation rotate, rotation, degree, ruler, set square, angle measurer, compass reflection  unit, standard unit, metric unit breadth Edge area, covers, square centimetre (cm2) heavier/lighter, heaviest/lightest leap year, millennium, date of birth noon, timetable, arrive, depart | protractor coordinate octahedron axis of symmetry, reflective symmetry congruent radius, diameter discount, currency,, pint, gallon square metre (m2), square millimetre (mm2) imperial unit | , circumference, concentric, arc, net, open, closed, intersecting, kite,intersection, dodecahedron  net, open, closed  plane reflex angle, profit, loss Greenwich Mean Time, British Summer Time, International Date Line centilitre, cubic centimetres(cm3), cubic metres (m3), cubic millimetres (mm3), cubic kilometres (km3) pound, ounce, Tonne, circumference, yard, foot, feet, inch, inches |